Returning to Our Roots:

Addressing Food Insecurity in Lewiston/Auburn, Maine with an Urban Farm Project

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Abstract

Returning to Our Roots was the groundwork for the development of an Urban Farm Project in Lewiston-Auburn, Maine. It specifically focuses on the Lewiston Enterprise Community, located in Downtown Lewiston.

Historically, state and federal programs in the city have "managed" symptoms of food insecurity by providing citizens with free or subsidized food. This has led to only greater food insecurity as residents have lost the skills and knowledge of how to grow, access, and cook affordable, nutritious meals. The Urban Farm Project's goal is to reverse this trend. Residents will work together to grow food for their community as well as educate themselves and others, and participate in income-generating opportunities.

The short-term goal of *Returning to Our Roots* was to conduct an assessment of the community's capacity to develop and operate an Urban Farm Project, as well as develop arguments in support of the project, recommendations for future stakeholders, and secure a fiscal agent and funding for the due diligence process.

The assessment found ample resources in place to develop an Urban Farm Project, including: a comprehensive Community Foods Assessment (*Local Food for Lewiston*), several land options for a farm site, interested stakeholders, and a network of organizations working to increase access to nutritious foods. Above all, the Community Foods Assessment has created an optimal stage for developing an Urban Farm Project that rises from the voices and investment of the community.

Key to Abbreviations

ALT: Androscoggin Land Trust
Bates ES: Bates College Environmental Studies Dept.
CARs: Community Action Researchers (for the CFA)
CED: Community Economic Development
CFA: Community Foods Assessment (aka Local Food for Lewiston)
CFP: Community Food Projects
CFS: Community Food Security
CSA: Community Supported Agriculture
DEC: Downtown Educational Collaborative
EC: Lewiston's Enterprise Community
EFP: Emergency Food Providers
EL: Empower Lewiston
EZ: Enterprise Zones
FSP: Food Stamp Program
L-A: Lewiston-Auburn
MOA: Memorandum of Agreement
MOU: Memorandum of Understanding
NSLP: National School Lunch Program
UFP: Urban Farm Project
USDA: U.S. Department of Agriculture
WIC: Women, Infants, and Children

Definition of Community Food Security

Several definitions exist for community food security. One such definition is a "condition in which all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes community self-reliance, social justice, and democratic decision-making (Winne, pg.2)."

This thesis is one of the steps being taken to address food insecurity issues in Lewiston-Auburn, Maine.

I. Community Context

A description of the context in which this community project lies has several functions. It provides an understanding of where the focused problems arise, what barriers still exist to overcoming the problem, and what resources exist to support the project. It also aids in creating arguments for why such a project is critical to the viability of the target population, both in terms of community and economic development.

Community Profile

(source: *blog5lewiston.jpg*)

The Androscoggin River runs between the twin cities of Lewiston-Auburn, ME (L-A). A mix of open farmland and neighborhoods surround the concentrated homes and apartments. Close to the center L-A, the river is lined on either side by brick mills, which once generated many jobs. In the 1960's and 70's, a majority of the textile and shoe manufacturing businesses closed down, leaving the already under-privileged city to become laden with issues relating to high levels of unemployment and poverty (*Local Foods for Lewiston,* 2008). Today, while some of the mills are used as offices, restaurants, storage, and processing facilities, the local economy is still struggling.

Since 1940, the population of Lewiston has remained at approximately 40,000 (Hodgkin, 2010). In 2000, over 95 percent of residents were White, with French-Canadian being the strongest cultural presence at 29 percent (*American FactFinder, 2000, n.d.*). This is an important statistic to keep in mind in understanding the change the city has gone through in recent years.

The streets of downtown Lewiston look very different today compared to ten years ago. There are now approximately 4,000 New Americans from Somalia, who came to the U.S. as refugees. The recent change in demographics has put an additional strain on the city, which experienced above average levels of poverty before the arrival of the New Americans. Local social services have had to increase and adjust their programs to provide low-income housing, job assistance and training, healthcare, and English language classes to the new population (Harris & Vazquez-Jacobus, n.d.). Over 39 percent of this population claims to have consistent employment and almost 10 percent claim to have stable employment, leaving over half of the New Americans unemployed or underemployed. The mean income of Somali refugees reflects their unemployment rate and need for assistance—in 2008 it was $8,800 (Rector, 2008).

In 1999, two census tracks in downtown Lewiston were deemed federally designated Rural Enterprise Zones (EZ) (Empower Lewiston, n.d.). According to O'Keefe and Dustan, evaluators of Enterprise Communities in California, Enterprise zones are:

> …Microcosms within a larger community, troubled and decaying places that governments want to rehabilitate. Governments endow the zones with various incentives to encourage businesses to locate within these economically and socially distressed areas, and revitalize them (Dunstan & O'Keefe, August, 2001, p.3).

Since the two census tracks in downtown Lewiston became Enterprise Zones, hundreds of millions of dollars, mostly from the USDA, have filtered through Empower Lewiston into the enterprise community for downtown revitalization, job training and retention, and other community development projects (Empower Lewiston, 2008). Historically, these programs addressed issues relating to poverty at a uni-dimensional level, based on deficit models, rather than on community capacity building (Local Foods for Lewiston,

2008). However, many organizations are shifting towards building comprehensive, community-driven initiatives.

In Lewiston, a city surrounded by rich soils and a long history of farming, the majority of local consumers do not purchase local foods. However, a recent article in Lewiston's Sun Journal, entitled, "Interest in Local Food Grows," draws a changing picture. The article states that local farmers have seen an increase in sales to their neighboring towns and cities in the past five years. The article also notes that at Hannaford's Supermarket, sales of natural, organic, and local farm foods have increased (Washuk, 2010).

According to a U.S. Department of Agriculture (USDA) survey, the state of Maine falls below the average for both overall food insecurity and very low food insecurity (Bartfeld, et. al., 2006). Furthermore, there was an increase in food insecurity of 3.5 percent among residents of Maine from 1996 to 2007 (Nord, et. al., 2008). Below, the underlying causes of food insecurity in the target population are discussed further.

Community Needs Assessment

Food insecurity in the target population is very high. At the Longley Elementary school in the EC, 97 percent of students are eligible for free or reduced-price meals through the National School Lunch Program. In comparison, the eligibility in Lewiston is 57 percent and the statewide figure is 37 percent (Maine Department of Education, n.d.). Recently, the seven Emergency Food Providers (EFP) located in downtown Lewiston have seen an increase in demand for their services (Burgis, et. al., 2009).

According to the Community Action Researchers (CARs), who carried out the focus groups for *Local Food for Lewiston,* those experiencing food insecurity were knowledgeable about how to access food in situations of crisis, but were lacking knowledge about alternative resources for greater nutritional-sustainability (Community Actions Researchers, 2010).

New Americans (mostly Somali refugees) need greater education in regards to basic living skills in order to sustain the nutritional requirements of their families. Somali residents exercise much less in the United States than they did in Africa. This fact, coupled with retaining their cooking habits of high fats and oils, causes weight gain and related health concerns. Nutrition education is a need for this population. Greater aid with translation is also needed to help refugees apply for government food assistance programs (Community Actions Researchers, 2010).

Emergency Food Providers (EFPs) are critical in keeping the citizens of Lewiston fed. However, they may also be perpetuating the cycle of food insecurity. Food provided by EFPs is often low in nutritional value, having high levels of corn syrup, sugar, and sodium (Burgis et al., 2009). Receivers of this processed, less nutritious food become dependent of the assistance and begin losing their skills at cooking fresh food. This often decreases their health, increases their food budget if they buy from more expensive convenient stores, and encourages non-sustainable living.

Citizens have grown accustomed to processed food (Maine Department of Agriculture, 2005). Now that transportation and processing costs are rising, so too is the cost of food. Those with a limited budget and who find assistance from emergency food programs are substituting subsidized alternatives for nutritious foods (Holben & Myles, 2004).

Due to the unavailability of land, Somali families are reverting to food coping strategies such as relying on EFPs. There is still a desire to grow nutritious foods, yet the unavailability of land forces them to revert to processed, non-local foods. As stated in Lewiston's CFA narrative, "demand for space (is) outpacing available plots, especially with the recent migration of Somali Bantu families eager to stay close to their agricultural roots, we need more space within walking distance of low-income neighborhoods (Local foods for Lewiston, 2008. p. 2)."

In a discussion with the Community Action Researchers, a vivid description of downtown living was told through personal and gathered stories. While asking questions to a variety of residents, such as parents, homeless youth and adults, Somali women, adults being treated at a local mental health hospital, young mothers, and young professionals—a picture was painted highlighting struggles of Downtown Lewiston. During one discussion, the young, white mothers became agitated while watching Somali women receive bags of diapers from a social service at the hospital—while they only receive a handful. Later, it was pointed out that the Somali women share the responsibility with neighbors for transporting the diapers. In another discussion, a Somali woman expressed that she is not able to understand how there are homeless people in the city when there are so many services available to them. She added that she was dropped on American soil and told she had to learn the language and get a job so she could pay back Catholic Charities for the plane ticket from Somalia. Tension between the races and cultures build, as they perceive the other receiving more government assistance than themselves (Community Actions Researchers, 2010). They share a

common thread of suffering from food insecurity, poverty, and job insecurity. However, these similarities, coupled with their differences, pull these threads taut, resulting in frayed relationships between neighbors.

Another factor leading to inaccessibility of fresh foods is a lack of transportation. In the EC census tracts 201 and 204, 59 and 41 percent of households respectively do not own a vehicle (US census bureau, 2000). White Americans have three times greater access to private transportation than black Americans within the same geographical location. Studies show that Americans living within walking distance to supermarkets that carry fresh foods consume a greater percentage of fruits and vegetables, less fat and less saturated fat (Grady, et. al., 2009). In most cases, residents of downtown Lewiston are not within close walking distance to supermarkets. However, they are within walking distance to one or more EFPs; yet accessibility is still limited due to timeliness of snow removal during winter months (Burgis et al., 2009). Many do not have the time or physical ability to travel to more than one EFP per day for two meals—and hunger is often experienced on the weekends due to the CitiLink bus not operating and EFP operational hours being limited. Another cause of decreased accessibility to EFPs is the requirements for disclosure. Many qualified residents will not use this resource for fear that releasing their information will risk their ability to keep children or grandchildren in their custody (Community Actions Researchers, 2010).

Between 2000 and 2005 over 20,000 acres of Maine farmland has been eliminated by unchecked sprawl. The state now produces only 20 percent of the food needed by its citizens (Maine Department of Agriculture, 2005). As a consequence, access to fresh, local foods is limited in the EC. The only place to purchase this food is at the downtown park (Kennedy Park) at the Lewiston Farmers' Market. However, this only runs on Tuesdays during the growing season and is not well attended. Specifically, many elderly residents do not visit the market because of fear related to violence (New American Sustainable Project participants, personal communication, 2008).

With little demand for local farm products, production decreases. The cycle is perpetuated of consuming unhealthy, processed, non-local foods—losing the skills and knowledge to prepare nutritious meals—increasing the risk of obesity and other diet-related diseases—creating financial strain on the individual, local, and federal agencies.

Low access and unaffordable food have had a detrimental impact on the residents of L-A—and Maine in general. A study of Maine residents showed a 20 percent increase in adult obesity from 1985 to 1995 and found that nearly 30 percent of high schools students were overweight. To put this in financial measures, a nation-wide study estimated a total cost for diet-related disease (including lost productivity due to illness and premature death) to be $70.9 billion (Maine Department of Agriculture, Food and Rural Resources, 2005).

The idea to develop an Urban Farm Project in L-A was sparked by a variety of changes in the L-A area. From this assessment, the following are found to be the major reasons:

- Enthusiasm for and support behind the garden plots started by Lots to Gardens in 1999. The community garden plots are in highly populated neighborhoods, the former Enterprise Community, and other low-income housing areas of Lewiston. Since these plots began sprouting up, they have grown in number (there are now 15 plots) (K. Walter, personal communication, 2008).
- An increase in the rate of food insecure families in L-A (see Community Context for further details).
- The recent migration of refugees from Somalia and Sudan, many of who seek land to cultivate.
- Recent action to cultivate Maine food and farmers. The local foods trend has reached Maine, mostly along the coast, yet it is creeping inland and there will soon be greater demand for more local food. A Food Policy for the state of Maine states a goal that by 2020, 80 percent of food consumed by Maine's residents will come from Maine soil (Joint Standing Committee on Agriculture, Conservation and Forestry, 2006). Also, many people believe that due to increasing transportation costs, political turbulence, and pollution, food choices may be limited in future years. Therefore, we must develop our local food systems to better meet our local needs.

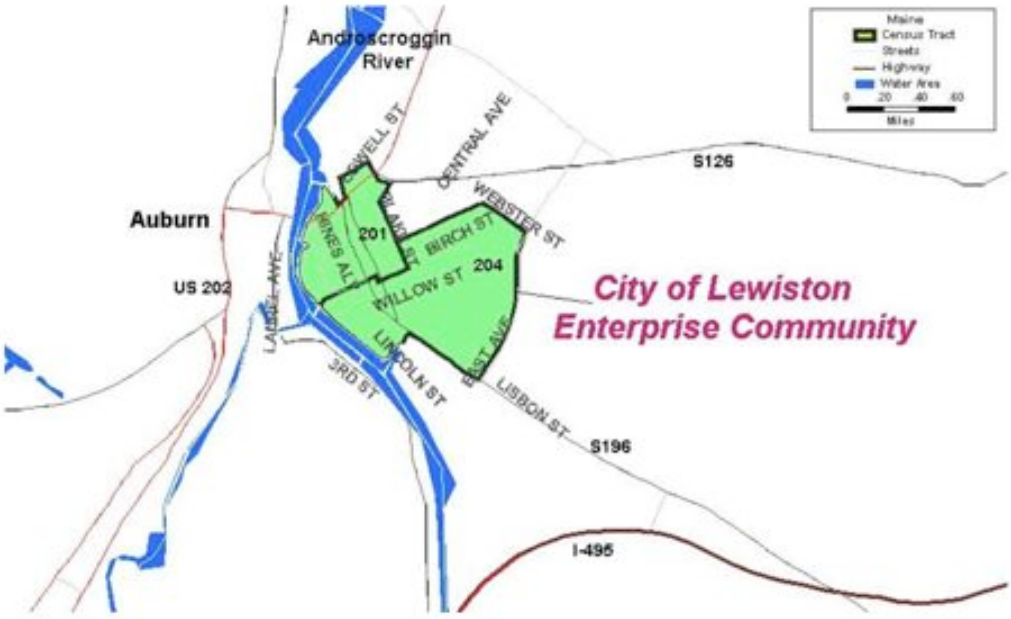
Currently, there is a great deal of activity in the L-A area, surrounding the subjects of food security, a local foods system, and community participation. *Local Food for Lewiston,* a community foods assessment, began in 2009 by a team of researchers, educators, and promoters of local foods from several organizations including Healthy Androscoggin, Bates College, The Nutrition Center, and Downtown Education Collaborative. The research is developing a better understanding of food security needs

in Lewiston. In the following months, a systematic study of community-wide solutions will be explored (Community Actions Researchers, 2010) and will "catalyze a community-based, comprehensive approach to strengthening our local food system (Narrative: Local Foods for Lewiston, 2008)." By the degree of interest shown by community partners and potential stakeholders, it is expected that an Urban Farm Project will be a continuation of this study

Target Community

The greatest concentration of people experiencing food insecurity in L-A is found in the Lewiston Enterprise Community, which is comprised of census tracts 201 and 204. Below, highlighted in green is a map of the neighborhoods. Research on the project's target community focuses on the EC, since this is a prime target for participant outreach.

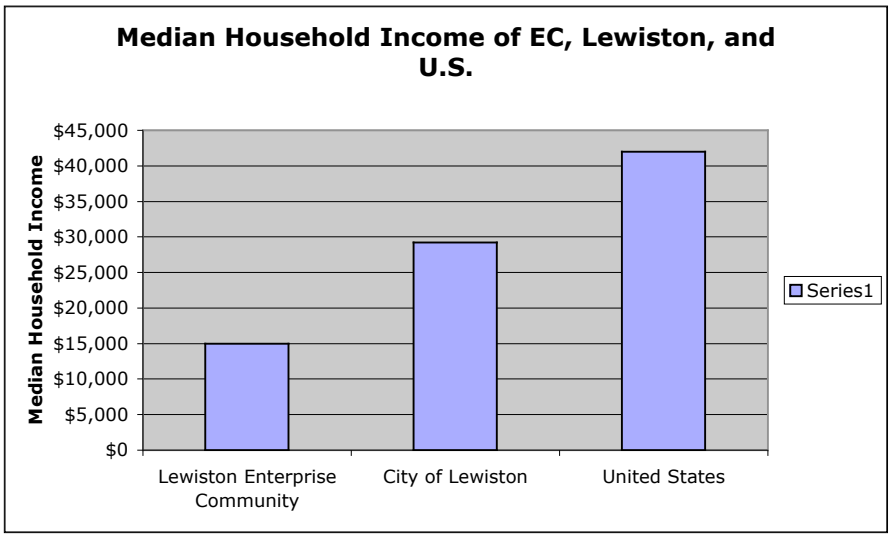
Map of Lewiston Enterprise Community



[map source: (*Map, City of Lewiston Enterprise Community*)]

In 2000, the population of the EC was 4,594. As seen in the chart below, Lewiston's Enterprise Community has almost double the poverty than the surrounding city and the

difference is even more significant when compared to the U.S. statistics. The EC has an average poverty rate of 36 percent, compared to the state average of 11 percent (Empower Lewiston, 2009).



(Sources: U.S. Census Bureau, Lewiston (city) QuickFacts 2000, (Empower Lewiston Enterprise Community, n.d.)

The organization, Empower Lewiston (EL), was created in 1999 to create a community development strategic plan for the EC. To this point, they have worked together with 65 organizations to carry out the plan. As stated on their website, "Empower Lewiston is a citizen effort to build leadership capacity and ownership in the target areas and focus considerable community resources on a shared approach (Empower Lewiston, n.d.)." The goals of EL center on various areas –from community participation & governance, training & employment to culture, and natural resource preservation (Empower Lewiston, n.d.).

Empower Lewiston's EC Funding Report of January 2008 recorded receiving over $65.5 million in funding, most of which came from private and non-profit sectors, although approximately $20 million came from local or state government agencies. The Executive Summary of 2007 also stated: "As the organization moves forward, it will work to bring community businesses and residents together in a tighter, mutually supportive relationship than has happened in recent years," implying room for improvement. The EC designation ended by the end of 2009, and so did Empower Lewiston. However, the

need for community economic development continues to exist (Empower Lewiston, n.d.).

II. Problem Analysis

The following is an analysis of the food security problem in Lewiston. It focuses on the underlying issues that lead to poverty in the community—in an attempt to develop more sustainable solutions.

Problem Statement

There is a lack of information in L-A about how to access affordable, nutritious food and a lack of understanding in regards to the benefits of consuming this food. This thesis assesses the underlying reasons for the lack of information and understanding; assesses the resources available locally to address the issues; and makes suggestions for how to improve the current state.

As stated earlier, the L-A community relies heavily on state and federally funded food supplement programs. Yet, hunger and nutritional needs are still not met. Along with the inaccessibility of nutritious foods come health issues, as the 20 percent increase in adult obesity portrays.

In order to increase food security in the target community, there must be improved access to nutritious foods, increased affordability of nutritious foods, and improved education in regards to nutrition, growing food, cooking food, and budgeting. However, more sustainable solutions include increased job opportunities, decreased racial tension to improve community cohesion, and greater community involvement in developing solutions. These sustainable solutions will be discussed further in the Sustainability Plan section.

There is a lack of local product in the L-A area. According to various literary sources, some reasons for this may be the following:

- Farming income is too low to see a great increase in production. A study on CSA farms in the Northeast found that after all expenses are accounted for, the average net income per farm was -$12,078 in 1995, -$5,265 in 1996 and -$4,834 in 1997. However, other factors suggest that these numbers will continue to improve and CSA and other small farms will increase their market power (Tegtmeier & Duffy, 2005).

- Availability of farmland is decreasing. From 2000 to 2005, twenty thousand acres of prime farmland was seized by unchecked sprawl (Joint Standing Committee on Agriculture, Conservation and Forestry, 2006).
- For institutions, such as schools, small farms are less enticing to buy from because of the higher prices in relation to commodity foods, an inconsistent supply, and difficult communications (Farms to school forum, November 2, 2006).

Developed intentionally and uniquely for this particular community, an Urban Farm Project will address the high rate of food insecurity and diet-related health issues of its beneficiaries. The assessment of the community and its resources further enables an intentional and unique development to occur, as well as plans for sustainability.

Stakeholders

The success of a project to address food security in L-A is contingent on the participation of key stakeholders. Community members in need of better access to food, policy makers, students and consultants will join together as stakeholders, along with representatives from the Lewiston community, the city of Lewiston, local food and nutrition organizations, and local farms. Further details on stakeholders in the development of the UFP is described in Recommendation C: UFP Staffing, and Recommendation D: UFP Methodology and Implementation.

Community Economic Development Perspectives

> *But what is poverty? Poverty is the lack of wealth; wealth comes from land by labor; therefore application of labor to land should and would produce wealth enough for all. Charity organizations and other philanthropic societies are doing what they can to relieve poverty, and one means of doing it is by getting people back to the land. To help people help themselves is the only charity worthy of the name.* --Bolton Hall (Lawson, 2005. p.23).

The above quote captures the most fundamental connection an urban farm has to Community Economic Development (CED). L-A's reason behind developing a UFP reflects this belief.

In implementing the UFP, stakeholders will focus on alleviating the forces that build barriers to disadvantaged populations. It will go beyond programs for personal

development or civic engagement. The UFP will break down existing barriers by focusing on areas of income generation, health, and community cohesion.

The UFP will integrate food production, job creation, and entrepreneurial training into its programs. It will act as an incubator for several other food production and/or value-added production businesses to stem from.

In regards to health, outreach will be tailored to "re-skill" and re-educate the food insecure population in Lewiston so they may "return to their roots" of consuming fresh foods. This has an indirect, yet heavy impact on the local economy because it alleviates financial pressure due to health problems on both the individual and governmental systems.

In a community where a majority of residents come from agricultural backgrounds, very few have land to continue farming. Without land to work on, people do not congregate as frequently. The lack of common workspace has spun into a loss in community cohesion. It is a connection to neighbors that has historically helped families survive economic hardships and not feel that they are "poor." Today, hardships exist, but community systems are weak—making "deep poverty" a reality.

To clearly identify the effectiveness of programs in regards to Community Economic Development, managers must focus on actual resources the farm will provide (Lawson, 2005). However, stakeholders must not lose sight of qualitative outcomes, which can be relayed in personal stories.

The process of developing the UFP must be democratic and arise from community voices, for it to be truly a CED project. As will be discussed, this process has already begun with *Local Food for Lewiston*, a comprehensive Community Foods Assessment, driven and informed by community partners and residents.

III. Literature Review

The motive behind combing through literature on food insecurity in the United States and the work of community farms is to gain a deeper understanding of the more global roots of food insecurity and how others have used the "application of labor to land" as part of the solution in their communities.

Beyond gaining this more global picture, there were two major motives that drove the collection of literature. One such motive was to discover the circumstances surrounding the development, successes, and failures of community farms. This information will help to develop an organizational structure and business plan that ensures a more permanent program in the community that participants, beneficiaries, and the city at large, can depend on.

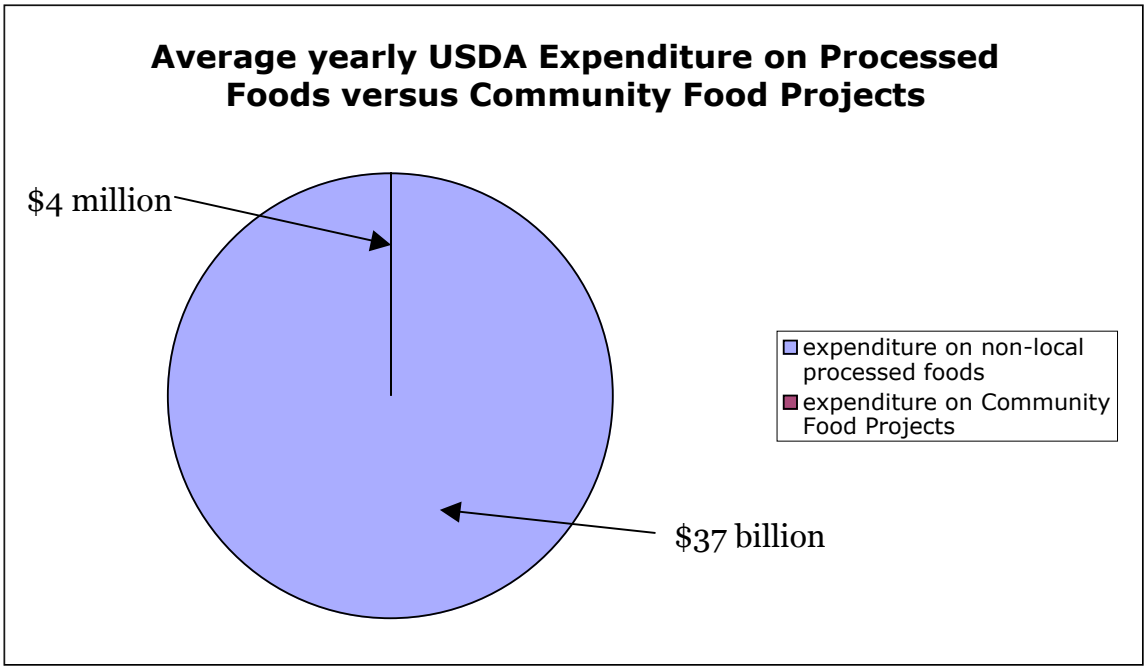
Another reason for a literature review was to develop arguments for the presence of a UFP specifically in L-A. Historical patterns from similar communities with farm projects, along with facts and stories on food security in L-A and beyond, provide useful information when advocating for local, political, and financial support.

As stated earlier, community food security is a "condition in which all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes community self-reliance, social justice, and democratic decision-making (Winne, pg.2)."

How the U.S. is Addressing Food Insecurity

There are fifteen domestic food and nutrition programs administered by the USDA. The largest three are the Food Stamp Program (FSP), the National School Lunch Program (NSLP), and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). The two Community Food-Assistance Providers also run by the USDA are food pantries and emergency kitchens. Of these five largest governmental food security programs, none of them are geared towards community or economic sustainability. Only a small percentage of food used in the programs come from local producers. Approximately 37 billion dollars each year from WIC and FSP (food expenditure only) does not get recycled back into communities (Nord et al., 2008). In contrast, the USDA funds only about twenty Community Foods Projects each year with

about two hundred thousand dollars each (Pothukuchi, 2007).



(Source: Pothukuchi, 2007)

Why a Focus on Maine's Food is Crucial

Individuals living below the poverty line often rely on food assistance programs. A vast majority of these programs do not provide locally grown or locally processed foods. Those seeking relief from these programs make a habit of substituting less expensive alternatives for nutritious foods and skip meals (American Family Physician, 2004). Even in Maine, where canning, root cellars, and other means of preserving foods were means of surviving winters even one or two generations ago, a culture that does not know how to prepare fresh foods now dominates. One of the dangers of this trend is that there is now a heavy reliance on prepared foods that often travel thousands of miles to get to families. Now, with the rising cost of fuel, these foods are becoming more expensive and consumers are losing their access to fresh foods and their knowledge about how to prepare them (A Food Policy for the State of Maine, 2005).

Maine farmers and fisherman receive only 4 percent of the $3 billion dollars their residents spend on food annually (Joint Standing Committee on Agriculture, Conservation and Forestry, 2006). This means that practically all food Maine residents consume are traveling an average of 1900 miles to reach their plate (Joint Standing

Committee on Agriculture, Conservation and Forestry, 2006)—and their neighboring fishermen and farmers are losing income. If a greater percentage of food budgets were spent locally, these funds would be recycled back into the community, addressing poverty, the underlying issue of food insecurity.

Families, cities, and the federal government are struggling, due to our nation's eating habits. Weak food systems and a lack of nutrition education lead to obesity and other diet-related diseases, which lead to family and public financial stress. From 1995 to 2005, there was a 20 percent increase in adult obesity in Maine. The same study showed that 30 percent of high school students are obese or overweight. These numbers are tied to financial stress. As previously mentioned, a recent nation-wide study puts a cost figure of $70.9 billion due to diet-related disease, which includes lost productivity in the workplace (Joint Standing Committee on Agriculture, Conservation and Forestry, 2006). Encouragement to eat local, nutritious foods as preventative health measures would free up some of the $70.9 billion in federal expenditure for other matters of importance, while recycling those funds back into the community.

Some literature suggests that although there have been increased initiatives and awareness as to the importance of consuming local foods, there has been little change in the actions of consumers. A study on the subject conducted in 2002 suggests that inconvenience and ignorance are the greatest barriers to increasing local consumption (Greenberg Quinlan Rosner Research Inc., 2002). However, as stated earlier, reports such as those in Lewiston's Sun Journal find that efforts towards boosting local food consumption is beginning to pay off—farmers and retailers have increased their sales of local, fresh foods (Washuk, 2010).

Community Farms and Gardens

Urban farms and gardens meet many community needs and serve multiple agendas. Throughout history, as the needs have changed, so too have the motives and activities of the farming and gardening programs. However, there has been relative consistency in providing nutritional subsistence, protection, and civic engagement. The recurring themes of community farm and garden programs since the 1890's are nature, education, self-help, and social reform (Lawson, 2005).

Re-introducing nature into the city began in early 1900's. It was to promote gentrification of the city by teaching rural skills to immigrants, encouraging their migration out of the city. Now, urban gardens are seen as beautification projects to prevent people from leaving the city and to increase the value of land. In the 1970's, when Americans started becoming cognizant of issues relating to energy, motives for gardeners and community farmers became more environmentally focused (Lawson, 2005).

Education has also been a consistent theme. In the 1890's, there was a spike in unemployment. This was addressed by offering agricultural technical assistance and land to the urban unemployed. Also, school curriculum was being tied to school gardens, the development of work habits, and civic engagement. School gardens became so widespread and effective that the Federal Bureau of Education devoted an office to it. In 1911, a market-based urban farming program taught "backward or defective boys." This lead to the entrepreneurial programs of today based on production and value-added goods (Lawson, 2005).

Self-help has historically been an underlying motive behind community farming and gardening. Rather than giving food to those with food insecurity, these programs provide opportunities for people to learn ways to sustainably feed their families without relying heavily on social services. A democratic space is often created which brings people of various backgrounds and ethnicities together to work communally and raise the quality of their lives (Lawson, 2005).

Community farms and garden projects are often favorable to government and society during economic, social, and environmental crises. They have immediate results and are relatively inexpensive to run compared to housing, job, or educational reform (Lawson, 2005).

I. Developing Sustainable Community Farms and Gardens

Community Food Projects (CFP) is a term designated by the USDA to projects the agency funds that are "designed to increase food security in communities by bringing the whole food system together to assess strengths, establish linkages, and create systems that improve the self-reliance of community members over their food needs (USDA, n.d.). In an extensive report on USDA funded CFPs, Pothukuchi concludes that combining CFP

strategies along with those "that enroll qualified households into nutrition programs (such as food stamps, Farmers' Market Nutrition Programs, WIC, etc.); training low-income youth to produce food for their families' consumption or for income-generation; and working with local Community Supported Agriculture (CSA) farms to develop "sweat-equity" shares might help reduce the tension between short-term and more sustainable food security." She also makes a point that there is not one single model with which to duplicate a multitude of programs. Each community has its own assets and challenges, and every program must be planned and executed accordingly" (Pothukuchi, 2007).

Community Food Security (CFS) initiatives work to find long-term solutions. Such solutions must be system-based, meaning they integrate all sectors—from the farmers to the policy makers. Solutions must also come from a community-based decision-making process and be implemented by the community to be effective and enduring. "When community development corporations connect neighborhood people to each other and to the programs that are trying to better their community, there is a higher rate of lasting community improvement (Winne, n.d., p.5)."

When developing or re-defining urban farms and gardens, the purpose must be crystal clear. The multiple themes of community farms and gardens, as described above, are a blessing and an impediment to the programs. While the comprehensive nature of the programs address issues in a creative, complete manner, the purpose is often blurred and can be overridden by projects that have clearer objectives. This was seen in the 1890's when playgrounds and urban community gardens emerged simultaneously. While communities and city planners could easily see that child socialization and recreation were the clear purposes for playgrounds, they could not identify clear purposes behind gardens—and the playground overtook many garden plots (Lawson, 2005). However, a project's mission must flexible enough to adapt effectively to changing and unforeseen conditions (Pothukuchi, 2007).

An important point Laura Lawson makes in *City Bountiful*, is that community farms must be portrayed as an end in itself, instead of only a means. They provide space for the development of a democratic process to define a common vision of what the future *should* be; they create nature in the midst of a city made of concrete; and they provide an environment where people develop a sense of individualism and self-help (Lawson, 2005).

Another critical element in developing an urban farm is access to land. Although urban gardening has remained consistent in society for many years, each program is rarely seen as permanent. Projects are often located on borrowed land, with borrowed leadership and are easily affected by the waxing and waning of current crises. When economic crisis ends, the land becomes more valuable and more likely to be put up for sale. When the economy gets better, and there is less of a need for food, nutrition, education and job training, urban farms are often no longer seen as "progress" and the land is prioritized for other purposes. The American Community Gardening Association (ACGA) reports that only 5.3 percent of community gardens in thirty-eight cities owned their land or worked on land in a conservation easement—and that the primary reasons for the loss of garden programs are either a lack of community participation or a loss of land. For these reasons, the ideal land to build community farms on are those under perpetuity, preferably with agricultural easements and managed by a land trust (Lawson, 2005).

After extensive study of successful community farms and gardens, common qualities were found. "Pitchfork ready" plans were often a key to success. These projects had systems and people in place when they began, such as a community kitchens, suitable fields, strong partnerships, and dedicated staff and participants.

Although these programs may be grassroots in nature, they rely on highly organized entities to develop and run their programs. Supportive local, state, and national partners with advocacy, funding, and advising roles are critical (Lawson, 2005).

Other characteristics of successful programs were that they developed and strengthen community-based partnerships, developed innovative, multi-sector approaches, built strong leadership that encouraged the local food network, and were sustainable even after their capital seed funds ended (Pothukuchi, 2007).

In *Building Community Food Security*, participating CFP groups noted that many of their challenges in developing successful CFPs were the same that made them successful—such as developing strong community partnerships and engaging community stakeholders. Other challenges were the following:

- A lack of understanding among community members and politicians as to the need for CFPs when food banks and community kitchens were already available.
- Promising more than they could deliver due to meeting the demands and

desires of funders.

- A need for more than a 3-year funding agreement to develop sustainable programs.
- Vulnerability to weather and seasonal limitations.
- Inadequate critical information on the successes and failures of other CFPs. (Pothukuchi, 2007)

II. Impacts of Successful Community Farms and Gardens

There are many positive impacts of successful CFPs. USDA studies on community-based food system programs have found the following to be their greatest contributions of CFPs, from a community development and an individual perspective. CFPs:

1. Encourage shifts in organizational missions and activities. Agencies supporting traditional "hand-out" programs, such as soup kitchens and food stamps, have begun to realize that without the partnership of other groups and entire communities, these services cannot be effective or have longevity.
2. Encourage and stimulate alternative entrepreneurship. It is understood that even partial-sustainability will not be attained in community food systems unless there are profit-making ventures included. For this reason, most CFPs encourage and stimulate alternative entrepreneurship (Pothukuchi, 2007).
3. Develop physical and organizational infrastructure. The effects of these developments are instrumental to the continued growth of the community in regards to local food systems, but also in regards to many other community development efforts (Pothukuchi, 2007).
4. Fuel public policies, plans, and new government programs. Mark Winne of the Community Food Security Coalition states: "As eaters come to see themselves as more connected to their local communities, economies, and environments, they also are able to ask for public policies that enrich these connections."
5. Create change in youth and adult behavior and leadership. Engagement in community-based food system activities and lifestyles spark behavioral change.
6. Increase the amount and depth of positive connections in communities. These community connections increase food security among low-income families. Research done in Hartford, Connecticut by Dr. Katie Martin found a strong correlation between food security and social capital for families living in poverty (Pothukuchi, 2007).

7. Support local and regional farmers and help keep them on the land. (Pothukuchi, 2007).

"Some of the most important outcomes are a sense of hope in places where hope is often scarce, and the recognition that people really can make a difference by working together. Over time, these Community Food Projects build the skills, relationships, and confidence that make it possible to develop *creative and lasting solutions* to old problems" (Winne, n.d.).

Although demand for emergency food sites are growing in The United States, the issue no longer seems to be given priority in newspapers or on political agendas. Mark Winne, of the Community Food Security Coalition writes: "One can argue that if sufficient compassion for the hungry and impoverished existed today among even a significant minority of the American public, that it would create the political will and public resources necessary to effectively eliminate these problems. Such is not the case" (Winne, n.d.). Research, which looks more deeply at studies and programs that *do* act on compassion for those experiencing hunger must be used to convince individuals and agencies that the underlying reasons for their struggle is of economic, social, and political circumstance—that it is not simply "the hungry's fault." After this is understood, thoughtful action will ensue.

IV. Project Design/Logic Model

Originally, this thesis project was to develop the organizational structure for the development of the UFP, procure seed funding, land, and stakeholders. However, due to a lack of organizational capacity, an extended timeline for completion of the CFA, and reconfiguring the development of the UFP to occur after completion of the CFA, the project design of this thesis was modified. See Recommendation A for the original logic model.

The long-term outcome of the original and current thesis project remains the same: increased health and economic wellbeing for residents of the former Enterprise Community and surrounding neighborhoods of low income in Lewiston-Auburn, Maine.

Intermediate outcomes also remain the same: a) increased consumption of healthy, local foods; and b) increased food-related income generating opportunities.

Returning to our Roots (current thesis project) focuses on some of the short-term outcomes to achieve the above long-term and intermediate outcomes. These short-term outcomes, correlating outputs and activities are shown in the logic model on the following page.

Assessment Logic Model

<table>
<tr><td>Long-Term Outcome</td><td colspan="4">Increased health and economic wellbeing for residents of the former Enterprise Community and surrounding neighborhoods of low income in Lewiston-Auburn, ME</td></tr>
<tr><td>Intermediate Outcomes</td><td colspan="2">Increased consumption of healthy, local foods</td><td colspan="2">Increased food-related income generating opportunities</td></tr>
<tr><td>Short-term Outcomes</td><td>Assessment of the organizational and community capacity to develop and support a UFP in L-A</td><td>Recommendations for development of UFP based on research of community farms in similar communities and studies of local food security and systems</td><td>Political, social, and health-minded arguments via research to support development of a UFP</td><td>Fiscal agent for initial development and funds for assessment phase</td></tr>
<tr><td>Outputs</td><td>Comprehensive written assessment</td><td>Comprehensive project proposal</td><td>Written report</td><td>Fiscal agent; funding</td></tr>
<tr><td>Activities</td><td>Interviews, communication with fiscal agent</td><td rowspan="3">Work as a community partner with Bates College ES course to conduct research</td><td rowspan="3">Work as a community partner with Bates College ES course to do research</td><td>Negotiate fiscal agent agreement</td></tr>
<tr><td></td><td>Research community context, history, potential partners</td><td rowspan="2">Secure funding for assessment</td></tr>
<tr><td></td><td>Work with Androscoggin Land Trust to research land options</td></tr>
</table>

V. Methodology and Implementation

Community Participants / Beneficiaries

At this stage of development, several community organizations and individuals wrote letters of support of the UFP. Others showed their support by meeting to discuss developments and collaborations. Partners include the Nutrition Center, Empower Lewiston, Bates ES, Downtown Educational Collaborative (DEC), The Harward Center for Community Partnerships of Bates College, ALT, Healthy Androscoggin, Maine Farm Enterprise School, Ken Morse of Healthy Oxford Hills, David Hediger, Lewiston's City Planner, and Mark McCommas, Lewiston's Community Development Deputy Director, David Colson of New Leaf Farm, and Gloria Varney of Nezinscot Farm. The groups most involved in the assessment are listed below along with their involvement.

The Nutrition Center and Lots to Gardens of St. Mary's Health System

St. Mary's Heath System is comprised of a 233-bed acute care hospital, community clinical services, one of the largest nursing homes north of Boston, an independent living center, occupational health services, and The Nutrition Center (St. Mary's Health System, 2009). The Nutrition Center is St. Mary's community based organization. The organization "strives to be a community resource and works towards promoting overall community wellness and providing all people with access to nutritious food, the opportunity to learn and implement healthy and safe eating practices, the support to make lifestyle changes that reduce the risk of nutrition related diseases and the ability to promote personal food security through growing one's own food (Nutrition Center of Maine, 2009)." The Nutrition Center is home to The Nutrition Center Kitchen and Classroom. It also focuses on being an agent for policy change and greater collaboration in regards to nutrition at the local, state, and federal level. St. Mary's Food Pantry and Lots to Gardens also falls under the umbrella of the Nutrition Center. Lots to Gardens works with neighborhood groups to capitalize on open spaces and abandoned lots in Lewiston to create community gardens (Nutrition Center of Maine, 2009).

Androscoggin Land Trust

ALT signed a Memorandum of Understanding (MOU) with St. Mary's Health System in January, 2010. The agreement was to define the partnership and outline the working relationship under a contract in which ALT would be reimbursed for their time and

efforts. The MOU stated, "ALT will utilize the funding to conduct necessary research for the acquisition of land use rights in the Lewiston/Auburn area for agricultural purposes. Necessary research will include: a) communication with landowners; b) develop terms of agreement between potential landowners and St. Mary's Health System for use of their land, or provide a template for such an agreement for future negotiation with identified landowners; c) a written report supporting identification of possible farm sites and any other pertinent information (Memorandum of Agreement Between St. Mary's Health System and the Androscoggin Land Trust, 2010)."

Empower Lewiston

Empower Lewiston signed an MOA with St. Mary's Health System in June, 2009. In the MOA was written, "Empower Lewiston as Grantor will disburse federal USDA Round II Enterprise Community funding in the total amount of ten thousand dollars ($10,000) to St. Mary's Health System as Grantee to support the feasibility phase of the Urban Farm proposal (Memorandum of Agreement between Empower Lewiston and St. Mary's Health System, 2009)."

Downtown Educational Collaborative

The Downtown Education Collaborative (DEC) works with the 4 colleges in the L-A area to involve students and faculty in the many initiatives to improve downtown L-A and the lives of its residents. The four schools include: Bates College, Andover College, Central Maine Community College, and The University of Southern Maine L-A Campus (Downtown Education Collaborative, 2010).

DEC agreed to partner in the development of a UFP. At this stage, the work of the Community Foods Assessment naturally converged with the community and organizational capacity assessment—and their findings are integrated throughout this thesis.

Healthy Androscoggin

Healthy Androscoggin, located in Lewiston, is "dedicated to improving the health of all Androscoggin County citizens through collaborative planning, community action, education and prevention (Healthy Androscoggin, n.d.)." The organization has partnered with Lots to Gardens to work on healthy eating programs. In conjunction with a Bates

College student, Healthy Androscoggin also recently published a guide to small farms and food producers in Androscoggin County (Healthy Androscoggin, healthy eating, n.d.).

Bates College Environmental Studies Capstone Course

Bates College Environmental Studies Department engaged students and professors in a capstone course, which entailed comprehensive research to deepen and broaden the scope of this assessment. Juniors and seniors from various concentrations worked together on interdisciplinary projects. The goal of the course from the ES department's perspective was to engage students in collaboration among themselves and with the community to study issues that have local and global relevance. Additional goals, from a more general perspective, were to encourage students' involvement in the community in order to heighten their awareness of what the community and its members have to offer. These interactions naturally encouraged students to become more involved in community activities in this community or in their own.

In conjunction with Assistant Professors Holly Ewing and Sonja Pieck and in partnership with Holly Lasagna, Director of the Community-Based Learning Program at the Harward Center for Community Partnerships, Annie Doran, as a community partner, and DEC, the Bates ES students completed four specific projects, described on page 34 and 35.

Other Potential Local Partners

The New American Sustainable Agriculture Project (NASAP) supports Somali Bantu refugees, Sudanese refugees, and Latino immigrants in developing their own farms and marketing their produce. Lewiston Regional Technical High School, located on the ground of Lewiston High School, trains youth in areas such as automobile mechanics, carpentry, engineering, computer technology, nursing, among other skills. The equipment and space available to these students is rare and a valuable asset to the community.

Long-term Beneficiaries

Long-term beneficiaries of the UFP are residents of L-A experiencing food insecurity or joblessness, and those with a desire to learn skills of growing, farming, business

development, etc. Beneficiaries are explained in more detail under Recommendation D: Methodology and Implementation.

Community Role

Community participation in research conducted by Bates students and by CFA leaders was imperative to the community capacity assessment. Residents with backgrounds and experience varying from Somali refugees to those who are homeless and/or jobless, to young professionals were involved in the CFA. Emergency Food Providers in Lewiston and Auburn were also surveyed. Recommended community roles in the implementation and operations of the UFP will be explained further in Appendix C: Recommendation-UFP Methodology and Implementation (Gannt Chart).

Fiscal Agent

The Nutrition Center of St. Mary's Health System has agreed to be the fiscal sponsor of the Urban Farm Project during its initial years. Suggestions for a fiscal agent for the development of the UFP is explained further under Results: Short-Term Outcome 1: Assessment of community capacity.

Project Staffing

Annie Doran carried out this community capacity assessment, under a contract with St. Mary's Health System. As described earlier, ALT was contracted to aid in researching land use options. Recommendations for project staffing of the UFP are explained in more detail in the results in Recommendation C: UFP Staffing.

Project Implementation

As with the logic model, the original methodology and implementation plans were modified after reconfiguring the development of the UFP. The modified Gannt chart (project implementation on a timeline) is below and the original Gannt chart is in Appendix C.

Assessment Gannt Chart

ACTIVITIES	Jan 09	Feb 09	Mar 09	Apr 09	May 09	Jun 09	Jul 09	Aug 09	Sep 09	Oct 09	Nov 09	Dec 09	Jan 10	Feb 10	Mar 10
Communicate with fiscal agent to conduct organizational assessment															
Conduct community capacity assessment															
Research community context, history, potential partners															
Work with a land trust to attain land															
Work with Bates College ES course to conduct research for UFP recommendations															
Work with Bates College ES course to develop arguments for UFP															
Negotiate fiscal agent agreement															
Secure funding for assessment															

Bates College Projects

As mentioned above, Bates College capstone students became an integral part of *Returning to Our Roots*. The four projects undertaken are described below.

Project 1: Emergency Food Resources, Nutrition, and Availability

In this project with DEC, students were part of a much larger team assessing food insecurity in Lewiston. Students worked with community action researchers (community members taking on an organizing role within the research within their community), faculty from other local schools, and staff from a variety of community organizations to investigate the accessibility and nutritional quality of emergency food available locally. This group was also responsible for finding ways to present the spatial and temporal patterns in emergency food availability. In other words, groups researched the ability of resident to access emergency food and proper nutrition in regards to location and time. This information was collected in part by this group and in part through a survey about emergency food resources that were administered by other Bates' ES students this semester.

Project 2: Access to Government-Sponsored Food Programs

This project, like the first one, is built on the Community Foods Assessment. Here students investigated the broad range of government-sponsored programs that were designed to provide access to food for those in need. Many of the programs that are active were known, yet there was little sense of how extensively they are used or whether they are reaching the people who most need these services. Little was known about either the nutritional profile of the food provided or the extent to which people have access to, or take advantage of locally produced food through these programs. Here again, students creatively made presentations of the spatial and temporal patterns of food availability. Because these government programs and the charity-based programs in Project 1 form a large portion of the safety net we provide in our society, students in these two groups provided key information about the extent, availability, accessibility, and characteristics of this system within our community.

Project 3: Assessment of Food Production Capacity within Androscoggin County

This project investigated the physical, social, and cultural resources available within Androscoggin County to increase food production and connect that food production to the citizens of Androscoggin County. Students were required to find information from

diverse sources and to interact with community representatives from governmental, not-for-profit, and commercial organizations. The group produced an analysis of food-production potential within the county, the key points of which needed to be easily accessible to all stake holders and so may need to be presented in a wide variety of formats.

Project 4: Investigation of Models of Urban Farms

There was a great need for an analysis of various urban farm models in other communities in order for the greater assessment to lead to best practice suggestions for developing an urban farm locally. All potential models were of interest, and considerable work was done to contextualize the findings from other systems. From the research, urban farm planners in L-A will be able hear the differences and similarities in the physical, social, and cultural resources, infrastructure, and constraints that exist in other systems relative to Lewiston-Auburn. This information was provided not just as an analysis, but also as a series of stories that can be used to energize local development of the urban farm.

VI. Monitoring

The project's timeline was influenced greatly by the capacity of the three key organizations involved: St. Mary's Nutrition Center, Androscoggin Land Trust, and Empower Lewiston. The first interruption in the timeline occurred due to delays by staff at Empower Lewiston in communicating with the USDA in regards to whether or not they could fund the UFP. After waiting approximately three months, it was found that the full funding of $80,000 could not be granted. At this point, St. Mary's Nutrition Center could not budget staff time for the UFP. ALT was in a similar position of being overbooked with projects. More importantly, it was understood that the implementation of an Urban Farm should wait until after the CFA was complete, providing the support and documentation needed for such a project. However, research and proposal writing continued. From January through the completion of this thesis project, ALT researched land options and communicated with landowners.

In lieu of continuing on the original path of developing an Urban Farm Project, becoming a Community Partner of Bates Environmental Studies Capstone course was pursued. This work was completed on time, as the college semester dictated.

Monitoring schedule

Activity	Dates	Status	Timeliness	Notes, Explanations, Alternative Actions	Output
Communicate with fiscal agent to conduct organizational assessment	Start: Jun '09 End: Feb '10	completed	late	Late due to delayed process of attaining funding from Empower Lewiston and over-capacitated Nutrition Center	Written report & recommendations
Conduct community capacity assessment via meeting/working with Bates class, community partners, CFA researchers	Start: Sep '09 End: Feb '10	completed	on time	Community capacity assessment will continue with the CFA	Written report in recommendations & results
Research community context, history, potential partners	Start: Jun '09 End: Feb '10	completed	late	Late due to inclusion of CFA research which had a several month delay	Written report in community context, needs assessment, & recommendations
Work with a land trust to research land options	Start: Apr '09 End: Nov '09	completed	late	MOU was signed by fiscal agent and ALT several months behind schedule due to capacity of ALT & Nutrition Center. Research completed by ALT and submitted April 9.	MOA signed by both agencies. Research completed and written report submitted to UFP organizers.
Work as a community partner with Bates College ES course to conduct research for recommendations for development of UFP	Start: Sep '09 End: Dec '09	completed	on time		Research embedded throughout recommendations & sustainability sections. For full Bates capstone project, contact Holly Ewing, Bates Environmental Studies Dept.
Work as a community partner with Bates College ES course to develop political, social, and health-minded arguments for development of UFP	Start: Sep '09 End: Dec '09	completed	on time		Research embedded throughout recommendations & literature sections. For full Bates capstone project, contact Holly Ewing, Bates Environmental Studies Dept.
Negotiate fiscal agent agreement	Start: Jun '09 End: Aug '09	completed	late	Late due to a delayed process of attaining funding from Empower Lewiston & over-capacitated Nutrition Center	St. Mary's Health System agreed to be fiscal agent to start program, with the intent to become own entity within a few years.
Secure funding for assessment	Start: June '09 End: Aug '09	completed	late	Late due to delays in communications with Empower Lewiston (EL) and between EL & USDA	$10,000 for due diligence (research, land options, proposal writing)

VII. Evaluation

The original evaluation plan was modified as a result of the altered timeline of the Urban Farm Project. Below is the plan that includes the work completed for this thesis. For the recommended evaluation matrix for the implementation of the UFP, see Appendix E.

OUTCOMES	INDICATORS	DATA GATHERING METHOD(S)	SOURCE(S)	TIMEFRAME
Long-term Outcomes				
Improved health of participants & consumers	a) 5% lower rate of missed days of work and school b) 5% decrease in doctor/hospital visits due to illness c) 5% decrease in days feeling ill for those without work or school	a) yearly health survey	urban farm participants	three years
Improved economic well-being of participants & consumers	a) 5% increase savings among participants and community member customers b) 5% decrease in food-related expenses c) 5% increased savings due to change in number of sick days	a & b) tax documents & monthly financial logs/surveys c) comparison of logs/surveys overtime	urban farm participants and community member customers	three years
Intermediate Outcomes				
Increased consumption of healthy, local foods	increase of sales in target community by local growers	yearly document review/survey	sales logs/local farmers and urban farm manager	two years
Increased food-related income generating opportunities	15% increase by 2015 in food-related businesses & organizations owned & operated by community members	yearly survey	State of Maine Office of Business Development	two years
Increased production of local, nutritious foods	Increase in vegetable and fruit production on Urban Farm (amount TBD by stakeholders)	yearly document review	farm harvest log	two years
Short-Term Outcomes				
Assessment of the organizational and community capacity to support a UFP	written report	meetings, minutes, strategic planning worksheets	fiscal agent, community partners, CARs & Bates students	one year
Recommendations for UFP based on research of other community farms and studies of local food security and systems	written recommendations	Bates students' capstone reports & presentations	Literature, Bates surveys & interviews, community farms & gardens nation-wide, CARs	one year
Political, social, and health-minded arguments via research to support development of a UFP	written report	research literature, Bates students' capstone reports, attend meetings	Literature, surveys by Bates students, CARs	one year
Fiscal agent for initial development and funds for assessment phase	Signed MOA, $10,000 in funding	document review	MOA, accounting documents	one year

VIII. Sustainability Plan

This chapter outlines how *Returning to Our Roots* creates greater sustainability for a UFP. Specific recommendations for the UFP sustainability plan as it is being implemented and operated are found in Recommendation I.

In the last several decades, the changing political, economic, social, and food-related culture in the United States has made it increasingly difficult for diversified farms to be self-sustaining. Until the current Federal Administration, large subsidies were given mainly to large farms, making it difficult for small, organic farms to compete. Between the marketing and low cost of commodity items and the decrease in the number of small farms, the availability of locally grown food has decreased. The Food Policy for the State of Maine, drafted in 2005, states that, "there is a growing disconnect in the minds of many Mainers between the food they eat, and where, how, and by whom it was produced" (Joint Standing Committee on Agriculture, Conservation and Forestry, 2006). This, along with the low median household income in the target community ($15,002) creates a difficult culture in which to sustain a food-related project. However, in the midst of this disconnect, the fastest growing piece of the United States' food-economy is farmers markets—they have doubled in the last decade (McKibben, 2007). The residents of downtown Lewiston are expressing a desire for change from consuming commodity foods to quality foods; and several small, diversified vegetable farms in Maine are becoming more financially successful. This gives great hope to not only the success of an Urban Farm Project, but to all of Maine's local agriculture.

The work of *Returning to Our Roots* aims to ensure greater sustainability of a future UFP. It approaches the development of a farm project in a comprehensive manner, giving ample time for research and community involvement. Research includes: a close look at the needs of the community from the residents' perspectives, studies of other community farm projects, how the role of social services can play a role in reaching the roots of food insecurity, developing arguments for strengthening the local foods system, best land options for a UFP, and community partner building. All of this research has become a compilation of recommendations for a sustainable UFP.

As a result of research, including that with Bates ES students, many elements for stakeholders to consider emerged. Those of greatest importance are highlighted below.

1. Assessment criteria: From assessing the needs of the community, sustainable solutions to food insecurity were found to be increased job opportunities, decreased racial tension to improve community cohesion, and greater community involvement in developing solutions. Stakeholders should assess each aspect of the project design, based on these three elements to determine if the UFP is addressing root causes for food insecurity.
2. Land use: Historically, the lifespan of many community farms and gardens have been dictated by land use (Lawson, 2005). High value must be placed on acquiring land use that is either in agricultural perpetuity, or under an easement that grants the project longevity. Partnering with a local land trust can help lead a project in this direction.
3. Balanced leadership: If the goals of the project are geared towards creating a sustainable community food system, stakeholders must be conscious of a balance between their control over programs and taking direction from local and interest-based leadership (such as schools, nutrition programs, obesity programs, conservation organizations, planning board, etc.) along with public supporters (city, state, and national agencies, organizations, and local businesses) (Lawson, 2005). In this manner, the initiative will generate wide support and therefore, sustainability. Support will come from on the ground leadership, advocates on a more global level, and varied sources of funding.
4. Democratic development: The particular process being conducted by leaders in the CFS movement in L-A will lead to sustainable solutions. They have begun by conducting a comprehensive community needs assessment, which gives voice to those most in need, and projects their voices to the public, government agencies, and surrounding community organizations. The CFA will be followed by a series of activities that enable residents to be leaders in creating an action plan and implementing it.
5. Clear Mission: The vision of a UFP must have a clear, crisp mission and it must reflect the public's interests. Programs without a clear mission have been stripped of their land and funding when other programs, such as playgrounds—with an obvious and widely accepted mission—have vied for the same space (Lawson, 2005).
6. Employee Longevity: An important finding by Bates students in regards to sustainability of community farms is that all five farms interviewed had more than one year-round position. Rippling Waters noted that it was because

there is too much investment made to train employees to lose them after one season. Many intern positions were seasonal but higher positions were year-round (Friedman et al., 2009).

7. Extended Growing Season: Students highlighted an interview with Woody Woodruff, the Executive Director of Red Wiggler Farm in Clarksburg, Maryland. Woody encourages farms to spread the growing season throughout the year. This will retain loyal customers, provide for food insecure participants and beneficiaries, and will increase overall revenue. Woodruff believes farms may not be sustainable if they do not institute an extended growing season (Friedman et al., 2009).

IX. Results, Conclusions and Recommendations

Results

Originally, this thesis project was to develop the organizational structure of an Urban Farm Project (UFP), which included the following: gather stakeholders, decide on a general structure for the Urban Farm Project, acquire access to land, and procure funding. Towards the beginning of the project, the adjacent assessment, Local Food for Lewiston, was delayed, and the fiscal agent for the UFP lacked capacity to develop the project. Given the circumstances, a more suitable scenario was created—as seen in the logic model. The revised thesis project included a community partnership with Bates College Environmental Studies Capstone students as they conducted in-depth research on the L-A community, local land, other community farm projects, and services provided in L-A in regards to food security. Other activities were also included, as described below and in the logic model. Results of the work with Bates College are embedded in the Conclusions and Recommendations as well as other pieces of this document, such as the Community Needs Assessment. A concise summary of the results is organized into the matrix on the next page and a more detailed description follows.

Summary of Results

Item	Link to Logic Model	Existing Resources	Additional Needs for Sustainability	Positive Impacts of Existing Resources	Negative Impacts of Existing Resources	Location in Thesis Report
Organizational Structure	STO 1. Activity: Interviews, communication with fiscal agent	The Nutrition Center of St. Mary's Health System	Long-term plan for fiscal agent or development of UFP organization.	Stable agency with existing administrative systems, network & reputation	Bureaucratic system slows progress; existing programs would compete with UFP for funding	Part V: Fiscal Agent; Part IX, Short-term Outcome 1 & Short-term Outcome 4
Community Partners; CFS Capacity	STO 1. Activity: Research community context, history, potential partners	ALT, EL, Bates ES Dept, Bates Harward Center, DEC, Healthy Androscoggin, Maine Farm Enterprise School, local farmers	Resident stakeholders, local food advocacy partners, EFP partnerships, more partners such as MOFGA, Co-op Extension, etc.	Good local variety: spanning health, land, educational, farming & environmental, & local enterprise advocates	Primarily local-state/regional partners would be beneficial	Part V: Community Participant and Beneficiaries; Part IX Short-term Outcome 1, C
Land	STO 1. Activity: Work with Androscoggin Land Trust to research land options	10 potential acres within a 12 mile radius; ranging from 11 – 394 acres, some in agricultural easements, others with residential or commercial zoning	*Optimal:* 6-10 acres; water access; long-term use; low/no cost; proximity to dense population & schools. Next step: Communicate with land owners.	N/A	N/A	Part IX: Recommendation F; Part IX Short-term Outcome 1, B
Emergency Food Providers	STO 2. Activity: Work as a community partner with Bates College ES course to do research	12 EFPs in L-A	Integrate local foods, cooking & budgeting classes into programs; would necessitate greater staff time/ knowledge & grants	Meets emergency nutritional needs of community	Creates dependency; most food is not nutritional; food is not local; funding is not recycled back in to community	Part IX, Short-term Outcome 1
Government-Sponsored Food Programs	STO 2. Activity: Work as a community partner with Bates College ES course to do research	Commodity-based: WIC, Commodity Supplemental Food Program, National School Lunch Program. Designed to Incorporate Local Food: Senior Farm Share, WIC Farmers' Market Nutrition Program. Integrate local food by choice: Congregate Dining, Meals on Wheels, SNAP, NSLP	For UFP: establish ties with particular programs & develop joint grants. Work for policies and infrastructure to support change; funds & education to implement; greater involvement of Farm to School Organization	All provide community with a basic need, local food integration has been sparked, some educate re: nutrition	Creates reliance on government and commodity foods; promotes consumption of processed foods	Part IX, Short-term Outcome 1
Sustainable Community Farming Resources	STO 2. Activity: Work as a community partner with Bates College ES course to do research	Network of nation-wide community farms and gardens; many residents with farming/gardening background	Connection to local farmers, nation-wide community/ urban farmers, Cooperative Extension, etc.	Various practices to learn from; many residents are both in need & experienced--an equation for sustainable investment		Part IX: Recommendation- I
Funding	STO 4. Activity: Secure funding for assessment	Empower Lewiston (EL) funds	Seed funds to start project & multi-year funding	Enabled development of assessment, partnership building & proposals	Additional EL funds are not available	Part IX, Short-term Outcome 4; Part IX: Recommendation- UFP Budget

Assessment of the Community Capacity

An assessment of the organizational and community capacity was completed and is found within the context of the Recommendations for the Urban Farm Project. An overall result of this short-term outcome is that the community has the capacity, determination, and need to develop and sustain an UFP. Within the current staffing and structure of the fiscal agent, capacity and funds are lacking. However, stakeholders of the UFP can decide either to incubate the project under the umbrella of St. Mary's Nutrition Center or to create an entity of their own. Recommendations for staffing and funding for either of these choices is found below.

A. Organizational Capacity

Benefits to choosing incubation by the Nutrition Center include:

- The process of incorporating, attaining 501cs status, etc. would be negated;
- Many of the managerial and bureaucratic systems needed would already be in place;
- The reputation and successful history of the Nutrition Center would aid in partnership building and fundraising.

Challenges to being incubated by the Nutrition Center include:

- The existing bureaucracy may slow decision making and actions by stakeholders, and constrict decisions made by stakeholders
- Activities of the Nutrition Center may compete for funding with the UFP.

B. Land Capacity

Community capacity includes land options. The Androscoggin Land Trust was contracted to research potential land sites in proximity to downtown Lewiston and begin communicating with the owners or managers.

Ten sites were researched. Specific names and locations cannot be disclosed as of the time of this writing, yet descriptions of the land and usage options will be discussed.

Key elements in targeting options for land usage were the following:

- Current zoning
- Acreage
- Current open land
- Soil quality

- Neighborhood context
- Proximity to Downtown Lewiston
- Proximity to schools and urban population
- Proximity to public transportation
- Term options and costs
- Restrictions on structures

A range of options was discovered. In the Recommendations section, several highlighted sites are described in more detail.

C. Community Food System Capacity

With respect to the capacity of L-A's community food system to support increased local food production by the UFP, there are a great deal of programs, policies, and initiatives that have been established. This discussion will focus on government-sponsored food programs, Emergency Food Providers, and other initiatives currently in progress.

There are government-sponsored programs designed specifically to provide low-income individuals and families with local, fresh foods. These are Senior Farm Share and WIC Farmers' Market Nutrition Program. Also, Congregate Dining, Meals on Wheels, Supplemental Nutrition Assistance Program (SNAP) and National School Lunch Program (NSLP) enable participants and providers to integrate local food by choice (Grady et al., 2009). Although these programs have played an important role in sparking integration of local foods into government-sponsored programs, the amount of local foods being consumed by recipients is still very low. Senior FarmShare provides only $50 worth of produce to seniors per year—and only during Maine's growing season. Public grade schools in L-A rely heavily on surplus commodity foods, and therefore are not offering many fresh, local foods to children. SNAP recipients are able to use their EBT card at accredited farmers' markets, but the USDA has not made any other efforts to incorporate local foods into the program (Grady et al., 2009).

According to a group of Bates Environmental Studies capstone students, who researched this topic, NSLP has the greatest potential to make connections with local farmers and integrate their food into school meals. In 2009, as a result of a bill being passed in the Maine legislature, a working group was established between the Department of Education, Dept of Health and Human Services, and the Department of Agriculture, Food and Rural Resources to strengthen Maine's farm-to-school program. Also, the

Nutrition director of Lewiston Public Schools expressed great interest in incorporating more local foods into the meals, but does not have the time or resources to do the initial research and implementation (Grady et al., 2009).

The Bates capstone students also found great potential for SNAP to increase access to local foods. They found that the outreach efforts have been successful in educating SNAP recipients and farmers. However, it is expensive for farmers to acquire EBT machines and become accredited providers. Also, there is little financial incentive for low-income individuals to purchase more expensive, local produce as opposed to the subsidized processed foods (Grady et al., 2009).

With political pressure to gear NSLP and SNAP more towards local foods, it would increase the market tremendously, enabling not only the UFP to sustain the farm production but also increase the sales of several other local farms. In fact, if non-committed government agencies were to include local, nutritious foods in their food assistance programs, over 13,000 residents in Lewiston alone and 59% of school children in L-A would have greatly increased access to a healthy diet (Grady et al., 2009.). Additionally, the programs would be supporting the local economy.

Four students from the Bates capstone course researched and wrote: *Accessibility and Services of Emergency Food Providers in Lewiston, ME.* Although the 12 EFPs in L-A play a crucial role in the community by providing food to those in crises, they found many shortfalls. Of the 12 EFPs surveyed, twenty-five percent always had increased demand by recipients by the end of the month and 41 percent had increased demand most of the time at the end of the month. These results, on top of the fact that demand for the EFPs is steadily increasing, suggests unresolved root causes of food-insecurity and is proof that this is not a sustainable system.

There is no guarantee that EFPs are meeting the nutritional needs of their clientele. Eight percent sometimes use nutritional guidelines when preparing meals or boxes, while 42 percent never do, 17 percent mostly do, and 33 percent always do (Grady et al., 2009). One of the major causes of the low nutritional food offered at EFPs was that along with funding many programs, the USDA controlled what food was distributed. A majority of this food was government subsidized commodity food and had a great deal of corn syrup, sugar, and sodium as ingredients (Grady et al., 2009).

Another interesting finding from this study was that half of the EFPs surveyed serve fifty percent of their food to people under the age of 18 (Grady et al., 2009).

The shortfalls mentioned above in regards to EFPs can be fulfilled by a UFP. The UFP will be designed to treat the root causes of food insecurity by teaching people not only how to grow their own food, but how to develop income generating ventures with the food. It will provide the community with nutritious, local foods and education to prepare healthy, inexpensive meals. As noted above, there is a high rate of people below the age of 18 who are seeking assistance from EFPs. From this pool of young people, ideal participants and/or employees will be found—providing the farm with necessary labor and the young people with training for future employment.

The EFPs can play a major role in developing L-A's community food system's capacity by providing outreach for the UFP, advocating for the integration of local foods in their own programs, and educating their recipients of the value of consuming nutritional foods.

Another group of Bates students analyzed various farm models around the country, studying over 150 farms with a web-based analysis and going more in-depth by interviewing five chosen farms. The five farms interviewed were chosen based on a scale that rated farms according to their similarities with the vision of the UFP and similarities in the surrounding communities (Friedman et al., 2009). This research aided in the community capacity assessment in that it highlighted characteristics that would greatly increase the chances of a successful UFP. Seven of these characteristics are described below along with a correlating assessment on L-A's capacity to develop them.

1. Decentralized system: Research found that farms were more apt to succeed if they began as a community effort rather than beginning with a centralized system and later distributing responsibility to the community. However, it was found that larger farms seemed to need a centralized structure to address budgetary and outreach needs, yet this does not necessitate great hierarchy. L-A's potential for a decentralized structure with components of a centralized system is very strong due to the precedence the CFA has set in involving the community in an in-depth study of their nutritional needs. The charrettes to follow will further involve the community in developing ideas for solutions to the food insecurity.
2. Natural/organic food is for everyone: Reversing the myth that natural/organic food is just for the "elite" will encourage people of all socioeconomic status to

seek this food. The demand will push local farmers to connect with the urban population, increasing access to healthy, local food. However, the food must also be affordable. Lots to Gardens of St. Mary's Health system has begun to reverse the "food elitist" trend by engaging downtown residents in their community gardens and other food-related events. When demand in urban Lewiston increases and farmers can sell a great deal of their produce at the market, prices can fall. Also, the UFP can create programs to make the food more affordable by trading labor, connecting with EFPs, etc.

3. Overcoming access constraints: A lack of transportation, and the time and finances for getting or growing and cooking food has been cited as an important factor in decreasing food insecurity. Currently, a majority of Lewiston residents living in poverty reside within walking distance to EFPs. The public transportation within Lewiston and across the river to Auburn is decent, yet does not run on weekends. However, one of the few places to access fresh, local foods is from June through October in downtown Lewiston at the Kennedy Park Farmers Market. Seniors living below the poverty line are also eligible to receive Senior FarmShares delivered to their homes (a value of $50/year per person). In terms of financial constraints, local farm produce and value-added foods are generally more expensive than subsidized commodity foods, making it difficult to afford the more nutritious option. The CFA is completing research focused on these needs and the charrettes (community-wide strategic development forums) will create a process of solving ways to overcome them. Collaboration with EFPs and government-sponsored food programs will be key in providing people with food insecurity the knowledge and access to eat local, nutritious foods. The Urban Farm can act as an agent for this change; can provide affordable food to the community, and a place for the community to grow it.
4. Community-oriented programs: Integration of community-oriented programs was found to be yet another component increasing the success of community farms. Such programs may be Farm-to-School, school-based education programs where math and science happen in the field or garden; profit share among teenage participants for financial management, marketing, job training skills; and various workshops. The Nutrition Center has begun carrying out programs such as cooking classes, workshops, and job training skills for young people. It has also formed a connection with Farm to School. There are also several schools in the area interested in developing their own school garden.

5. Publicity methods: Using a wide variety of publicity methods along with creating a strong logo was recommended (Friedman et al., 2009). The Nutrition Center and Lots to Gardens has generated a stable community network that disperses information through printed material, emails, PR, and word-of-mouth. If the UFP were to be developed under the Nutrition Center's wings, this resource would be available to them. One of the downfalls to this option is that every piece of information to be dispersed must be submitted and accepted by a media manager at St. Mary's, which at times delays progress. Of the 150 community farms and gardens researched by Bates students, the following advertising strategies were found: newspaper articles, websites, word of mouth, press releases, fundraisers, personal relationships with community, door-to-door campaigns, flyers, barbeques, pronounced logo and color scheme on all flyers, online networking (blogs and Facebook), community events for certain holidays or special days, newsletters, and farm tours (Friedman et al., 2009).
6. Partnerships: Partnering with existing supplemental programs, such as MOFGA (Maine Organic Farmers and Gardeners Association), Co-operative Extension Services (USDA), Lewiston Regional Technical Center, among many others, as a means of providing knowledge and employment resources may improve sustainability to the UFP (Friedman et al., 2009).
7. Creative solutions: Implementing creative solutions to overcoming the challenges to accessing suitable land for growing was a common theme among many community farms studied. The solutions ranged from vertical growing to aquaponics, to heating greenhouses with chickens to extend the season. These options are explained in more detail in the Sustainability section. It will be up to the stakeholders to decide which methods to use and will depend on the land available, demand, other resources; and most of all, the willingness of stakeholders to experiment (Friedman et al., 2009).

A positive impact resulting from completion of a community capacity assessment is that it raised awareness among community partners, the fiscal agent, and other residents of L-A of the benefits to an Urban Farm Project. After a process of communicating with the Androscoggin Land Trust, a valuable entity in the community, they became invested in this work. The assessment also sparked a buzz that will continue into the work of the CFA and charrettes to make action plans. It also shed brighter light on St. Mary's Nutrition Center in regards to their current lack of organizational capacity to incorporate

another program into their work. It was recognized that a process of reorganizing and hiring would need to occur for them to incubate a UFP.

Although awareness was raised through the assessment about benefits a UFP could bring to the community, the timing may have been better had it occurred after the CFA was completed. In this manner, there would be a clear line drawn from the voices and needs of the residents of downtown Lewiston of their desire for this project. The idea for a UFP was still sparked from a community request, but it was more informal and less documented.

Recommendations for the Development of a UFP

The comprehensive project proposal was completed. It is found in the recommendations below and is embedded in the Community Context, Problem Analysis, Literature Review, and Sustainability Plan. Partnering with Bates capstone students and integrating their research into the thesis enriched the proposal.

The positive impact of the process of developing recommendations was greater than the actual end product of a series of recommendations. The process involved communicating with several local organizations to gather their ideas and interest. Bates College ES capstone students and their professors were integral to the in-depth research crucial to a strong project plan. Students' awareness was raised about how their efforts and learning can be integrated into a comprehensive *action*-oriented plan for the community. This seemed to propel them to place greater value on and pursue their research in a more professional manner. It is a hope that it sparked interest in many students to pursue similar work in the future.

As mentioned previously, the timing may have been better if this portion was developed as a continuation of the CFA and involved CFA participants to a greater degree. However, this material can be used to spark interest in downtown residents and give them ideas from which to build.

Political, Social, and Health-related Arguments

Returning to Our Roots is rich with arguments—on political, social, health-related, and local levels—for the development of an Urban Farm Project. Again, the activity of working as a community partner with Bates College capstone students increased the depth of these arguments and their work is found throughout this thesis.

As written in *The Community Farm: Analysis of Farm Models Throughout the Nation*, "In neighborhoods facing financial hardship and food insecurity, building a sense of community is an invaluable goal as it promotes unity and helps to solve common problems (p. 6)." It is an end and a means in itself, solving many families' situations of hunger while also providing space for strengthening communities and democracy.

There are many arguments aligned more towards community planners and residents not involved in the project. One such argument is that empty lots breed drug dealing, generate crime, and often prostitution. On the contrary, farm and garden lots produce community space, productive and healthy use of land, decrease crime, and increase property value. In a study of the Bronx gardens, it was determined that each garden in the neighborhood generated $512,000 in tax benefits over 20 years. This greatly exceeded the cost of keeping up the gardens (Friedman et al., 2009).

The CFA is continuing to develop deep arguments from a community perspective and will advocate for change based on these needs. This thesis did not hold focus group meetings to develop a community needs assessment because it would have created duplication. Pieces of the CFA as of March, 2010 are included in this thesis.

Fiscal Agent and Funding

As part of this project, an MOA was signed with St. Mary's Health System as the fiscal agent with an understanding that it would become its own entity after initial developments. Although currently the organization does not have the capacity to host a UFP, the process of writing an MOA gathered strong support from administration.

Funding was secured to cover the assessment, proposal writing, partner building, and land research. After a series of presentations, conversations, and meetings with Empower Lewiston, they granted $10,000 to the project. Initially, $80,000 was requested. However, per order of the USDA, funds beyond those for due diligence were

restricted for projects outside the bounds of the Lewiston Enterprise Zone (census tracts 201 & 204). Since there are no adequate sites within these two census tracts for a UFP, the full request was not granted. Other sources were not sought due to the timeline change for the actual UFP implementation. Although the full $80,000 would have enabled the project to develop a stronger foundation, it was beneficial to push the timeline back until the CFA is complete. However, the process of requesting funding was positive in that it raised awareness and unanimous support among board members of Empower Lewiston, who have a history, and future, of personal and professional investment in L-A.

Conclusions and Recommendations

Prospects of Attaining Intermediate and Long-Term Outcomes

This thesis work is a partial step in attaining the long-term and intermediate outcomes. The project not only gathered materials for a proposal, but gathered support from community partners.

The long-term outcome of increased health and economic wellbeing for residents of the former Enterprise Community and surrounding neighborhoods of low income in Lewiston-Auburn, Maine will take years of dedication and community-wide efforts to achieve. Issues relating to poverty are created by a wide variety of problems, such as urban development, immigration, resource capacity, governmental capacity, civic development, social welfare, public education, and social policy (Local Foods for Lewiston, 2008). Therefore, solutions must be comprehensive, include all sectors of society, and be geared towards capacity building. Major steps will be taken when an efficient, effective community foods system is in place and the community is educated in terms of cooking, nutrition, and local foods. The Urban Farm Project along with other community organizations will advocate for this system to be established and will implement programs towards its sustainability through community involvement.

The intermediate outcomes of a) increased consumption of healthy, local foods; and b) increased food-related income generating opportunities, will be achieved once the UFP is implemented and sustained by the community. The written reports generated by this

thesis project provides the community with materials, recommendations, and a set of community partners to help generate the support necessary to make the UFP a reality.

Currently, the Community Foods Assessment is building steam from the ground-up to support projects such as the Urban Farm. The assessment is giving voice to downtown residents. Next, it will hold charrettes to discuss potential solutions, working towards decreasing food insecurity in L-A. It is the hope of those involved in the CFA that positions will be created that are dedicated to working with participants to transform these solutions into community-implemented projects. It is the hope of many individuals and community partners that the UFP will be one of the solutions chosen.

Sustainability and Replication

Sustainability of a UFP rests of the ability to create a strong community foods system—and this cannot be done without a wide variety of groups being involved. A strategic plan must be developed in partnership with individual stakeholders from L-A, local, state, and federal agencies, along with special interest groups whose mission is harmonious with the UFP. This assessment has sparked these partnerships. However, a strong outreach component must be created when developing a UFP to strengthen the partnerships, and gather wider collaboration.

The farm itself must also install means of financial sustainability. This aspect is discussed in Recommendation I: Sustainability Plan.

There are many community food projects being implemented and sustained in communities similar to L-A. Leaders and participants in the UFP have been and will continue to learn from those already in progress, to create some replication yet remaining flexible to adapt to our individual community's needs. It is the hope that given the quality of research and in-depth community assessment leading to implementation, this too will be a project than can be replicated in similar communities. Documentation of the process will be undertaken to do so.

Personal Thoughts

A great deal of my challenges as a CED practitioner in the past has come from the struggles to break the cycle of dependency that has been developed in many cultures due to government and NGO practices. My greatest learning throughout the project came while observing the process of the Community Foods Assessment. I saw it as a powerful tool to raise the voices of the community, gather investment, and guide the community to understand their role in creating change. It gives me hope that with thoughtfulness and patience, this cycle of dependency can be broken.

My most hopeful moment in the project was while listening to the Community Action Researchers of the CFA speaking of their findings during focus group meetings. Several people of diverse backgrounds were sitting around the table truly listening to each other's struggles and the reported struggles of the community. A Somali CAR told a personal story of when she came to the U.S. and kept pressing buttons on the microwave, thinking it produced food. Then the CAR who spoke with homeless individuals told of the details sometimes missed while attempting to "help"—such as not providing can openers. All of these stories had a similar thread: a need for food and an untapped potential of the community to feed itself. This need spreads across all socio-economic, cultural, and racial backgrounds; and the feeling that there are not enough resources for everyone creates tension across the spectrum of community members. However, this thread of food insecurity can weave individuals of differing backgrounds together to not only provide their community with food and a source of health, but also create work and responsibilities they can be proud of.

As a CED practitioner, it was validating to work with the Bates ES students to see their excitement in working directly with an underprivileged community, and their hope that their involvement in this project would propel a UFP forward. My disappointment in the project was that I was not as involved directly with the community myself in implementing a UFP structure. Initially, this was the plan. However, after funding from EL did not come through, the project became more of an assessment—necessitating some distance so as to not get the hopes of the community high for a project that may not occur within the near future.

An Urban Farm Project will be developed in coming years. It will be the natural progression stemming from CFA discussions about what the *community* can do, rather

than what should be done for the community. Most importantly, it will be powered and sustained by the will, sweat, and solidarity of the community. I look forward to being a part of this process.

Recommendation A: UFP Logic Model

A recommendation for the Urban Farm Project logic model is found in the following page. Stakeholders may use it to develop a new logic model and to gather ideas from. There are several numbers omitted from the existing logic model, currently showing "XX." These numbers will be decided upon by stakeholders as they choose the direction and goals of the project.

Long-term outcomes	increased health and economic wellbeing for residents of the former Enterprise Community and surrounding neighborhoods of low income in Lewiston-Auburn, Maine.							
Inter-mediate outcomes	Increased food security through production, accessibility, affordability, and knowledge of food and nutrition.							
Short-term outcomes	increased people resources and community investment	increased availability of land for programs usage	Increased community food stability knowledge, market, and how to make food more affordable and accessible	a) increased access to affordable, local fresh foods b) increased knowledge of how to access food c) increased means to sustain project.	increased knowledge among community in creating a sustainable food-related business	increased knowledge of benefits of eating local, fresh foods and how to do so affordably and efficiently	increased resources and healthy food returning to community	a) increase availability of local, nutritious food b) increase knowledge of growing food
Outputs	a) XX# invested participants with roles and responsibilities b) direction to develop project	usage of 6-10 acres of agricultural land in L-A	Market Plan	a) increased consumption of local, fresh produce by 60 families b) funds from sales of produce covers 25% of budget in 2010, 50% of budget in 2011, 80% budget in 2012 c) build customer base	educate XX# participants in food-related entrepreneurship	educate XX# participants from the community in nutrition/ cooking/ budgeting education	a) XX# community members involved in entrepreneurial ventures; b) participants increase income by XX% c) venture is sustaining itself by XX% in 2010, XX% in 2011, XX% in 2012	a) X# acres is prepared and planted b) XX# community members involved, c) XXlbs. vegetables harvested in 1st production yr
Activities	a) outreach to stakeholders b) meetings to define structure of project roles	work with ALT to attain long-term land usage	a) gather info from CFA b) create food access and market plan	Market and sell produce following market plan	Research, design and execute farm, and food-related entrepreneurial education programs	Perform outreach to Nutrition Programs to include Urban Farm Project and participants	Create and run programs following sustainability and entrepreneurial plan	a) create crop planting and harvesting plan based on CFA and survey results b) prepare land for cultivation, grow and harvest food
Inputs	Development Coordinator & stakeholders	Meetings and time from develop-ment coordinator & ALT	development coordinator, stakeholders, ALT, survey forms, community members to survey	retail/wholesale license, market plan, sales supplies and equipment, farmstand (?), tent, tables, sales associates, vehicle, marketing materials, stakeholders to market, funding	stakeholders business consultant, survey and CFA, ed. program supplies & materials, space for programs, suitable kitchen, farmland, growing/ harvesting supplies and tools.	time of development coordinator and initial stakeholders	Program managers/ coordinator & participants. Other possibilities: produce from farm and other sources, licensed kitchen, individual program market plans, truck, equipment, etc.	a) Crop planting guide software, CFA, survey results, land and soil test results; b) min. 6 acres, hoop-house, toolshed, irrigation system, farm tools & equipment, compost, cover crop seeds, other supplies, labor

Recommendation B: UFP Vision

The vision of an Urban Farm Project is to create a sustainable structure that encompasses increased production of local food, access to nutritious food, production-related enterprise opportunities, education programs related to food and farming, and a stable distribution network. To be a sustainable, community project, it must be planned and operated by L-A community members.

The first piece of the Urban Farm Project will be to create a space for growing food either as for-profit enterprise projects or non-profit community food projects. The multi-use space will provide opportunities to share across cultures while cultivating the land and also will become a source for affordable, nutritious food to the local community. Growing fresh food and making it accessible is just the first step towards improving personal and public health: we have to ensure that recipients of the food have the necessary resources and knowledge to use it.

The second piece of the Urban Farm Project will be to partner with nutrition and cooking classes provided by St. Mary's Nutrition Center of Maine and other willing organizations to include more participants from the community. This piece of the project will not only teach participants how to affordably feed their family and how to prepare healthy meals but it will also serve as a marketing tool for the farm, building a customer base that is excited about supporting local farmers and purchasing fresh produce.

The third piece of the project will be to provide local organizations and schools an outdoor classroom space. This space will bring more people to the farm as well as host workshops that foster creative learning and deepen participants' knowledge of food systems, composting, energy and environment, and more.

To provide an initial structure for research to be completed, the following basic goals for an Urban Farm Project have been determined. These goals were developed by a group of local leaders, from St. Mary’s Nutritional Center in downtown Lewiston, individuals working and residing in Lewiston, and Annie Doran. These goals may change as research is completed and community stakeholders begin working together.

1. URBAN LAND AS A RESOURCE: Create a physical space to be a resource for increased local food production, hands-on education, and enterprise projects.
2. ACCESS TO FRESH FOOD: Create access to affordable local foods to those most vulnerable to food insecurity, with a focus on residents of the former EC.

3. SUSTAINABLE MODEL: Create a sustainable local food production, distribution and educational model for the Lewiston-Auburn area.

Key stakeholders from the community will decide the structure of the Urban Farm Project. It will be geared towards meeting the urban land as a resource goals (production, education, enterprise) as well as providing access to affordable local foods through the creation of a sustainable model which provides opportunities to learn how to use the food (distribution/nutrition education). Upon commitment to the project, a series of meetings will take place in regards to developing the structure of the Urban Farm Project. Meetings will include the following:

- Creating rules and process of decision-making.
- Discussing participant assets and needs.
- Revisiting and revise goals.
- Deciding the structure of the Urban Farm including land use and management.
- Creating programs that meet the intended goals.
- Developing roles and responsibilities of stakeholders.
- Developing evaluation criteria, process, and choose evaluator.

<u>Recommendation C: UFP Staffing</u>

Staffing and management positions for the L-A Urban Farm Project will be decided upon during meetings held with stakeholders. Below is a list of possible positions, but other possibilities may be created during the meetings.

A. Advisory Board & Lots to Gardens Staff
B. Development Director
C. Programs Manager
D. Farm Manager
E. Community Coordinator
F. Food Access and Distribution Coordinator
G. Education Coordinator
H. Farm Members
I. Youth Apprentices
J. Volunteers
K. Other Apprentices

A. Lots to Gardens' staff and advisory board will give guidance to the project's activities. The advisory board is made up of community gardeners, parents of youth involved in Lots to Gardens' programs, faculty at Bates college, employees of local non-profits working with youth, and many more.

B. The Development Director will a) work with stakeholders, managers, and staff to create the project development plan and the organizational management plan; b) organize structure around ongoing development decisions with stakeholders; and c) plan and execute fundraising activities.

C. The Programs Manager will coordinate programs and organize farm labor with the Farm manager, which includes organizing volunteers, farm members, and youth apprentices.

D. The Farm Manager will be responsible for planning and executing a sustainable farm plan, researching and implementing best practice, procuring farm tools, equipment and supplies, and finding suitable consultants when needed.

E. The Community Coordinator will perform community outreach to recruit members of the farm, volunteers, and apprentices. They will also help organize fundraisers and other events along with perform manual labor on the farm.

F. The Food Access and Distribution Coordinator will direct the marketing and sales aspects of the farm, with focus on how to distribute the produce affordably to food instable community members. This will entail working with the community to create roles, responsibilities, and schedules for those involved in the sales and distribution.

G. The Education Coordinator will work directly with youth apprentices to carry out educational workshops for school groups, community groups, farm members, etc..

H. Farm Members will commit a chosen number of hours per week to the project. They will have a choice of which general activities they would like to be involved in (i.e. farm labor, farmers market sales, distribution, or education). In return for their work, they will receive a family share of produce. Stakeholders will choose criteria (such as residence, family income, etc.), which farm members must meet to participate.

I. Youth apprentices will fulfill a variety of roles such as farm research and

planning, labor for growing and harvesting, organizing and teaching workshops, and conducting sales.

J. Volunteers will be needed for a variety of responsibilities such as farm labor, construction of buildings, tool and equipment servicing, website development, and produce sales and distribution.

K. Other apprentices such as Americorps/Vista volunteers and MOFGA (Maine Organic Farmers and Gardeners Association) apprentices will support the farm manager and coordinators. Like Youth Apprentices, they will perform a variety of duties, but their responsibilities may be greater.

The Farm Manager and Programs Manager may be one person if substantial support for the position is solidified. Also, one person may fulfill two or three of the following jobs: Community Coordinator, Food Access and Distribution Coordinator, and Education Coordinator. Americorps/Vista volunteers, MOFGA apprentices, or Lots to Gardens staff may fulfill these roles. However, preference will go to local community members.

Other individuals and groups likely available to fulfill much of the personnel, contractual work and farm labor are the following:

- community members
- experienced local farmers
- participants in workshops given by the project
- participants of the Downtown Educational Collaborative in Lewiston
- interns from local colleges such as Bates and community colleges in the Lewiston and Auburn area

Recommendation D: UFP Methodology and Implementation

Appendix C depicts the activities, outputs, and timeline recommended to efficiently implement the UFP. The work does not stop at the end of the Gannt chart. The outputs achieved in the initial 23 months will enable the project to continue in a sustainable manner.

I. Community Participants

Beneficiaries will mainly be Enterprise Community residents experiencing food insecurity and/or joblessness with a desire to learn any or all skills relating to growing and cooking food, farming, entrepreneurial business development, etc.

Managing stakeholders in the project will come from L-A, including the EC. Some may have been previously involved in Lots to Gardens programs, will have shown an interest in developing their farming and/or organizational skills, and have financial need. However, it is expected that many people who have not been previously involved in Lots to Gardens will step forward and become involved.

Many participants of programs offered by the Urban Farm and those purchasing or receiving food will most likely come from the EC. However, it will not be limited to these neighborhoods. A variety of groups and institutions, found in and out of the EC make up the broader target community, including the following:

- Senior residents eligible for the SeniorShare program (age 60 and above or 55 and older if they are Native American with a maximum income of $19,240 per year for a one-person household or $25,900 per year for a two-person household (Maine Nutrition Network, 2004).
- Public and private elementary, middle and high schools in Lewiston/Auburn may be involved in education programs and/or Farms to Schools. There are 20 public and 9 private elementary, middle and high schools. Depending on the location of the farm, 1-2 of the schools may be within walking distance.
- College/University faculty and staff and PTO members of the local public schools.
- Participants in the Nutrition Center cooking and nutrition classes, currently in progress in Lewiston.
- Current and past participants of Nutrition Center programs.

Recommendation E: UFP Budget

The summary of a proposed UFP budget for years 1, 2 and 3 is found below, followed by a corresponding detailed budget. These estimates are based on information gathered in 2009 and 2010. This is simply an initial budget with which stakeholders can base decisions off of when developing the project structure and activities.

UFP Budget Summary Years 1-3

Item	Year 1	% Yr 1	Year 2	% Yr 2	Year 3	% Yr 3	Total	% Total
Capital Items	$33,920	42%	$700	1%	$250	1%	$34,870	21%
Personnel (wage and fringe)	$22,780	29%	$31,920	62%	$21,280	56%	$75,980	45%
Contractual	$7,850	10%	$1,250	2%	$750	2%	$9,850	6%
Farm Production-Fixed	$500	1%	$2,100	4%	$2,170	6%	$4,770	3%
Farm Production-Variable	$5,525	7%	$8,300	16%	$8,685	23%	$22,510	13%
Fundraising	$800	1%	$1,250	2%	$800	2%	$2,850	2%
Education	$1,200	2%	$1,350	3%	$350	1%	$2,900	2%
Overhead	$7,257.5	9%	$4,687	9%	$3,428.5	9%	$15,373	9%
Total Project Budget	$79,833	100%	$50,857	100%	$37,464	100%	$169,103	100%

UFP Detailed Budget Years 1-3

Capital Expenses- Detail	Year 1	Year 2	Year 3	Total
Greenhouse materials incl. heating & ventilation structure (48' x 30')	8,000	0	0	8,000
Irrigation Infrastructure (dependent upon site)	12,000	0	0	12,000
Work/tool barn (materials only)	1,500	0	0	1,500
Composting Toilet	1,800	0	0	1,800
Restroom building (materials only)	600	0	0	600
Trees and berry bushes	500	500	250	1,250
Washing station (materials)	200	0	0	200
Signs (materials)	250	0	0	250
Demonstration beds (material only)	600	0	0	600
Rear-tine rototiller	1600	0	0	1,600
Hand tools	1000	200	0	1,200
Push gasoline lawnmower	300	0	0	300
Tables for greenhouse (material only)	750	0	0	750
Fence posts	1500	0	0	1,500
Solar battery energizer for electric fencing	420	0	0	420
Garden carts & Wheelbarrows	1800	0	0	1,800
Folding tables	600	0	0	600
Coolers	500	0	0	500
Total	33,920	700	250	34,870

Personnel- Detail	Year 1	Year 2	Year 3	Total
Development, Planning and Coordination (640 hrs total)	7200	2400	640	10,240
On-farm education development (60 hrs. total)	320	320	320	960
Fundraising planning and development (220 hrs. total)	2400	800	320	3,520
General Outreach (70 hrs. total)	640	320	160	1,120
Nutrition education outreach (40 hrs. total)	480	160	0	640
Partnership Development (60 hrs. total)	640	320	0	960
Land preparation (400 hrs. total)	800	5600	0	6,400
Food access and distribution (340 hrs. total)	3200	1600	640	5,440
Farm and programs managers (2200 hrs. total)	5600	14000	12800	32,400
Youth apprentices	1500	6400	6400	14,300
Total	22780	31920	21280	75,980

Contractual- Detail	Year 1	Year 2	Year 3	Total
Business consultant (20 hrs. total)	300	100	0	400
Farm consultant (40 hrs. total)	400	400	0	800
Evaluator/monitor (60 hrs. total)	500	500	500	1500
Equipment operator for custom work	250	250	250	750
Builders	6400	0	0	6400
Total	7850	1250	750	9850

Recommendation F: UFP Land Options

We are currently working with the Androscoggin Land Trust (ALT) to develop a plan to secure land. Brief descriptions of recommended sites to choose from are below, with names of the sites omitted for discretionary purposes. Recommendations are based on a set of criteria elaborated upon in the Results: Sort-term outcome 1.

Option A

- Current zoning: Agricultural (AG)
- Acreage: 29 acres
- Current open land: 15 acres
- Soil quality: Approx 55% State Significant & Prime Soils; 45% Locally Important Soils
- Neighborhood context: outside of downtown, in industrial area
- Proximity to schools and urban population: near private school and community college
- Proximity to Downtown Lewiston: Approximately 2.5 miles
- Proximity to public transportation: on bus line
- Existing land usage: Existing farmhouse and barn on land
- Term options and costs: TBD
- Restrictions on structures: TBD
- Other: Existing agricultural land on good agricultural soils; conserved land; near existing farmers market

Option B

- Current zoning: Rural Residential (R1)
- Acreage: 20 acres
- Current open land: 0 acres
- Soil quality: Approx 65% Locally Important Soil (Sutton Very Stony Loam 0-8% if stones removed); 35% Statewide Significant Soil (Hollis Fine Sandy Loam 8-15%)
- Neighborhood context: In Urban area outside of Downtown Lewiston
- Proximity to schools and urban population: near grade school
- Proximity to Downtown Lewiston: Approximately 2.5 miles
- Proximity to public transportation: on bus line
- Existing land usage: Vacant forested land
- Term options and costs: TBD; owner may be looking to sell.

- Restrictions on structures: TBD
- Other: Currently parcel is completely forested; potential for 13-14 agricultural land; is currently parceled into 1 acre lots; timber and 2-3 house lots could be potential income for farm with initial investment.

Option C

- Current zoning: Residential, Two-Family (R2)
- Acreage: 65 acres
- Current open land: 50 acres
- Soil quality: Approx 75% Statewide Significant Soils (multiple types); 25% Locally Important Ag Soils (Hartland Very Fine Sandy Soil 8-15%)
- Neighborhood context: In Urban area outside of Downtown Lewiston; near conserved land
- Proximity to schools and urban population: near public elementary school
- Proximity to Downtown Lewiston: Approximately 2 miles
- Proximity to public transportation: on bus line
- Existing land usage: Active agriculture (hay)
- Term options and costs: TBD
- Restrictions on structures: Ag support structures only
- Other: Consultation with current farmer is critical; ALT has been actively attempting to contact landowner for further information.

Option D

- Current zoning: Agriculture (AG)
- Acreage: 392 acres
- Current open land: app. 100 acres
- Soil quality: Approx 44% Prime and Statewide Significant Soils, 30% Locally Important Soils
- Neighborhood context: in rural area
- Proximity to schools and urban population: 5-6 miles from Lewiston Public Schools and Lewiston urban area.
- Proximity to Downtown Lewiston: 6 miles
- Proximity to public transportation: not proximal

- Existing land usage: app 20 acres is currently used by another community project; other open land is hayed
- Term options and costs: TBD
- Restrictions on structures: Property is controlled by Agricultural Conservation Easements
- Other: most likely a lease option

Option E

- Current zoning: Low Density Residential Districts (LDR)
- Acreage: 215 acres
- Current open land: 40 acres
- Soil quality: Approx 25% State Significant & Prime Soils; 50% Locally Important Soils
- Neighborhood context: just outside of
- Proximity to schools and urban population: app. 4.5 miles from elementary school; app. 2-4 miles from dense population including low-income housing
- Proximity to Downtown Lewiston: app. 5 miles
- Proximity to public transportation: not in close proximity
- Existing land usage: Active agriculture (hay) in fields; forestry in woods
- Term options and costs: TBD
- Restrictions on structures: none known
- Other: House on property has utilities; good agricultural soils coincide with current open land

<u>Recommendation G: UFP Monitoring</u>

Monitoring will be an important piece in the development and ongoing operations of the Urban Farm Project. All stakeholders, including community members, staff, and the development director will conduct the monitoring. Stakeholders involved in the development of the project will create the final monitoring matrix, based on the logic model, Gannt chart, and workplans they draft to design the overall project structure. To ensure maximum investment by the community, the following must be monitored in regards to involvement of and direction by stakeholders:

a. design project structure, roles & responsibilities
b. prepare land for cultivation
c. design, purchase, and build infrastructure and buildings
d. hire farm managers, marketers, apprentices, etc.
e. design education programs
f. plan 2010 growing season
g. grow produce
h. sell produce

Appendix D is a sample of what may be included in the matrix. Monitoring will be conducted at monthly core-stakeholder meetings through the first growing season. The third party evaluator will review documents created by the core-stakeholders. Data will be collected and included in the final project report.

Monitoring will help to keep the project moving forward efficiently and in a timely manner. It will also help to ensure that the project is focusing an effective process to build invested stakeholders and create a positive impact on the community.

Recommendation H: UFP Evaluation

A recommended evaluation guideline is found in Appendix E. As with the other appendices, this information has been created as a tool for stakeholders to use when creating evaluation guidelines tailored to their specific development process, programs and activities.

Recommendation I: UFP Sustainability Plan

The goal of the project is to fully sustain the farm production activities with the sale of produce by year 3. After this, donations and grants will be accepted only for educational activities, research, and significant farm purchases. The project will rely on in-kind gifts from community members to achieve this goal such as time and land usage. The project will create sustainability within itself and provide skills for sustainability to the greater community by focusing on the following:

a. Education. The project intends to educate our local community to be more conscious of the benefits to consuming local, fresh produce and more knowledgeable about how to do so on a small budget. This education will be a

form of marketing that will not only assist the project, but also other local food producers.

b. Diversification. Not only will the farm grow a variety of vegetables that cater to our local needs, but we will also provide services that financially sustain the project while providing healthy food to the community. These services will be in the form of food-related education programs for schools and other community groups and other ventures decided upon by stakeholders and advisors. Examples may be food-related entrepreneurial workshops, a value-added production side-business, or a teens-catering program.

c. Social Investment. Community members will bring an array of skills and experience to the project. Somali immigrants, who come from an agriculturally based culture, make up about ten percent of the population of Lewiston. Many other residents come from farming families, have the desire and knowledge to farm or have gardens, yet do not have access to the space to grow. There are political and educational leaders of the community who have shown their support and commitment to aid in the development of the project as well as interest in participating in programs. We will gain strong investment from members such as these so this project can have low overhead expenses and be more financially sustainable.

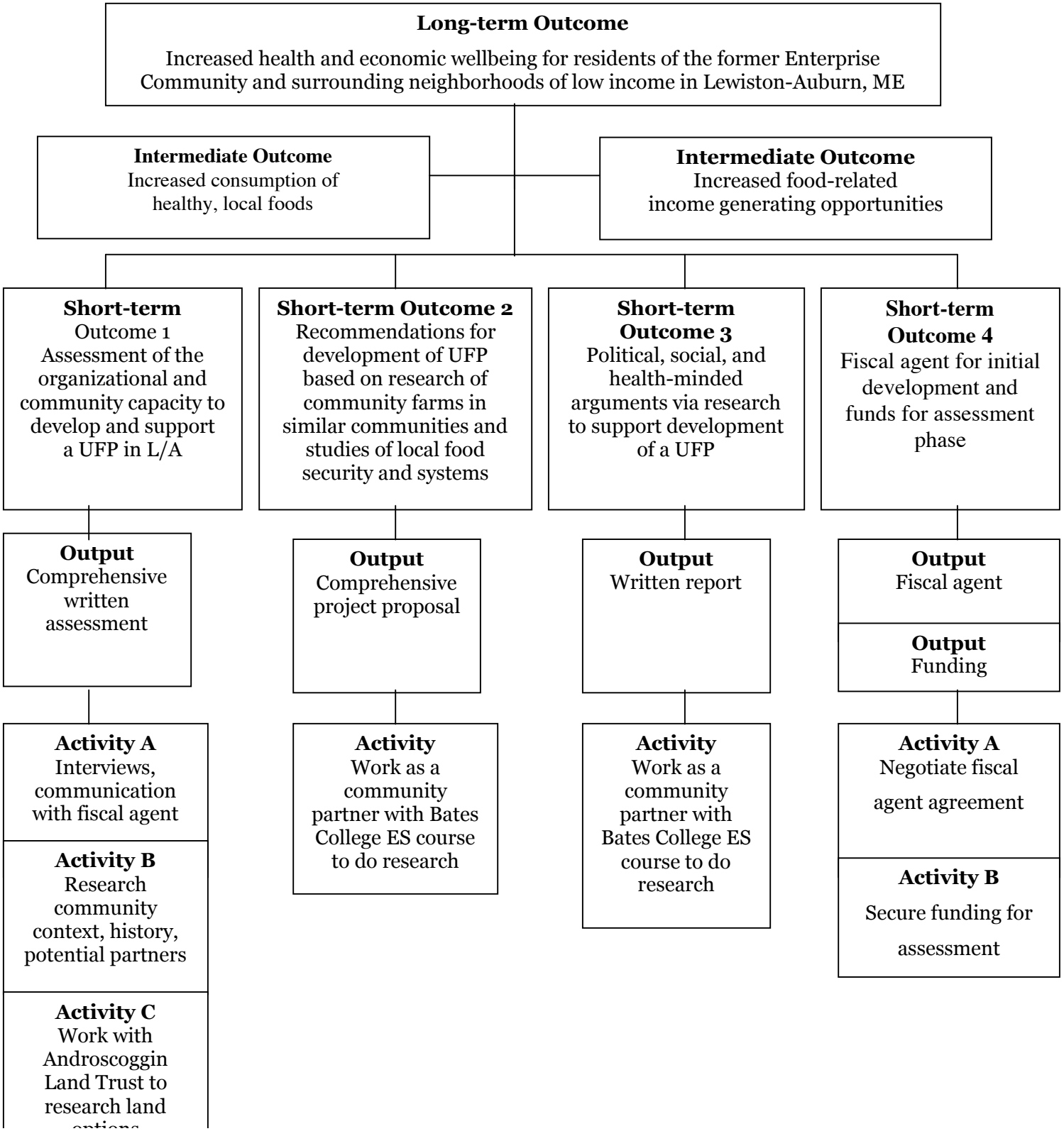
d. Financial Investment and Profit Generating Activities. This project is designed to operate without long-term donations. If the first year and a portion of the following 2 years are fully funded by grants and donations, the farm will be able to sustain the vegetable production activities by the sale of produce by year four. The farm and farming activities will be the backdrop for many of the educational activities offered by the Urban Farm Project. Educational programs such as food-related entrepreneurial training and school group workshops will need funding beyond what the farm can raise with sales.

e. Sustainable Production Methods. The project will explore various methods to increase production efficiency and the quality of produce. Options will depend on the land acquired for use, resources available, type of produce to be grown, and interests of stakeholders. Such examples of sustainable methods are passive solar houses, vertical systems, aquaponics, nutrient cycling, rainwater collection, anaerobic digesters, potted plants for moving in and out of hoop houses to extend the growing season, wastewater from fisheries to fertilize crop, rainwater

collection systems, and heating greenhouses by storing chickens and/or compost in them. There are many community farms from which to learn for implementing sustainable methods. One such project is Growing Power in Chicago. The methods of sustainable production enable the farm to produce $200,000/acre/year as opposed to traditional crop rowing that yields $500/acre/year (Friedman et al., 2009).

X. Appendices

Appendix A: Returning to Our Roots Assessment Logic Model



Appendix B: Recommendation- UFP Expected Revenues

The following expected revenue figures will change according to the decided-upon structure, marketing and distribution plan of the project. This chart below is simply information in which to work from.

Source	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Grants	80,000	25,000	15,000	10,000	5,000	135,000
Individual Donations	0	1,000	1,000	0	0	2,000
Fundraisers	0	6,000	0	0	0	6,000
In-kind gifts	5,000	4,000	4,000	2,000	2,000	17,000
Produce Sales	0	15,000	20,000	30,000	32,000	97,000
Total Revenue	85,000	51,000	40,000	42,000	39,000	257,000

Percent Revenue from Sales	0%	29%	50%	71%	82%	38% (Average 3 yrs)

Appendix C: Recommendation- UFP Methodology and Implementation (Gannt Chart)

Start Date: Jan. 20xx
End Date: Nov. 20xx

ACTIVITIES	Jan	Feb	Mar	Apr	May'	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	OUTPUTS
Research and draft concept paper and 3-year budget	■	■	■																					Concept paper and budget for seeking support and to give direction
Work with ALT to attain usage of land	■	■	■	■	■	■																		Land for project
Seek initial funding	■	■	■																					Funding from EL
Research similar organizations		■	■	■	■	■	■																	Data on similar projects from similar organizations
Design and conduct community survey			■	■	■	■	■	■																Tabulated survey information
Outreach to Advising stakeholders			■	■	■	■																		Identified advising stakeholders
Outreach to farmer stakeholders				■	■	■	■	■	■															Identified Farmer Stakeholders
Identify consultants and create agreement				■																				Contracted consultants
Create structure, work flow, etc. with stakeholders					■	■	■	■	■	■	■	■	■	■	■									Defined project structure and stakeholders more invested
Seek additional funding, donations, and in-kind gifts					■	■	■	■	■	■	■	■	■	■	■									Funding for years 2 & 3 acquired (minimum)
Create Food Access & Sustainability Model						■	■																	Market Plan ready to execute
Prepare Land for cultivation						■	■	■	■						■	■	■							Land ready for cultivation
Design, Purchase & Build Infrastructure & Buildings							■	■	■	■														Infrastructure and buildings ready to support programs
Outreach to education program stakeholders								■	■															Identified Education stakeholders
Hiring Process for Farm Managers, Marketers, Apprentices, etc.									■	■	■													Farm managers, marketers, apprentices, etc. hired
Purchase, procure & service tools and equipment											■	■												Tools and equipment ready for 2010 growing season
Design Education programs												■	■	■										Education programs ready to implement
Market produce following food-access plan												■	■	■	■	■	■	■	■	■	■	■	■	Places/people to buy produce
Outreach to participants, volunteers, etc.													■	■	■	■								Have member participants for investments & labor
Plan 2010 growing season													■											Have plan for 2010 growing. Ready to purchase seeds, etc.

Grow produce																							Food for community via sales, workshares, etc.
Run Education Programs																							Community is more knowledgeable in food subjects
Sell Produce																							Funds from sales acquired & customers found
Hold fundraising events																							Additional funds and friends raised
Evaluate program																							Evaluation of past and plan for future set

Appendix D: Recommendation- UFP Monitoring Matrix

ACTIVITIES	DATES	STATUS	TIMELINESS	EXPLA-NATION FOR DELAY	ALTER-NATIVE ACTION	ATTAINMENT OF OUTPUT
write project proposal for funding	Start: End:					Target: To Date:
seek start-up funding	Start: End:					Target: To Date:
design project structure, roles & responsibilities	Start: End:					Target: To Date:
Attain land usage	Start: End:					Target: To Date:
Prepare Land for cultivation	Start: End:					Target: To Date:
Design, Purchase & Build Infrastructure & Buildings	Start: End:					Target: To Date:
Outreach to education program stakeholders (including Nutrition Center & Healthy Androscoggin)	Start: End:					Target: To Date:
Hiring Process for Farm Managers, Marketers, Apprentices, etc.	Start: End:					Target: To Date:
Purchase, procure & service tools and equipment	Start: End:					Target: To Date:
Design Education programs	Start: End:					Target: To Date:
Market produce following food-access plan (initial push)	Start: End:					Target: To Date:
Outreach to member participants, volunteers, etc.	Start: End:					Target: To Date:
Plan 2010 growing season	Start: End:					Target: To Date:
Grow seedlings	Start: End:					Target: To Date:
Run Education Programs	Start: End:					Target: To Date:
Transplanting & Direct Seeding	Start: End:					Target: To Date:
Grow & Harvest Produce (a separate, more detailed monitoring plan will be drawn up)	Start: End:					Target: To Date:
Sell Produce	Start: End:					Target: To Date:
Plan and hold fundraising events	Start: End:					Target: To Date:

Appendix E: Recommendation- UFP Evaluation Matrix

OUTCOMES	INDICATORS	DATA GATHERING METHOD(S)	SOURCE(S)	TIMEFRAME
Long-term Outcomes				
Improved health of participants & consumers	a) 5% lower rate of missed days of work and school b) 5% decrease in doctor/hospital visits due to illness c) 5% decrease in days feeling ill for those without work or school	a) yearly health survey	urban farm participants	three years
Improved economic well-being of participants & consumers	a) 5% increase savings among participants and community member customers b) 5% decrease in food-related expenses c) 5% increased savings due to change in number of sick days	a & b) tax documents & monthly financial logs/surveys c) comparison of logs/surveys overtime	urban farm participants and community member customers	three years
Intermediate Outcomes				
Increased consumption of healthy, local foods	a) increase of sales in target community by local growers	yearly document review/survey	a) sales logs/local farmers and urban farm manager	two years
Increased food-related income generating opportunities	a) 15% increase by 2015 in food-related businesses & organizations owned & operated by community members	yearly survey	State of Maine Office of Business Development	two years
Increased production of local, nutritious foods	Increase in vegetable and fruit production on Urban Farm (amount TBD by stakeholders)	yearly document review	farm harvest log	two years
Short-term Outcomes				
Increased knowledge of nutrition	Increase in nutrition class participation (5% increase in 2010, 15% in 2011, 20% 2012)	document review	attendance logs	bi-annual review
Increased knowledge of how to afford local, nutritious foods	a) Increase in nutrition class participation (5% increase in 2010, 15% in 2011, 20% 2012) b) increase in sales to target community	document review	a) attendance logs b) sales logs/local farmers and urban farm manager	a) bi-annual review b) annual review
Increased knowledge among local growers re: how to reach the city market	a) increased sales by local growers in Lewiston & Auburn	survey	local farmers	yearly review
increased knowledge of food-related entrepreneurial skills	a) 10 participants complete food-related entrepreneurial training programs b) increase in food-related businesses owned and operated by community members (15% increase by 2015)	document review	a) attendance logs of entrepreneurial program b) State of Maine Office of Business Development	yearly review
Increased knowledge and resources to develop and run a community farm	a) accuracy of workplans developed with stakeholders and consultants b) increase in knowledgeable stakeholders c) funding appropriate for budget	a) document review b) focus group discussion c) document review	a) project workplans b) key stakeholders c) accounting books and in-kind logs	a&b) monthly review thru 2010; bi-yearly thereafter c) quarterly review
Increased knowledge and resources for individuals to develop local farms	a) 10 community members complete farm training program b) increase in community members who work on or own local farms (5% increase by 2015)	document review	a) attendance logs of farm training programs b) State of Maine Office of Business Development and survey	yearly review

XI. Bibliography

American FactFinder 2000, (n.d.). Lewiston City, Maine. Retrieved 2/2/2009, from http://factfinder.census.gov/servlet/SAFFFacts?_event=&geo_id=16000US2338740&_geoContext=01000US|04000US23|16000US2338740&_street=&_county=lewiston&_cityTown=lewiston&_state=04000US23&_zip=&_lang=en&_sse=on&ActiveGeoDiv=&_useEV=&pctxt=fph&pgsl=1(TRUNCATED)

American Family Physician; 3/1/2004, Vol. 69 Issue 5, p1058-1063, 4p, 2 charts

blog5lewiston.jpg (JPEG image, 825x538 pixels). Retrieved 6/6/2010, 2010, from http://www.billstuff.com/images/blog5lewiston.jpg

Burgis, C., Chase, A., Cohen, M., & Fahey, M. (2009). *Accessibility and Services of Emergency Food Providers in Lewiston, Maine. Bates College*. Fall 2009.

The College Connection (n.d.). Retrieved 2/27/2010, from http://www.declewiston.org.AboutUs.html

Community Actions Researchers. (February 26, 2010). *Local Food for Lewiston meeting at downtown education collaborativ*e. Lewiston, ME.

Dunstan, R., & O'Keefe, S. (2001). *Evaluation of California's Enterprise Zones*. Unpublished Manuscript.

Empower Lewiston. 2007 Annual Report Executive Summary (2008). Retrieved 1/6/2009, from http://www.rurdev.usda.gov/rbs/ezec/07_Exec_Summaries/Lewiston.html

Empower Lewiston. Community Executive Summary. Retrieved 10/27/2009, from http://www.rurdev.usda.gov/rbs/ezec/99_Exec_Summaries/lewistonexecsum.html

Empower Lewiston. *Community Funding (n.d.)*. Retrieved 2/3/2009, from http://www.rurdev.usda.gov/rbs/ezec/Community_Funding/lewistonfunding.html

Empower Lewiston. *Latest Progress Report* (n.d.). Retrieved 1/6/2009, from http://www.rurdev.usda.gov/rbs/ezec/Communit/lewiston.html

Empower Lewiston. *Strategic Plan's Executive Summary* (2008). Retrieved 2/3/2009, from http://www.ci.lewiston.me.us/development/empowerstrategicplan.htm

Friedman, C., Friedman, R., Mylius, M., & Roebuck, H. (2009). *The Community Farm: Analysis of Farm Models throughout the Nation*. Unpublished. Environmental Studies Capstone Seminar, Bates College.

Grady, E., Sol, S., Torrey, E., & Willemsen, C. (2009). *The Role of Government-sponsored Food Programs in Addressing Food Insecurity in Lewiston-Auburn*. Unpublished. Environmental Studies Capstone Seminar, Bates College.

Harris, D. E., & Vazquez-Jacobus, M. Mapping Hunger in Maine: A complex Collaboration (n.d.). Unpublished.

Healthy Androscoggin » healthy eating. Retrieved 6/6/2010, from http://www.healthyandroscoggin.org/healthy-eating/

Healthy Androscoggin » home. Retrieved 6/6/2010, from http://www.healthyandroscoggin.org/

Hodgkin, D. I. *A brief history of the city of Lewiston, Maine* (n.d.). Retrieved 2/10/2010, from http://www.ci.lewiston.me.us/history/

Holben, D.H. & Myles, W. (2004). *Food Insecurity in the United States: How It Affects Our Patients*. American Family Physician.

Lawson, L. J. (2005). *City Bountiful: A Century of Community Gardening in Americ*a. Los Angeles, CA: University of California Press.

*Local Foods for Lewiston, Narrative: CFP Planning Projec*t (June 24, 2008).

Maine Department of Agriculture, Food and Rural Resources (2005). *A Food Policy for the State of Maine*. Unpublished Manuscript.

Maine Nutrition Network (2004). Winter/Spring 2004, Issue 18. Augusta, Maine.

McKibben, B. (2007). *Deep Economy: The Wealth of Communities and the Durable Futur*e. New York, NY: Holt Paperbacks.

Memorandum of Agreement between Empower Lewiston and St. Mary's Health System (June, 2009). Unpublished manuscript.

Memorandum of Agreement between St. Mary's Health System and the Androscoggin Land Trust (January, 2010). Unpublished manuscript.

Nutrition Center of Maine (n.d.). Retrieved 12/6/2009, from http://www.stmarysmaine.com/nutrition-center-of-maine.html

Serve New England (n.d.). *What is Serve New England?* Unpublished manuscript.

St. Mary's Health System (n.d). Retrieved 12/6/2009, from http://www.stmarysmaine.com/

U.S. Census Bureau, Lewiston (city) QuickFacts (n.d.). Retrieved 1/6/2009, from http://quickfacts.census.gov/qfd/states/23/2338740.html

USDA. *Community Food Projects Competitive Grants*. Retrieved 3/7/2010, from http://www.csrees.usda.gov/nea/food/in_focus/hunger_if_competitive.html

Washuk, B. (February 25, 2010). Interest in Local Food Grows. *Sun Journal,* pp. A1.

Winne, Mark (n.d.). *Community Food Security: Promoting Food Security and Building Healthy Food Systems.* Unpublished manuscript.