The Community Garden as a Tool for Community Empowerment: A Study of Community Gardens in Hampden County

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THE COMMUNITY GARDEN
AS A TOOL FOR COMMUNITY EMPOWERMENT:
A STUDY OF COMMUNITY GARDENS IN HAMPDEN COUNTY

A Thesis Presented

By

SHANON C. KEARNEY

Submitted to the Graduate School of the University of Massachusetts in
partial fulfillment of the requirements for the degree of

MASTER OF LANDSCAPE ARCHITECTURE

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Department of Landscape Architecture and Regional Planning
THE COMMUNITY GARDEN
AS A TOOL FOR COMMUNITY EMPOWERMENT:
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ABSTRACT

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A STUDY OF COMMUNITY GARDENS IN HAMPTDEN COUNTY

SEPTEMBER 2009

SHANON KEARNEY, B.A., UNIVERSITY OF CALIFORNIA BERKELEY
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Directed by: Professor Mark T. Hamin

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CHAPTER 1: GLOBAL AND NATIONAL CONTEXTS OF COMMUNITY GARDENS

Introduction

The *American Community Gardening Association* estimates that there are more than 6,000 community gardens in thirty-eight U.S. cities, including gardens on otherwise vacant lots and on land in public housing projects. (Monroe-Santos, 1998). Of these, more than 30 percent, or 1853 community gardens, were started after 1991, reflecting the growing trend of interest in this model of community development that now encompasses some hundreds of thousands of gardeners (ACGA, 1998).

Currently, towns and cities across the country continue to see a significant increase in community gardens, often perceived as a community empowerment tool. Community can be defined as a group of people who share a common territory or ecology (Beck, 2001). As many low-income communities link their urban gardens with programs such as youth gardening and food donation centers, residents continue to gain opportunities for education and job training related to urban agriculture, food production and distribution, and healthy nutrition. In addition to providing these valued services, community gardens also offer food and the restorative benefits of nature in the city for low-income families. Through the community garden, a locally-oriented center of interaction, residents can work towards improving their local social institutions, culture, and ecology; which can allow them to shape the social forces that most directly affect them (Wilkinson, 1979 and 1991). However, despite the critical role community gardens play as centers of local activity, community gardens continue to be threatened and replaced by more financially lucrative land uses through private real estate development.
For urban residents, the demolition of a community garden is often seen as a major loss of a valuable local resource. Though most community gardens are essentially improved vacant lots, their role in community development warrants protecting them as a community asset. Often gardeners convert vacant lots to gardens when housing has been razed without a definite plan for future development. As a result of such action, a community garden typically grows organically into a neighborhood center, as more gardeners show interest in reclaiming the abandoned site. Research shows that community gardens can help to improve social networks and organizational capacity in communities, especially in lower-income and minority neighborhoods (Armstrong, 2000). However, for gardens that limit access to users, signs of community neglect in the form of litter, crime, and vandalism can still dominate, outweighing the potential for community empowerment. Therefore, access to a shared resource such as a community garden can encourage interaction between community members previously segregated by racial or socio-economic differences. Though interaction is not an assured outcome, providing equal opportunities for education, recreation, and social interaction for all the members of a community is a step towards building community from the bottom up. Gardening programs and increasing public access to gardens are two elements for making urban gardens community empowering forces.

**Plan of Study**

Community gardens are outdoor plots of land where groups of citizens work regularly to propagate agricultural produce for personal or public consumption. Increasingly used by municipal bodies and community organizations to stimulate economic development, build community pride, and restore small-scale urban agriculture,
community gardens are maintained by at least 300,000 people nationwide, according to the National Gardening Association Gallup Poll in 1994.

Low-income urban communities, where vacant lots are common, poverty and malnutrition are pervasive and grocery stores are limited, can particularly benefit from the presence and produce community gardens can offer. In urban communities, small-scale agriculture can be a great asset especially when community gardens generate enough profit and interest to reinvest in the local economy and to deter real estate developers from building additional housing units on a lot.

The purpose of this study is to gain a better understanding of how community gardens can catalyze positive change in an urban environment, to determine and catalog the impacts, and to learn about their importance to small-scale agricultural production. The study surveyed neighbors of the two umbrella organizations community gardens, The Nuestras Raíces of Holyoke AND Growing the Community of Springfield, who strive to ensure that local families get enough food to feed their families on a daily basis. According to a closed case longitudinal study by the state of Massachusetts, 3% of a representative sample of the population reported not having enough to eat on a daily basis.

The Hampden County cities of Holyoke and Springfield occupy an urban stretch of a city center and as such, lie within great marketing areas for local produce and ethnic agricultural products. However, the success of each community garden model varies significantly. While some community gardens are burgeoning with gardeners and produce, other community gardens have had setbacks challenging food security and the livelihood of the managing non-profit. Community gardens risk potential marketing and
growth potential if gardeners and crop yields dwindle. The state as a whole suffers if community gardens fail to realize their full potential when profits are flat and community involvement in maintaining and harvesting crops is minimal.

This research study aims to explore how planning and management practices can create community gardens that can more effectively build ‘community capital.’ Issues of access to land ownership and public land use are also closely tied to community building (Armstrong, 2000). How do community gardens and the tools and techniques to create them empower citizens to reclaim not only derelict vacant lots but also rebuild entire neighborhoods? What level of involvement should the community have in the garden’s creation, management, and maintenance? How important is access to the garden when trying to empower community? By conducting further research of community gardens, this thesis will examine the appropriate tactics for growing community capital even in culturally diverse settings.

To investigate the factors that most contribute to the success of urban community gardens, this study examines two organizations located in Hampden County striving to have a positive impact on food production and youth empowerment. Chapter Two will examine contemporary conditions and case studies. Chapter Three will discuss these Hampden County organizations, along with a similar case study in Portland, Maine. Chapter Four will discuss the methodology used for this paper to evaluate these community garden organizations via a Community Garden Perception Study. Chapter Five discusses the outcome of the survey. Chapter Six makes recommendations for maximizing the impact of Hampden County community gardens and identifies directions for future research.
General Literature Review

Across the United States, the creation of sustainable health and wealth in distressed communities is of prime concern to theorists as well as practitioners. Researchers of community greening continue to argue that the community garden’s association with nature can have ecologically restorative qualities that translate to economic and social benefits in urban environments (Malakoff, 1995). Besides stimulating economic wealth, there are three other forms of capital — social, natural, and human capital (Hancock, 2001) — that warrant greater community attention. According to Hancock, a healthy community is one with high levels of economic, ecological, human, and social ‘capital’ that in combination can be conceived as ‘community capital’ (Hancock, 2001). The dilemma confronting communities today is that all four forms need to be addressed simultaneously to have any lasting cumulative benefit. Fortunately, through the development of community gardens, planners and citizens have the power to build long-term community capital even in culturally diverse neighborhoods. As a result, community gardens have become increasingly associated with community building.

In modern capitalist societies, economic wealth is viewed as the primary means by which we obtain our human and social goals (Hancock, 2001). Communities need to be prosperous in order to feed, clothe, and house their residents, as well as to provide clean water and proper sanitation. Economic capital also provides resources for education, jobs, health, and social services. However, as can be seen in the impact of underregulated land use and development, economic capital can jeopardize the other forms of capital — human, social, or ecological — that also sustain a community’s well-being. Fortunately, community gardens can sometimes compensate for economic
disinvestment with the production of affordable food where economic capital is limited. After all, a 64-square-foot plot can save a family up to $600 in food purchases per year (Malakoff, 1995).

In the 1890s, vacant lot gardens became governmentally sponsored American relief gardens to supplement food supplies in response to the economic downturn. By the 1910s up until the 1960s, vacant lot gardens served war-related needs and efforts to celebrate Americanization in the form of patriotism, conservation, and assimilation of immigrants (Kurtz, 2001). Today, the community garden serves a similar economic function: it can alleviate financial pressure for residents of low-income communities by providing cheaper sources of food while promoting self-respect and independence among the poor (Kurtz, 2001). However, unlike in 1910, there is a clearer recognition and acceptance of ethnic diversity. By cultivating a community garden, residents can take pride in maintaining a piece of their neighborhood while guaranteeing their survival. Community gardening also allows residents to increase their disposable income by sharing their harvest with a local food bank. In addition, community gardens can also potentially become retail ventures, creating income and employment for the community. For example, in New York City, community gardens have been known sell their herbs to local restaurants. Communities can also earn equity from a community garden, since maintained open space is more valuable than a vacant lot filled with garbage and weeds. In contrast to city-developed parks, gardens are a bargain because they are labor-intensive, and community labor represents 80 percent of the investment in the project (Schmelzkopf, 1995). Overall, community gardens are a wise financial investment especially when compared to the alternatives of vacancy and neglect.
From the ecological capital perspective, community gardens are vibrant alternatives to vacant lots or commercial developments. As research shows, gardens provide a restorative green retreat for the urban dweller who is typically plagued by stress and fatigue (Kaplan, 1990). With their flowers and other plants, community gardens also serve as habitats for various birds and insects (Hancock, 2001). Gardens help cool the city by utilizing solar energy, both in photosynthesis and in evaporating water from the foliage and soil (Assadourian, 2003). Likewise, if gardeners establish a vegetable garden, the food grown will likely be organic which suggests the possibility of composting. As a result, a community garden can help to reduce the amount of waste a community produces. Finally, since the food is grown locally, there is no need to ship long distances. The community garden effectively contributes to the ecological capital of the community. Therefore, community residents can experience ecology as dynamically linked to their urban environment. Urban agriculture can return nature to cities to help restore the connection to natural processes that has been obscured by mechanization (Nelson, 1996).

Human capital relates to healthy, well-educated, skilled, creative people who become involved with their community and local governance (Hancock, 2001). When community gardens are established, there is potential for people to learn directly about gardening and about other cultures, as well as about the environment, organic farming, different cooking techniques, and the nutritional value of food. A community garden offers the potential of intergenerational learning whereby more experienced gardeners can teach less experienced ones. Gardens can be used by adults to mentor children and to introduce them to the natural processes of growth, maturation, and decay and to social processes of cooperation and collective effort (Kurtz, 2001). Tending a garden can also
convey a feeling of pride and joy, a sense of personal growth, and the opportunity for self-sufficiency to residents of public housing (Jackson, 1996). Human interaction in the garden can build human capital by fostering community through shared projects and by improving the nutritional status of the community with the introduction of fresh food. Different types of activity within the community garden - such as visits with friends, neighborhood gatherings, nature education, recycling, and composting, board games, art classes, performances, yoga and childcare - all show that community gardens can spur neighborhood revitalization (Kurtz, 2001).

To understand the social function of the community garden in the urban landscape, a researcher must recognize the importance of community contributions. Communities create and manage gardens largely by themselves. From the start, the community garden depends upon a unified social network to organize and manage its program and access. People often congregate to work, relax, and enjoy communal spaces, and through these interactions build community (Assadourian, 2003). In ethnically diverse neighborhoods, there is a tendency for families to grow the foods that are culturally familiar. As a social space, gardens serve as a medium for the transport and translation of cultural practices that concern both nature and food (Kurtz, 2001). Different ethnic groups can use the community garden to cultivate and prepare foods as they would in their homeland. Eventually, other families may develop an interest in the vegetables other cultures grow and use. Consequently, there is the potential for ethnic groups to begin sharing planting practices, foods, recipes, or establishing community potlucks that build social networks across ethno-racial lines.
Gardening and socializing make people feel that they are part of the community and part of the land (Schmelzkopf, 1995). Unfortunately, cultural exchange and interaction are not always an assured outcome. What has yet to be determined is whether community gardens can be planned and managed to further encourage an organic growth of social capital. Community gardens serve as an interpretative mediation between nature and culture with regard to the nutritional needs, medicinal purposes, religious beliefs, aesthetic preferences, and land resource uses of different ethnic groups (Kurtz, 2001). When overlaid with the notion of fostering community, community gardens become even more complicated entities. Additional research is required to determine what types of planning and management practices encourage social interaction and build community without causing cultural isolation.

Finally, community gardens can act as springboards to other forms of social and economic activity. For example, city gardens can help communities reclaim their neighborhoods from crime and pollution, and save kids from risks on the street (Nelson, 1996). By encouraging the involvement of the homeless, community gardens can help them with access to food, job connections, and social ties with local residents. Likewise, interest in community gardens can foster interest in larger food systems agriculture that promote community capital on different scale, such as bulk-buying groups, food co-ops, or community supported agriculture.

In order to understand the possibility of building community capital, however, it is crucial to begin by examining the role of grassroots urban politics in the making of the public realm (Hou & Rio, 2003). Marti Ross Bjornson, a graduate student at Northwestern University, found that the process of community gardening is ultimately a
political activity (Malakoff, 1995). Bjornson concluded that by simply starting a garden, previously powerless people can learn how to gain access to city power including public policy, economic resources, and social interaction (Malakoff, 1995). As a result, many community gardens serve to grow responsible garden leaders while simultaneously encouraging wider civic participation. Today, the success of most community gardens requires the combined efforts of local garden leaders, members of not-for-profit technical support organizations, and, in the case of city-leased gardens, city officials (Shmelzkopf, 1995). With the understanding that urban gardens provide areas with a “sense of community” that may lead to “increased involvement in neighborhood issues” (Jamison, 1985), suitable methods for measuring community capital become apparent. For instance, reduced littering rates and improved maintenance of other properties in a neighborhood (Assadourian, 2003) associated with a community garden suggest that increased community capital can be documented.

The remainder of this chapter discusses the global and national evolution of the community garden from past to present and the challenges facing community gardens today. Chapter Two will offer more recent case studies of community gardens from the Eastern United States.

The History of the Community Garden

Community gardens have a deep history embedded in the oldest, most traditional patterns of human settlement: indigenes living in a self-sufficient village. With the exception of nomadic groups, many early pre-state societies survived because of their ability to establish subsistence horticulture and agriculture. In a mixed economy of hunting and gathering, villagers would sow, harvest, over-winter and store their crops in
order to provide for their families throughout the year. In other societies across the globe, including Asian, African, European and Pre-Columbian American, the basic pattern of indigenous agricultural practices was the same. As civilizations became more urbanized, and as states emerged the patterns of land use changed. Land became the property of feudal lords who demanded fees and rents from farmers in exchange for land protection. Eventually, commercial hierarchies gained control of the land, eliminating the commons and transforming subsistence gardens to larger cultivated fields of grains and lucrative cash crops. With the start of the Renaissance, the increased interest in exploration, commerce, and money-based economies furthered the fragmentation of indigenous agricultural patterns and land uses. The enslavement of Africans and the seizure of tenant farmlands fed the new economy of the centralized farm. ‘Improved’ capitalist farms became more profitable than traditional contracts with tenant farmers. Displaced farmers slowly migrated to urban centers in hopes of finding work in the changing economy.

Beginning in the mid-eighteenth century, the Industrial Revolution rapidly increased the movement from local labor-intensive agricultural self-sufficiency to a machine-driven, monetary economy. Community gardens became a way to remain connected to the land in a rapidly industrialized world. New to the city, many rural people created an urban version of the feudal system of land ownership by renting plots of land outside city centers in Europe. Rented in England for one guinea, “guinea gardens” as they were called, were similar to today’s community gardens since they were
meant to promote healthful exercise and rational enjoyment among families… and, with
good management, produce an ample supply of those whole-some vegetable stores. ¹

As the Industrial Revolution gained momentum, farmland and gardens in Europe
and the United States became prime land for residential and commercial development. In
response to the resulting overcrowded conditions and health epidemics, municipalities
began to require gardens and parks in the interest of public health. In Britain, Acts of
parliament such as the Allotment Acts of 1887 and 1890 required sanitary authorities in
urban neighborhoods to provide space for “allotment” gardens. As a result, each rural
gardener had access to a small garden allotment, approximately 500-square-yeards, as an
act of good faith between the Agricultural Organization Society, the community, and the
local government. Eventually, the managing organization changed the parcel size to 300
square yards.²

In the late nineteenth century United States, a similar urban movement took place
to provide the public with access to open space and gardens. Cities such as New York
City and Boston set aside major parcels of land as protected parkland. However, despite
the increased use of parkland for recreation, agricultural land near cities remained at risk
to development. Food became a commodity shipped into the cities. In response to an
agriculture crisis in 1893, the city of Detroit created an unemployment relief program that
set aside vacant city land as community gardens for citizens to grow subsistence crops.

Galloway, and L.M. Evans in From Allotments to Leisure Gardens. Birmingham,
By 1895, 455 acres were under cultivation as “potato patches,” and the city's initial $5,000 investment had produced $28,000 worth of produce.\(^3\)

**The American and European War Garden**

At the turn of the century, developable land was at a premium. Immigrants flooded into city centers, forcing urban expansion into bordering agricultural land. As the infrastructure of the modern city such as sewers, streetcars, electric and gas lines gobbled up farmland and gardens, the demand for permanent open space increased. In response to this demand, horticultural societies and civic groups in metropolitan areas such as Boston, Philadelphia, and Cleveland created the Schools Garden movement. Children’s gardens next to schoolyards became a way to create and protect city plots for the next generation. Consequently, vacant lots became the primary target of development. Despite the abundance of produce grown at this time, supporters of community gardens had to continuously remind the public that community gardens did more than secure food. Supporters cited community gardens as a method to improve sociability, health benefits, savings in food costs, and relief from the tension of urban life.

With the onset of World War I and the wartime involvement of farmers from Great Britain and the United States, national governments had to think creatively about how to minimize national food shortages. In response to the crisis, both countries sponsored War or Liberty Gardens to combat the food problem. An American War Garden organizer explained, “The war garden was a wartime necessity… The knowledge the world faced a deficit in food... was apparent to every well-informed thinking man and

\(^3\) Ibid., p. 13.
woman during the early months of 1917.\textsuperscript{4} Gardening in the city as an organized community became common practice.

In 1918, the U.S. War Gardens produced over 264,000 tons of fresh vegetables in 5 million gardens.\textsuperscript{5} With the creation of the U.S. School Garden Army, community gardens drafted children to support the movement and grow produce. As a result, community gardening even continued to be a productive form of agriculture years after the war despite the resurgence of conventional, commercial agriculture.

The American Relief Garden

During the Great Depression crisis of the 1930s, ‘relief gardening’ regained popularity as a means of supplementing the food surplus and maintaining morale in an era of unemployment and economic turmoil. Gardeners sowed, harvested, and stored large plots of subsistence crops such as potatoes and beans to feed the poor and hungry. Unlike England’s allotment gardens, however, the community gardens of the United States were managed as temporary holdings rather than as fixtures in the landscape. Many gardens were eventually displaced by overgrown weeds, development projects, or parklands. Similar to the War Garden movement, the relief garden was a way for the Department of Agriculture, civic groups, and park departments to plow up and use arable land near urban centers. Produce went to feeding the local community or raising funds to aid the armed forces overseas. Throughout the country the demand for garden plots exceeded the supply and gardeners had to compete for space by lottery. At peak


\textsuperscript{5} Ibid., pp. 16-17.
production in 1944, 20 million gardeners grew 40 percent of the fresh vegetables consumed in the United States.  

Like every boom and bust cycle, war gardens and victory gardens reverted to their status as vacant lots, lawns, and parkland when prosperity returned after World War II. The “American Dream” of the single-family home with a white picket fence, cheap mortgages, and access to highways, put the remaining community gardens at risk from more lucrative or convenient uses. Even in Europe, with a renewed interest in “leisure gardening,” demand for plots decreased and weeds returned to former garden vacant lots.

Summary of Chapter 1

Since the early 1960s and 1970s, the popularity of community gardens has risen slowly in response to the environmental movement, increased food prices, and a concern with the presence of pesticides and other chemicals in processed foods. Similarly, the 1965 immigration law regarding Third World and other non-Europeans has brought a new, larger influx of people from agrarian cultures. The combination of these factors has helped the community garden movement gain momentum since the mid-1970s. In fact, community gardens today often reflect the agricultural practices and specialty cultivars of the gardeners who regularly worked in the local community gardens of past eras. Sadly, trends show that food security is an increasing problem in poor urban areas. Therefore, it is likely community-based agricultural systems will continue to rise, increasing the demand for arable land near urban centers. The following chapter will analyze and assess contemporary circumstances that favor as well as challenge community gardening efforts.

---

Introduction: Today’s Community Gardeners

Small-scale urban growers fall into two distinct categories: community gardeners and backyard gardeners. However, there may be an additional category of people involved in similar forms of urban farming. For example, food is often grown as a form of therapy at hospitals, senior centers, drug treatment clinics, and short and long-term care facilities. In addition, as done historically, school programs today often design their curriculums and school lunches to engage children in raising food in their school gardens.

Community gardeners are a diverse population including men, women, immigrants, ethnic groups, and baby boomers looking for an activity in their retirement. Twice as many community gardeners are over the age of 65 as are under the age of 35. However, Anne Carter has documented that there is a growing number of new farmers who are younger than average. Her findings hypothesize that some of these new farmers may be from established farming families and taking over the business or starting a new farming operation (Carter, 2003).

The trends indicate that many farmers and citizens are looking to grow and buy fresh, nutritious produce, meat and dairy products free of chemical additives close to their homes. Consequently, they value growing produce for the local market or themselves first and foremost. Agricultural production for the national market is still a consideration but for the less marketing-savvy farmer, national markets are risky and unsustainable. Direct marketing to the local community, though less lucrative, outweighs national marketing due to the risks and costs associated with trucking, farm operation, and crop health of a large-scale farming operation.
Present Day Small-Scale Agricultural Alternatives

Community Gardens

According to the North American Urban Agriculture Committee, a conventional community garden is a large lot of land that has been divided into smaller plots for individual household use. Community gardens can have numerous owners in its lifetime: a municipality, an institution, a community group, a land trust, or a private proprietor. Legal possession and protection of a garden parcel is tricky business in developing areas where vacant land is a hot commodity. Specifically, towns facing development pressure desperately need to petition on behalf of community gardens for public officials and policymakers at the local and state level to safeguard shared agricultural assets. Data from the American Community Gardening Association in 1997 show that there were more than 6,000 community gardens in thirty-eight U.S. cities, including gardens on otherwise vacant lots and on land in public housing projects. As this report will show, community gardens will continue to develop since they have the power to effect positive change at the local level.

Backyard Gardens

Backyard gardens are plots around homes including plantings on balconies, patios, roofs, and around pool decks. Container-grown plants also qualify as backyard gardens, since they can also yield significant produce. As many as one quarter of households in the United States have gardens. Researchers of gardeners estimate that

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close to "73% [of U.S. citizens] do enough yard work to consider themselves gardeners," a figure that includes every conceivable activity such as lawn and houseplant care. More conservatively, American Demographics estimated in 1993 that the country included 61 million gardeners, who, for marketing purposes, fell rather neatly into four categories: the Dabblers, the 60% who are least experienced and committed; the Decorators, the 19% who love ornamental horticulture; the Cultivators, the 18% who love to grow and eat vegetables; and the Masters, the 3% whose dedication or addiction makes them an important niche market. According to Professor Anne Carter, “cultivators” are likely raising some of their own food to supplement their diets with seasonal crops. In addition, any surplus produce likely becomes food to preserve and keep or to give to friends, neighbors, and family.

In Des Moines, Iowa, the organization Digging Deeper works to support a significant increase in backyard gardens among low-income communities. Among their project goals is to provide targeted communities with raised bed backyard gardens with one edible perennial plant (such as a rhubarb plant, a raspberry bush, or a fruit tree) in individual yards or in common areas of multiple family housing. To complete the project, Digging Deeper also provides follow-up assistance to the recipient community from experienced gardeners.

In some North American households, backyard gardens are a method to increase and maintain the food budget of low-income families and their network of family and

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University of Massachusetts, Amherst, Massachusetts, p. 14.
Surveys indicate that many American families would have a better chance of meeting their food needs if they had access to a productive garden. For example, in 2001, America's Second Harvest (A2H), the nation's largest organization of emergency food providers, completed a food security study. After completing in-person interviews with over 32,000 clients served by the A2H network, as well as completed questionnaires from nearly 24,000 A2H agencies. The A2H network’s key findings reported that:

- The A2H system serves an estimated 23.3 million different people annually.
- 36% of respondents had to choose between paying for food and paying their rent or mortgage bill.\textsuperscript{12}

Clearly, these drastic indicators of food insecurity are bleak. However, this report aims to prove that community food security can be enhanced through one focused mechanism, community gardening. With improved access to gardens, low-income residents and other households that are food insecure can grow fresh food and thereby stretch their annual food budget.

**Food Insecurity in the United States**

Food security is the “ready availability of nutritionally adequate and safe foods, and an assured ability to acquire acceptable foods in socially acceptable ways (e.g. without resorting to emergency food supplies, scavenging, or other coping strategies).”\textsuperscript{13}

Food insecurity is the inability to use traditional food acquisition and management means


and use instead of an assortment of coping strategies. As mentioned in the Community Food Security Coalition’s Primer, 80 percent of the population lives in cities. The contrast is sharp when history shows that, only 100 years ago, 50 percent of Americans lived on farms or small rural community where they lived predominantly on locally-grown foods. As urban sprawl continues out from urban centers, food production gets more complicated and transportation-dependent. Furthermore, close to 50 percent of the food shipped is lost to spoilage, while produce harvested and shipped is often chosen to withstand heavy equipment and extended travel, not for taste or nutritional value.

Clearly, current food production standards are wasteful and non-sustainable.

In the last twenty years, the United States has experienced a record strong economy and historically low rates of unemployment. At the same time, there has been large-scale involvement by both the federal government and private organizations to provide food assistance to the poor. Despite a strong economy and these public and private efforts, millions of Americans continue to experience hunger and food insecurity every year. The question is therefore raised: Why are the poor still struggling to have enough to eat? A startling number of Americans, including many children, do not get enough to eat on a daily basis. In 2001, based on the Census Bureau’s Food Security Supplement to the Current Population Survey, 10.7% of households in the United States (11.5 million people) were food insecure at some time during the year. In fact,

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16 Ibid., p. 4.
households with children experienced food insecurity (16.1%) at rates greater than the national average. Other characteristics of households prone to being food insecure include (a) having an income below the official poverty line, (b) being headed by a single woman with children, and (c) living in rural areas.\footnote{17}

In 2002, the U.S. Census Bureau reported that more than 1.3 million Americans are living below the poverty line. Food insecurity is on the rise with more working class families requiring emergency food assistance. While the need for food continues to grow, access to nutritious food has also become increasingly difficult for the working class. In many urban areas supermarkets have either closed due to market competition or due to the financial hardship of their clientele and the deterioration and depopulation of once vibrant communities. Also, a 1997 study by USDA’s Economic Research Service found that supermarket prices were about 10 percent lower, nationwide, on average, compared with grocery stores, convenience stores, and grocery/gas combinations predominant in rural areas and central cities where a greater proportion of the poor live.\footnote{18} Furthermore, since many inner city residents do not own cars, transportation to suburban food stores is often difficult, requiring several bus changes or expensive taxi services. With the additional responsibility of caring for small children, the disabled or the elderly, food shopping can become an even greater hardship.\footnote{19} Food security is a major national issue


in the 21st century. Hopefully, by creating some awareness, this report will help to incite citizens to act in favor of alternative community based food systems such as supporting the local farmers’ market and community garden.

The prevalence of food insecurity and hunger, whether related to food insufficiency, nutritional quality, or the risk of food deficiency, varies considerably from state to state. However, the right to an adequate standard of living, including food, is recognized in the Universal Declaration of Human Rights. Food security should be a fundamental objective of development policy as well as a measure of its success. After all, food insecurity affects a vast cross-section of the population in both rural and urban areas. The common food-insecure socioeconomic groups include: farmers, many of them women, with limited access to natural resources; landless laborers; rural artisans; temporary workers; homeless people; the elderly; refugees and displaced persons, immigrants; indigenous people; small-scale fishermen and forest dwellers; pastoralists; female-headed households; unemployed or underemployed people, isolated rural communities; and the urban poor.20

Food insecurity can drastically impact the quality of life of an urban dweller. Poor nutrition can effect school and work performance and impair one’s concentration and sleep habits. Hunger and poor nutrition have also been linked to a rise in infectious disease susceptibility such as tuberculosis. Poor nutrition is also a well-known risk factor for diabetes, hypertension, and heart failure. Furthermore, research shows that preschool and school aged children who experience chronic hunger have higher levels of anxiety,

University of Massachusetts, Amherst, Massachusetts, p. 5.

depression, and behavior problems than children without hunger.\textsuperscript{21} Consequently, it is imperative that the United States remains steadfast in its mission to combat and eradicate food insecurity for the health of future generations.

**Community Garden Case Studies**

**Fenway Victory Gardens, Boston, Massachusetts**

During World War II, a group later known as the Fenway Garden Society, created the Fenway Gardens on seven and half acres of Parks Department land. Today, the Fenway Victory Gardens represent the nation’s last remaining one of the original victory gardens created nationwide during World War II. At that time, demands for food exports to the nation’s armed forces in Europe and the Pacific caused rationing and shortages for those back home in the States. In response, President Roosevelt called for Americans to grow more vegetables. As a result, the City of Boston established 49 areas including the Boston Common and the Public Gardens as “victory gardens” for citizens to grow vegetables and herbs. The plots citizens received were roughly 15 X 25 feet, the standard size of the small American allotment.

From an organizational standpoint, an elected superintendent managed the gardens, parceled out the plots, and reported to the Commissioner of Parks and Recreation of the City of Boston. Today, the management of gardens is strikingly similar. Any resident of the city may apply for a plot and, if there is availability, may garden for a season upon payment of a small annual fee. The proceeds from the annual dues go directly towards maintaining the gardens’ water resource. With the continued consent of

\textsuperscript{21} Ibid., p. 5.
Massachusetts’ politicians, the Fenway Garden Society continues to use the World War II designated parkland free of charge.

Over the last few decades, several development proposals threatened the Fenway Victory Gardens. For example, at one time, the late U.S. Congressman John J. Moakley proposed that the gardens be paved over to accommodate a parking lot for the patrons of Fenway Park. Fortunately, Senator John E. Powers, an active Fenway gardener, led a coalition to defeat Moakley’s bill. The coalition of a strong gardeners’ organization and active politicians saved the gardens and marked the way for a new view of community gardens between the first Earth Day, April 22, 1970, and the summer of 1975, when the U.S. Department of Agriculture began its Food and Nutrition Education Experiment.22 The Fenway Victory gardens are now an official Boston Historic Landmark, with over four hundred active gardeners.

6th and B Community Garden, New York, New York

Though young when compared to the Fenway Victory Gardens, the 6th and B Community Garden in New York City has had a colorful history, offering several useful lessons. Prior to the colonial era, the garden site was a salt marsh. By 1845, the city had covered the marsh with landfill and erected the first buildings as housing for tradesmen and artisans. By the 1890s, the lower East Side was densely concentrated with immigrant tenements, lacking adequate light, air, or green space.

In the 1960s, the neighborhood had become the home of students, low-income working people, and a growing Latino population. In the late 70s and early 80s, the energy crisis led landlords to abandon their buildings, and the corner of Sixth Street and

Avenue B became a slum of deteriorating, vacant buildings occupied by drug addicts. As the City removed some of the buildings for safety reasons, the dereliction of the neighborhood incited the community to action. Eager for the green space, a committee of the 6th Street A-B Block Association petitioned the City's Operation Green Thumb in 1982 to lease the land and started hauling waste from the 17,000 square foot site.

Similar to the Fenway Garden, the 6th and B Community Garden has been threatened by numerous development proposals. For example, a local waste hauler petitioned the City to use the site as a parking lot. Residents of Sixth Street successfully defeated the parking lot proposal in favor of the garden. Again, in 1985, another more serious challenge threatened the garden. Since the garden lay on City land taken from former owners in lieu of back taxes, the City argued that the land should be sold at auction to high-end housing developers with deep pockets. To their credit, the garden membership successfully drew up an outreach program to counter the housing lobby.

From the garden’s inception, garden members surveyed the site, drew up the schematic plans, built 125 4’ x 8' plots, laid pathways, prepared for the installation of a fence, and laid out ornamental borders. By April of 1984, Green Thumb had issued a one-year lease. To secure the operation of the site, the Garden established partnerships with the Green Guerrillas and the Trust for Public Land to raise funds to buy supplies and gardening equipment.

Today, the 6th and B hosts an annual Corn Roast and Harvest Festival, crafts programs, horticultural/science workshops, slide shows, multicultural festivals, and performances that run throughout the summer. In addition, three preschool centers work the garden as part of an environmental curriculum to teach the children gardening and
nature principles and skills. The garden also includes a children's adventure playground, a children's garden, and a 37-foot internationally famous sculpture of NYC street treasures created by a garden member.

In 1996, a deal was worked out by the Trust for Public Land to give the garden permanent site status. As a result, the garden became part of the NYC Parks Department as part of the City Spaces program. The Garden is incorporated as the 6th Street and Avenue B Garden, Inc., a 501(c) 3 corporation. The garden has a board of directors comprised of 15 gardeners and community representatives. The general membership makes everyday decisions at monthly meetings. Each member has to be a resident of the community, pay annual dues for a 4x8 foot plot, and must work 4 hours each month on behalf of the Garden.

Bodine Street Community Garden, Philadelphia, Pennsylvania

In June of 1980, the organization Philadelphia Green helped local community members turn a former trash-strewn vacant lot into a lush neighborhood green space known as the Bodine Street Community Garden. Located at 914 South Bodine Street and 939-941 South 3rd Street, the community garden is located in the Queen Village neighborhood of Philadelphia, and is equal in size to approximately three city lots.

Since the garden’s inception, it has transformed into an urban paradise where generations of neighborhood families have had free plots to grow vegetables and flowers, compost or just relax and barbecue. The garden provides outdoor space to urban dwellers with limited garden access. In the bustling city of Philadelphia, Bodine Street Community

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Garden has become a haven for neighbors to meet, socialize, share gardening tips, and form friendships.

Over the years, the Bodine Street Community Garden has continued to flourish and improve the appearance of the surrounding neighborhood. In May of 2000, the famous Philadelphia mosaic tile artist Isaiah Zagar created a beautiful mosaic tile mural, *The Garden Goddesses*, on one of its walls. As a result, through the combined beauty of the garden and this impressive work of public art, Bodine Street Community Garden has become an attraction for neighborhood residents, many bringing visitors here as part of their Queen Village tour. However, like any urban gardens, Bodine Street Community Garden has had its share of problems to solve. For instance, last year the gardeners began a trap-spay-release program to help control the feral cat overpopulation problem in the area. This type of initiative is just one of many intended to establish the garden as a hub for future neighborhood improvements.

In an unfortunate turn of events, in 2003 the city put the garden's land on the market. Frightened by the threat of development and the destruction of the garden along with its original Isaiah Zagar mosaic tile mural, the gardeners and neighbors of the Bodine Street Community Garden joined forces to save this precious urban green space. Along with the help of the Neighborhood Gardens Association and City Councilperson Frank DiCicco they successfully fought the city to keep the garden from being sold. Now, through Mayor Street's Neighborhood Transformation Initiative, the garden is waiting to become an official part of the Neighborhood Gardens Association.
Summary of Chapter 2

The postwar departure of Americans from cities to suburbs, the decline in farming population, and the advancement of technologically driven agricultural practice have had a profound impact on urban and rural communities. In many instances, the result has been an increase in poverty, hunger, unemployment, uncontrolled and unsustainable land-use development and community despair when considering the future.

Community gardens are a positive response to how a community might reduce some of the negative effects of current trends in agriculture and land development. Community gardens bring fresh produce to neighborhoods in need, and return dollars to local economies rather than to distant corporations. Gardens allow consumers to pay reasonable prices for healthier food. In addition, community gardens create vibrant environments for distressed neighborhoods. Establishing community gardens also provides the added environmental benefit of preserving valuable open space, protecting biodiversity, localizing produce availability and reducing the dependency on packaging materials, fossil fuels, and agricultural pesticides of larger scale farming processes.

Although not commonly viewed as having a widespread influence, community gardens are well documented in various research areas including urban agriculture, community development and food security literature. However, resources rarely make recommendations as to how to successfully establish and protect community gardens from future development.

Gardens in economically depressed urban areas with low-income populations confront many ongoing challenges. Since many community gardens occupy vacant city lots, it is not uncommon for gardens to be leveled in the interest of housing development.
Cultural differences, language barriers and safety concerns may make community gardens exclusionary spaces, discouraging open participation within the community.
CHAPTER 3: 
REGIONAL AND LOCAL CONTEXTS OF COMMUNITY GARDENS

Introduction

The American Farmland Trust has identified the Connecticut River Valley as one of the top twenty most threatened agricultural areas in the United States based on regional development pressures.24 The region is well known for some of the most fertile soils in the world as well as average rainfalls that often make irrigating farmland unnecessary. Unfortunately, despite ideal farming conditions, Massachusetts farmland is still disappearing at a rapid rate. For example, between 1982 and 1997, Massachusetts lost 18% of its agricultural land to development -- in all, 89,000 acres.25 Without land protection strategies in place, prime agricultural land in the northeast critical to the national food supply could become lost to the impacts of population growth, urbanization and global climate change detrimentally effecting water availability and agricultural production. The Massachusetts Community Preservation Coalition points out that since 1945, Massachusetts has lost over 1.3 million acres of farmland, nearly 20% of the entire land area of the state. Every year, 200,000 more acres of land are lost to development.26

Hampden County, in addition to Hampshire and Franklin counties, comprises the Pioneer Valley, an area through which the Connecticut River flows en route to the Long Island Sound. Historically, the lower Connecticut River basin was one of the nation’s earliest agriculturally productive areas. Formed by glacial outwash and lacustrine

deposits from glacial Lake Hitchcock, the Pioneer Valley contains some of the richest soil deposits in the nation. Consequently, agriculture still persists as a prominent driver of the region’s economy and physical character.

Similarly to the Connecticut River Valley, Cumberland County, Maine has some of that state’s most productive farmland. The U.S. Department of Agriculture defines prime farmland as the land best suited to producing food, feed, forage, fiber and oilseed crops. Historically, farming is inextricably linked to the history of Maine. Statewide, farmers were stewards of the land; protecting natural resources and creating open space. Maine’s first settlers own farmland whose fields, farmhouses and barns became Maine’s familiar bucolic landscape. Unfortunately, similar to the Massachusetts trend, acreage of Maine farmland is decreasing because of development pressures. According to the USDA/Dept. of Commerce, Agriculture Census 1974 – 1997, land in Maine farms has decreased 8 percent from 53,893 acres in 1992 to 49,892 acres in 1997. Yet despite, the decrease in available farmland, Maine’s agricultural producers and processors continue to make a large contribution to the state’s economy. Specifically, the farming industry annually contributes over 1.2 billion dollars and consistently employs approximately 65,000 workers within Maine. From a market standpoint, agricultural profits have also increased in the last decade. In Cumberland County, the average per farm market value of

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29 Ibid., Cumberland County Profile.
30 Ibid., Cumberland County Profile
agricultural products sold increased 5 percent from $36,201 in 1992 to $38,061 in 1997.\textsuperscript{31} Therefore, aesthetically and economically, farming is still of critical importance to Maine’s character and livelihood.

**Food Insecurity in Massachusetts and Maine**

**Massachusetts**

In 2005, Project Bread conducted a study on the status of hunger in the state of Massachusetts. The findings were startling. A USDA study conducted from 2001 to 2003, reported that roughly 6.2 percent of households in Massachusetts were food insecure. As the root cause of hunger, the researchers pointed to the rising problem of poverty across the state. In 2005, they estimated that 630,000 people in the state of Massachusetts (or 9.8% of the population) were living below the poverty line and unable to secure nutritious food.\textsuperscript{32} As documented by several public health reports, hunger has serious medical consequences, especially for children, which demonstrates a pressing need for the state to approach this problem. Researchers at the Massachusetts General Hospital (MGH) have found that childhood hunger can be linked to poor health and medical problems such as asthma, high lead levels, and ability to thrive.\textsuperscript{33} Not surprisingly, children of low-income wage earners are likely to be victims of poverty and hunger. Combine low income with the high cost of living in the state of Massachusetts and the outcome is bleak. Among low-income households, 67% spend more than one

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\textsuperscript{31} Ibid., Cumberland County Profile

\textsuperscript{32} Project Bread, Status Report on Hunger, in Massachusetts, Boston, Massachusetts, p. 1.

\textsuperscript{33} Ibid., p. 1.
third of their income on housing while others spend an even greater amount for fair
market rent in Eastern Massachusetts.\textsuperscript{34}

In a 2003 study, Project Bread and the Center for Survey Research at the
University of Massachusetts Boston discovered a concentration of hunger in low-income
communities across the state: 20 percent of all households lacked adequate food.
Strikingly, over 60 percent of school-aged children living in poverty in Massachusetts,
are found in these 20 communities.

The study showed that one child in three within these communities was a member
of a family that was unable to meet its basic need for food. The survey results indicated
two measures of hunger in Massachusetts: 1) those households that were "food insecure"
to the extent that one or more household members were on the brink of hunger
occasionally during the year, and 2) those households that were "food insecure with
hunger."\textsuperscript{35} The latter finding, which affects 10 percent of the households with children
surveyed and represents a more extreme deprivation, meaning that these households were
forced to cut the size of meals, to skip meals, and eventually to deplete their food supply
altogether, experiencing hunger as a result.\textsuperscript{36}

In Massachusetts, Project Bread and other statewide programs have tried to
mitigate the negative impacts of hunger and poverty especially among children. As a
form of community-based child hunger prevention, Project Bread established MCHI, the
Massachusetts Child Hunger Initiative (MCHI). With over $5.5 million in grants, MCHI
works to provide funding to organizations within the twenty low-income communities to

\textsuperscript{34} Ibid., p. 1.
\textsuperscript{35} Ibid., p. 3.
\textsuperscript{36} Ibid., p.3.
provide assistance programs so that children receive free breakfast and lunch at school, summer meals when school is out, healthy snacks at after-school programs, and better nutrition at home with the assistance of food stamps.\textsuperscript{37} The goal is to provide appropriate nutrition to all kids in their daily environments – school and home – thus removing them from pantry lines and allowing them to thrive as children not affected by hunger and poverty.

Fortunately, the results of these child nutrition programs are encouraging. Researchers at the University of Massachusetts Boston completed a preliminary study of the relationship between school breakfast participation and MCAS scores. In schools where between 60 and 80 percent of the students are eligible for free or reduced-price school meals, they found that school breakfast participation was directly correlated with higher MCAS scores. They also concluded that when the school breakfast participation rate was over 80 percent in a given school, MCAS scores were significantly higher than when participation was at lower levels.\textsuperscript{38}

Government-sponsored nutrition programs include the Food Stamp Program, WIC (the Special Supplemental Nutrition Program for Women, Infants, and Children), School Meals, and the Summer Food Service Program. However, despite the availability and best intentions of these programs, according to the several state reports, enrollment rates are low throughout the state. The USDA reports that only 39% of those eligible for food stamps are enrolled.\textsuperscript{39} Some reasons for the under enrollment could be attributed to

\begin{footnotes}
\item[37] Ibid., p.3.
\item[38] Ibid. p. 4.
\item[39] Ibid., p. 4.
\end{footnotes}
state office hours, transportation difficulties, a complicated application process, language barriers, and a lack of awareness of the benefits of the program.\textsuperscript{40}

In many ways, Massachusetts does a poor job of supporting local economies and keeping federal tax dollars within the state related to federal programs. For instance, according to the Tax Foundation, Massachusetts ranked 44th among the states in the return on federal tax dollars in fiscal year 2003.\textsuperscript{41} The Commonwealth received only 78 cents in federal spending for every tax dollar its residents sent to the Internal Revenue Service. This amount is a drastic decrease from twenty years ago when the Commonwealth received $1.09 back for every dollar sent. Massachusetts is failing to capture millions of federal dollars available through the Food Stamp, School Breakfast, and Summer Food Service Programs. If enrollment in the three child nutrition programs increased from current levels to 66 percent of those eligible, Massachusetts would receive $103 million in additional federal revenues. In all likelihood, these federal dollars would probably be spent in grocery stores and markets, fueling the economies of some of the state’s poorest communities.\textsuperscript{42}

Similarly, the cost of transporting food also acts as a drain of money from local economies. The Food Project estimates that food in the United States travels an average of 1,300 miles from farm to market shelf. In Massachusetts alone, food trucking costs translate into a $4 billion leak in the state economy. If the state could produce closer to 35% of its food supply locally, Massachusetts could also increase its annual contribution

\textsuperscript{40} Ibid., p.4.
\textsuperscript{42} Project Bread, Status Report on Hunger, in Massachusetts, Boston, Massachusetts, p. 5.
to the state economy in the amount of $1 billion dollars, limit truck pollution, and keep local farms in business providing jobs while supplementing town economies.

Maine

Maine has a population of approximately 1.2 million people spread over a large geographic area. Similar to Massachusetts residents, Maine families experience economic pressures faced with the high costs of housing, fuel and utilities. According to a 1999 study by Massachusetts Institute for a New Commonwealth, Maine ranks last among all states for per capita disposable income after adjusting for the cost of living. For low-income families, budgeting for food is secondary to budgeting for housing especially during the winter months. Maine is a poor state, ranking 37th in the nation with a median income of $22,078. According to a study released November 1, 1999, by the Maine Center on Economic Policy, about half of Maine’s workers do not earn enough to meet basic needs for themselves and their families. Therefore, employment by itself does not guarantee food security.

The USDA Food Security Measure indicates that in 1998 approximately 8.7 percent of Maine households experienced food insecurity. While that number is near the national average, the 3.7 percent of Maine households who directly experience hunger exceeds the national average. Maine’s Community Childhood Hunger Identification Project (CCHIP), conducted in 1992 and updated in 1995, estimates that 19,375 low-income children under 12 in the state are hungry with another 64,087 at risk of hunger.

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44 Ibid., Site accessed on February 27, 2006.
These findings show that more than 40 percent of Maine kids under 12 showed some evidence of hunger when the research was completed.

In response to similar alarming statistics, the International Conference on Nutrition, convened in Italy in December 1992, developed the following Plan of Action:

1) Ensure a safe and nutritionally adequate food supply both at the national level and at the household level.
2) Have a reasonable degree of stability, in the supply of food both from one year to the other and during the year.
3) Most importantly, ensure that each household has physical, social and economic access to enough food to meet its needs. Therefore, each household must have the knowledge and the ability to produce or procure the food that it needs on a sustainable basis.

On a regional level, increasing access to healthy food and improving the incomes of the diverse groups who are currently food insecure requires adopting multiple policy instruments and striking a balance between short-term and long-term goals.

**Hampden County, Massachusetts Demographics**

Hampden County is the urban core of the Pioneer Valley. The county is home to two programmatic community garden organizations in two of the largest cities in the region:

<table>
<thead>
<tr>
<th>Population</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Springfield</td>
<td>152,082</td>
</tr>
<tr>
<td>Chicopee</td>
<td>54,653</td>
</tr>
<tr>
<td>Westfield</td>
<td>40,072</td>
</tr>
<tr>
<td>Holyoke</td>
<td>39,838</td>
</tr>
</tbody>
</table>

Similar to other industrialized cities in New England, each of these Hampden County cities lost population between the 1990 and 2000 Census reports. The only exception to this trend was the city of Westfield that actually grew by 4.3% between the two reports. Compared to the other cities, Westfield is less densely populated, less
racially diverse, and more affluent than the three other cities, which have a stronger need for the output of community gardens. [Chicopee is also different from Springfield and Holyoke.]

In the Commonwealth, Hampden County has the second highest poverty rate (16.6%) according to the 1997 Census Bureau behind Suffolk County (20.7%). Holyoke and Springfield, the respective homes of Nuestras Raices and Growing the Community, have poverty rates close to double of the state and national rates. These cities also have a higher proportion of non-white residents compared to the rest of county, state and nation. Notably, more than 40% of Holyoke’s population is over Hispanic origin, primarily first or second-generation immigrants from Puerto Rico, the Caribbean, or other Spanish speaking countries. By comparison, 27.2% of Springfield residents describe themselves as Hispanic or Latino (2000 Census) whereas 20% identify themselves as African American.

In terms of median income, both these cities are economically less viable compared to the rest of the county, state or nation. The census shows them at only two thirds the state level. At the census tract level, Holyoke’s household incomes range from $8,580 per year to $47,734 showing a high-income disparity. At closer observation, census tracts with the lowest median household incomes coincide with the areas with the highest concentrations of non-white populations.

**Cumberland County, Maine Demographics**

Cumberland County, the largest county in population, is in the Southern half of the state and comprises the Portland metro area. The county has one community gardening association, Cultivating Community, and six city owned and managed
community garden plots. As of 2004, the county has an estimated population of 273,505. Compared to the 2000 census, Cumberland County’s population has increased over 2.97% since the last survey. Cumberland County ranked first in the state for population growth during the 1990s. This change is a stark contrast to the other New England regions like Hampden County, Massachusetts, which continue to lose population. In Cumberland County, the only exception to this trend was the City of Portland, which actually lost a small portion of its population (-.17%) between the two reports. Compared to the other cities, Portland is more densely populated, more racially diverse, yet less affluent than the three other areas, suggesting stronger need for the output of community gardens. The majority of Cumberland County’s population is dispersed among these four locations in the region:

<table>
<thead>
<tr>
<th>Population</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Portland City</td>
<td>64,249</td>
</tr>
<tr>
<td>South Portland</td>
<td>23,324</td>
</tr>
<tr>
<td>Brunswick</td>
<td>21,172</td>
</tr>
<tr>
<td>Scarborough</td>
<td>16,970</td>
</tr>
</tbody>
</table>

In 1998, Cumberland County led the state in per capita income at $29,960. By 2002, the per capita personal income in Cumberland County had grown to $34,498. This was an increase of 25.6% from 1997. The 2002 figure was 112% of the national per capita income, which was $30,906. At the census tract level, Portland’s household incomes range from $4,262 per year to $45,651, showing a high income disparity. Census tracts with the lowest median household incomes coincide with the areas with the highest concentrations of non-white populations.

However, despite these positive indicators of economic gain, Cumberland County is not without poverty. In 2000, the U.S. Census Bureau reported that in Cumberland
County, Portland had the highest poverty rate (9.7%), with Brunswick having the second highest incident of poverty at 5.7%. Similar to Springfield and Holyoke, Massachusetts, Portland also has a higher proportion of non-white residents compared to the rest of county and state. Notably, more than 5.6% of Portland’s population is of African/African American or Asian origin, primarily first or second-generation immigrants from Africa especially Somalia or Asia.

**Local/Regional Challenges Facing Community Gardens**

Although tackling food security through alternative community food systems is an admirable goal, there are several challenges facing urban growers today. Specifically, community gardens encounter numerous obstacles to growing and distributing produce to food insecure populations. Below, the Community Food Security Coalition presents a comprehensive list of current urban agricultural challenges. Subsequent chapters will discuss possible community-based remedies to these urban obstacles in the future.

**Land Tenure**

Few community gardens own the land they use to grow food. Without property rights, or 3 to 5 year leases, they risk losing their investment if the town, the city, or a private investor seizes the land for another purpose.

**Start-up Costs**

Starting a community garden has associated start-up costs that can be prohibitive to gardeners living on limited incomes. Among the expenses are: labor, site management, water, tools, rent, insurance, packaging and marketing materials.
Access to Markets

Community gardeners often have problems directly marketing their locally grown produce to grocery stores, restaurants, and institutions because of the stranglehold wholesale distributors have on the marketplace.

Knowledge and Skills

Community gardeners may have limited knowledge and skills in agricultural production, processing and marketing that would improve crop yields and community food security.

Seasonal Limitations

Food production is seasonal and therefore not a reliable year-round source of food in all climates. Community gardeners may not be aware of overwintering techniques or have access to facilities for preserving foods that they grow.

Health Standards

Growing produce in the city comes with certain health risks. Urban soils can be contaminated with heavy metals or chemicals such as lead or pesticides. Any community garden certified organic must guarantee that their productive land is fifty feet from a site that is possibly contaminated.

Urban Planning

Selling the public on community gardens as a way to maintain open space and biodiversity in the city is not always easy. Educating the public and city officials on the principles of low-impact development, smart growth, and sustainable urban development is a critical next step. Taxpayers need to know that urban greening projects such as
community gardens is a way to have green space that pays taxes rather than costing taxpayers more money.

Vandalism and Crime

Although vandalism and crime have not detrimentally affected the development of community gardens, they remain environmental factors that need to be watched closely. After all, one’s perception of the environment and one’s personal safety can evoke a sense of danger and trigger a state of alertness if a space is not designed with crime prevention in mind. CPTED, an acronym for Crime Prevention Through Environmental Design, is based on the theory that proper design and effective use of the built environment can lead to a reduction in the incidence and fear of crime and an improvement in the quality of life.

The History of Community Gardens in Hampden County and Cumberland County

Nuestras Raíces

Founded in 1992 by members of La Finquita community garden in South Holyoke, Nuestras Raíces was originally established to help manage the garden and to create local greenhouse space. Over time, Nuestras Raíces eventually evolved into a grassroots non-profit organization to promote economic, human and community development in Holyoke through projects related to food, agriculture, and the environment. More specifically, Mr. Luis Saez, the Director of Environmental Education, described the objective of Nuestras Raíces as “organiz[ing] residents of

Holyoke to achieve greater self-determination, develop unity and leadership and address issues of food security, environmental justice, civil rights, nutrition, cultural preservation, and intergenerational activities.™

To put their plan in action, the founders and directors of Nuestras Raices continue to try to create and sustain community urban gardens; many of their gardens rose from former vacant lots, byproducts of old factories and abandoned residential developments. There are presently seven gardens operated by approximately 100 families; most gardens are on city land or on leased land care of the Trust for Public Land. Similar to other urban gardens, the gardens transform the urban environment, providing access to low-cost, nutritious food, and bringing friends, neighbors, youth and elders together to improve the community.

Programmatically, Nuestras Raices has far-reaching plans to involve the entire community. For example, the organization has developed youth gardening programs, environmental educational workshops and field trips, micro-business development ventures, and has preliminary plans for a future agricultural farm center consisting of a restaurant, a greenhouse, a library, and a community kitchen. Through their efforts, Nuestras Raices’ work in the lower-income neighborhoods of Holyoke helps to coordinate youth and adult volunteers to produce healthy food for residents of the city, to create youth leadership opportunities, and to inspire others to create change in their own communities.

Gardening the Community

Likewise, Gardening the Community of Springfield and Cultivating Community of Portland, Maine, are community-based nonprofits that operate community gardens in low-income urban settings. Similar to Nuestras Raices, Gardening the Community and Cultivating Community view urban agriculture as a way to promote community development while securing affordable food production. Gardening the Community is a project of Massachusetts’ Northeast Organic Farming Association (NOFA). From a mission standpoint, the project strives to help youth understand the importance of healthy locally grown food, environmental justice, and community empowerment, as well as gain first time job experience and leadership skills, in a safe, supportive atmosphere.

Unfortunately, in the course of their four year history, Gardening the Community has faced several challenges, including having their land sold by the city to a developer, soil contamination, monetary limitations, and recognition from the city as a community asset.

In an effort to secure their land, Gardening the Community actively protested the Springfield Redevelopment Authority’s plans to sell their original quarter acre site at 488 Central Street, Springfield. Gardening the Community asked to be the developers of the land and to ensure that it remain green space dedicated to youth, the community and food production for the neighborhood. Sadly, the organization has lost its youth garden to development of low cost housing during the writing of this report. The struggle is not over but new measures need to be taken to help Gardening the Community thrives within the city of Springfield, Massachusetts.
Cultivating Community

Cultivating Community is five years old but it is still an organization in the early stages of development. As their mission statement reads, “we are committed to building sustainable communities. We do this through community food work, through youth and community development, and by promoting social and environmental justice.” Strong believers in youth development, Cultivating Community have multiple youth training programs to teach them how to grow and distribute food, gain job and leadership skills, and learn how to be responsible members of the community. Among the programs they offer are: Youth Growers, an intensive seven-week summer program and Compost Corps, and eleven-week session that run during the Fall and Spring. Among some of their goals are to distribute food in the emergency food system, provide life and jobs skills to teens, and to reduce landfill waste by composting food scraps at their garden provided by local restaurants. They also partner with local schools to offer educational workshops about issues of social and environmental justice, self-sufficiency, and ecological sustainability. For dedicated veteran youth members, Cultivating Community also offers a summer internship program to enhance their leadership skills.

Cultivating Community has many achievements to be proud of. Other than establishing a popular local garden, the organization is responsible for 66,000 pounds of locally grown organic produce accessible to families and elders with low incomes. In addition, they have trained more than 56 young people more than half from mixed immigrant backgrounds or low-income families. They have created school gardens and educated over 1000 students about food systems and creating an ecologically sustainable food system for all. Lastly, Cultivating Community is responsible for establishing
Portland’s only urban farm, restoring to ecological health and agricultural productivity some mistreated land. Although their vision is far from complete, Cultivating Community is an organization that has the enthusiasm to motivate citizens of Portland, Maine, to effect change towards improving the built environment, building a sense of community, and empowering youth.

Summary of Chapter 3

With community-based support and the implementation of effective public policies, community gardens could potentially help to alleviate the hunger crisis through catalyzing a nationwide process to build community food security and increase economic development in American cities. By petitioning for changes to agricultural practices and policies at the local, state, and federal levels, community gardeners could help educate the public about the need to move towards sustainable agriculture. However, most of the burden to resolve this crisis resides with the urban dweller’s consumer habits and the structure of our economy. If each urban dweller could strive for the following: seeking local products, preserving farmland, supporting conservation legislation, and funding land preservation projects for agriculture, the chances of improving the future of our national food supply today could be greatly improved.

Nuestras Raices (NR) of Holyoke, Gardening the Community (GC) of Springfield, and Cultivating Community (CC) of Portland, Maine, are three New England organizations that recognize that program and access for community gardens can catalyze community empowerment. To improve the future prospects of subsequent community gardens, the following chapters will elaborate upon a list of programmatic criteria that can better position community gardens as tools of community empowerment. This
research will provide a model to communities of how to establish, protect, and promote the valuable but often underappreciated resource known as the community garden. As a side note, due to the fast-tracked research timeframe, the non-profit Cultivating Community was removed from the study due to the geographic limitations of implementing the survey tool out of the state of Massachusetts.
CHAPTER 4: METHODS FOR CONDUCTING A COMMUNITY GARDENS PERCEPTION SURVEY OF HAMPDEN COUNTY

This study seeks to identify what factors in a programmatic community garden contribute to positive changes identified within a neighborhood related to health, crime, and economic development. Information was compiled through interviews conducted with business leaders, educators, councilors, and town officials of Holyoke, Massachusetts. Supporting background research for the survey content included printed and online resources, site visits, and meetings with Daniel Ross, the director of Nuestras Raíces. The interview questions aimed to glean outside opinions and attitudes about Nuestras Raíces as well as the value of programmatic community gardens in general. Information about interview participants’ relationship to Nuestras Raíces and market research about specialized crops was also documented.

Background Research

This project began with background research including online and printed journal articles, site visits, and meetings with staff members of Nuestras Raíces to learn about the development of community gardening organizations, the national and regional context of community gardens, the operation of programmatic community gardens, and to inform the creation and development of the Community Garden Neighborhood Survey Discussion Guide.

The researcher completed a literature review using printed library materials; relevant peer reviewed journal articles, the Internet, and online database such as Web of Science, Agricola and InfoTrac. Maps and census material for Holyoke were acquired from the city of Holyoke and the U.S. Census website.
Site visits of the community gardens were identified by Internet research and through the assistance of Nuestras Raices staff members. The researcher initially conducted preliminary site visits to the community gardens in three New England cities in the summer and fall of 2005. The initial site visits served as case studies for this paper and provided a baseline for additional research.

Several community garden organizers shared their opinions about community gardens in general and tools they considered successful. Community garden organizers also provided interviewee contact information and offered suggestions for supplemental reading and other research contacts. Most interviewees had a supervisory or management position related to their organization. The list of contacts was as follows:

**Municipal Planning**
- Alicia Zoeller, Conservation Director, Holyoke, Mass.
- Kathy Anderson, Mayor's Assistant, Holyoke, Mass.
- Jeff Hayden, Director of Planning Department, Holyoke, Mass.
- Scott Hanson, City Planner, Springfield, Mass.

**City Government**
- Lillian Santiago, Ward 1 City Councilor, Holyoke, Mass.

**Educators**
- Orlando Isaza, Holyoke Community College, Holyoke, Mass.
- Gustavo Acosta, Holyoke Community College, Holyoke, Mass.
- Jan Zeigler, American International Arts College, Springfield, Mass.
- Ellen Pader, UMass – Amherst, Associate Professor of Regional Planning, Amherst, Mass.
- Mari Paredes, UMass – Amherst, Assistant Professor of Communication, Amherst, Mass.
- Jen Cannon, UMass – Amherst, Community Education Project, Amherst, Mass.
- Joseph Krupczynski, UMass – Amherst, Assistant Professor, Art and Art History, Amherst, Mass.
Local Non-Profits
- Betty Medina, Director of Enlace de Familias, Holyoke, Mass.
- Carlos Vega, Director of Nueva Esperanza, Holyoke, Mass.
- Heidi Thomson, Associate Director of Girls Inc of Holyoke, Holyoke, Mass.
- Gloria Wilson, Activities Director of Mason-Wright Senior Center, Springfield, Mass.
- Tom Rossmassler, HAP Inc., The Region’s Housing Partnership, Springfield, Mass.
- Imre Kepes, Co-director of El Arco Iris, Holyoke, Mass.

Agricultural Associations
- Annie Cheatham, Community Involved in Sustaining Agriculture, South Deerfield, Mass.
- Ruby Maddox, Former Director of Gardening the Community, Springfield, Mass.
- Jonathan Bates, Nuestras Raices Board Member, Gardening the Community Advisor, Springfield & Holyoke, Mass.

The information collected from my initial research was used to gain an understanding of the community gardens’ role in neighborhood development and formed the basis for the Neighborhood Survey to see if the gardens stimulated community improvements in the city of Holyoke. See Appendices A and B for the Community Garden Perception Survey in English and Spanish.

From several journalistic sources, various indicators of neighborhood improvements related to community gardens came to the surface. These indicators fell into three general categories:

- Site Aesthetics
- Social Connectedness
- Youth Empowerment

Aesthetic improvements commonly referred to in the literature included tidier appearance of vacant lots, public access for gardeners and the public, and a reduced presence of trash. The presence of a supporting youth crew, continuous site maintenance,
and the regular traffic near the site from the surrounding neighbors must also be adequate to ensure that site aesthetics aren’t degraded. The regular presence of youth participants and neighbors in or near the garden are the best protection for a newly transformed vacant lot.

Community gardens serve an important social function in a community. They can provide activities; serve as an informal gathering spot or as an educational venue for community outreach activities related to gardening and nutrition. While the primary goal of a community garden is to produce fresh local food, the need to maintain them draws various generations and cultures to the site. In low-income neighborhoods, where access to fresh produce or larger grocery stores may be limited, community gardens can be the driving force connecting nutritious food to those populations that need it the most. The potential to provide high quality affordable food to even larger numbers of people is possible when community garden organizations participate in food coupons programs for seniors and single female households with children.

To succeed in a community, programmatic community garden organizations need the support and involvement of local residents, city government officials, the site owner (if there is one), local youth organizations, and nearby businesses. Open communication between all groups is critical to the stability and growth of the community garden organization. If the organization does not foster and nurture these relationships, the likelihood the gardens will survive and thrive is questionable.

Like any non-profit business, leadership is crucial to the success of a community garden organization whether it has an executive director, board of directors, a parent agency, or all of the above. Although a business plan is not necessarily the best approach
to starting a community garden non-profit, an organization can benefit from having a leader with vision who strongly believes and promotes the groups’ mission statement and set of objectives.

One of the key ingredients to a community garden organization is the continuous involvement of local youth members. For an organization to thrive, staff members must continually try and involve the public, attracting enthusiastic youth members and growing appropriate crops for their constituents. Engaging youth members from the community who want to return season after season is essential to growing and harvesting produce that is then returned to the community. The pressing need for healthy food, the consistency of youth involvement, and the production of fresh produce makes the organization sustainable and establishes a solid customer base.

Survey participants were asked to rate *Nuestras Raíces* on twenty different factors that fell into the three broad categories listed above (Site Aesthetics, Social Connectedness and Youth Empowerment). Site Aesthetics includes Trash Removal, Foot Traffic Volume, Visibility, Public Access, No Loitering Observed, After-Hours Security, and Vandalism. Social Connectedness refers to Proximity to Community Places, Culturally Appropriate Produce, Community Support, Official Endorsement, Food Disbursement, Educational Programs, and Public Outreach. Youth Empowerment factors include Skill Building, Reliability, Interaction with Adults, Public Outreach, Performance in School, and Risk Reduction Education. Survey respondents were asked to rate each item on a scale of one to five, one being poor, two being fair, three being good, four being excellent, and five being don’t know/no answer.
An “Overall Score” was calculated by combining the scores of the listed factors for each category (Site Aesthetics, Social Connectedness and Youth Empowerment). The end result was a Compound Score for all factors with an associated “letter-grade” equivalent for the community garden organization.

**Survey Development and Implementation**

The survey was sent to Hampden County employees and members including municipal planners, government officials, educators, local non-profits, and agricultural associations. The goal of the survey was to gain an understanding of community members’ attitudes about the community gardens in Hampden County as well as their organizing bodies, *Nuestras Raices* and *Gardening the Community*. The survey also gathered information about participants’ role in the community and the importance of community gardens’ as an empowerment tool.

[The primary resources used for survey development was *The Practice of Social Research* by Earl Babbie (1998) and the copy editing expertise of Mark Hamin, Lecturer of Regional Planning, UMass - Amherst.]

The survey consisted of three parts. The first section gathered attributes of participants and their role within the cities of Holyoke or Springfield. The second section asked questions about their produce shopping habits in general, and their opinions about the role and effects of community gardens’ in a city. The final part asks participants to assess the community garden organization in Hampden they are most familiar with on Site Aesthetics, Social Connectedness, and Youth Empowerment (See Appendix B).
Contacting the following key informants generated a list of participants’ names, addresses, and other contact information:

3. Juan Camilo Osorio, UMass – Amherst, Amherst, Mass.

The survey was distributed to vendors by mail and confirmed by phone in the Spring of 2006 before farming and production activities reached their peak. The survey was administered independently, free from any affiliation with the University of Massachusetts or any other organization. However, having an affiliation with the University of Massachusetts and the Department of Landscape Architecture and Regional Planning did lend credibility to the survey and generated a rate greater of return than would have been realized by an unknown researcher.

The survey was preceded by an introductory phone call during which the researcher identified herself as a graduate student at University of Massachusetts at Amherst and explained the intent of the survey. Since the initial approach of conducting interviews was deemed too slow a method to collect information, the researcher expedited the process by sending the survey by mail. If the participant was not reached by phone, the researched left a message describing the survey and then mailed the survey with the introduction letter separately.

Introduction letters printed on Landscape Architecture and Regional Planning departmental letterhead accompanied each mailed survey. The introduction letter described the researcher’s Masters thesis, the purpose of the survey, and included instruction to complete and return the survey.
Follow-up phone calls and thank you letters were made in ten day intervals following the initial phone call, and reinforced the importance of collecting input from as many participants as possible. Every participant was contacted at least three times by phone and/or mail before they were considered a non-respondent.

Due to the relatively small sample size and the qualitative nature of the research, the output from the statistical analysis was rudimentary and fairly specific. Mean, median, and mode were calculated for rated survey questions whenever possible.

**Summary of Chapter 4**

The Hampden County Community Gardens’ Perception Study was based on background research from peer reviewed articles, online sources, and interviews with key informants. The survey was distributed by mail and confirmed by phone to informed members of the cities of Holyoke and Springfield. The names and contact information for the participants was acquired from *Nuestras Raíces, Gardening the Community*, Community Involved in Sustaining Agriculture, and the University of Massachusetts at Amherst. The information gathered from the survey was analyzed by using basic descriptive statistics such as mean, median, and mode.

The purpose of the survey is to gain a better understanding of what factors contribute to successful urban community gardens, as well as the importance of community gardens to local communities. By documenting the positive impact of community garden associations as much as possible, consumers are more likely to gain access to fresher healthier food, securing the livelihood of these food producing non-profits, thus preserving the region’s agricultural heritage and helping to improve food security in Hampden County.
Chapter 5 below will discuss the results of the Hampden County Community Gardens Perception Study. Chapter 6 to follow will offer concluding remarks and suggestions for improving community garden organizations in Hampden County.
CHAPTER 5: 
RESULTS OF THE COMMUNITY GARDENS’ PERCEPTION STUDY OF 
HAMPDEN COUNTY

The literature research, site visits, and interviews with the directors of the gardens informed the content of the Hampden County Community Gardens’ Perception Study. The outcomes of the survey analysis included a profile of city respondents, their city associations, their attitudes towards community gardens, and their assessment of two community garden associations in Hampden County (*Nuestras Raices*, Holyoke, and *Gardening the Community*, Springfield).

The participants’ community garden evaluations included rating each garden organization on twenty different factors associated with positive indicators for healthy communities. These twenty factors were grouped into three categories: Site Aesthetics, Social Connectedness, and Youth Empowerment. Site Aesthetics includes trash, traffic visibility, access, loitering, security, and vandalism. Social Connectedness refers to proximity, appropriate produce, community support, official endorsement, food disbursement, educational programs, and public outreach. Youth Empowerment factors include skill building, reliability, interaction with adults, outreach, school performance, and risk reduction education.

**Sample Characteristics**

A total of 34 respondents were questioned about their usual produce purchasing habits. For the purpose of this study, participants were asked to write about produce acquisition in Hampden County. A total of thirty three responded to the Hampden County Community Gardens’ Perception Study, equal to a total gross response rate of 97%.
Ultimately, nine surveys were completed in Springfield constituting 27.2% of the surveys received for Hampden County. The remaining twenty for surveys comprised the remaining 72.8% surveys received specifically for Holyoke.

Profile of Survey Respondents

The average age of survey respondents was between the ages of 35 and 50 although there were several outliers in the 18 to 35 and 51 to 66 brackets. Survey respondents were slightly more likely to be female than male (14 Females to 10 Males in Holyoke; 6 Females to 3 Males in Springfield).

Slightly more respondents for Hampden County were Caucasian (54.5%) than of Latino/Puerto Rican descent (30.3%). The remaining respondents (15.2%) were evenly split between individuals of African American, Greek, or Portuguese descent. In Holyoke, the largest percentage of respondents was Caucasian (50%); followed by Latino/Puerto Ricans who made up 42% of respondents. The remaining 8% of those surveyed was evenly split between individuals of Polish and Portuguese descent.

Profile of Respondents’ Businesses and Organizations

In Holyoke, respondents have been working in their designated field of municipal planning, city government, education, non-profit management, or agricultural associations for a combined average of 7 years. Respondents’ years of experience in their respective fields range from two years to twenty years. By contrast, in Springfield, respondents have been working in their designated field of municipal planning, city government, education, non-profit management, or agricultural associations for an average of 6.9 years. Respondents’ years of experience in their respective fields range from one year to twenty years.
Close to half of the respondents (48.5%) are in some way partnered with one of the Hampden County gardening organizations; typically through volunteer educational programs or through grant-funded programs. Similar in numbers, close to half (45.5%) of respondents described themselves as supporters of the gardening organizations. The remaining respondents (6.5%) were evenly split between a neighbor and an affordable housing agency that often sees itself in direct opposition to the protection of local community gardens.

Though most respondents were intimately familiar with their respective garden association, only thirteen of them (39.4%) were strongly in favor of participating in community gardens to help strengthen their presence in Hampden County. However, overall all twenty six respondents (78.8%) agreed to participate in promoting the role of the community garden in Hampden County.

**Attitudes Towards Community Garden Organizations**

Community gardens in low-income neighborhoods that have a high percentage of immigrant populations face many unique challenges within their community. Most respondents strongly agreed that community gardens can have positive impacts on communities particularly related to crime rates, business development, health, site aesthetics, and educational opportunities for local youths. Yet, some survey respondents reported “no opinion” to the impacts of community gardens on crime due to a lack of crime statistics and analysis for Holyoke and Springfield.

On the issue of community gardens being autonomous from city governance, the majority of those surveyed “Agreed” or “Strongly Agreed” but a larger percentage than other categories either had “No Opinion” or flatly “Disagreed.” Many respondents
admitted to not having enough knowledge on the subject to make a recommendation. Several survey participants disagreed because they believed the existing community garden organizations were more effective being independent from the city rather than being another program and space they had to maintain. In the Hampden County Community Garden Profiles, for instance, several respondents lauded the independent community garden organizations for their ability to successfully promote social connectedness and youth empowerment from the ground up.

When asked if they thought community gardens were supported in their communities, both Holyoke and Springfield respondents had mainly negative answers. In Holyoke, the majority of participants (83.3%) believed community gardens were valued. The remaining 16.6% of respondents disagreed, largely blaming municipal indifference for their assessment. Many noted an appreciation for the gardens from within the community but not necessarily by city government. Specifically, respondents cited the following areas for making community gardens a local asset: food production, youth skill building, adult/youth interaction, affordable produce, additional income for local vendors, economic development, negative behavior reduction, improved aesthetics, educational opportunities, connection to the environment, and building a sense of community. Nuestras Raices received special praise for its efforts to mobilize local adults and youth towards the worthy cause of food production and education.

By contrast, Springfield respondents almost entirely disagreed. An overwhelming 88.8% of those surveyed did not believe that community gardens were valued in Springfield. As many of them explained, their consensus can be attributed to the recent sale of Gardening the Community’s youth garden for the construction of a single-family
home. According to several respondents, the City of Springfield currently values low-cost housing more than open space for future generations such as community gardens, parks, or farmland. In general, they described community gardens as unknown entities in a city that ascribes greater monetary value to real estate than to gardens. As one individual aptly put it, community gardens are largely undervalued because of a perceived lack of interest, participation, and political will. Therefore, by considering some of the recommendations from the following chapter, perhaps Springfield citizens could better rally around their gardens and reform land use policies to effectively change the city’s view that programmed open space is unimportant and without value.

The final question of the survey was to gauge whether each organization was meeting the produce needs of its population. For Holyoke, more than half of respondents (54.2%) did not or could not identify any desirable produce items. Other respondents urged community gardens to provide more of the following: cilantro, Puerto Rican produce, tropical fruits and vegetables, tomatillos, sweet chili, zucchini, recao (herb similar to cilantro), and other organic, affordable foods. In addition, two local Puerto Rican farmers requested an increased availability to rabbit, poultry, and roasted pork. Fortunately, in the coming years, Nuestras Raíces plans to build a facility to roast pork on their newly acquired farm property.

Being in close proximity to Holyoke, it is not surprising Springfield’s respondents requested similar items. Although 22.2% had no new recommendations, the others suggested collards, sweet potatoes, fresh fruits, berries, fresh herbs, and an increased production of Caribbean, Central American, and Asian produce. Springfield has a diverse population; therefore, it is not surprising that the dominant requests were for more
culturally specific products. Cultural diversity is an asset for these two cities and the community gardens’ crops should celebrate the varied backgrounds of its users.

**Hampden County Community Garden Profiles**

The highest shared ratings Hampden County community garden organizations received were for visibility of their sites and the interaction of their youth members with adults. Overall, Holyoke’s Nuestras Raíces had higher rankings related to Site Aesthetics, Social Connectedness, and Youth Empowerment compared to the scores of Springfield’s Gardening the Community. In particular, Nuestras Raíces received high scores for their skill-building efforts and educational programs whereas Gardening the Community received substantial accolades for their proximity to other community spaces. Although Hampden County respondents gave positive feedback to these attributes, their mid range rankings did suggest room for additional improvement related to visibility, youth interaction with adults, educational programs, and proximity to other community spaces.

By contrast, for all of Hampden County, many survey responses noted several areas received poor ratings including security, vandalism, and school performance of youth participants. One reason for the low scores was a lack of information related to the categories. For instance, neither organization locks their gardens nor patrols their gardens on a regular basis during the off-season. Similarly, neither garden keeps a log of crimes including thefts, assaults, or property damage committed on their lots. In addition, despite the fact that most gardens are owned by the municipality in which they reside, city officials were unable to report how secure or free from vandalism the gardens actually were.
Another area that received poor reviews was the rating related to the school performance of youth participants. Although schooling and gardening seem somewhat unrelated, Nuestras Raices partners with several higher education institutions to bring volunteer tutors to their program. Nuestras Raices also offers lessons on gardening, reading, spelling, baking, public outreach, food preparation and selling at market. However, there is currently no evaluation to assess if the program is positively impacting their performance in school. Therefore, it is no surprise that respondents are unclear about the school performance of its youth. Perhaps if there were a closer connection between school and community gardening organizations, the educational benefits would be more visible and measurable.

One area in which Holyoke and Springfield differ is their respective ratings specific to Social Connectedness. Coincidentally, Nuestras Raices has seven community garden sites, all in close proximity to one another (See Figure 1.2 and Figures 1.3). Other than such proximity generating potential interaction, another area where Holyoke’s Nuestras Raices stimulates social connection is through its educational programs, a category where Springfield’s Gardening the Community falls short with its lowest ranking of 2.22 out of 4. In contrast, the Nuestras Raices lowest score (2.17 out of 4) pertained to the city’s official endorsement of the organization. Springfield’s respondents were in close agreement giving the City of Springfield an equally low ranking of 2.33. Unsatisfactory city leadership, land protection, and a general devaluation of community gardens for land use were all cited as major obstacles to the growth of the organizations. See Table 4.4 for Hampden County Specific Factor Scores.
Summary of Chapter 5

Neither the Holyoke community gardens nor the Springfield community gardens received any very high or perfect scores in any of the specific categories. However, there are a few observations and lessons worth mentioning.

Nuestras Raices continues to grow in membership and land production with their recent acquisition of four additional acres and a lease of farmland near the Connecticut River. With the recent creation of a training program for farmers and the involvement of the community in their plans and design of the farmland, it is not surprising Nuestras Raices’ highest composite score relates to Social Connectedness. Their second highest composite score was in Youth Empowerment, with Site Aesthetics placing third. Holyoke respondents evidently identify Nuestras Raices as more of a community builder than as a land beautification project.

Similarly, Springfield’s Gardening the Community gained needed attention when its members and founders publicly protested the city’s plan to sell its two garden plots for housing development (See Figure 1.4 – Figure 1.8). Although the community garden at 488 Central Street (Figure 1.6) was eventually sold for a future house lot, the organization did make an impact in forging Social Connectedness. Next, survey respondents noted how the organization had a lasting impact on the Site Aesthetics of the area. With the help of youth participants, Gardening the Community effectively converted a trash filled, overgrown vacant lots into clean, productive garden plots neighboring local businesses. However, despite their visible efforts, Gardening the Community received low scores for Youth Empowerment; lack of funding, low youth membership, and their unstable land tenure likely contributed to their poor score. However, similar to the merits of Nuestras Raices, Gardening the Community has much
to offer Springfield in terms of community building if they continue to gain partners and supporters who will help them secure their land.
CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

Planners, public health workers, community activists, and other supporters of sustainable agriculture praise community gardens as important urban-rural partnerships yielding many potential social, economic, and health benefits. Low-income communities especially stand to benefit from community gardens since they fill a food supply need not always immediately accessible to local consumers. They can bring vitality and a relative tidiness to derelict plots of land and they provide informal spaces for social interaction and educational programs. Compared to other improvements to the built environment, community gardens can be relatively inexpensive to start up and maintain.

This study surveyed individuals working in Hampden County including municipal planners, government officials, educators, local non-profits, and agricultural associations to determine the general perception of local community garden organizations. In this chapter, key findings are discussed and recommendations offered for Holyoke’s Nuestras Raices and Springfield’s Gardening the Community, two organizations that are currently operating and for which the perception survey was designed and collected to assess.

Key Findings Regarding Best Practices

The key findings of this report could be used by any organization trying to establish a service program in a community:

- Choose a good site(s) and stay there.
- Identify who are the leaders and stakeholders in the community. Establish a method of regular communication with them and work with them to promote youth engagement.
- Make sure that organizational management and participants regularly perform public outreach and publicity.
Selection of Site Location

Community gardens and their managing organizations are best when they maintain a visible presence in the community. An open-door policy, handicap accessibility, and proximity to public transportation and other community resources help to encourage usage of the garden by all local residents. Interest in the garden, food production, and traffic volume (both pedestrian and vehicular) of the surrounding area can help a developing community garden flourish in terms of membership and productivity. A mix of residential and educational programmatic uses is best because gardens can be occupied by users of different ages at varying hours of the day. Many community gardens choose to be either residually or programmatically driven but gardens that combine the two drivers and adapt their product list are the most successful. For instance, The Food Project of Boston has community members work with their youth crew to grow and harvest produce for their neighborhood Farmers’ Market.

Losing tenure of a garden plot can cause the demise of a community garden organization, according to Kristin Brennan of Gardening the Community. Rachel Chandler Worth, formerly of Community Involved in Sustaining Agriculture, confirmed Ms. Brennan’s assessment. The Springfield community garden is a case in point when its land was sold as the future site of a single family home in late 2005. It is likely that with this loss of productive land, Gardening the Community will not grow as much produce or need as many youth participants to garden their land. However, if the City of Springfield protected community gardens from development, it is likely the organization could rebound and thrive rather than continue to struggle for survival year after year.
Leadership to Promote Youth Engagement

Local non-profit organizations that do not capitalize upon the potential contributions of community leaders and stakeholders will not thrive, nor will an organization that overlooks youth involvement. To determine who the local leaders are as well as interested youths, community garden management should conduct occasional community surveys and facilitate other means for evaluating the community gardens’ contribution. This approach gives consumers and community members an opportunity to identify potential partnerships and to give feedback about the community gardens’ presence in the neighborhood which management can then respond to. It also allows community gardens and management to grow their membership base, especially teens, so they can tailor their programs and produce to meet the needs of their users.

Regular Public Outreach

In both interviews and surveys, respondents noted that community gardens are largely self-governing and do not always engage in public outreach and communication related to their programs and efforts. Although it is likely community gardens will continue to exist, public outreach can help them reach their full potential by engaging the local community more fully and soliciting the input of knowledgeable people outside the organization.

Springfield community garden respondents reported that part of Gardening the Community’s problems stems from reactive or defensive public response rather than continuous proactive public outreach and communication. Although they recognized the organization’s funding limitations, they thought additional grant funding might help alleviate this condition. By contrast, Holyoke’s respondents directly attributed the
stronger outreach methods of Nuestras Raices to the efforts of Executive Director and grant writer, Daniel Ross.

Program directors who also serve as youth program coordinators and grant writers may become too overwhelmed with their workload to be able to facilitate side projects such as community outreach, press releases, and public meetings to promote the organization. In addition, when members leave the garden, the director must single-handedly orchestrate garden tasks such as seeding, weeding and harvesting crops. With limited staff, time limitations, and financial constraints, directors understandably rarely prioritize public outreach.

Larger agricultural associations such as Community Involved in Sustaining Agriculture (CISA) and Northeast Organic Farming Association (NOFA) are typically involved in grant-funded public survey projects. The grants are not large and the projects are terminal, but they could provide a partnership opportunity with community garden organizations that could fulfill a public outreach goal. Lack of partnerships can limit the reach of a community garden organization.

An ideal community outreach model is when a member of the community garden works directly with an agricultural organization to complete a public service project. A community member can speak on behalf of the garden and can work to promote relationships to support the future development of the garden. They do not have to create a list of supporters or potential consumers, the agricultural associations already have those networks and listservs established. They can collect feedback about potential events or programs and how to publicize them. If the community member can identify how attract attention to the garden or the organization, they can help to draw people to the area
and enliven the neighborhood. After all, the presence of people successfully draws other people to a place. Working with larger granted funded organizations often means additional resources do not need to be located; the pie just needs to be divided into smaller pieces.

Regardless who the community member is, they need to be vocal, enthusiastic, and willing to take the time to help their community garden organization reach its full potential as tool for building community networks.

**Recommendations for Hampden County Community Gardens**

Recommendations not only outline what should be done, but also target those entities that can most effectively actualize them, whether those be government agencies, public authorities, private businesses, or other community-based organizations.

This paper’s recommendations are organized into two sections. First, General Recommendations are delineated for those entities most directly connected and influential to achieving community food system security. These recommendations are intended to guide the actions and decisions made by these entities. In addition to Nuestras Raices and Gardening the Community, entities include the Cities of Holyoke and Springfield, Hampden County, CISA, and emergency food organizations such as the Western Massachusetts’ Food Bank. Second, Detailed Recommendations within three strategic areas are targeted towards particular entities that may have more specific roles in addressing food security in Hampden County and establishing a community food system. These specific recommendations are presented relative to each of the following three strategic areas:
1. Enhancing local food production through effective land use planning, crime reduction, and by connecting with Western Mass farmers
   A) Land-use Planning
      i) City of Holyoke and City of Springfield
      ii) Hampden County
   B) Crime Reduction
   C) Collaboration with Western Massachusetts Food Bank
   D) Enhancing Urban Food Production
      i) City of Holyoke and City of Springfield
      ii) Hampden County Community Development Corporations

2. Promoting food-based economic development
   A) Nuestras Raices and Gardening the Community
      i) Workforce Development
      ii) Resource Availability
      iii) Promote Partnerships and Networks
      iv) Program Implementation
   B) Nueva Esperanza and the “X” Corporation

3. Youth development through food-based projects
   A) Nuestras Raices and Gardening the Community
      i) Program Implementation
      ii) Outreach
      iii) Fundraising
   B) School Districts
   C) City Crime Prevention Program
   D) City of Holyoke and City of Springfield

General Recommendations

Nuestras Raices has worked toward community food security with very positive results. Outlined below are general recommendations that can help both Nuestras Raices
and Gardening the Community further strengthen Western Massachusetts food security and promote neighborhood revitalization:

- Strengthen connections with the Holyoke and Springfield communities.
- Facilitate intra-community awareness and appreciation of residents’ diversity.
- Promote city and regional awareness of Holyoke and Springfield’s communities’ diverse cultures and ethnic food markets.
- Facilitate collaboration among various organizations interested in strengthening food systems in Massachusetts, such as Northeast Regional Anti-Hunger Network, to create a regional food policy council that will address food security in the Western Massachusetts region.
- Establish connections between Holyoke and Springfield food businesses and local food producers such as Nuestras Raices and Gardening the Community.
- Educate residents through a food awareness campaign about nutrition.
- Continue and expand food-based youth development programs within Holyoke and Springfield.

**Detailed Strategic Recommendations**

1. **Enhancing local food production through effective land use planning, crime prevention, and by connecting with Western Mass farmers**
   
   A) **Land-use Planning**
   
   i) **City of Holyoke and City of Springfield**
   
   A community food system plan reaches beyond Nuestras Raices. Without support from the city, Nuestras Raices community food security initiatives cannot be sustained. General recommendations for both cities are outlined below:
   
   - Assign a person in the Office of Planning and Economic Development to undertake food systems planning in the cities of Holyoke and Springfield.
   - Recognize public safety as a top priority in neighborhood revitalization to promote a healthy and safe local food system.
   - Promote quality and affordable food stores to the cities in economic development activities.
• Modify land use policy to allow land trusts that would protect viable urban community gardens.

• Recognize community gardens as a permissible use in all zoning categories.

• Encourage opening a community based, community owned and operated food store in both Holyoke and Springfield that would buy local produce and food products.

**ii) Hampden County**

As home to many family farms as well as urban consumers, Hampden County can play an important role in strengthening the community food system of the region. The county encompasses both threatened farms and food insecure neighborhoods; therefore, it has a unique opportunity to improve local food security and support Hampden County family farms. To do so, the county can take the following immediate steps.

• Facilitate connections between county growers and the cities’ food-based businesses and local consumers.

• Conduct and publicly disclose the results of a weekly food survey to pressure food retailers to keep prices for food staples low and food quality high.

• Provide funding for food security initiatives, including those sponsored by Nuestras Raices and Gardening the Community.

• Look to establish partnerships with regional agencies such as Pioneer Valley Planning Commission, the Holyoke Food Policy Council, and the Springfield Community Food and Nutrition Coalition.

**B) Crime Reduction**

High concentrations of crime and food insecurity in Holyoke and Springfield detract from residents’ quality of life. If residents feel safer in their community, food security can more easily be achieved. It is essential to strengthen the community relationships between neighbors, businesses and organizations to reduce crime rates in the area. In particular, by creating more community gardens in Holyoke and Springfield, resident activity will be greater
in the neighborhoods and the opportunity for drug related crime in city lots will be reduced.

To make these improvements, the following measures should be taken:

- Identify areas where crime related activities are concentrated.
- Support efforts, such as those by Nuestras Raíces and Gardening the Community to transform the numerous vacant lots throughout both cities into community gardens.
- Petition the cities of Holyoke and Springfield to adopt community gardening as a Crime Prevention Through Environmental Design (CPTED) planning strategy. CPTED consists of four key concepts to prevent crime through design: 1) Natural surveillance, 2) Natural access control, 3) Territorial reinforcement, and 4) Maintenance. Measures should be taken to thoughtfully place physical features, activities and people to maximize visibility; guide the movement of people on and off of the site, convey ownership of the property, and show continued use of the property through maintenance.\(^{48}\) CPTED guidelines exist to make an environment safe.

C) Collaboration with Western Massachusetts Food Bank

Organizations and government programs that provide emergency food play an extremely important role in the lives of many Hampden County residents. However, the emergency food system only provides short-term relief of hunger and is not able or equipped to prevent it. Therefore, a strong community food system is needed within Holyoke and Springfield to ensure the long-term elimination of hunger and the attainment of food security. Though the importance of the charitable and governmental emergency food system cannot be overstated, it needs to recognize and support long-term measures that eliminate the root causes of hunger.

- Allocate a portion of the budget, normally spent on buying food for distribution through pantries, for long-term food security efforts such as the expansion of urban gardens and the purchase of tools needed to create and maintain them.
- Measure the efficacy of the Food Bank in terms of the nutrition supplied through the food pantries, rather than the pounds of foodstuffs delivered.

D) Enhancing Food Production

Although agriculture within Hampden County is mostly stable, it is threatened by low crop prices, aging farmers and development pressures. At the same time, the region is becoming increasingly dependent on non-local food production. The potential exists for fresh local produce to be sold within Holyoke, Springfield, and other city neighborhoods.

Additionally, both cities possess considerable vacant land, detracting from the cities’ neighborhoods. With assistance, committed residents and community groups can transform these vacant lots into viable community gardens that serve a multitude of uses including public safety, city beautification, and food security. Both Nuestras Raices and Gardening the Community strive to support community gardens as a land use. However, their gardening projects cannot continue without the support of city and county governments as well as other neighborhood revitalization agencies.

To strengthen local food production in these cities, the following recommendations are advisable:

Support urban food production

- Produce information brochures about “How to start an urban garden in Hampden County”.
- Monitor conditions of Holyoke and Springfield community gardens.
- Broaden the concept of community garden space to include rooftops, porches and above ground containers. Re-vision the idea of the community garden. Garden space is not limited to empty lots; they include areas at the bases of trees, on porches, in greenhouses and on rooftops.
- Offer classes on gardening and composting at demonstration garden sites within the Holyoke and Springfield.
- Partner with Community Involved in Sustaining Agriculture (CISA) and the Kestrel Trust of another regional land trust to explore the feasibility of an urban land trust to preserve successful community gardens.
- Solicit partnerships with city or suburban nurseries to build greenhouses on vacant lots in the Holyoke and Springfield.
i) **City of Holyoke and City of Springfield**

- Amend each cities’ comprehensive plan to recognize food security as an important component of urban revitalization.
- Formally recognize community gardening as a viable and valuable land use under all zoning categories.
- Transfer ownership of long-standing gardens on municipally owned lots to gardening groups such as Nuestras Raices and Gardening the Community. Where this is not possible, lease vacant lots for community gardening for longer time periods, such as three to five year increments.
- Set aside a portion of the projected vacant land management budget for a community garden start up and maintenance fund.
- Provide water sources for community gardens; for example, preserve pre-existing water lines and connections on vacant lots.
- Create a conservation easement for preservation of established urban gardens.
- Facilitate the establishment of new farmers’ markets and roadside stands that sell fresh local produce.
- Encourage Holyoke and Springfield Community Development Corporations, to explore the possibilities for partnering with the rural townships to set up Transfer of Development Rights agreements for supporting preservation of farmland in the surrounding region, and redirecting development from the rural areas to city lots/areas that are suitable/prepared for development.

ii) **Hampden County CDCs**

- Encourage Hampden County CDCs form a unified front or food security collaborative such as Hampden County Community Collaborative (HCCC).
- Strongly articulate local food security as part of the HCCC plan.
- Include garden rehab as part of HCCC housing rehab programs.

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49 Transfer of Development Rights (TDR) is a technique for preserving farmland and redirecting development into a desired area. Through the use of TDR, “development rights can be severed from a landowner’s “bundle of rights” and sold to a local or state government for the purpose of preserving the land...development rights can also be sold to private developers who transfer those rights to develop real estate in another location” (Bowers et al., 1997, p. 171).
• Collaborate with Kestrel Trust or another regional land trust to explore the feasibility of urban land trusts for conservation of viable agricultural parcels.

2. **Promoting Food-Based Economic Development**

   Food businesses manufacture, distribute and sell most of the food we eat. These businesses also play an important role within the local economy by creating jobs and economic opportunities. Nuestras Raices has capitalized upon this opportunity by making available a commercial, certified kitchen to residents of the neighborhood. This effort must continue, in part, because the West Side is home to many resourceful immigrant groups, who have demonstrated the potential and interest in being successful food entrepreneurs.

   Nevertheless, the neighborhood is significantly underserved, especially by the conventional marketing and distribution system. Therefore, encouraging the opening of food businesses that supply affordable and nutritious foods within Holyoke and Springfield has to be a priority - to make nutritious foods available within the community and to provide economic opportunity for cities’ residents.

   In order to support food-based economic development in both cities, the following recommendations are suggested below.

**A) Nuestras Raices and Gardening the Community**

   To further enhance the role of Nuestras Raices and Gardening the Community, there are certain goals both cities should commit to when considering their long-term planning. Based on conversations within the community, the following areas appear to need the most attention: workforce development, resource availability, partner and network development, and program implementation.

   **i) Workforce development**

   Raising the educational attainment level in the neighborhood would help increase the local skilled labor force. More importantly, training and
educating the workforce is more likely to attract jobs/businesses that pay higher wages. To achieve this goal, the following steps could be taken:

- Stimulate collaboration between local colleges (Holyoke Community College and Springfield Technical Community College) and the cities of Holyoke and Springfield to promote workforce development.

ii) Resource Availability

- Create a Hampden County micro-loan entrepreneur program to enable food entrepreneurs such as Nuestras Raíces to start and sustain their food businesses.
- Assist entrepreneurs in finding suitable short-term (e.g. farmers’ markets) and long-term indoor and outdoor outlets (e.g. in a food retail store such as the People’s Market) for selling their goods.
- Provide technical support to food businesses; offer business workshop classes, food preparation, processing and packaging classes.

iii) Promote partnerships and networks

- Develop partnerships with local colleges and universities to offer vocational training programs for Nuestras Raíces and Gardening the Community participants. For example, collaborate with HCC and STCC to offer vocational training and community support.
- Initiate a dialogue between restaurants located in Hampden County and local farmers and urban gardeners to support the use and sale of local produce in area restaurants.
- Continue to support the FarmShare project through CISA to make fresh produce available to local elders.

iv) Program implementation

- Promote urban gardens as an economic development project by creating a master gardeners education program for seniors and youth.

B) Nueva Esperanza (Holyoke) and The “X” Corporation (Springfield)

Like Nuestras Raíces, Nueva Esperanza, with which NR has close ties, has started to incorporate urban agriculture into its own economic programs. For instance, they have initiated an Aquaculture project that will create a facility for the production and selling of fish. The goal of the project is to support local
enterprises and help other new businesses such as restaurants and other fish farming industries.

To strengthen the local economy, Nueva Esperanza is also planning an indoor Mercado and a seasonal outdoor Mercado that will allow residents to sell products they have produced.

In contrast, the X Main Street Corporation in Springfield has used a Community Food Project Grant to integrate their food resources in the neighborhood, including their farmers' market, and to develop an additional community garden on property owned by Holy Name Church. They have also doubled their free shuttle service to the local A&P Market and introduced a free shuttle service for the elderly to the weekly farmers' market, an urban agriculture education program at the Holy Name School, and a school-to-work program at the A&P Super Foodmart.

Other creative economic development approaches can help to meet the needs of communities by building on other internal resources. Some of these strategies could include:

- Supporting local food businesses in the Hampden County especially in Holyoke and Springfield; these businesses make significant contributions to the local economy and foster greater community food security.
- Creating a food-based business development advisory task force for the cities of Holyoke and Springfield.
- Promoting niche food processing with high rate of economic return such as baked good and condiment production.
- Promote Holyoke and Springfield to the rest of the region as communities with unique and exotic food offerings. Highlight the unique foods that are available and encourage people to come to Holyoke to encounter a traditional Puerto Rican food shopping experience.
- Provide organizational support for small business development within Holyoke and Springfield.
3. Promoting Youth Development through Food-Based Projects

Food-based projects for youth educational development are, by far, the most critical component of Nuestras Raices’ effort to revitalize Holyoke. Food-based youth development programs promote community development and enhance food security. The following recommendations can assist Nuestras Raices, Gardening the Community, both Holyoke and Springfield’s School Districts, and Crime Prevention Programs in promoting youth development through food-based projects.

A) Nuestras Raices and Gardening the Community

i) Program implementation

- Initiate a Master Gardener program as a way to engage both cities’ youth.

- Design the Master Gardener program in a structured 3-year program so that youth experience the four stages of the food cycle through hands-on experience and training. First year participants would learn about nutrition, where food comes from and local food issues; second year youth would learn how to plant and cultivate food, prepare and cook their produce and how to present it in an appealing manner; in the third year, area youth would learn about agri-business and marketing their product. For example, a specific project could be to train the youth to grow fresh greens and market them to local restaurants for salads.

- Encourage youth to become more involved in the community; for example, create a senior-youth networking program through which youth can assist elderly residents with grocery shopping or meals and the elderly can lead cooking classes in return for area youth.

- Offer neighborhood cooking workshops for the local youth in the Nuestras Raices kitchen, potentially run by the youth graduating from the program.

ii) Outreach

- Make a concerted effort to publicize the Master Gardener program and involve Holyoke and Springfield youth.

iii) Fundraising

- Raise additional funds to support current and future youth educational development programs.
B) School Districts

- Partner with Nuestras Raices and Gardening the Community to explore the possibility of creating farm-to-school programs and school garden programs in Holyoke and Springfield that would provide healthy food choices in school breakfasts, lunches, and snacks.

C) City Crime Prevention Program

- Provide monetary and organizational support to Nuestras Raices and Gardening the Community for creating a senior-youth networking program to help grow community relations.

- Provide monetary and organizational support to Nuestras Raices and Gardening the Community for gardening initiatives for city youth.

D) City of Holyoke and City of Springfield

- Conduct envisioning sessions with area youth to build youth leaders.

- Establish a Youth Council for both cities that addresses the needs of the younger city residents and reduces dependence on the Executive Director of a community gardening organization.

Summary And Directions For Future Research

As a valuable reminder, we return to the United Nation’s definition of food security. “Food security means that food is available at all times; that all persons have means of access to it; that it is nutritionally adequate in terms of quantity, quality and variety; and that it is acceptable within the given culture. Only when all these conditions are in place can a population be considered food secure” (United Nations’ Food and Agriculture Organization).

In view of this definition, are Holyoke and Springfield food secure? Quite plainly, they are not. Residents in both cities do not have unimpeded access to quality food. The increasing incidence of poverty further threatens residents’ access to food. According to U. S. Census 2000, 16.6% of Hampden County residents live in poverty;
consequently a significant portion of residents rely on emergency sources of food for their daily subsistence. Although charitable and governmental organizations try to provide short-term emergency food sources, these entities are not designed to address the root causes of hunger or to provide long-term solutions. Fortunately, Hampden County is not entirely food insecure either. Certain foods are available at all times, throughout the year to Holyoke and Springfield residents. Regardless of the fact that food is available at all times in stores throughout both cities, many people cannot afford to purchase it. Moreover, when residents have the means to buy food, fresh, nutritious food is difficult to find, or just absent in many local stores.

Hampden County food insecurity is neither simple nor uniform. This is evident in the contradictory food realities within the county. For example, Holyoke has one of the greatest assortments of authentic ethnic food stores within the city of Holyoke that supplies the city’s immigrant communities with an ample variety of culturally acceptable foods. At the same time, the local corner stores carry a less than adequate supply of nutritious foods, such as fresh produce. Such dichotomies epitomize the complex situation that exists in Hampden County.

Implementing the recommendations of this paper will strengthen the community food system and communities of both Holyoke and Springfield. This will facilitate food security and spur community revitalization within the neighborhood. Nuestras Raices has made a significant start in this direction. For continual success, Nuestras Raices and Gardening the Community must listen to the needs of both cities. Both community garden organizations cannot implement these recommendations alone; city and county
governments, as well other interested organizations will have to step up their efforts in promoting food security within the Hampden County.

As another method to strengthen the positive effects of community gardens, there are related research topics that could use further academic study. They include:

- The effect of community gardens on property values.
- The relationship of community gardens and programs to citywide open space policies and plans.
- Participatory planning and design approaches and techniques.
- Community gardening as an individual empowerment tool.
- The development of constituencies for community greening.
- The contribution of community gardening to building social cohesiveness.
- Community gardens as a meeting place for different cultural groups.
- National policies and programs for community gardens.
- The relationship of land ownership to project permanency.
- Greening as job training.

Community gardens in general have shown growth in the past five years and many respondents foresee an optimistic future. The data, however, reveals that some issues still need to be addressed. Some types of gardens remain underused despite the high population segment that could support it.

Study should be made in the senior, horticultural therapy, school and economic development categories for gardens. Permanency land issues are of concern to respondents, yet only an alarming 5.3 per cent of gardens are in permanent status of land trusts or other ownership, and just 14 cities of the 38 reported any significant policy changes in land use regulations that helped move gardens toward a more favored status.

The way gardens are initiated does not seem to create a tendency one way or the other for more losses, whether the garden is started by grassroots support from neighbors or an intervening agency. What may be a more telling study is how the gardens are
maintained and managed, focusing on the garden group’s dynamics and the type and amount of outside support from institutions.

Since the completion of this study, both Nuestras Raíces and Gardening the Community have evolved, extending the reach of their local programs. In 2006, when this paper started, Nuestras Raíces proudly boasted of seven community gardens with wooden fences separating the 15-by-20-foot plots and brightly painted tool sheds known as casitas. They had a student-run Nuestras Raíces stand at a weekly farmers’ market in front of City Hall. They also had a test kitchen named El Jardín, attached to their office, approved for commercial use as an artisan bakery that made sourdough loaf in a wood-fired brick oven for local restaurants. They also operated Mi Plaza, a restaurant in the same building that uses Nuestras Raíces herbs and vegetables in the summer and makes traditional Puerto Rican food all year.

Today, El Jardín has opened its own café in South Deerfield and a teaching kitchen through a grant funded project with the Holyoke Health Center that is housed in a splendidly renovated furniture store downtown. At this kitchen, nutritionists show patients how to reduce the fat in traditional Puerto Rican dishes using fresh fruit and vegetables from the supermarket out of season and from the Nuestras Raíces weekly farmers’ market stand. However, the largest and most recent achievement of Nuestras Raíces is the ongoing creation of their farm, Tierra de Oportunidades, a mile from downtown Holyoke, in response to requests from community gardeners for larger plots to work commercially. Since its inception, the farm has grown to include a petting zoo, a farm stand, summer concerts, and weekly pig roasts—activities similar to those present in Puerto Rican villages many community members remember from home.
The community continues to till the overgrown land—the original four acres grew to 30 when the neighboring Sisters of Providence offered 26 prime acres for a nominal rent—uniting students, church groups, and pre-release prisoners to remove invasive species, haul and spread tons of compost, and clear nature trails along the river. Nuestras Raíces even moved an enormous red gabled barn to the farm to house paso finos, “fine-stepping” horses to celebrate their Puerto Rican pride. As part of the agreement to operate as a commercial grower at Tierra de Oportunidades, farmers go through an eight-week training program during which they write a business plan that serves as their application for a plot; so far, 20 of 45 applicants have been given plots at a monthly rent of $25 a quarter-acre, and microloans to start “incubator farms.” Teenage farmers don’t pay rent. Nuestras Raíces food project continues to thrive as community reaps the benefits of healthy eating and taking pride in their accomplishments and Puerto Rican heritage.

Similarly, Gardening the Community (GTC) has continued to thrive as a youth-centered community based urban agriculture program in Springfield, MA. Through growing organic fruits and vegetables on formerly abandoned lots they teach local youth about practicing agriculture, environmental stewardship, and community development. In the last three years, GTC has also begun to promote bicycle ridership to further their vision of urban agriculture to include principles of sustainable living.

Originally, GTC started in 2002 with a quarter of an acre vacant lot on Central Street in Springfield. In 2004, the neighborhood council offered the use of a half acre additional garden space within an established community garden further down Central Street. The youth of the program grew food for market and for donation to shelters and

each had a plot of their own to bring produce home. In 2005, their garden land was put up for sale for development. They lost one of their Central Street gardens but successfully organized the community to convince the City to support youth and community gardens. In 2006, they identified new land for their garden through a local business owner. Since then, working with the City they have expanded to 58,000 square feet of land -more than an acre- on several parcels. Their gardens are located at 488 Central Street, the original garden started in 2002 (owned by the City of Springfield); 49 Lebanon Street (owned by a local business); and 252 Hancock Street (owned by a local business). Notably, Gardening the Community also maintains vegetable gardens in residents’ backyards and for non-profit organizations. They actively garden the land and continue to try and secure gardens in Springfield for the future.

Currently, Gardening the Community supplies produce to three city farmers’ markets, a senior center, a local restaurant, and a health food store as well as runs a small flower bouquet business. They are also working to establish an additional mini-farm site, protected by an urban land trust, with a community center, a bike shop, a vegetable and seed stand, to serve as an example of the practice of local living. In addition, each year GTC organize Bike Springfield, a bike-and-garden fundraiser for the public. At each garden, bikers receive tours by the gardeners and learn about cultivation techniques and crops. The event ends at the Mason Square Farmers’ Market with a feast prepared from the produce grown by Gardening the Community.  

Gardening the Community is a social action project of NOFA/Mass, the Massachusetts chapter of the Northeast Organic Farming Association. The organization

has grown to three staff members, several college interns, five youth crew leaders, and fifteen youth crew members for spring, summer, and fall. Despite land tenure hardships over the years, Gardening the Community, similar to Nuestras Raices, has continued to thrive thanks to a dedicated staff and community eager to organize around self-sufficiency and local living through urban agriculture.
<table>
<thead>
<tr>
<th>POPULATION</th>
<th>Springfield</th>
<th>Holyoke</th>
<th>Chicopee</th>
<th>Westfield</th>
<th>County</th>
<th>State</th>
<th>US</th>
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</thead>
<tbody>
<tr>
<td>2000 Census</td>
<td>152,082</td>
<td>39,838</td>
<td>54,653</td>
<td>40,072</td>
<td>456,228</td>
<td>6,349,097</td>
<td>281,421,906</td>
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<tr>
<td>% Change</td>
<td>-3.1</td>
<td>-8.8</td>
<td>-3.5</td>
<td>4.3</td>
<td>&lt;.01%</td>
<td>5</td>
<td>29.1</td>
</tr>
<tr>
<td>Density/ sq. mi.</td>
<td>4783</td>
<td>2052</td>
<td>2389</td>
<td>847</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acres (%) Ag Land</td>
<td>92 (0.4)</td>
<td>285 (2.0)</td>
<td>121 (0.8)</td>
<td>4,692 (15.5)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| RACE | % White (2000) | 56.0% | 66 | 89.8 | 94.5 | 79.1 | 84 | 75.3 |
| % White (1990) | 68.6% | 74.7 | 95.4 | 96.5 | 85 | 89.8 | 80.3 |
| % Change | -12.6 | -8.8 | -5.6 | -2 | -5.9 | -5.8 | -5% |

| INCOME | Med. HHold Income | $25,656 | $22,858 | $28,905 | $33,498 | $31,100 | $36,952 | $30,056 |
| % State | 69.4 | 64.3 | 78.2 | 90.6 | 84.1 | n/a | 81.3 |
| % Persons < poverty | 20.1 | 25.7 | 9.8 | 7.9 | 13 | 8.9 | 13 |
| Median Home Price | $105,000 | $116,800 | $113,800 | $136,000 | $123,200 | $162,800 | $79,100 |

Table 2.1 Demographics from Hampden County Cities: Population, Race and Income.

<table>
<thead>
<tr>
<th>COMMUNITY</th>
<th>Children Ages 5 to 17 in Poverty</th>
<th>COMMUNITY</th>
<th>Children Ages 5 to 17 in Poverty</th>
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<tr>
<td>EASTERN MA</td>
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<td>CENTRAL MA</td>
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</tr>
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<td>Boston</td>
<td>21,131</td>
<td>Athol</td>
<td>203</td>
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<td>3,517</td>
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<td>Chelsea</td>
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<td>1,009</td>
<td>Worcester</td>
<td>6,430</td>
</tr>
<tr>
<td>Lawrence</td>
<td>4,873</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowell</td>
<td>4,521</td>
<td>Chicopee</td>
<td>1,737</td>
</tr>
<tr>
<td>Lynn</td>
<td>4,017</td>
<td>Greenfield</td>
<td>624</td>
</tr>
<tr>
<td>New Bedford</td>
<td>4,669</td>
<td>Holyoke</td>
<td>3,084</td>
</tr>
<tr>
<td>Revere</td>
<td>1,464</td>
<td>Pittsfield</td>
<td>1,272</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Springfield</td>
<td>9,363</td>
</tr>
</tbody>
</table>

| WESTERN MASS | | |
| | | |
| TOTAL ON THE TWENTY TARGET COMMUNITIES | 75,849 | |
| MASSACHUSETTS TOTAL | 123,193 | |

Table 3.1 Project Bread, Status Report on Hunger in Massachusetts, Boston, Massachusetts, p. 3.
### Table 4.1 Survey participant response rate by Hampden County Community Garden Organization

<table>
<thead>
<tr>
<th>NAME OF COMMUNITY GARDEN ORGANIZATION</th>
<th># OF GARDENS</th>
<th>TOTAL PARTICIPANTS</th>
<th>#(% ) RESPONDING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuestras Raices</td>
<td>7</td>
<td>24</td>
<td>24 (100.0%)</td>
</tr>
<tr>
<td>Gardening the Community</td>
<td>2</td>
<td>10</td>
<td>9 (90.0%)</td>
</tr>
</tbody>
</table>

### Table 4.2 Purchase methods and outlets employed by respondents (in addition to community gardens).

<table>
<thead>
<tr>
<th>PURCHASE METHODS/OUTLETS</th>
<th>#(%) OF RESPONSES</th>
<th>(% ) HOLYOKE in top 3</th>
<th>(% ) SPRINGFIELD in top 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Respondents</td>
<td>33</td>
<td>24</td>
<td>9</td>
</tr>
<tr>
<td>Grocery Store(s)</td>
<td>32 (97%)</td>
<td>23 (95.8%)</td>
<td>9 (100%)</td>
</tr>
<tr>
<td>Specialty Store(s)</td>
<td>9 (27.8%)</td>
<td>6 (25%)</td>
<td>3 (33.3%)</td>
</tr>
<tr>
<td>Farmers’ Market</td>
<td>21 (63.6%)</td>
<td>16 (66.7%)</td>
<td>5 (55.6%)</td>
</tr>
<tr>
<td>Community Supported Agriculture</td>
<td>11 (33.3%)</td>
<td>8 (33.3%)</td>
<td>3 (33.3%)</td>
</tr>
<tr>
<td>Roadside Stand</td>
<td>18 (54.5%)</td>
<td>13 (54.2%)</td>
<td>5 (55.6%)</td>
</tr>
<tr>
<td>Home Garden</td>
<td>10 (30.3%)</td>
<td>5 (20.8%)</td>
<td>5 (55.6%)</td>
</tr>
<tr>
<td>Other * community garden, coop</td>
<td>5 (15.2%)</td>
<td>3 (12.5%)</td>
<td>2 (22.2%)</td>
</tr>
</tbody>
</table>

### Table 4.3 General Valuations of Community Garden Organizations by General Factor

<table>
<thead>
<tr>
<th>COMMUNITY GARDENS FACTOR</th>
<th>HOLYOKE</th>
<th>SPRINGFIELD</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRIME</td>
<td>3.46</td>
<td>4.22</td>
</tr>
<tr>
<td>BUSINESS DEV.</td>
<td>4.04</td>
<td>4</td>
</tr>
<tr>
<td>HEALTH</td>
<td>4.42</td>
<td>4.44</td>
</tr>
<tr>
<td>AESTHETIC IMPACT</td>
<td>4.54</td>
<td>4.22</td>
</tr>
<tr>
<td>NUTRITIONAL VALUE</td>
<td>4.71</td>
<td>4.22</td>
</tr>
<tr>
<td>EDUCATIONAL VALUE</td>
<td>4.63</td>
<td>4.56</td>
</tr>
<tr>
<td>WILLING TO PARTICIPATE</td>
<td>4.17</td>
<td>4.33</td>
</tr>
<tr>
<td>AUTONOMY</td>
<td>3.83</td>
<td>3.22</td>
</tr>
<tr>
<td>COMPOSITE SCORE (40 POSSIBLE)</td>
<td>33.8</td>
<td>33.27</td>
</tr>
<tr>
<td>GRADE AVERAGE</td>
<td>84.5%</td>
<td>83%</td>
</tr>
<tr>
<td>GRADE EQUIVALENT</td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

Table 4.3 General Valuations of Community Garden Organizations by General Factor
<table>
<thead>
<tr>
<th>Question</th>
<th>HOLYOKE</th>
<th>SPRINGFIELD</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Community gardens help reduce crime rates in Hampden County.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>29%</td>
<td>33%</td>
</tr>
<tr>
<td>Agree</td>
<td>41%</td>
<td>56%</td>
</tr>
<tr>
<td>No Opinion</td>
<td>25%</td>
<td>11%</td>
</tr>
<tr>
<td>Disagree</td>
<td>5%</td>
<td>0%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>8. Community gardens improve business development in Hampden County.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>33%</td>
<td>22%</td>
</tr>
<tr>
<td>Agree</td>
<td>46%</td>
<td>56%</td>
</tr>
<tr>
<td>No Opinion</td>
<td>13%</td>
<td>22%</td>
</tr>
<tr>
<td>Disagree</td>
<td>8%</td>
<td>0%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>9. Community gardens improve health conditions in Hampden County.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>50%</td>
<td>56%</td>
</tr>
<tr>
<td>Agree</td>
<td>42%</td>
<td>33%</td>
</tr>
<tr>
<td>No Opinion</td>
<td>8%</td>
<td>11%</td>
</tr>
<tr>
<td>Disagree</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>10. Community gardens have a positive aesthetic impact on their immediate surroundings.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>63%</td>
<td>44%</td>
</tr>
<tr>
<td>Agree</td>
<td>33%</td>
<td>44%</td>
</tr>
<tr>
<td>No Opinion</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Disagree</td>
<td>4%</td>
<td>12%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>11. Community gardens provide nutritional value to children in Hampden County.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>58%</td>
<td>33%</td>
</tr>
<tr>
<td>Agree</td>
<td>38%</td>
<td>56%</td>
</tr>
<tr>
<td>No Opinion</td>
<td>4%</td>
<td>11%</td>
</tr>
<tr>
<td>Disagree</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Table 4.4 Responses to the Community Garden Perception Study: Questions 7 - 14 (continued on next page)
### Table 4.4 Responses to the Community Garden Perception Study: Questions 7 - 14

<table>
<thead>
<tr>
<th>12. Community gardens provide educational value to children in Hampden County.</th>
<th>HOLYOKE</th>
<th>SPRINGFIELD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>63%</td>
<td>67%</td>
</tr>
<tr>
<td>Agree</td>
<td>37%</td>
<td>22%</td>
</tr>
<tr>
<td>No Opinion</td>
<td>0%</td>
<td>11%</td>
</tr>
<tr>
<td>Disagree</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>13. I would participate in community gardens to help strengthen their presence in Hampden County.</th>
<th>HOLYOKE</th>
<th>SPRINGFIELD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>46%</td>
<td>44%</td>
</tr>
<tr>
<td>Agree</td>
<td>29%</td>
<td>44%</td>
</tr>
<tr>
<td>No Opinion</td>
<td>21%</td>
<td>12%</td>
</tr>
<tr>
<td>Disagree</td>
<td>4%</td>
<td>0%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14. Community gardens should be autonomous from city governance.</th>
<th>HOLYOKE</th>
<th>SPRINGFIELD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>38%</td>
<td>0%</td>
</tr>
<tr>
<td>Agree</td>
<td>25%</td>
<td>44%</td>
</tr>
<tr>
<td>No Opinion</td>
<td>21%</td>
<td>34%</td>
</tr>
<tr>
<td>Disagree</td>
<td>16%</td>
<td>22%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>COMMUNITY GARDENS FACTOR</td>
<td>HOLYOKE</td>
<td>SPRINGFIELD</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>SITE AESTHETICS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trash</td>
<td>1.67</td>
<td>2.56</td>
</tr>
<tr>
<td>Foot Traffic</td>
<td>1.88</td>
<td>2.33</td>
</tr>
<tr>
<td>Visibility</td>
<td>3.58</td>
<td>3.33</td>
</tr>
<tr>
<td>Public Access</td>
<td>2.83</td>
<td>2.67</td>
</tr>
<tr>
<td>Loitering</td>
<td>1.42</td>
<td>2.22</td>
</tr>
<tr>
<td>Security</td>
<td>.79</td>
<td>1.33</td>
</tr>
<tr>
<td>Vandalism</td>
<td>1.17</td>
<td>1.22</td>
</tr>
<tr>
<td><strong>COMPOSITE SCORE (28 POSSIBLE)</strong></td>
<td>13.34</td>
<td>15.66</td>
</tr>
<tr>
<td><strong>GRADE AVERAGE</strong></td>
<td>48%</td>
<td>56%</td>
</tr>
<tr>
<td><strong>SOCIAL CONNECTEDNESS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proximity</td>
<td>3.42</td>
<td>3.56</td>
</tr>
<tr>
<td>Cultural Produce</td>
<td>3.38</td>
<td>3.33</td>
</tr>
<tr>
<td>Community Support</td>
<td>3.29</td>
<td>2.67</td>
</tr>
<tr>
<td>Official Endorsement</td>
<td>2.17</td>
<td>2.33</td>
</tr>
<tr>
<td>Food Disbursement</td>
<td>2.50</td>
<td>2.56</td>
</tr>
<tr>
<td>Educational Programs</td>
<td>3.63</td>
<td>2.22</td>
</tr>
<tr>
<td>Public Outreach</td>
<td>3.29</td>
<td>2.33</td>
</tr>
<tr>
<td><strong>COMPOSITE SCORE (28 POSSIBLE)</strong></td>
<td>21.68</td>
<td>19</td>
</tr>
<tr>
<td><strong>GRADE AVERAGE</strong></td>
<td>77%</td>
<td>68%</td>
</tr>
<tr>
<td><strong>YOUTH EMPOWERMENT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skill Building</td>
<td>3.71</td>
<td>2.78</td>
</tr>
<tr>
<td>Reliability</td>
<td>3.08</td>
<td>2.56</td>
</tr>
<tr>
<td>Adult Interaction</td>
<td>3.54</td>
<td>3.11</td>
</tr>
<tr>
<td>Public Outreach</td>
<td>3.17</td>
<td>2.33</td>
</tr>
<tr>
<td>School Performance</td>
<td>1.46</td>
<td>.89</td>
</tr>
<tr>
<td>Risk Reduction Education</td>
<td>2.88</td>
<td>1.78</td>
</tr>
<tr>
<td><strong>COMPOSITE SCORE (24 POSSIBLE)</strong></td>
<td>17.84</td>
<td>13.45</td>
</tr>
<tr>
<td><strong>GRADE AVERAGE</strong></td>
<td>74%</td>
<td>56%</td>
</tr>
<tr>
<td><strong>COMBINED FACTORS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SITE AESTHETICS</strong></td>
<td>13.34</td>
<td>15.66</td>
</tr>
<tr>
<td><strong>SOCIAL CONNECTEDNESS</strong></td>
<td>21.68</td>
<td>19</td>
</tr>
<tr>
<td><strong>YOUTH EMPOWERMENT</strong></td>
<td>17.84</td>
<td>13.45</td>
</tr>
<tr>
<td><strong>TOTAL COMPOSITE SCORE (80 POSSIBLE)</strong></td>
<td>52.86</td>
<td>48.11</td>
</tr>
<tr>
<td><strong>GRADE AVERAGE</strong></td>
<td>66%</td>
<td>60%</td>
</tr>
</tbody>
</table>

Table 4.5 Hampden County Community Gardens Organization Specific Factor Scores
<table>
<thead>
<tr>
<th>Community Garden Organization</th>
<th># of Gardens</th>
<th>Total Participants</th>
<th>#(%) Responding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuestras Raices</td>
<td>7</td>
<td>24</td>
<td>24(100.0%)</td>
</tr>
<tr>
<td>Gardening the Community</td>
<td>2</td>
<td>10</td>
<td>9(90.0%)</td>
</tr>
</tbody>
</table>

Table 5.1 Survey participant response rate by Hampden County Community Garden Organization
Figure 1.1 Location of study area in Hampden County, Massachusetts.

Figure 1.2 Location of Holyoke in Hampden County, Massachusetts.
Figure 1.3 Locations of Nuestras Raices’ Community Gardens, Holyoke, Massachusetts.
Figure 1.4 Location of Springfield in Hampden County, Massachusetts.

Figure 1.5 Location of Gardening the Community’s Parcel at 488 Central Street, Springfield, Massachusetts. (recently sold)
Figure 1.6 Property Boundaries for Former Gardening the Community Lot (488 Central Street, Springfield, Massachusetts)

Figure 1.7 Location of Gardening the Community’s Parcel at 326 Central Street, Springfield, Massachusetts.
Figure 1.8 Property Boundaries for Gardening the Community Lot (326 Central Street, Springfield, Massachusetts)

Figure 5.1 Hampden County Survey Respondents: Descent by Percentage

Figure 5.2 Holyoke Survey Respondents: Descent by Percentage
Figure 5.3 Profile of Survey Respondents: Levels of Support

Figure 5.4 General Valuation of Community Garden Organizations
March 13, 2006

Dear Hampden County Community Member:

For my Masters thesis in Landscape Architecture, I am currently researching the community garden as a community empowerment tool. To date, I have written the literature review, county demographics, methodology, relevant case studies and only the recommendations chapter remains largely incomplete.

Community gardens benefit from the support of local citizens, businesses and engaged government. In recent years, organized gardening programs have become productive catalysts for agricultural production and community empowerment. In Hampden County, urban gardening programs empower the whole community, starting with the younger generation, producing similar effects among elders, such as neighborhood pride and desire for additional ‘greening’ endeavors. Beyond these social benefits, I believe that urban gardening also improves community health and well being by incorporating the nutritional needs of the community into the physical landscape.

Hampden County provides some of the region’s best agricultural land. However, the success of Hampden County’s community gardens has varied widely. While some organizations are doing well and new land is being converted to productive agricultural use, other organizations have experienced difficulties with land tenure, leaving some communities at risk of losing an important source of fresh local food.

Your perspective as a member of the Hampden County community is critical to understanding the factors that determine in what ways and to what extent a community garden organization succeeds or fails. At your earliest convenience, please complete and return this brief survey to share your opinions about these various programs and their contributions to Hampden County food production and youth empowerment. Please keep in mind that I am a student; I do not represent the University of Massachusetts.

Rich and poor, young and old, rural and urban- people deserve access to a verdant, produce-yielding community gardens and the energy they creates at the local level. Thank you for taking the time to help with this effort.

Best wishes for a warm and bountiful spring!

Sincerely,

Shanon Kearney
Master of Landscape Architecture and Master of Regional Planning Candidate 2006
University of Massachusetts - Amherst
Nuestras Raices & Growing the Community
Hampden County, Massachusetts
APPENDIX B:
HAMPDEN COUNTY COMMUNITY GARDENS PERCEPTION STUDY

HAMPDEN COUNTY COMMUNITY GARDENS’ PERCEPTION STUDY

This survey was developed in consultation with:

John Gerber, Mark Hamin, Pat McGirr,
University of Massachusetts – Amherst

1) Name of participant: ______________________________

2) What organization/government office/agency do you work for?

________________________________________________________________________

3) How many years have you worked there? __________

4) What is your age group? (Check one)

_____ 18 – 35 years
_____ 35 – 50 years
_____ 51 – 66 years
_____ Over 66 years

5) Ethnicity: _______________________________

Relationship to Community Garden organization (neighbor, partner, funder, supporter, no relationship etc.)

________________________________________________________________________

6) Where do you get your produce? (Rank all that apply, 1 = Most Likely, 6 = Least Likely)

_____ Grocery Store(s)
_____ Specialty Store(s)
_____ Farmers’ Market (please specify) ________________________________
_____ Community Supported Agriculture
_____ Roadside Stand
_____ Home Garden
_____ Other (please specify) ___________________________________________
Please indicate how strongly you agree/disagree with the following statements. Circle the appropriate number for each statement:

1 = Strongly Disagree  
2 = Disagree  
3 = No Opinion  
4 = Agree  
5 = Strongly Agree  

<table>
<thead>
<tr>
<th>Number</th>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>7)</td>
<td>Community gardens help reduce crime rates in Hampden County.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8)</td>
<td>Community gardens improve business development in Hampden County.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9)</td>
<td>Community gardens improve health conditions in Hampden County.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10)</td>
<td>Community gardens have a positive aesthetic impact on their immediate surroundings.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11)</td>
<td>Community gardens provide nutritional value to children in Hampden County.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12)</td>
<td>Community gardens provide educational value to children in Hampden County.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13)</td>
<td>I would participate in community gardens to help strengthen their presence in Hampden County.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14)</td>
<td>Community garden organizations should be autonomous from city governance.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
The following questions pertain to individual community garden organizations. Please complete this section for the organization(s) you have worked with in the past 3 years.

15) NAME OF COMMUNITY GARDEN ORGANIZATION:

Please rate the organization you listed on question #15 in the following areas. Circle a number for each factor (You should have 20 circles in total).

<table>
<thead>
<tr>
<th>SITE AESTHETICS</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Excellent</th>
<th>Don’t Know/NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trash Removal</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Foot Traffic Volume</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Visibility</td>
<td>1</td>
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* survey work and other community-based work

16) What types of specialty produce are lacking in Hampden County?
________________________________________________________________________

17) Do you feel community gardens are valued in Hampden County?
   Why or why not?
________________________________________________________________________

THANK YOU FOR YOUR PARTICIPATION.
APPENDIX C:

COVER LETTER ACCOMPANYING HAMPDEN COMMUNITY GARDENS PERCEPTION STUDY IN SPANISH

13 de Marzo del 2006.

Querido miembro de la comunidad del Condado de Hampden:

Actualmente me encuentro realizando una investigación, para mi tesis en el programa de Master en Arquitectura paisajista, sobre el Jardín de la Comunidad como una herramienta de capacitación de la comunidad. A la fecha, he escrito la reseña de la literatura, las demográficas del condado, la metodología, los estudios de casos relevantes y sólo el capítulo de sugerencias permanece incompleto en su mayor parte.

Los jardines de la comunidad se beneficia con el apoyo de los ciudadanos locales, los negocios y el gobierno comprometido. En años recientes, los programas de jardinería organizada se han convertido en catalizadores beneficiadores para la producción agrícola y la capacitación de la comunidad. En el Condado de Hampden, los programas de jardinería urbana capacitjan a toda la comunidad, empezando con la generación joven produciendo efectos similares entre los mayores, tales como el orgullo del vecindario y el deseo de un esfuerzo complementario del medio ambiente. Más allá de estos beneficios sociales, creo que la jardinería urbana también contribuye a mejorar la salud y bienestar de la comunidad incorporando las necesidades nutricionales dentro del paisaje físico.

El Condado de Hampden provee algunas de las mejores tierras para la agricultura de la región. Sin embargo, el éxito de los jardines de la comunidad del Condado de Hampden ha variado ampliamente. Mientras algunas organizaciones están yendo bien y nuevas tierras están siendo convertidas para uso productivo agrícola, otras organizaciones han experimentado dificultades con la ocupación de las tierras, dejando algunas comunidades en riesgo de perder una importante fuente de alimento fresco local.

Su perspectiva como miembro de la comunidad del Condado de Hampden es crítica para entender los factores que determinan en que formas y a que alcance la organización Jardines de la comunidad triunfa o fracasa. Por favor a la mayor brevedad posible complete y devuelva esta breve encuesta para compartir sus opiniones acerca de estos diversos programas y su contribución a la producción de alimentos y a la capacitación de la juventud del Condado de Hampden. Por favor recuerde que yo soy una estudiante y que no represento a la Universidad de Massachusetts.

Las personas ricas o pobres, jóvenes o mayores, rurales o urbanas, merecen acceder a jardines de la comunidad que sean verdes y que rindan productos y a la energía que ellos crean a un nivel local. Gracias por tomarse un tiempo para ayudar a esta obra..

Los mejores deseos para una calida y generosa primavera!

Sinceramente,

Shanon Kearney
Master en Arquitectura paisajista y Master en Planificación Regional Candidato 2006
Universidad de Massachusetts - Amherst
Nuestras Raíces & Growing the Community
Condado de Hampden, Massachusetts
APPENDIX D:
HAMPDEN COUNTY COMMUNITY GARDENS PERCEPTION STUDY IN SPANISH

1) Nombre del participante: ________________________________________

2) Para que Organización/Oficina de Gobernño/Agencia trabaja?
___________________________________________________________

3) Cuántos años ha trabajado ahí? ____________

4) En qué grupo se encuentra? (marque uno)

   _____ 18 – 35 años
   _____ 35 – 50 años
   _____ 51 – 66 años
   _____ más de 66 años

5) Etnicidad/ Origen étnico: _______________________________________

   Relación con la Organización “JARDINES DE LA COMUNIDAD” (vecino, socio, fundador, partidario, ninguna relación, etc)

   ________________________________________________________________

6) De dónde obtiene sus productos? (Ordene como sea pertinente, 1 = lo más probable, 6 = lo menos probable)

   _____ Supermercado(s)
   _____ Tienda(s) especializada(s)
   _____ Mercado agricultor (especifique por favor)
   ________________________________________________________________
   _____ Agricultura apoyada por la comunidad
   _____ Puesto al borde de la carretera
   _____ Jardín de la casa
   _____ Otros (especifique por favor)
7) “Los Jardines de la Comunidad” contribuyen a reducir los índices de crimen en el Condado de Hampden.

1  2  3  4  5

8) “Los jardines de la comunidad” contribuyen a el desarrollo de los negocios en el condado de Hampden.

1  2  3  4  5

9) “Los Jardines de la comunidad contribuyen a mejorar las condiciones de salud en el Condado de Hampden.

1  2  3  4  5

10) “Los Jardines de la comunidad tienen un impacto estetico positivo en los alrededores cercanos .

1  2  3  4  5

11) “Los Jardines de la comunidad” proporcionan un valor nutricional a los niños del Condado de Hampden.

1  2  3  4  5

12) “Los Jardines de la Comunidad” proporcionan un valor educational a los niños de la Comunidad de Hampden.

1  2  3  4  5

13) Participaría en “Los Jardines de la Comunidad” para ayudar a fortalecer su presencia en el Condado de Hampden.
14) “Los Jardines de la Comunidad” debería ser una organización autónoma del gobierno de la ciudad

Las siguientes preguntas se relacionan a organizaciones de “los jardines de la comunidad” particulares. Por favor complete esta sección para la organización con la que Ud. Ha trabajado durante los pasados tres años.

15) NOMBRE DE LA ORGANIZACION JARDIN DE LA COMUNIDAD:

__________________________________________________

Por favor clasifique en las siguientes áreas a la Organización que nombró en la pregunta #15. Haga un círculo en el número para cada factor (Debe tener 20 círculos en total).

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* trabajo de sondeo y otros trabajos basados en la comunidad

16) Qué clases de productos especializados están faltando en el Condado de Hampden?

________________________________________________________________________
________________________________________________________________________

17) Ud. Cree que “Los Jardines de la Comunidad” se valoran en el Condado de Hampden? Por qué sí o por qué no?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

GRACIAS POR SU PARTICIPACION.
APPENDIX E:

ORIGINAL DISCUSSION GUIDE FOR CITY OFFICIALS AND BUSINESS OWNERS

NEIGHBORHOOD DISCUSSION GUIDE

INTENT:
To glean attitudes, opinions and perceptions of the community garden’s role in neighborhood and community improvements. Organizations and individuals— including community organizers, residents, private business owners, and non-profits whose work and missions are aligned with the broad concept of the community building put forth by the mission statement of Nuestras Raices – will be identified by my community research, contacts provided by Nuestras Raices, site analyses, and general business directories.

METHOD:
Youth members of the community and Nuestras Raices will interview participants. Depending on the number of interviewees, the youth group may be broken into pairs to conduct the interviews in person. The questions will be designed around a 10-minute time frame, with discrete periods of time for different topics (outlined below).

At least two youth members will moderate the conversation by following this discussion guide; one student will record notes and responses in a notebook and responses will be typed up for review. Contact information will be collected from all participants and guests will be asked if this information can be shared with other community-involved individuals and businesses in Holyoke. Contact information will be compiled in a database for future distribution.

TIMELINE:
A preliminary list of interviewees will be compiled by Wednesday, May 11th. Interviewees will be contacted by Friday, May 27th for interviews over the course of the summer.

SCREENER:
The community of the City of Holyoke, Massachusetts.

Community participants include:

- local business owners
- gardeners
- local residents
- non-profit organizations
- city officials such as police officers, assessors etc

DISCUSSION GUIDE:

There are three main areas of focus for the discussion:

- Demographic information
- Opinions about community gardens within the area;
- Needs and opportunities assessment.
Demographic information

Name of participant: _________________________________

Age of participant: ______

Ethnicity: _________________________

Relationship to garden (neighbor, gardener, no-relationship etc.):
____________________________________________________________________________

Opinions about community-based gardening: 5 minutes

Goal: To learn whether and how the local community perceives the relationship between crime, economic development, and health and the presence of a community garden in Holyoke.

Questions:

- In your opinion, do you think there is crime in Holyoke? If so, what kind of crime? Do you think the community gardens improve crime rates here? If so, why?
- Do you think there are business opportunities in Holyoke? If so, what kind? Do you think the community gardens improve business development here? If so, why?
- Do you think there are health problems in Holyoke? If so, what kind? Do you think the community gardens improve community health here? If so, why?
- Do you believe your business or residence is affected by the presence of the community gardens? In what ways? Name one opportunity and one challenge to having a community garden in close proximity to your home or business.
- Does your business or residence have any direct connection with the community gardens such as providing an educational or food source opportunity to your kids or staff?
- Would you or your organization participate (i.e. fund, plan, provide advertising) in community garden events organized for Holyoke?
- How would a community garden best function or best serve you, your organization, or family?
Needs and Opportunities Assessment: 5 minutes

**Goal:** To determine specific neighborhood and city challenges, opportunities, etc. for establishing a community garden:

**Questions:**

- Is your organization or family experiencing any challenges in the immediate area due to crime, business development, or health? If so, what are they?
- What improvements would be best for the neighborhood?
- Which produce or specialty food items has your organization or family eaten or prepared for meals or special events? What are the specific produce or herb needs for those dishes?
- Do you feel local community gardens are valued in Holyoke? If not, what one or two suggestions do you have to improve the relationship between the community gardens and the neighborhood or city?
- Would you be willing to be part of a small neighborhood cooperative to assist the community gardens with fundraising, clean up, and maintenance?


Websites

America’s Second Harvest: The Nation’s Food Bank Network.  

Rouge’, David. The History of the 6th and B Community Garden.  