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## Pathways to Self-Governance and Success: An Exploratory Study of Community Gardens in Louisville, Kentucky

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PATHWAYS TO SELF-GOVERNANCE AND SUCCESS: AN EXPLORATORY  
STUDY OF COMMUNITY GARDENS IN LOUISVILLE, KENTUCKY

A Capstone Experience/Thesis Project Presented in Partial Fulfillment  
of the Requirements for the Degree Bachelor of Arts  
with Mahurin Honors College Graduate Distinction  
at Western Kentucky University

By

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May 2021

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2021

## ABSTRACT

Those involved in community gardens face multiple challenges to survival, including land tenure, lack of funding, lack of sustained interest, and poor infrastructure, but many successful, long-lasting gardens have found management style to be a key aspect of their success. This project investigated three community gardens in Louisville, Kentucky, in order to determine how self-governance, or internal management by gardeners, overlaps with other success indicators and what development processes lead to successful self-governance. Using qualitative, semi-structured interviews and participant observation, the researcher gathered and analyzed data relative to each garden site's land tenure, community engagement, environmental design, resource mobilization, and style of management. The researcher discovered that various pathways to self-governance exist, but community-building efforts, such as social events, leadership development, and garden-neighborhood partnerships can foster self-management and success in Louisville's community gardens. The study concludes a list of recommendations for the organizers to encourage self-management and sustainability for the city's community gardens. While this project is a case study with results specific to the research sites, other mid-sized metro areas that share demographic characteristics, a range of socioeconomic statuses, and host similar recent immigrant communities as Louisville may benefit from the findings and recommendations of this report.

I dedicate this thesis to my sisters, Cynthia, Rachel, Bridget, and Eleanor, who have been my greatest source of enduring support.

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## INTRODUCTION

Community gardens have long been considered places of health and well-being for individuals and communities. The United States Department of Agriculture (USDA) defines community gardens as “plots of land, usually in urban areas, that are rented by individuals or groups for private gardens or are for the benefit of the people caring for the garden” (2021). They are labeled as “healthy places” by the Center for Disease Control, providing physical and mental health benefits such as access to fresh produce, greenspace, and opportunities for physical activity (2010). These benefits reach not only the individuals involved and the surrounding neighborhood, but the broader community. Community gardens create opportunities for health, participatory citizenship, and organizing, bring people together, and support environmental justice (“About ACGA,” n.d; Kaplan, 1973; Blair et al., 1991; Crespo et al., 1996; Armstrong, 2000; Twiss et al., 2003; Glover, 2004; Glover et al., 2005; Kingsley & Townsend, 2006; Alaimo et al., 2008; Alaimo et al., 2010; Draper & Freedman, 2010; McCormack et al., 2010; Firth et al., 2011; Okvat & Zautra, 2011; Algert et al., 2014; Lanier et al., 2015; Hartwig & Mason, 2016).

As multi-beneficial spaces, community gardens contribute a wealth of resources and opportunities to people and urban environments. In Louisville, Kentucky, immigrants farm at Peaceful Eden Community Garden to stay connected to their agricultural roots. At the Limerick Community Garden in downtown, Dave views the site as his oasis of greenspace and fresh produce in the midst of a concrete environment, and Curtis, at the Bluelick Community Garden, sees the activity as the perfect form of exercise during his

retirement. In other parts of the city, gardening is a necessity and the only source of fresh produce for miles. Even though most people come to community gardens with a specific motivation, the benefits received through communal gardening are far ranging. Louisville has a large number of community gardens, operated by a variety of institutions, including Cooperative Extension, the University of Louisville, and various non-profits. They are located at vacant lots, parks, churches, community centers, and schools (Montgomery, 2016). The gardens mitigate food insecurity, provide urban greenspace and opportunities for recreation, and build strong community networks. This project explores management and development of three community gardens sites in Louisville, Kentucky: Limerick Community Garden, Bluelick Community Garden, and Peaceful Eden Community Garden.

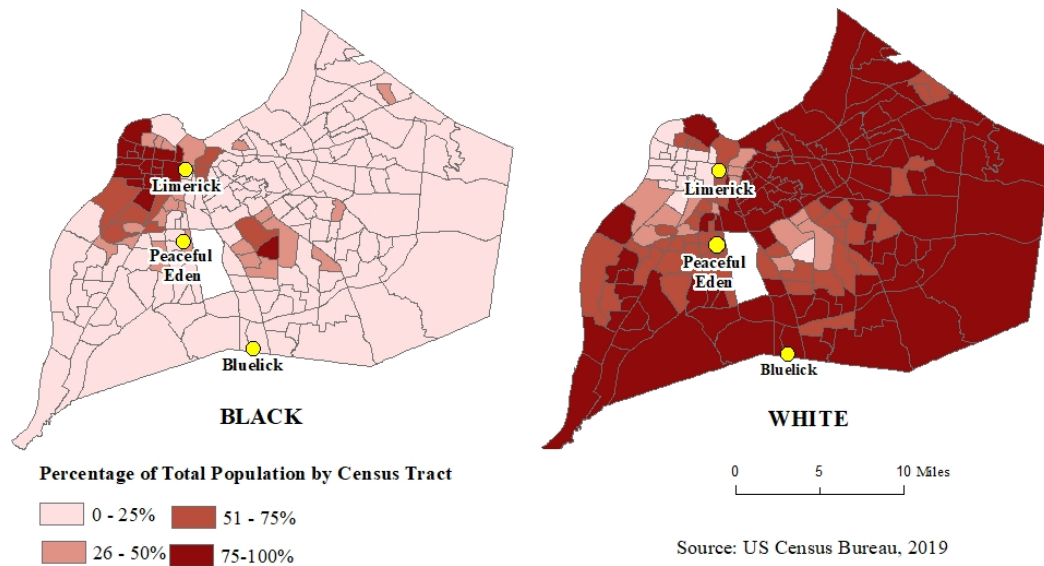
### **Introduction to Study Site**

Louisville's geographic location greatly influenced its historical development and current socioeconomic context. Situated along the Ohio River, the city originated as an important economic port (Yater, 2001). Steamboats had to stop and transfer their loads due to the impassible Falls of the Ohio. Even after the construction of the Portland Canal, which bypassed the Falls, the city's industrial sector continued to grow during the early twentieth century (Yater, 2001). Around this time, the city became a popular designation for thousands of Black people during the Great Migration. While most Black migrants only passed through Louisville on their way to the North, many decided to stay due to the city's economic opportunities and unique mix of Southern culture and Northern politics (Adams, 2003). In the late 1900s, city officials marketed Louisville as a "Gateway to the South:" a city that captures the deep traditions of the American South while celebrating

the diversity and progressiveness of the North (K'Meyer, 2009). In reality, like many of the industrial cities of the North, the city remains largely segregated today as a legacy of redlining, “white flight,” and urban renewal. Despite movements targeted at reducing de-facto segregation in the 1960s and 1970s, the majority of Louisville’s minority populations continue to reside in the West End neighborhoods while the suburbs are predominately white (see Figure 1; Hudson, 2004; K'Meyer, 2009; Hashim 2014).

**Figure 1**

*Racial Demographics, Louisville 2019*

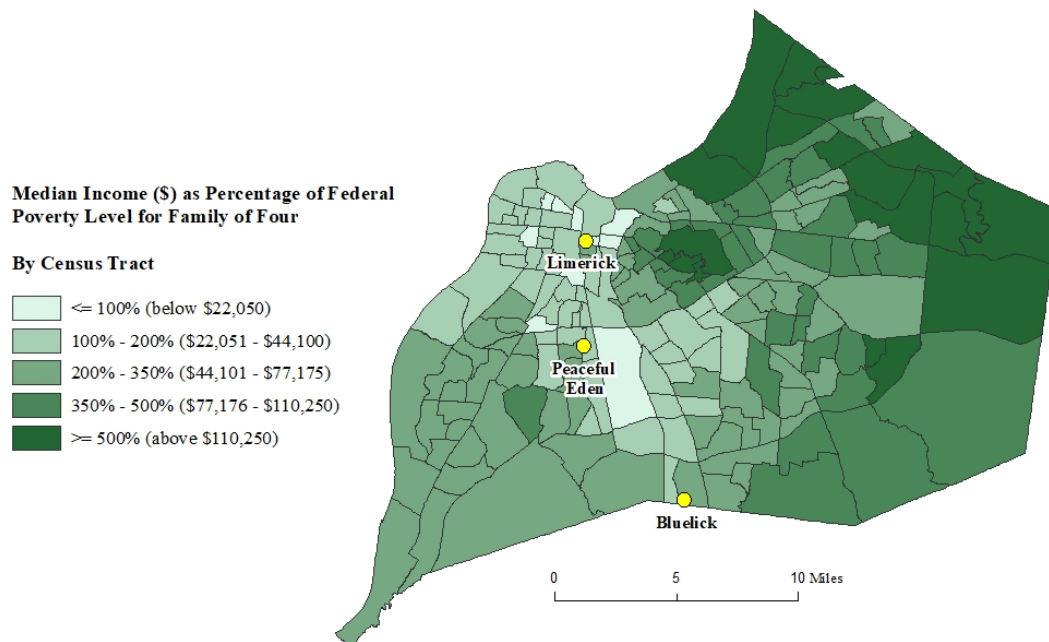


The community living in the West End of Louisville, which is the majority Black, has a disproportionate risk of developing health issues compared to the rest of the city. The West End has persistent issues with air quality due to the nearby industrial zone nicknamed “Rubbertown” (Hanchette et al., 2011). Though no definite links have been drawn between the toxins released from the factories and community health, researchers have explored associations between zip-codes, demographics, and poverty levels with rates of childhood asthma (Jones et al., 2004; Hanchette et al., 2011). Reports from

community organizations identify high rates of cancer and respiratory problems in the area (Coleman, 2004). The Louisville Metro Health Equity report identified a 12-year disparity between the zip code with the longest average life expectancy, located in the East End, and the zip-code with the shortest average life expectancy, located in the West End (Center for Health Equity, 2017). Neighborhood development, housing, environmental quality, education, employment and income, and food systems were just some of the “root causes” that lead to health outcomes in the city (Center for Health Equity, 2017). Lower levels of income and higher rates of poverty in the West End are also contributing factors to the community’s heightened risk of health complications (see Figure 2 and Figure 3).

**Figure 2**

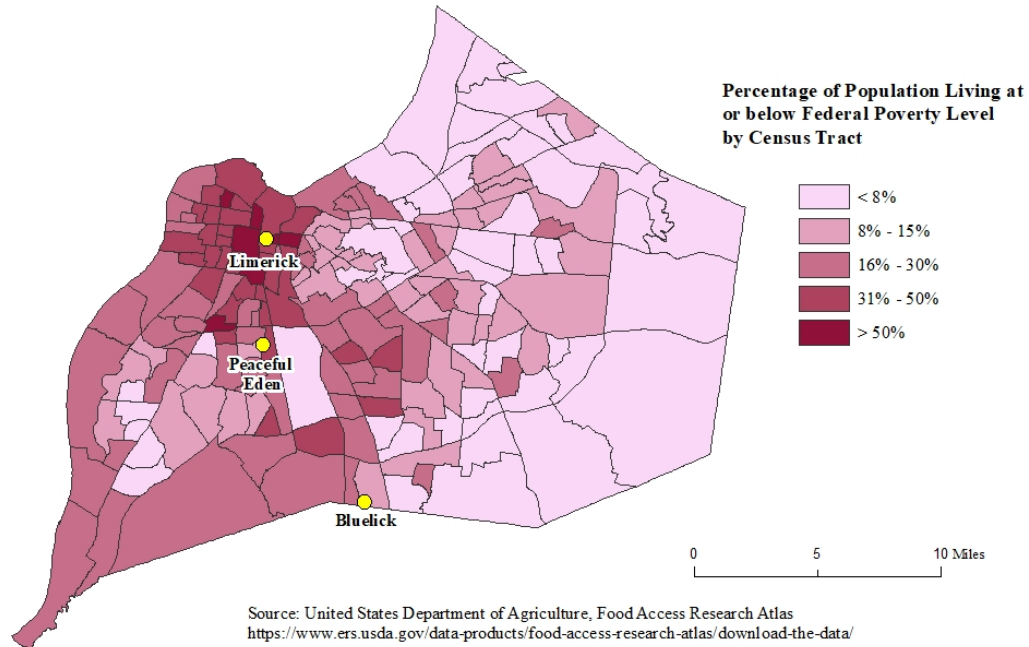
*Median Income, Louisville 2015*



Source: United States Department of Agriculture, Food Access Research Atlas  
<https://www.ers.usda.gov/data-products/food-access-research-atlas/download-the-data/>

**Figure 3**

*Poverty, Rates, Louisville 2015*

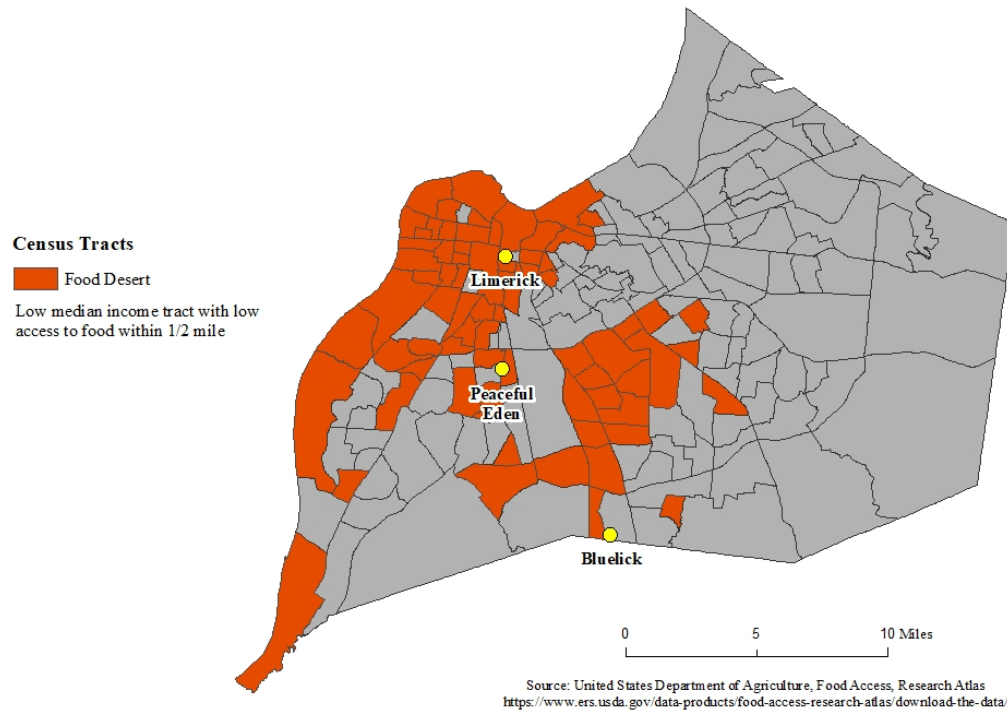


Furthermore, lack of access to fresh produce is another factor contributing to health disparities in the city, as many census tracts are designated as food deserts by the USDA (see Figure 4; USDA, 2017). The term “food desert” has been used commonly in academia to describe disparities in access to grocery stores and healthy food (Hashim, 2014). Gallagher (2007) found that the majority of Louisville venues accepting food stamps are grocers who carry little fresh food. Low access to fresh food contributes to the poor health of the low-income communities in the city due to increased consumption of foods high in salt, fat, and calories. The issue of food system segregation and inequality is a common issue seen in other urban areas with high levels of segregation and wealth disparities, like Detroit and Chicago (Hashim, 2014). As urban agriculture can provide public health benefits and economic development, Louisville and like cities tend to have a high prevalence of community gardens and urban farming projects (Hashim, 2014).



**Figure 4**

*Food Deserts, Louisville 2015*



Note: Low-access is measured by the number of supermarkets, grocery stores, and other sources of healthy food that can be easily accessed by the population of the census tract. Lack of public transportation or high levels of poverty can decrease food access.

In addition to the demographic patterns discussed above, Louisville has a large immigrant population. Around seven percent of the city’s population is foreign born, and over 130 languages are spoken (Center for Health Equity, 2017; U.S. Census Bureau, 2019). While communities of immigrants are spread throughout the city, a large concentration is located in the census tracts around Site 3 and the Americana World Community Center (See Figure 1; Americana World Community Center, n.d.). Many of the immigrants in Louisville are refugees, with a large presence of Bosnian and Somali refugees in the city (Izyumov et al., 2002; Capps et al., 2006). Additionally, large populations of immigrants from Mexico and Bhutan have settled in Louisville (Izyumov et al., 2002; Shrestha, 2011). The foreign-born population has a significant role within the

city's urban agriculture development. As one of the largest community garden organizations, Common Earth Gardens, specifically serves refugees who are looking for space within the city to farm.

### ***Louisville's Community Gardens***

Despite an abundance of garden sites in the city, documentation of Louisville community gardens before the late 2000s is limited. As in many U.S. cities, Louisville's community gardens originated in the early 1900s, spurred by the World Wars (Miller, 2003; Lawson, 2005). Even before the first war, in 1912, the state's agricultural commissioner suggested that the city begin a practice of gardening on vacant lots, touting the economic benefits, resulting beautification, and opportunities for youth (Louisville Courier Journal, 1912). The Louisville Garden Club claimed to have started 200 gardens "where none had grown before" in 1913, mainly in backyards and vacant lots (Morton, 1914). During the first World War, Kentuckians viewed planting "war gardens" as an act of patriotism and "team work" (Louisville Courier Journal, 1918). In 1942, the Louisville Courier Journal promoted community gardens with the headline "Time to Plan Your Victory Vegetable Garden Now!" (Gregg, 1942). These garden sites were more formalized than WWI war gardens, overseen by the War Garden Committee under the Louisville Defense Council for the purposes of supplementing the food supply (Gregg, 1942).

Community gardens similar to ones existing today began to develop in Louisville during the 1970s and 1980s. Communal gardening most likely resurged due to the economic insecurity and growing environmentalism of the time (Lawson, 2005). In the 1970s, Citizens Fidelity Bank & Trust Co. provided 5,000 rentable garden plots to

Louisvillians, considered to be the largest garden project in the country at the time (Cooper, 1975). Additionally, the Urban 4-H Council leased land in Louisville's downtown to provide free gardening space to children involved in 4-H and low-income families (Cooper, 1975). New garden sites developed slowly, with only a few city-run gardens reported in the Louisville Courier Journal throughout the 80s (Woolsey, 1982). In late 1990s, that same newspaper reported five community gardens in the city and four more within the county (Farmer, 1996). Then, in 1997, the Louisville Coalition for Community Food Security called for a greater effort to transform vacant land into economically and socially productive garden spaces, offering volunteers to spearhead the process (Hinkle, 1997). During the late 20<sup>th</sup> century, community gardening had strong support from the city government, who had a hand in managing and providing land for most of the gardens that existed at the time (Woolsey, 1982; Farmer, 1996; Louisville Courier Journal, 2000; Stahl, 2000). The city's support for urban gardening has preserved into the 21<sup>st</sup> century. In 2019, Louisville had at least 25 active community gardens (Goldstein, 2019). One study reported up to 55 garden sites in the city, excluding community gardens embedded into schools (Montgomery, 2016).

Previous research on Louisville's community gardens has explored the communality, resource sharing, food justice efforts, and state-supported self-governance (Hashim, 2014; Montgomery, 2016; Deitsch, 2018; Goldstein, 2019). While many of the city's community gardens were developed to address the issues of community food insecurity and economic underdevelopment, garden sites differ widely in demographics of participants, goals of the garden project, and operational style (Hashim, 2014; Goldstein, 2019). Montgomery (2016) grouped Louisville's community gardens into four

main categories: a) municipal, b) charitable, c) neighborhood-based, and d) hybrid.

Despite their many differences, most sites struggle with the same challenges including funding, access to resources, and land ownership (Goldstein, 2019). The difficulty of acquiring usable land for new garden sites has been noted as one of the largest barriers to garden development in the city (B. Pratt & R. Brunner, personal communication, December 19, 2019; Montgomery 2016). Deitsch (2018) also identified a lack of state-supported self-governance as a challenge to the success of the city' urban agricultural network. This study looked at the organizational structure of Louisville's largest community garden operator, Jefferson County Cooperate Extension, finding that the city provides an insufficient amount of authority and support to Extension in order to successfully manage community greenspaces (Deitsch, 2018)

Despite the quality and depth of prior studies, there is much more to learn about management and success at the level of individual community garden sites. Of the previous research on Louisville's community gardens, most studied success and resource sharing on a city-wide scale. However, Montgomery (2016) explored communality at the scale of individual garden sites, discovering that the needs, services, and structures of the gardens vary by site, despite top-down organizational structures employed by many garden organizations. Dietsch (2018) concluded that the Jefferson County Cooperative Extension service has low state-reinforced self-governance. This assessment implied that Cooperative Extension has little to no decision making power or institutional autonomy as an organization. Rather, the city holds the majority of the power in their organization model, limiting their ability to self-direct the development of their community gardens. However, little is known about self-governance at individual garden sites. This study

sought to fill the gap in prior research regarding scale of analysis by studying management at individual community garden sites. This gap is important to address because variation among garden sites operated under the same top-down organization structure can lead to differing levels of long-term success.

### ***Community Garden Organizations***

A large number of the community gardens in Louisville are operated by two entities: Jefferson County Cooperative Extension and Common Earth Gardens, the agricultural branch of Catholic Charities, Inc. The two groups manage about 20 gardens throughout the city and offer educational and development opportunities to participants. Jefferson County Cooperative Extension operates two of this study's sites, Limerick Community Garden and Bluelick Community Garden, while Common Earth Gardens operates the third study site, Peaceful Eden.

Cooperative Extension was started with the Smith-Level Act of 1914 with the purpose of expanding the reach of practical education to US adults (Ramussen, 2002). Cooperative Extension agents are based in state land-grant universities and are tasked with educating adults on agriculture and home economics through demonstration and applied learning. The system has been seen as imperative to the resilience of the country through periods of crisis, such as the World Wars and the Great Depression. Across the US, the extension service looks different in its management and programs but shares a common mission of diffusing practical education to US citizens (Ramussen, 2002).

In Kentucky, Cooperative Extension Offices are run through the University of Kentucky and Kentucky State University with the mission of improving the lives of Kentuckians through education focused on the specific needs and issues of communities.

The services are focused on nutritional education, horticulture, and community and economic development through various programs (JCCE, 2021a). In Jefferson County (Louisville, Kentucky), cooperative extension manages 10 community gardens with individual plots that are leased by the year. The gardeners have access to many materials, tools, and educational programming through extension (JCCE, 2021b). The Jefferson County Horticultural Agent, Bethany Pratt, formed a Community Garden Council for the city comprised of garden leaders who oversee the budget and program (Goldstein, 2019). As Cooperative Extension is a government entity, its gardens are subject to a level of regulation and bureaucracy greater than gardens managed by other organizations. In relation to their garden sites, the extension office is responsible for securing land, managing agreements and fees from participants, and providing resources needed to maintain the garden. The extension agents, community garden leaders, and garden participants all have clear rules and responsibilities that are uniform among sites (B. Pratt, personal communication, June 17, 2020). However, the actual manifestation of guidelines and rules at each garden site can vary according to leadership style and community needs and norms (B. Pratt, personal communication, March 10, 2021).

Common Earth Gardens is a program of the Catholic Charities of Louisville, Inc. Originally started under the Kentucky Office for Refugees in 2007, the Refugee Agricultural Partnership Program was renamed and moved to Catholic Charities in 2014. They work with the diverse and multicultural community of Kentucky (mainly refugees) to increase access to agricultural land and business opportunities. Their programming includes community gardens, a farm business training program, and nutritional education. They approach their work through a model of Healing Encounters, that seeks “healing in

culturally responsive, linguistically appropriate, and trauma-informed relationships and experiences” (Common Earth Gardens, n.d.a). The program service providers work alongside multicultural communities to establish long-term gardens that eventually graduate the program with community ownership and management (Common Earth Gardens, n.d.a). The program currently operates six gardens and farms and has four graduates.

Many of the garden sites currently operated by Cooperative Extension and Common Earth Gardens were originally started by Brightside, a public-private partnership that sought to address neighborhood beautification and environmental cleanliness in the city. The initiative was started in 1986 to encourage community pride and greenspace development. Currently, the program organizes garbage clean-up days, community tree-planting, and educational programming in the city (Brightside, n.d). In the 1980s, Brightside started a project to revitalize vacant lots and address food-needs of the Louisville community by creating community gardens and educational programming. In the early 2000s, Jefferson County Cooperative Extension became involved with the efforts and expanded the program, especially with elderly populations. Then, in 2010, Brightside officially transferred their gardens to Cooperative Extension and Catholic Charities, Inc. for management. (Goldstein, 2019; B. Pratt, personal communication, June 17, 2020).

### **Study Purpose**

This study addressed to address an important gap in the understanding of community gardens in Louisville, specifically how management, governance, and self-sufficiency develop and affect garden success. The project focused on individual gardens

in order to explore the place-based and context-specific needs and development patterns of different garden sites within the same organizational structure. In order to best address community questions, two community partners were selected to participate in the research process, Jefferson Cooperative Extension and Common Earth Gardens. Using qualitative interviewing and participant observation, this exploratory study broadened the understanding of how gardens come to be self-governed under a top-down organization structure and the relationship between garden self-governance and overall success. This topic is a priority for community garden organizers in the city, who hope to maximize garden agency and success. This paper concludes with a list of insights and potential recommendations for community garden organizers to increase the success and self-agency of community garden sites in Louisville.



## LITERATURE REVIEW

Community gardens can take different forms; many definitions exist that encompasses one or many of the variations. Some scholars define them broadly as any “defined area of tillable land made available to groups of individuals, households, classes, and others to garden” (Hou et al., 2009, p. 11). Other common definitions make a clear distinction between community gardens and other forms of urban agriculture, focusing on the specific social environment produced: “the term *community* in community gardening refers to the fact that this approach of gardening involves the convergence of individuals, joining together in a diverse setting [...] to grow, among other things, food” (Draper & Freedman, 2010, 459). Hancock (2001) distinguished community gardens from traditional allotment style gardens by highlighting the communal management of garden spaces. Despite some slight disagreement, scholars agree that community gardens are spaces gardened by many people on shared land and occur most often in urban environments.

Although community gardens have existed in the United States since at least the 1890s, they have resurged as a popular tool of community development and urban sustainable planning in the past 50 years. Some scholars argue that communal gardening originated even earlier than the late 1800s through communal pasturage land in American frontier towns (Lawson, 2005). Originating in cities such as New York City and Detroit, the contemporary community garden model grew from a history of transforming vacant urban land into spaces of economic development, community engagement, and food

security (Lawson, 2005). In World War I, U.S. citizens were encouraged to plant “War Gardens” in order to supplant the amount of food being sent overseas (Miller, 2003). Then, many people returned to or continued to garden in vacant lots during Great Depression as a means of subsistence agriculture. In addition to providing food, these gardens, which served as economic cooperatives, encouraged community economic support during the time of recession. In the second World War, the War Gardens were renamed “Victory Gardens.” Unlike War Gardens, which were primarily planted in public space, Victory Gardens were mostly found in private and familial lots. The campaigns were implemented mainly with the goals of increased food production and domestic support of the wars (Miller, 2003). With the rise of the environmental movement, community gardens rose to popularity again in the 1970s, often as acts of resistance to urban land change and economic disenfranchisement (Lawson, 2005). Today, thousands of community gardening programs exist across the nation, embedded in schools, neighborhoods, and even local governments. Beyond food production, they continue to be sites of community empowerment, economic development, and urban renewal (Lawson, 2005).

In the past 50 years, researchers have identified numerous benefits and purposes driving community gardens including improved personal and public health, food security, economic development, green space recreation, crime prevention, neighborhood beautification, cultural preservation and expression, social capital generation, and community organizing (Draper & Freedman, 2010). Participants of community garden projects are able to access fresh produce at a low price and often consume more fruits and vegetables than non-gardeners (Blair et al., 1991; Alaimo et al., 2008; McCormack et al.,

2010; Algert et al., 2014). In addition to increasing fresh food intake, gardening as an activity is associated with positive physical and mental wellness (Kaplan, 1973; Crespo et al., 1996; Armstrong, 2000; Twiss et al., 2003; Hartwig & Mason, 2016). Beyond individual benefits, community gardens provide community and city-wide benefits. Teig et al. (2009) found that the social processes that occur within community gardens encourage reciprocity, mutual trust, collective decision making, social norms, civic engagement, and community building. As sites of social interaction, community gardens foster social capital and relationship-building that increase community resilience and cohesiveness (Glover, 2004; Glover et al., 2005; Kingsley & Townsend, 2006; Alaimo et al., 2010; Firth et al., 2011; Okvat & Zautra, 2011; Lanier et al., 2015). Furthermore, within urban environments, community gardens connect people with nature, which contributes to environmental education and awareness (Okvat & Zautra, 2011). The environmental benefits of community gardens and urban agriculture are still not fully understood by researchers. However, urban gardens are thought to contribute to reduced urban runoff, heat, and air pollution and increased biodiversity (Deelstra & Girardet, 2000; Tsilini et al., 2015; Gittleman et al., 2017; Clucas et al., 2018). Due to the many benefits of community gardening, they continue to be applauded as a popular tool of social, economic, and environmental sustainability within cities.

Despite the praise, garden benefits are unevenly distributed along demographic and geographic lines. In a survey of gardens in New York City, Armstrong (2000) found a geographic difference in participant motivation for gardening. While urban sites were focused on food production for low-income households and green space access, rural community gardens had a greater focus on expression of traditional culture. Additionally,

the beneficial social process of the community gardens, such as social capital, relationship building, and community organizing, was found to be more prevalent for gardens in low-income or minority neighborhoods. However, this could be due to a greater need rather than a social difference between the neighborhoods, suggesting that the goals and benefits of gardens are not, and need not be, universal (Armstrong, 2000). However, creation of community gardens has been connected with gentrification. Development of urban green space within low-income areas often attracts other new development in the surrounding area, which subsequently raises property values and displaces residents (Braswell, 2018). Even when gardens are situated in Black- and Latino-dominated areas, the predominately white, middle-class, and largely exclusive urban agriculture movement promotes physical, cultural, and social spaces within garden sites that are dominated by white leadership and ideology (Hoover, 2013). The opportunity to build and sustain community gardens is unequal, due to racial and economic disparities in access to financial resources and governmental/organization support (Reynolds, 2015; Cohen & Reynolds, 2015). Continuing critical research on urban agriculture and community gardening is necessary to better understand and address these disparities.

### **Review of Success Indicators within Community Gardens**

Sustaining a long-term, successful community garden is a challenge for many communities. Without certain vital components, a garden site cannot be resilient in the face of social, economic, and natural disturbances. Previous academic literature has identified the key elements to successful community gardens as a) land access, b)

community support and engagement, c) social capital and access to resources, and d) garden design and environmental factors, and e) appropriate leadership and management.

### ***Land Access: Secure Land Tenure***

Secure land tenure is a necessity of a successful community garden, but it is also one of the biggest challenges due to restrictive policies and lack of funding (Armstrong, 2000; Milburn & Vail, 2010; Lang, 2013; Ghose & Pettygrove, 2014; Knapp et al., 2016). Many community gardeners lease land from municipal governments, universities, churches, and other partners, as this is often the fastest and easiest method of procuring land. These leases are usually short-term, can be terminated with little notice, and are not ideal for building a long-term garden (Hou et al., 2009; Milburn & Vail, 2010; Cohen & Reynolds, 2015). Additionally, in places like New York City, gardeners have reported difficulties with finding usable land to grow food due to the complex and difficult process of gaining access to vacant land through the city government. In many cases, community gardens are seen as temporary installments on vacant urban land. Gardeners can use the land, but only until a more advantageous use of the land comes along (Hou et al., 2009). Community non-profits and non-governmental organizations (NGOs) can serve as mediators between gardens and landowners to make the process of securing land easier (Cohen & Reynolds, 2015). Another approach to the issue of land security is to embed gardens within public parks, which generally provides long-term security for the community (Hou & Grohmann, 2018). This arrangement is often beneficial for the park and its ecosystem (Middle et al., 2014). In Seattle, the integration of community gardens into parks led to some challenges revolving around shared management and lack of participatory site planning (Middle et al., 2014; Hou & Grohmann, 2018). Community

land trusts, used commonly for land conservation and affordable housing, can also provide secure land for community gardening projects (Campbell & Salus, 2003). Land Trusts provide the ideal land tenure as they provide long-term ownership to gardeners and can address inequities among and within neighborhoods (Schukoske, 2000; Hou et al., 2009).

Long-term access to usable land is important to the sustainability of a garden because it encourages appropriate garden design, resource infrastructure, and sustained community interest (Milburn & Vail, 2010). The ability to design the space to the community's unique needs and interests comes along with the security of long-term land tenure. While community gardeners have a multitude of motivations, including food production, leisure, and community-building, the ability to develop a well-planned, multimodal place from the beginning is important to sustaining the interest of the community and participants (Hou et al., 2009). Securing usable land that can be developed to the specific needs of the community is the first step in creating a sustainable community garden.

### ***Community Support and Engagement***

Community and municipal support can greatly alleviate the challenge of land tenure for community garden projects but conflict with local agencies is a common challenge for garden sites (Drake & Lawson, 2015a). Many gardeners who use municipal property have difficulty communicating with the city regarding land maintenance, security, and sanitation needs, citing a lengthy response time on the city's part. Additionally, local guidelines and regulations can be confusing and complex, limiting organizations' abilities to access to appropriate growing space and conduct various

garden-related activities (Cohen & Reynolds, 2015). For example, in Seattle, where the climate allows for gardening year-round, community gardens have various avenues of institutional support. The gardens have been incorporated into the city's planning since the 1970s, and the King's County extension program and Washington University offer technical expertise for garden design and horticulture success (Hou et al., 2009).

Similarly, in Chicago, an NGO land trust, "NeighborSpace," was created in the 1990s to serve and protect urban agriculture spaces within the city on behalf of the municipal government (Helphand, 2015; Dietsch, 2018).

Beyond land access, community engagement and participation are some of the most important elements of any community-based project; such is the case with community gardens (Ceptureanu et al., 2018). Many gardens are supported by local and municipal organizations that oversee their development and maintenance, such as the parks and recreation department, a neighborhood association, a non-profit agency, cooperative extension, or a local school/university (Hou et al., 2009). Success is dependent on community engagement over time and additional measures beyond initial partnership may be necessary for a sustainable garden project. Several community engagement factors are relevant to long-term success, such as partnerships with external community groups, non-garden related use of the space, and demand for locally grown food (Beilin & Hunter, 2010). These factors indicate sustained volunteer and participant interest, which gardens rely on to maintain shared spaces and encourage continuing garden development. To encourage participation, gardens must first engage in "pull strategies" such as social and educational outreach events to bring more volunteers to the garden. Then, to ensure maintenance of shared spaces, "push factors" such as community

standards and enforcement techniques encourage participants to keep the garden manageable (Drake & Lawson, 2015b).

The motivations of gardeners also can have a large impact on sustained participation and volunteer interest. Lee and Matarrita-Cascante (2019) identified three main types of motivations that greatly effect participation with community gardens: 1) functional, 2) emotional, and 3) conditional motivations. Functional motivators include material and tangible needs, such as access to food, health benefits, and leisure and recreation. Emotional motivators are less tangible and have more to do with the positive feelings that gardeners receive through involvement with the garden site. A sense of ownership and attachment to the garden is a particularly strong motivator that encourages long-term participation. Finally, conditional motivators are potential barriers to sustained interest, such as time commitment and lack of gardening knowledge (Lee & Matarrita - Cascante, 2019). Motivations for becoming involved in a garden will vary greatly by location and can affect the amount of engagement and support a garden receives.

Besides outreach initiatives and motivations, other factors may influence community engagement, such as location and garden design (Milburn & Vail, 2010). Many scholars have found additional evidence supporting this claim, finding a connection between a large community presence and sustained garden interest, funding opportunities, and a strong volunteer base (Firth et al., 2011; Cohen & Reynolds, 2015; Fox-Kamper et al., 2018). Ultimately, community outreach is a vital element of a community garden's purpose, as it brings more participants, volunteers, funding opportunities, resources, and municipal support.



### ***Social Capital and Resource Access***

While community gardens have been identified as sites of social capital generation, utilizing existing networks during the development stage is essential to accessing needed resources (Glover, 2004; Alaimo et al., 2010; Lanier et al. 2015). The ability to access resources is central to any organization. Small, grassroots organizations, such as community gardens, often do not have the funding or institutional support to obtain all their physical and intangible needs, such as labor, supplies, and infrastructure, on their own. Glover and colleagues (2005) found that social capital, the access to resources and opportunity that one earns from group membership and social relationships, is mobilized frequently in a community garden context (Bourdieu, 1986). Made up of the informal and formal social networks, such as friends, neighbors, co-workers, friends of friends, and other connections, social capital plays a large role in effective resource mobilization (Glover et al., 2005; Ghose & Pettygrove, 2014). These networks, and access to resources, are further expanded when gardens have greater participant diversity, allowing them more opportunities to acquire political/institutional support, funding, resources, and expertise (Okvat & Zautra, 2011). Additionally, community organizing and partnerships are networking strategies mobilized by garden groups to grow their network and widen their resource pool (Drake & Lawson, 2015a).

Social capital, while mostly a success indicator, can create new challenges for community gardens. Due to a lack of resources and connections or local policy, communities often find themselves compelled to partner with and depend on larger organizations or municipal institutions to expand their social network. As these partners operate as gatekeepers to their network and resources, they possess great influence over

the garden development and management. For example, Milwaukee requires garden organizers to create agreements with the local government to use vacant land, drive communities to co-opt the city's standards and guidelines for garden development due to the threat of loss of land security or institutional support (Ghose & Pettygrove, 2014). As community gardens provide a wide range of services dependent on community needs, this power structure threatens the community's specific needs and vision for the space. However, the resource access that comes with institutional partnership is often too attractive for communities to go without. Overall, community gardens with large networks are more likely to succeed in the long-term, even with certain drawbacks.

### ***Garden Design and Environmental Indicators***

The most important design factor of planning a community garden is stakeholder participation, which ensures a garden is planned and constructed in accordance with community vision and will adequately provide the intended benefits for the stakeholders. Beyond inclusive planning and design, additional important elements include site selection, accessibility, garden spaces, and site elements. While the community will not have control over all the factors due to funding, space, and resource limitations, attention to specific details during the beginning stages are important for establishing a solid foundation for garden success: site proximity to the intended participants, environmental factors such as sunlight, soil, and water access, accessibility accommodations, and social gathering spaces (Milburn & Vail, 2010). Of these, Milburn and Vail (2010) emphasize the importance of the gathering spaces as they enable other success indicators such as community engagement and social capital.

However, Hou and colleagues (2009) argued that different models of community gardens require different processes, meaning that participatory design is not always a necessity. Gardens are often multimodal spaces that focus on different goals, such as recreation, social space, or food production. In some cases, professional landscape architects can be critical while in other cases participatory, incremental design may be more appropriate. Despite various uses of space, ad-hoc design is prevalent in most community gardens, due to lack of funding and other resources (Hou et al., 2009).

### ***Leadership and Management***

Due to their context-specific and community-based needs, community gardens do not have one organizational model that ensures success. A number of enabling factors can contribute to a more successful project. Often, community gardens will have the help of municipal or non-governmental professionals from outside of the community who offer expertise and resources. In these scenarios, the relationships between the larger organization and individual garden community requires rapport, flexibility, and a shared vision to generate success (McGlone et al., 1999). Community gardens can be managed and governed in a range of models from top-down, or external, to bottom-up, or internal. Most gardens are managed in a manner that incorporates both approaches, utilizing the resources and expertise of an external organization while implementing decision-making and staffing from within the community (Fox-Kamper et al., 2008).

Within the literature on internal community garden governance, researchers have not reached a consensus for the best model. Fox-Kamper et al. (2008) maintains that gardens established by groups external to the community in which they are placed are rare and tend to be less successful. Sites that are initiated and governed by the community

while being supported financially and technically by partnering institutions are the ideal model (Fox-Kamper et al., 2008). Firth et al. (2011) warns that gardens should be wary of becoming dependent on input from these partnering organizations. Over-dependence on resources and funding from a partner may give the party influence over the garden's management and governance, threatening the independence of the site. Van de Jagt et al. (2017) listed partnerships as one governance component linked to success in community gardens, along with clear rules, open-minded leadership, regular gardener meetings, resources, and shared goals between the site and the community. While many community garden sites might employ a form of self-governance, meaning involving participants in decision-making, more research needs to be conducted to determine if this model is linked to long-term success (Van de Jagt, 2017).

In terms of sustainability and longevity of community-based programs, management capability and leadership are key elements that enable success (Twiss et al., 2003; Glover et al., 2005; Teig et al., 2005; Ceptureanu et al., 2018). How leadership, management, and governance interact with success in a community garden context is not well understood. Short (2012), when studying community gardens embedded within Canadian universities, concluded that a shared leadership structure is most suitable to the needs and motivations of community gardens. This model conceptualizes leadership as “a shared or distributed phenomenon occurring at different levels and dependent on social interactions and networks of influence,” compared to a focus on individual leadership (Fletcher & Kaufer, 2002, p. 21). The majority of the gardens that Short (2012) observed used collaborative and participatory management, but relied on a strong, set leadership structure to provide the institutional memory needed for longevity, especially in a context

where participants might rotate out frequently. Short's (2002) contributions to the literature on community garden success are important, but do not adequately apply to gardens in less structured or institutional environments.

Gilbert et al. (2020) sought to fill this gap in the research with their qualitative review of leadership in relation to volunteer participation in The University of North Carolina Center for Health Promotion and Disease Prevention's community gardening program. In this context, garden leaders were seen as vital components for garden in success in a myriad of ways; Adequate management capabilities have been recognized as drivers of success for community-based projects by securing resources, developing goals and plans, organizing staff and volunteers, ensuring program effectiveness, and other vital tasks (Ceptureanu et al., 2018). The project identified the ideal garden leader, according to volunteers, as organized and open to participant suggestion. Further, the researchers found most garden leaders were either collaborative or direct in their management, and the choice of style influenced the vision, goals, design, and volunteer coordination of the garden. Despite the practice and planning implications of this study, more research needs to be conducted to understand how leadership interacts with and influence other measures of garden success. (Gilbert et al. 2020).

## METHODOLOGY

### **Introduction to Community-Based Research**

The methodology used in this project was qualitative in nature and grounded in community-based research. Community-based research is rooted in and combines other, more specific methodologies, such as the popular education model, the participatory research model, and action research. The popular education model, pioneered by Paulo Freire and Myles Horton, advocates for education to be used as a tool for social change, where the teacher or facilitator is part of an active learning circle along with the students (see Freire, 1986; Horton & Freire, 1990). This model has transformed into what is commonly known as service-learning in college classrooms. The model allows a student or researcher to frame the learning process through connections building with community groups (Wallace, 2000). The participatory or participatory action models of research have similar goals but extend the role of the researcher. First used within developing countries, participatory action research is rooted in critique of traditional Western social science research and emphasizes research for the purposes of community development (Strand et al., 2003). The model differs from traditional sociological study through direct involvement by the researcher into the entirety of the social change process, including social action. The approach is relatively new in the social sciences discipline and utilizes a wide variety of methods. The process usually involves citizen research and is seen as more accessible to community groups working towards change (Park, 1992). The action research approach was introduced by Kurt Lewin (1948) as a method used to reduce

social conflict in the workplace. Though it shares many of the same design principles, this model is considered less influential for the discipline of community-based research.

This project was designed using Strand *et al.*'s (2003) model of community-based research. The model pulls from many of the traditions discussed above and prioritizes collaboration between academics and community members, democratization of knowledge, the valuation of different methods of data collection and analysis, and advancement towards social change and justice (Strand et al., 2003). The model outlines 10 principles that should be followed to promote successful and sustainable community-academic partnerships, including a) shared worldview, b) shared power, c) shared goals, d) flexibility, e) mutual trust and respect, f) communication, and g) empathy. In terms of research design, the most important element of this model is usefulness to the community organizations. Sometimes, to achieve this goal, unconventional data collection and analysis methods are employed, engaging community members in the process. At its core, community-based research exists to address community-identified needs. Collaboration with community partners is essential throughout the process. By including local people as participants, stakeholders, researchers and academics can produce findings that are more relevant, place-based, and specific to the community needs (Strand et al., 2003).

For data collection, this study used qualitative methods of semi-structured interviews and participant observation. Semi-structured interviews are commonly used for qualitative research, as their structure allows for a conversational, informal interview that can reveal complex behaviors, opinions, and emotions (Longhurst, 2016). The format of a semi-structured interview is between that of a structured interview, with a set list of

questions that are delivered in a set order, and an unstructured interview, where the informant guides the conversation (Longhurst, 2016). With semi-structured interviews, the researcher prepares a guide with open-ended questions to keep the interview focused on the topic of interest (Jamshed, 2014). However, the guide is flexible and delivered in a conversational manner, so that the informant can direct the conversation to what they view as most important (Longhurst, 2016). For this project, semi-structured interviewing was chosen for its flexible and conversational nature that helps to identify varying opinions, motivations, and leadership styles among the leaders and organizers of the three garden sites.

Originally developed within the disciplines of anthropology and sociology, the methodological practice of participant observation is a commonly used technique in most social and behavioral sciences. Participant observation involves collecting data through observation of and interaction with a community “to learn about the activities of people under study in a natural setting” (Kawulich, 2005, 2). Bernard (1994) emphasized the importance of being a careful observer and good listener when conducting participant observation. By immersing oneself into the research community and establishing a level of rapport and comfortability, the aim of participant observation is to gather data in a natural environment, opposed to observation which can cause participants to behave differently due to the awareness of being watched (Bernard, 1994). Participant observation is useful in qualitative research to access how participants communicate with each other in their daily interactions. Furthermore, the practice compliments semi-structured interviews by allowing the researcher to witness the processes and observations discussed or omitted by the interview participants (Kawulich, 2005).



Participant observation has been employed in study of community gardening. Flachs (2013) volunteered in four community gardening or farming sites over the course of eight weeks to investigate conflicts between environmentalism and food production. Through “volunteering as ethnography,” Flachs (2013, 99) was able to uncover complex observations regarding diversity in communal food production. The participant observation employed in the study entailed not only regular volunteer activity, but intentional discussions with the members of each garden site. Flachs (2013) found a way to direct informal conversations into topics of politics and economics through first engaging in small talk about why a person gardens and transitioning broader environmental opinions. Flachs (2013) prepared specific open-ended questions that could ease the gardeners into the topics of study while still feeling informal and natural. Additionally, while engaging in these conversations, Flachs (2013) was actively engaged in the gardening process, assisting in weeding, mulching, and other activities. Overall, Flachs’s (2013) practice of volunteering as participant observation contributed to richer data collection and more complex findings. The participant observation of this study was modeled off the method of Flachs (2013) in order to reveal the relationships between garden leaders and participants and the communal governance and ownership of each site.

### **Site Selection and Identification of Research Questions**

Jefferson County’s Kentucky Cooperative Extension office and Catholic Charities, Inc’s agricultural program, Common Earth Gardens, were community partners for this project. In collaboration with the community partners, three study sites were purposefully chosen, providing a range of self-governance levels and pathways to self-

governance: Limerick Garden and Bluelick Garden, are projects of Jefferson County Cooperative Extension. As described by Horticultural Extension Agent Bethany Pratt, Limerick has been generally self-governed since they were established in the 1980s, while Bluelick is more resistant to self-governance and relies quite heavily on Extension as a resource (B. Pratt, personal communication, December 19, 2019). Peaceful Eden Garden, facilitated through Common Earth Gardens, was created only four years ago. Common Earth Garden organizers continue to develop a self-governance model through leadership development and community organizer aid for the community, which still relies on the organization for management assistance (R. Brunner, personal communication, December 19, 2019). The study sites were selected specifically for different apparent levels of self-governance. Comparison of the three sites allows for observation of different forms of governance and development processes.

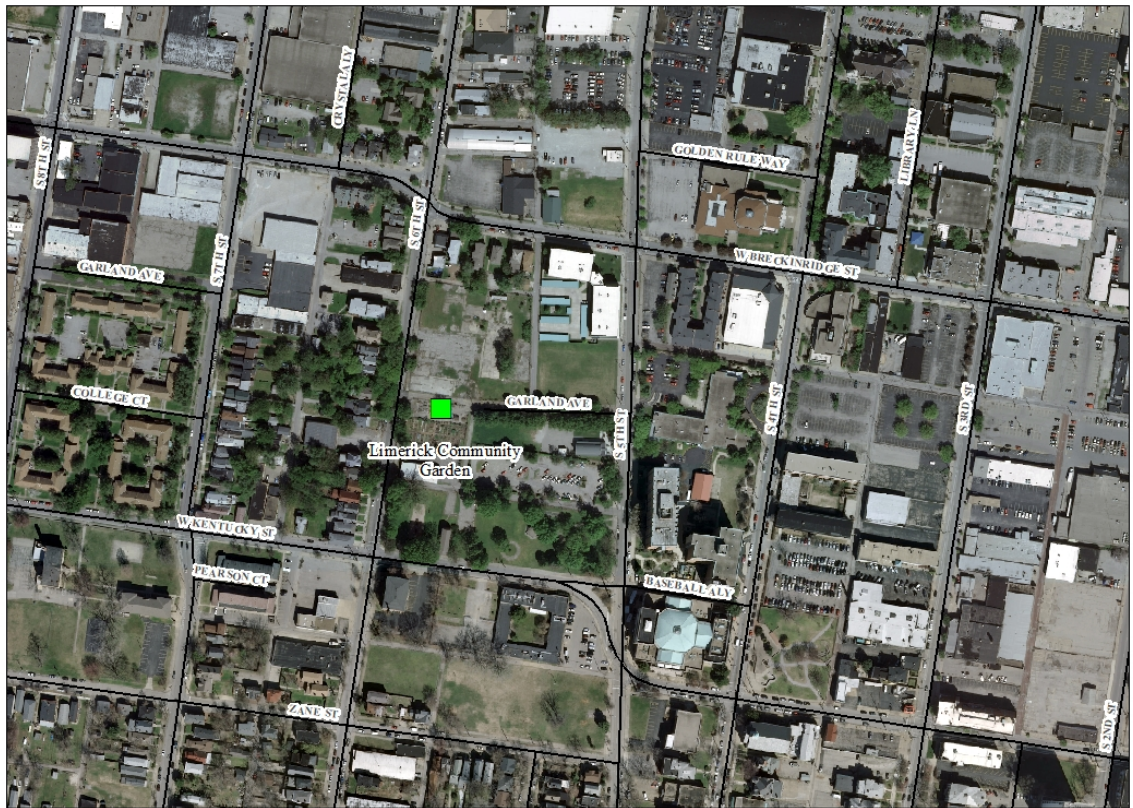
### ***Limerick Community Garden***

Limerick Community Garden was one of the first vacant plots revitalized by Brightside in the 1980s. In the early 2000s, management of the site was transferred to Jefferson County Cooperative Extension. Due to this management shift, as well as turnover in the gardeners at the site, limited information is available about the history of Limerick's beginnings and development since then (B. Pratt, interview, June 17, 2020). The plot is located on S. 6<sup>th</sup> Street in the Limerick neighborhood. The neighborhood lies between the Central Business District and Historic Old Louisville. The neighborhood is mainly residential with some business and industry. The immediate surroundings of the plot include housing units and a large vacant lot (see Figure 5). Limerick Community Garden has about 26 plots. Historically, most of the gardeners at the site were elderly, but

some new, younger gardeners have joined in recent years. The majority of the gardeners are residents in the Limerick neighborhood or other nearby neighborhoods.

**Figure 5**

*Limerick Community Garden*



Source: The Louisville/Jefferson County Information Consortium, 2012. <ftp://ftp.kymartian.ky.gov/kyaped/>

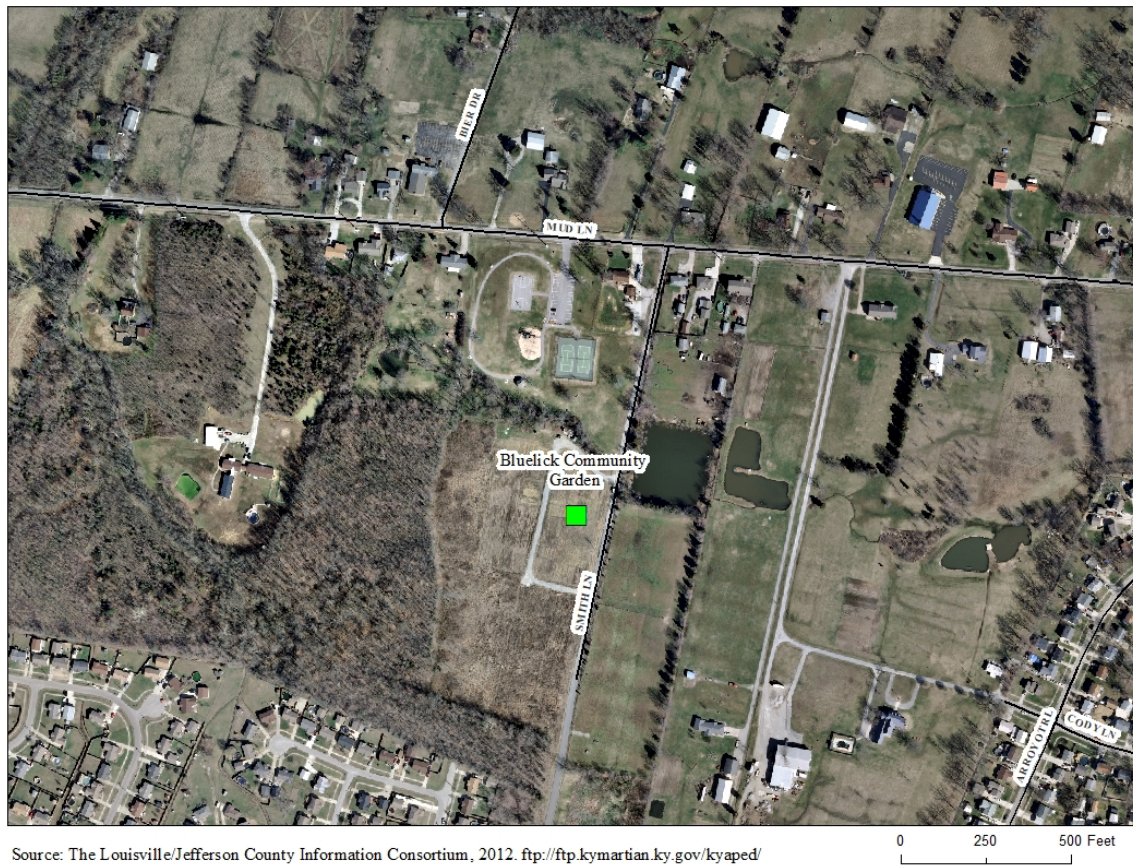
**Site 2: *Bluelick Community Garden***

The Bluelick Community Garden was started in the early 2000s. Similar to Limerick, many of the historical details of the garden have been lost through management changes and participant turnover. The site was originally at a different location off Smyrna Road, a short driving distance from its current location on Mud Lane at Bluelick Park. The garden site's surrounding area is suburban residential, with a mix of housing

units, farmland, churches, and grocery stores within a mile of the site. An industrial site is also located close to the site. The garden itself is located on an unused plot of land within the Bluelick Park, neighbored by residential neighborhoods and farmland (see Figure 6). The majority of the gardeners are middle-aged or elderly white people who live in driving distance of the site. Some of the newer gardeners differ from this demographic, particularly one Nepalese family who joined the garden in the 2020 season.

**Figure 6**

*Bluelick Community Garden*



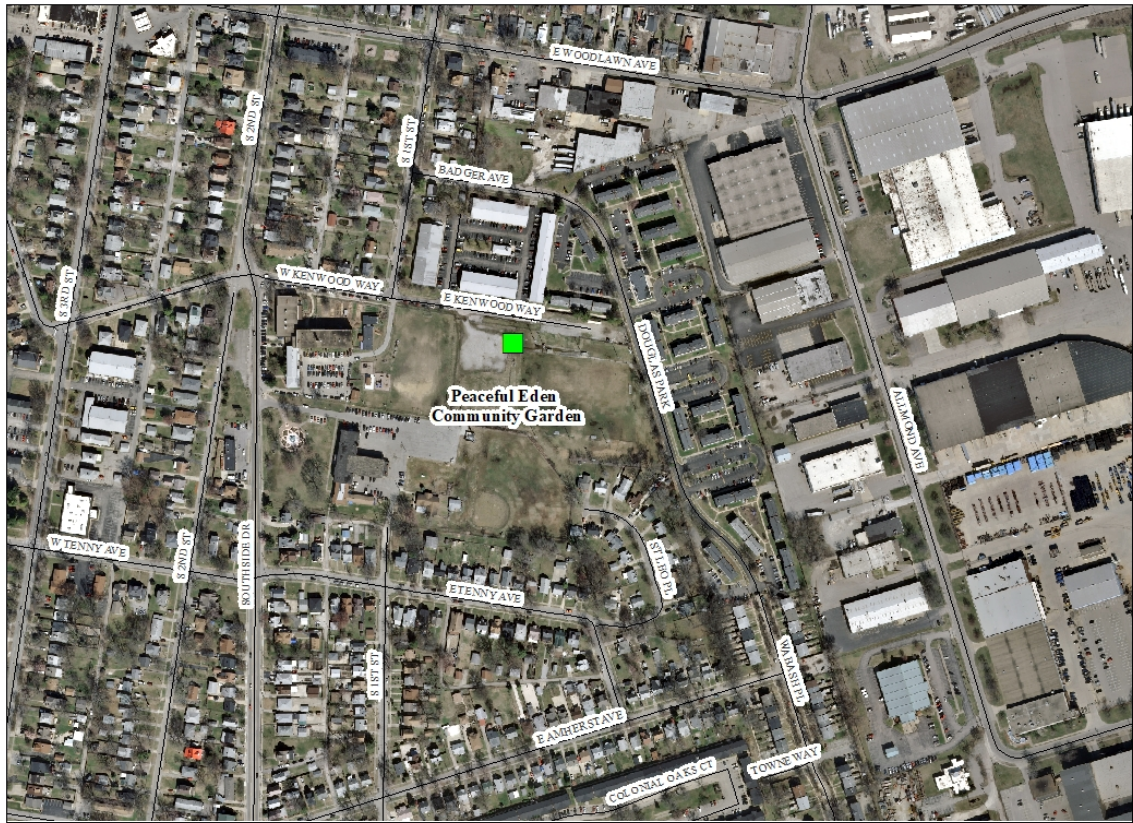
Source: The Louisville/Jefferson County Information Consortium, 2012. <ftp://ftp.kymartian.ky.gov/kyaped/>

### ***Site 3: Peaceful Eden Community Garden***

Peaceful Eden, founded in 2016, is the newest of the garden sites. The garden was created through a partnership among 3 organizations: Common Earth Gardens, Americana World Community Center, and St. John Vianney Catholic Church. Americana is a non-profit located in Louisville, Kentucky that assists the city's refugee and immigrant population (Americana World Community Center, n.d.). The organization, along with Catholic Charities Common Earth garden program, wanted to establish a garden in the vacant plot owned by St. John Vianney Catholic Church, located directly behind Americana's headquarters in a neighborhood that is 51% foreign-born and 37% below the poverty line (Americana World Community Center, n.d.). The organizations canvassed the nearby neighborhood, inviting residents to join a community planning meeting, and the garden had its first season in 2017 (R. Brunner, personal communication, June 19, 2020). At all community meetings, Common Earth Gardens and Americana provide translators, as most of the gardeners are immigrants who do not speak English. The majority of the gardeners immigrated from Congo, Burundi, Bosnia, Nepal, and Burma (Common Earth Gardens, n.d.b). The garden site has 133 plots. The site borders Americana Community Center, St. John Vianney Catholic Church, multiple apartment complexes, and an industrial/business area (See Figure 7). Many of the gardeners live in these neighboring complexes and are able to walk to the garden site.

**Figure 7**

*Peaceful Eden Community Garden*



Source: The Louisville/Jefferson County Information Consortium, 2012. <ftp://ftp.kymartian.ky.gov/kyaped/>

0 250 500 Feet

**Research Questions**

The success indicators, as outlined in the literature, examined in the study were a) land access, b) community support and engagement, c) social capital and access to resources, d) environmental factors and garden design, and e) appropriate leadership and management. In January of 2020, I met with organizers from Jefferson County Cooperative Extension and Common Earth, Inc. to discuss a potential research collaboration. At the end of the meeting, we had identified a problem feasible for an undergraduate thesis project and that met a current concern of community garden

organizers in Louisville. The organizers were concerned about their workload, garden success, and land access. Particularly, they noted that the metro government seemed more likely to support and provide land to gardens established and operated by large organizations and non-profits. Louisville Metro appears to believe that gardens with a top-down organization and management structure were more likely to succeed than independent gardens, a belief that acts as a barrier to land access and development of gardens not affiliated with Cooperative Extension on city land. We developed two research questions regarding establishment of gardens and development of successful projects for their communities, while still being integrated into the larger organizational models of these partners:

- 1) What is the relationship between self-governance and other success indicators in the study's community gardens?
- 2) What are the different pathways through which community gardens in Louisville come to be self-governed?

In addition to aiding the development of existing community gardens, the results of this research aim to highlight that various organizational paths through which sites can become successful with the hope of encouraging the metro government to lease land to a wider community gardening base.

## **Data Collection and Analysis methods**

### ***Interviews***

Data for this project were collected through semi-structured interviews and participant observation of garden sites. Overall, 6 interviews were conducted. First, the Jefferson County Horticulture Extension Agent and two Common Earth garden

organizers were interviewed for background information on the organizations, garden sites, and organizational structure (see Appendix A). Then, three interviews were conducted with the designated leader/manager from each of the three garden sites. The garden leader interview questions were built from community partner expertise and review of literature to construct a narrative of each community garden's development, leadership/organization structure, and challenges and identify success indicators (see Appendix B). Each interview lasted approximately 1 hour and was recorded with the permission of the study participants. Due to public health concerns, most of the interviews occurred through phone and Zoom video calls. The interviews with the garden leaders from Bluelick Community Garden and Peaceful Eden Community Garden were conducted at the garden site, where public health precautions, such as mask-wearing and social distancing, were observed.

### ***Participant Observation***

Following the methods of Flachs (2013), I volunteered at the three garden sites on a regular basis from May 2020 to August 2020. As a regular volunteer at the garden sites, my presence felt familiar and informal to the gardeners. These methods were employed with the aim of making participants feel comfortable sharing their attitudes and the dynamics of the site that would have been hard to tease out from a formal interview process. Using this methodology, I was able to collect higher quality data that provides a deeper look into the management and daily workings of each garden site (Flachs, 2013).

During each visit, I helped with tasks in the community areas of the gardens, including picking up trash, shoveling fallen fruit and leaves, watering plants, and weeding. While we worked, I talked with the gardeners about how they found the



community garden, how long they been there, what they liked about it, current events, and the weather. Throughout the course of the observation period, I talked and interacted with between five to ten gardeners each at the Limerick and Bluelick garden sites. Due to the language barrier, I talked with fewer gardeners at the Peaceful Eden site. Field notes were taken at each visit that documented garden design, gardener engagement and communication, and personal observations and reflections.

### *Analysis*

The data were analyzed using both deductive and inductive coding processes. Deductive coding involves a pre-defined list of codes that is created before data analysis. This method is preferable when coding on issues with known importance, with codes developed from themes of previous literature (Linneberg & Korsgaard, 2019). For this study, deductive coding was chosen to assess the success level of each garden site based on conclusions of previous research. The results of this deductive coding provide a measure of success that can then be compared to the garden's apparent level of self-governance, allowing for an analysis of the relationship between the two measures. After the deductive coding, the data were coded inductively, looking for patterns of management, decision-making, and leadership that could indicate the governance development of each site. Inductive coding is more common in qualitative research, often termed grounded theory (Linneberg & Korsgaard, 2019). Inductive coding involves developing codes directly from the data with language used directly by the participants. This approach is preferable for exploratory research when previous research is limited (Linneberge & Korsgaard, 2019). For this study, inductive coding was chosen for analyzing the self-governance of each site due to limited previous literature on the topic.

The analysis process was conducted in two phases. First, using deductive coding, interview transcripts and field notes were analyzed for garden success indicators. The success indicator coding set was developed using previous studies on garden success (See Table 1; Glover et al., 2005; Milburn & Vail, 2010; Beilin & Hunter, 2011; Firth et al., 2011; Cohen & Reynolds, 2015; Fox-Kamper et al., 2018). The transcripts and notes were then coded inductively looking for patterns and indicators of self-management. The two sets of codes were compared by garden site to identify patterns and associations regarding garden success indicators and garden management. After the conclusion of the coding process, the initial findings were presented and discussed with the community partners. This step was an important part of the community-based research process, gathering insights, reflections, and further findings from the partners' technical and experiential knowledge that adds additional depth and relevance to the study's conclusions.

**Garden Success Indicators.** Using input from previous literature and the expertise of this study's community partners, a list of garden success indicators was developed to measure the level of long-term sustainability and success of each garden site. The list included four main indicators of success: a) secure land tenure, b) community engagement and support, c) social capital and resource mobilization, and d) garden design and environmental factors. In addition to these four indicators, some studies have concluded self-management and collaborative leaderships styles are important to community garden success (Teig et al., 2009; Van de Jagt, 2017; Gilbert et al., 2020). The codes within each indicator represent common manifestations of the success indicator that could be easily noted from observation and participant input. For example,

participant diversity is listed as a code under the Social Capital and Effective Resource Mobilization indicator because diversity expands the social capital of the community, expanding access to funding, materials, knowledge, and political support (Okvat & Zautra, 2011).

**Table 1**

*Community Garden Success Indicator Codes*

Indicator	Codes
1. Secure Land Tenure	1.1 Land lease/land agreement (long-term)
	1.2 Ownership of land
2. Community Engagement and Support	2.1 External partnerships
	2.2 Use of garden space by non-participants/for external activities
	2.3 Engagement of public officials
	2.4 Low turnover/abandonment
	2.5 Waiting list
	2.6 Participants living in close proximity to site
	2.7 Demand for local food projects
3. Social Capital and Effective Resource Mobilization	3.1 Participant diversity
	3.2 Use of gardener social network to acquire materials/resources
	3.3 Organizational network building strategies/long-term partnerships
	3.4 Access to technical knowledge
	3.5 Consistent funding

Indicator	Codes
4. Beneficial Garden Design and Environmental Factors	4.1 Community engagement with initial design and changes
	4.2 Gathering Space
	4.3 Usable soil/land
	4.4 Long-term infrastructure

**Limitations**

The language barrier between myself, as the researcher, and the gardeners at Peaceful Eden Garden site, most of whom do not speak or speak very little English, posed a challenge for data collection. At the two other sites, I was able to interact with gardeners more easily during participant observation which allowed me to assimilate into the garden setting and collect more data. The majority of the data collected from Peaceful Eden was obtained through interviews with garden leaders and organizers or observation at the garden site with little to no data coming directly from the immigrant gardeners. With the limited budget of an undergraduate thesis, hiring a translator (or multiple translators) was not possible.

As the planning stage of this research project occurred in January and February of 2020, the project was designed to study community gardens under their normal conditions. The outbreak of the COVID-19 virus was officially declared a pandemic in March of 2020. The pandemic has had wide-reaching implications throughout all of society, including public greenspace and communal gardening. The pandemic limited my ability as a researcher to connect with as many people in person, leaving me to conduct interviews over the phone and gather information through email. Additionally, my

original plan of conducting regular participant observation from May to October (the entirety of the growing season) was hindered by health precautions preventing me from returning to Louisville, Kentucky while at school in Bowling Green, Kentucky.

Furthermore, as case study of only three garden sites in Louisville, this study may not serve to produce generalized findings (Stake, 2005). However, my hope is that the findings highlighting the relationship between garden resilience and self-management can serve as an insightful example to organizers in developing community gardens in the U.S. Additionally, the data and records gathered for this study serve as a snapshot of each garden's development in this time and can serve as part of historical record in the future.

## FINDINGS AND DISCUSSION

The purpose of this study was to identify a relationship between self-governance and overall community garden success in Louisville community gardens. The findings suggest that self-governance can be an important enabler for successful gardens by cultivating sustained participant interest and community development. However, other factors of land security and environmental conditions can limit both garden success and self-management capabilities. Furthermore, this study found that organizations can help foster self-governance and independence in community garden sites by initially building social cohesion of the participating gardeners.

### **Garden Success**

Utilizing the community garden success indicators identified, this study assessed the relative success of each garden site. Limerick Community Garden has a relatively high level of long-term success, while Bluelick Community Garden and Peaceful Eden Community Garden both have a medium level of success. Table 2 presents the complete list of codes identified for each garden site.

**Table 2**

*Success Levels of Study Sites*

		Site 1 - Limerick	Site 2 - Bluelick	Site 3 – Peaceful Eden
Indicator 1 - Secure Land Tenure	Code 1.1 Land lease/agreement	x	x	
	Code 1.2 Land ownership			

Indicator 2 - Community Engagement and Support	Code 2.1 External partnerships	X		X
	Code 2.2 External garden use	X		
	Code 2.3 Engagement of public officials	X		X
	Code 2.4 Low turnover	X		X
	Code 2.5 Waiting list	X		X
	Code 2.6 Participant in close proximity	X	X	X
	Code 2.7 Demand for local food	X		X
Indicator 3 – Social Capital and Effective Resource Mobilization	Code 3.1 Participant diversity	X	X	X
	Code 3.2 Social networks to access resources	X	X	
	Code 3.3 Organizational network building	X		X
	Code 3.4 Access to technical knowledge	X	X	X
	Code 3.5 Consistent funding	X	X	X
Indicator 4 – Beneficial Garden Design and Environmental Factors	Code 4.1 Community engaged design	n.d.*	n.d.*	
	Code 4.2	X	X	X

Gathering space			
Code 4.3 Usable soil/land	X		X
Code 4.4 Long-term infrastructure	X	X	

*Note.* See Table 1 for a full list of indicators and codes.

\*No data: Little to no information is known about the initial development and design of Limerick and Bluelick.

## **Garden Success**

### ***Site 1: Limerick Community Garden***

Limerick Community Garden meets almost every code under the four success indicators, suggesting a high level of long-term garden sustainability (see Table 2). Notably, the only success indicator code not found through the collected data was ownership of land. However, the site does have a high degree of land security due to the garden being located on land leased by the city. The garden’s land, owned by the Christian Care Senior Citizen Highrise located a few blocks away, is rented annually by the metro government for a fee of one dollar for the purpose of community gardening. While this arrangement is a year-to-year lease with no guarantee of long-term, indefinite land tenure, the municipal government’s involvement provides great support for the site that indicates a high level of land security. For example, the Metro Council Member that represents Limerick’s area of the city was involved when the garden experienced a threat to their land security a couple years back. A nearby high school, Presentation Academy, wanted to develop the garden lot and the neighboring vacant plot into an athletic



complex. The volunteer garden manager, Dave, said that the community, including the metro government and the landowner rallied for the site:

“We - along with the Limerick Neighborhood Association - we appealed to our board members. [...] They got on board. We met with the [Metro] Council [...] Presentation was there. They didn’t realize how much it meant” (D. Erdley, phone interview, January 13, 2021).

After seeing the great community support for the community garden, the prospective developer backed off their bid. Community support of the project is a large contributor to the land security of the site.

Limerick’s high level of community support is the largest point of success for the garden. The community’s partnership with the Limerick Neighborhood Association and the support of the city council member helped them keep their land during a moment of insecurity. In addition to those partnerships, Limerick also has an amiable relationship with Brightside, their landowner, and a nearby church. About once every year, the site opens up to the public to lead the Brightside trash clean-up day in partnership with the Limerick Neighborhood Association. They open the garden gates to community members, setting up a workstation with trash bags and gloves. Additionally, the nearby Unitarian Church has provided youth volunteers and donations to the site in the past. After nearly 50 years of garden development, the site has become a well-known institution within the community.

The garden site has a very low level of participant turnover and a consistently long waitlist. Several factors could affect this apparent high level of demand. First, while the garden is not located in a census tract considered a food desert, it is surrounded by

neighborhoods with low food access (see Figure 4). This indicates that the access to fresh, healthy produce is low in the area. Additionally, many of the gardeners expressed an interest in the site due to a lack of space to garden at their homes. Located so close to the city center, many residents live in apartment complexes, duplexes, or houses with very small yards.

The low level of participant turnover also indicates that the environment of the community and plot is approachable and reasonably accommodating. Common areas of frustration with learning how to garden and a high time demand do not seem to be significant factors for participants to abandon their plots (Lee and Matarrita-Cascante, 2019). A sense of community among garden participants is also a likely factor in low turnover. While Limerick does not have regular garden meetings, a couple social activities occur every year that bring all the gardeners to the site. The community clean-up day with Brightside brings out the additional non-gardening residents of the Limerick community. Additionally, every summer the garden hosts a potluck. Each gardener brings a dish that features something they have grown in their garden plot. Dave also likes to invite some of the garden's biggest supporters and unofficial leaders to a dinner at the end of the season to thank them their support. These opportunities provide chances for the gardeners to meet and interact with all the other participants, building relationships and community.

Garden participants benefit from their social networks, personal funds, and Cooperative Extension funding through access resources and technical knowledge. In addition to annual plot fees, Extension is provided 50,000 dollars annually by the Louisville Metro government to support their community agricultural sites. Divided

among the ten garden sites, this money does not go very far for tools and equipment. The majority of the tools in the communal shed at the garden are gathered by participants themselves. For example, one gardener - named Darren - purchased a used lawn mower from a friend after the garden's previous mower was stolen from the shed. Theft was greater issue at the site before members set up security cameras around the perimeter a couple years ago. Other infrastructure at the site includes a city water line with hoses, a compost pile, and a locked gate around the perimeter. By nature of its relationships with Cooperative Extension, access to technical knowledge is built into the site's design. Extension regularly hosts educational events and distributes pamphlets and tips via email and social media to all the garden participants. Furthermore, Dave, the garden manager, is a Master Gardener, so he can also assist the participants with technical horticultural knowledge. The Master Gardener program is run through Cooperative Extension to train volunteer leaders with horticultural knowledge to serve in Cooperative Extension programming (Jefferson County Master Gardener Association, n.d.). The program is one of many ways through which Extension transfers knowledge to the communities they serve. While many of the gardeners live close to the garden site, their diversity in age and occupation widens their reach through social capital and provides different lived experience and knowledge for the community:

“We have a very diverse membership. We have a little bit of everything. You can pick the old peoples' brains – and I now am one of the old people, I guess. It's just cool” (D. Erdley, phone interview, January 13, 2021).

Through participant diversity, developed infrastructure, consistent funding, and educational programming, Limerick is able to access a majority of the resources it needs to be a sustainable site.

Little is known about how the garden was initially designed when it began in the 1980s. Today, the garden is structured in a way that incorporates shared community space and accessible plots. One half of the site is made up by the individual garden plots while the other has raised beds that are used by participants who are elderly or disabled, the garden shed, a gazebo area with a table and seating, a portable toilet, and some greenspace with decorative plants. Even though it cannot be determined whether the community was engaged in the design process of the garden initially, the current gardeners have certainly adapted the space to fit their needs. The gazebo area even has a grill for their annual summer potluck. Gardeners frequently take breaks from the garden work to sit and chat with other gardeners, suggesting the space is just as important socially as it is physically. Overall, the Limerick Community Garden has developed a great community that is strongly attached to the neighborhood it which is located over the past 50 years.

### ***Site 2: Bluelick Community Garden***

Bluelick Community Garden meets many codes for secure land tenure, resource mobilization, and garden design. However, community engagement and environmental conditions are large barriers to success for the site (see Table 2). Interestingly, some of the success indicators present in the site negatively affect other indicators that are not present. For example, the site is located on a plot of land that is owned by Bluelick Park and leased by the city for one dollar a year. The land is 25 percent unusable swamp land,

and the remaining 75 percent is clay soil that is prone to flooding. On one hand, the condition of the land strengthens the land security of the site, as it is inadequate for other uses and development. However, the land can be difficult to farm on, especially for new gardeners, which can lead to frustration and increased participant turnover. Community engagement and support is a large gap area for the community garden. Compared to the other sites, Bluelick is located in a more suburban area that is less walkable and more spread out (see Figure 6). This could have an effect on the partnerships and community engagement with the site.

Over the past 20 years of the site's tenure at its current location, about ten individuals have been long-term gardeners at the site. Bluelick has a high level of turnover and has never had a waitlist. Out of the total of 42 plot owners during the 2020 gardening season, 32 were new to the site. A possible explanation for this recent demand is the food shortages during the beginning of the COVID pandemic. Several gardeners expressed a sense of unease with shopping at the grocery store due to health and safety reasons and turned to gardening for a safer source of food. However, the new gardeners could also indicate a demand for fresh food in the area, even before the pandemic. Most of the new participants held plots at a community garden located at a church nearby that closed this season. Bluelick provided the nearest garden space for those who wished to continue. Despite having a grocery about a mile down the road and being located in an area with twice the average Federal Poverty Level, the garden plot borders a designated food desert tract.

Another common motivation for the Bluelick gardeners is physical activity and leisure. Many of the members, especially the consistent participants, are older and have

retired from their jobs. They described their garden participation as a hobby that gave them a reason to get out of the house and move. Both of these motivations, exercise and food demand, are strong motivators for garden participation, suggesting conditional factors like time commitment and lack of knowledge to be important factors that contribute to the high turnover at the site (Lee and Matarrita-Cascante, 2019).

Bluelick is not well-connected with its host community, which forces gardeners to mobilize resources through personal social capital. The lack of community connection could potentially be caused by a suburban setting with lower residential density than Limerick's downtown location. In addition to Cooperative Extension, the community has a few loose partnerships with Bluelick Park and Ford Motor Company. The paid garden manager, Curtis, is a previous employee of the company and has used his union connections to build a gazebo area for the site's common area. The sole source of funding for the site is Extension, which provides water, a locked gate, and some basic tools. Curtis is a key resource enabler for the site, often using his social status and capital to acquire services, wood chips, and infrastructure:

“I just run into people and ask. If I see a tree service company, like last year, me and [another gardener] were eating up here at Wendy's and a tree service company came in. I asked them, ‘what are you doing with your shavings?’ You know, I can't buy it. [Extension] won't let me buy it. I can't afford to buy it out of my pocket. And I said, ‘if you need to get rid of it, I have a place out here.’ They said, well we got places, but we will give you some a load” (C. Emmitt, interview, September 12, 2020).

Since he has taken over as garden manager, Curtis prides himself on his ability to successfully gather resources for the group that otherwise would have been unaffordable under Extension's budget:

“Since I took over here, I got mulch. I got them tillers. Well, I had a tiller, but I ended up getting another two tillers, other stuff. I try to get stuff [like] special mulch. Then, I talked to this farmer across the street, Mike, and I got it where he comes over here and [tills] barely for nothing” (C. Emmitt, interview, September 12, 2020).

Even though the garden has some diversity, particularly a few younger people and a Nepali family who transferred from the church garden, Curtis seems to be the main source of resource acquisition. Similar to Limerick, Extension regularly conducts horticultural education, and the site has a master gardener as a participant. Ultimately, the community has been able to gather the funding, resources, and knowledge it needs.

The biggest challenge for the site is the environmental condition of their land. The site is divided into large plots, about 30 by 30 feet each. Being located on swamp land, the soil retains water at the surface. When the area experiences heavy rains, the water can sit for days and weeks, rotting the roots and killing the crop. In order to build usable soil, the gardeners have to take great care of their plots over many seasons to build up the soil and its ability to absorb water. When asked what the most important element to a successful garden is, Curtis said:

“You got to have the right soil and you got to be keeping adding stuff to it every year. If you don't, it settles over the winter and you got to keep putting stuff in it. You've got to have enough drainage. If water starts standing in it, you're going to

have a problem [...] If you can't dry it out in two or three days and you get all that rain, you're going to have a problem. Just like certain different parts of this ground [...] some plots] dried out faster and [those] gardens did good. You get frustrated when you got to keep buying plants and replanting. It makes it rough” (C. Emmitt, interview, September 12, 2020).

For participants who are new to gardening, especially those who are motivated to garden as a hobby, this dedication can be a large barrier and point of frustration. The land is likely a large influence on the lack of sustained community interest at the site.

The site does have a small gathering space with a shaded gazebo, a table, and several chairs. Often, the group of core gardeners who have been at the site for years now spend time sitting and chatting in the mornings. While the gazebo was built by Ford, the rest of the materials were gathered by gardeners who wished to use the place as a social space:

“Each person finds chairs. I found chairs in my driveway and bring them down here and I had Bob bring a table out here. Different one's chip in. We sit around and talk about different things” (C. Emmitt, interview, September 12, 2020).

Although not much is known about how the site was initially planned and designed, this community area shows active gardener involvement with adapting the space to their needs and goals. The community between the consistent members is strong and the land at the site is very secure, indicating that the site will likely have a long-term presence with a medium level of success.



### ***Site 3: Peaceful Eden Community Garden***

Despite meeting more of the success indicator codes than Bluelick, Peaceful Eden Community Garden does not have a high level of success due to their land insecurity (see Table 2). More than likely, 2021 will be the last season the community can use the land at their current location. When the garden was created by Common Earth Gardens, Americana, and St. John Vianney Catholic Church, the land-use agreement was effective until December 31, 2021. Common Earth, Americana, and the Peaceful Eden community have spent the past year petitioning the Church to extend this lease, with no success. The current plan is to transform the garden into a parking lot that the Church can use to generate revenue from truckers looking for a place to park. Despite presenting medium to high levels of success in community engagement and support, resource mobilization, and environmental design, the site will most likely cease to exist, as it is now, within the year.

The community has strong demand and support for the garden site. Even before the gardeners believed they would lose their land, they were actively looking for more space to meet the community's demand for farming land. The high demand is caused by a number of factors. The garden site is located in a food desert designated tract in an area with high levels of poverty (see Figure 2; see Figure 3; see Figure 4). Culturally, the space is significant to the community:

“If we can keep it forever, we will forever. And that's what we are hoping to achieve. Even if we get one more year, that would be really appreciated, because we need it. We are used to organic foods – I am too because it goes to the point that if we need meat, we go to the point of actually going to the farm, getting the

cow alive and killing it ourselves. So, if we can get vegetables that are fresh and organic, why not do it?” (N. Nijimbere, interview, September 12, 2020).

The lack of access to fresh food and the cultural significance of organic, farm-fresh food to many of the immigrant community members has created a high demand for the site, which has about 133 plots. The plots are so coveted that when participants move out of the states, they often informally transfer their plot over to a friend or family member, so it is not lost to their social circle. This practice contributes to the long waitlist that has barely shrunk in the three years the garden has been active. Overall, the garden site has high sustained interest, which could contribute to the community living on beyond their tenure at the current location.

Unlike the other two sites, the development of Peaceful Eden is well-known and documented. In addition to partnerships with Catholic Charities, Inc. and Americana World Community Center, many organizations were involved with the garden’s beginnings. An Eagle Scout helped measure and divide up the land into the site’s 133 plots. Local businesses, neighborhood associations, and churches helped fundraise over 20,000 dollars for the site when it was first beginning. On the day of the site’s grand opening, Mayor Greg Fischer and a local Metro Councilman made appearances to show their support. Later on, during the land negotiations, local council members were also involved. Their role was mainly to serve as a mediator between the Church and the garden, but the garden leader, Nadine, believed the city was acting as a supporter for the community. Over the past couple of years, the site has also seen regular volunteers participate in the site, helping mainly with cleaning up litter and environmental maintenance of the common areas.

While the idea for the garden was initiated by Common Earth and Americana, the community did have some say in how it was set-up. The location was picked due to its proximity to the Americana Community Center and apartment complexes that house many new immigrants and refugees. After the location was secured, the two organizations canvassed the nearby neighborhoods to generate awareness of the project and invite interested community members to a community visioning meeting. At the meeting, the community planned out their vision for the space, settling mainly on farming plots with some potential for art, community orchards, and beekeeping later on. The area was also designed with a common area with picnic tables for hosting garden meetings and social events. Nadine finds the common area to be an informal social space for the community:

“I don’t even know how they manage to do that because they are all here at different times, but they manage to come here at a certain point and they would sit and chat and its actually fun” (N., Nijimbere, interview, September 12, 2020).

Ultimately, the strong demand for food and involvement in the garden’s design process likely fosters strong emotional motivators such as an attachment to the place and sense of ownership over the garden (Lee and Matarrita-Cascante, 2019). These factors have fostered strong sustained interest in the community garden.

Common Earth is the main provider of resources and infrastructure to the site. Water is supplied to the site via a well at the corner of the property. The well was chosen after a cost-benefit analysis that showed the well would pay for itself after a few years, opposed to a city water line that could be a long-term expense. However, the well has caused many problems for the gardeners. In the 2020 season, the water pressure was very

low, and many participants were unable to water their plot in the early season. Then, flooding became an issue. The garden leaders discussed potential solutions to the problem, but ultimately did not want to make a large investment in a site that was going to be gone in a year. This example demonstrates the importance of land security for the other success indicators. The garden site has a shed with communal tools, but many gardeners also bring their own to the site. In the past, Common Earth has purchased mulch for the site, but it is not a yearly occurrence. Based on observation of the 2020 season, most of the gardeners do not draw on their social capital in acquiring resources. Many of the seeds, tools, and other materials are either provided through their established partners or provided themselves. However, except for some issues with water, they are able to gather a majority of the resources needed for a successful garden.

If it were not for their land tenure situation, Peaceful Eden Community Garden would likely be a successful, long-term garden site. The garden land is in high demand and the community is supportive of the project. This finding supports the conclusions of past literature that land security is the number one enabler or challenge to success for community garden spaces (Milburn & Vail, 2010; Cohen & Reynolds, 2015; Drake & Lawson 2015b; Fox-Kamper et al., 2018).

### **Garden Governance and Management**

In terms of self-governance, Limerick and Peaceful Eden both demonstrate a higher level of community decision making and management. However, due to the difference in organizational goals from Cooperative Extension and Common Earth Gardens, Peaceful Eden has achieved a relatively lower level of self-governance. Bluelick has the lowest level of self-governance of all the study sites.

### *Cooperative Extension*

Within Cooperative Extension's top-down organizational structure, Limerick Community Garden has been able to achieve a high level of self-governance and independence while Bluelick Community Garden maintains a high level of dependence. Extension has a standardized agreement form that gardeners at each site are required to follow. The agreement includes clear rights and responsibilities of the participants and responsibilities of Extension (see Appendix C). As the sites are located on city-owned property, these standardized rules are important to release the city from liability and set clear boundaries for what Extension is and is not responsible. However, this uniform contract gives little agency to the gardeners at each site to make decisions for their garden plot. This form of top-down decision-making regarding rules and obligations has caused previous literature to label Jefferson County Cooperative Extension gardens as community projects with low self-governance (Dietsch, 2018). Based on the observations of this study, the Limerick community has managed to develop self-agency by determining the norms and culture of its garden site, even within this structure. The processes, social events, and norms present at Limerick vary widely from those present at Bluelick, indicating that each garden can adapt the standardized garden contract with their own site-specific context.

The organizational structure of Extension places a garden manager at each site who is the main point of contact for the horticultural agent, Bethany, and maintains the day-to-day business of the site. The managers at both Limerick and Bluelick have been at their respective garden site for about 20 years and were recommended to take over the manager position after the previous leader left. Limerick's garden manager, Dave, is a

volunteer who views the site as his “oasis” within downtown Louisville. Despite the guidelines that Extension will handle all gardener communication, Dave has friendly relationships with a majority of the gardeners and often communicates directly with them regarding garden business and weed notices. Bethany describes her role at the site as very hands-off, rarely being called to handle problems and management decisions of the site. Bluelick’s garden manager is a paid seasonal worker, Curtis. Unlike Dave, Curtis has set hours that he will be at the garden in order to open the tool shed and provide guidance to the gardeners. Participants are able to come the site at any time but are likely only to communicate with Curtis if they come during his set hours. Bethany handles most of the weed notices and conflicts at the site. This difference suggests a higher level of self-management at Limerick than Bluelick.

At the two sites, the difference in garden leadership influences the perceived self-agency of the two communities to develop and make decisions for the garden. Following Gilbert and colleagues (2020), initial findings of this study label Dave’s leadership approach as collaborative and Curtis’s approach as direct. Further study could be conducted to identify the effect leadership style has the ability to foster self-governance in community gardens. The managers’ leadership styles likely affect their processes for addressing problems that arise with the garden. When asked about how Curtis addresses large problems at the Bluelick site, such as flooding, he responded, “there is nothing you can do” (C. Emmitt, interview, September 12, 2020). This answer suggests that Curtis does not see himself as an active problem solver or change agent for the community plot. In contrast, when Limerick’s land security was threatened, Bethany stated that Dave and

the gardeners organized themselves to protect the site. Dave says his biggest goal as a garden leader is to communicate that the participants can craft the site to their needs:

“Making them feel welcomed. Making them want to be there. Making the place interactive, where you feel like you are part of something [...] just getting that little in that and making them feel like they have ownership too. Because sometimes they say, ‘can I do this?’ and I say, ‘I don’t own this place. We own this place’” (D. Erdly, phone interview, January 13, 2021)

In fact, the findings suggest that Limerick has actively worked to create a level of independence from Extension throughout the years:

“Extension has a fund that we are able to help out with. We get help from them every year. Try to, you know, have a little fund among ourselves where we can be a little bit more independent – more on our own” (D. Erdley, phone interview, January 13, 2020).

The two leaders perceive their ability to address the gardens’ challenges differently, suggesting that they view their level of power, control, and level of agency within the organizational structure at varying levels. Dave feels a sense of ownership over Limerick that empowers him to address challenges and changes as they present themselves. Curtis, on the other hand, feels he has little control over the development of the garden, usually asking permission from the Extension Agent to implement changes. This could be a contributor to the disparity in self-governance level.

Ultimately, the two Extension community garden sites have been able to position themselves in different levels of independence within the top-down management structure. Limerick Community Garden sees themselves as having ownership over the

space and the development of the garden whereas Bluelick sees themselves as a space they are able to use within the set goals and processes of the Extension office. When Curtis wants to bring a new resource or idea into the garden, he often contacts Bethany to get approval. The participants at Limerick appear to have made the space their own, while Bethany has been rarely involved in the garden's changes. The reason behind the gardens' two drastically different governance style is still unclear. Limerick's site has been around a bit longer and has had a more consistent membership compared to Bluelick. However, the garden managers have both been in their positions for around the same time. Ultimately, the difference could be due to factors relating to geographic location, participant's motivations to join, and demographics and personalities of the leaders and participants.

### ***Common Earth Gardens***

Peaceful Eden Community garden was intentionally designed in a manner that would be self-managed. Over the past four years, the Common Earth Garden and Americana organizers have engaged in leadership development processes to slowly heighten the site's independence from the two organizations. The end goal of Common Earth is to graduate their garden sites out of the program to be self-sustaining sites. This allows the organizers to then move on and find new land in the city on which to develop more gardens. However, Peaceful Eden has been resistance to this independence and have continued to heavily rely on the two partners to help manage the site.

At the first community vision meeting, the gardeners decided on the vision, design, and management structure of the garden site. The community members determined the vision for the site as "a happy garden where families and new friends



grow food and make art and where people are respected and love each other” (Common Earth Gardens, n.d.b). At the meeting, the community also decided to elect two garden leaders, Nadine and Solomon. Nadine is still a garden leader at the site. Every year, the gardeners create a set of garden guidelines that are to be followed at the site (see Appendix D). The guidelines are voted on during the annual garden meeting that takes place on plot sign-up day. On this day, each garden signs a plot contract where they agree to follow the community guidelines and a few other liability and photo releases (see Appendix E). During these garden meetings, Common Earth and Americana arrange for translators to be at the event so all participants can engage in the process. By incorporating these decision-making mechanisms, the garden was designed to be engaging for the community and governed by those who use the site.

Though the garden leader positions were designed to handle most of the communication with the other gardeners, collection of plot fees, and facilitation of garden meetings, the Common Earth and Americana organizers often have to provide a lot of support and guidance. The organizational structure of the garden site is less top-down than that of Extension, which means that garden leaders have fewer existing processes and procedures to pull from. The Common Earth organizers leave space during meetings to let the garden leaders decide how these processes and systems should be designed. Insights from the garden leaders and the organizers reveals tension and resistance to this agency in decision-making. The primary garden leader, Nadine, is not actually a gardener at the plot. She came to the first meeting to provide a ride to her mother-in-law. The other gardeners voted her the leader, a role that she reluctantly accepted. Despite still not seeing herself as a leader, she has said her leadership skills have developed through the

experience, especially her ability to say no. Mainly, she sees herself as a support person for both the gardeners and the organizers:

“I am in the middle of them and the community, like Americana and [Common Earth] and all of them because [the gardeners] will come to me with their problems and I deliver them and work together. Just support, pretty much. Am I a leader? I don’t see myself as one because I don’t particularly want it” (N. Nijimbere, interview, September 12, 2020).

The other garden leader at the site, Pascaline, also shows this resistance to the designation as leader. There have been a couple instances where an enthusiastic volunteer offers to help with the management. However, Nadine has said that the community will not see anyone as a leader who they have not chosen, which is why she continues to help out despite not wanting the role. Ultimately, the design of leadership and management at the garden has great potential for self-governance and independence, but the leaders in place are reluctant to embrace the role causing the transition of management to be difficult.

The community-elected leaders and guidelines at Peaceful Eden represent a high level of self-governance for the site, comparable to that of Limerick. Their attempts to organize over their land security risk, by arranging meetings with the landowner, creating a petition to support the garden, and actively looking for another plot for the gardeners, also displays a high level of social cohesion among the participants. However, since the goal for the site is to graduate from Common Earth and achieve complete self-sufficiency, there is still much room for growth. The strengths of the garden’s management are that the community has great trust and respect in its leaders and has the agency to design the garden to meet their needs. However, a disconnect between those

wanting to be leaders and those actually voted to represent the group has made the process of achieving this graduation difficult. Like that of Limerick and Bluelick, leadership seems to be a large factor in the development of self-governance. Further research could be conducted to explore the nature of this relationship and leadership development practices that help foster independence and self-agency.

### **Relationship between Success and Self-Governance**

Previous literature has concluded that independence from organizations and the ability of participants to make decisions for their own garden site are key success factors for community gardens (Teig et al., 2009; Firth et al., 2011; Van de Jagt et al., 2017). In Louisville, garden organizers have found city officials to be more reluctant to support and lease land to independent community projects, suggesting that they believe gardens operated under a top-down organizational structure are more likely to be successful (B. Pratt & R. Brunner, personal communication, December 19, 2019). Due to this contrast, this study aimed to explore the relationship between garden success and self-governance in Louisville. The findings of this study reveal the garden with the highest level of success to be operating under a top-down structure with a high degree of independence. The gardens with lower success levels are largely still dependent on their parent organization for support. Peaceful Eden, however, does have a high level of community decision-making. Ultimately, this study found a connection between leadership, social cohesion, and self-governance in the three study sites. Connections between self-governance and other success factors, like land security and environmental conditions, were not as clear and could be explored further in future research. These findings support conclusions of previous literature that sustained interest, community decision-making,

and internal management enable community garden success (Teig et al., 2009; Firth et al., 2011; Drake & Lawson 2015a; Drake & Lawson, 2015b; Van de Jagt, 2018).

The leadership style of community garden managers appears to have a large impact on both garden success and a garden's ability to self-organize. While the leaders at the Extension garden sites, Dave and Curtis, were both eager and passionate about gardening, the leaders at Peaceful Eden, Nadine and Pascaline, were more reluctant to take on their roles. However, Nadine and Dave share a common value of community within the space, emphasizing the garden as a social space with a focus on the community. All garden leaders were asked what they believed to be the most important success factor for a community garden. Dave and Nadine discussed the importance of involvement and a sense of ownership over the space:

“The main reason that many people are actually very very involved here. Because I have been to different plots owned by different people and we always have issues with the people who own the plots because they don't communicate well. But, with the communications we have with the people here – with the people actually being involved – [...] We actually try to work it together. Not just them handling everything on their own. It is actually good because with the challenges they might be facing, if they don't have anybody to tell it to, they are just going to leave it alone and walk away. Because they have somebody to actually go to and try to get the problem resolved, not just by themselves, it's actually good. With the communication, that's the number one thing. The second thing is that they are able to grow whatever they want. There is nobody telling them they have to grow more wheat or whatever. They grow whatever they want and however they want

it. As long as it doesn't interact with another person's plot. So, it's actually good" (N. Nijimbere, interview, September 12, 2020).

On the other hand, Curtis seems to be more focused on the actual activity of gardening. The majority of the challenges he cited had to do with issues of the soil and flooding. He believes the most important element to a community garden is good soil. These answers provide insight to their priorities and path of development of each site, as well as the leadership style of each manager. Dave and Nadine seem to be more collaborative while Curtis takes a direct approach. This finding supports previous literature that found an open-minded, collaborative leader to foster higher sustained participant interest at community garden sites (Lee & Matarrita-Cascante, 2019). Further research could explore how leadership style and motivations influences other success indicators.

The two gardens with higher levels of self-governance appear to have more collective efficacy. According to Teig et al., (2009), collective efficacy is based social cohesion and informal social control that includes solidarity, mutual trust, and an expectation to act as a group. Mechanisms that can build collective efficacy include volunteer activity, effective leadership, neighborhood engagement with the garden, and recruitment activities. At Peaceful Eden, the garden was developed to provide the gardeners collective decision-making for guidelines, leaders, and major changes to the site. Additionally, despite her reluctance, Nadine is usually the one who is communicating with the gardeners through their group WhatsApp, phone messages, and garden meetings. The Peaceful Eden community members' trust and respect for their garden leaders is indicated by their choice to elect Nadine and Pascaline and further emphasized by their unwillingness to welcome volunteer leaders. At Limerick, these

processes are more informal as the gardeners did not have a say in who the new manager would be or the garden guidelines. However, Dave's regular communication with the other gardeners and the community's annual social events have built a level of community and solidarity in the site that has made it possible for them to become more independent. At Bluelick, Curtis has a strong rapport with many of the gardeners, but not all. Due to his set hours, Curtis does not interact with many of the gardeners at the site who may have to come in the evenings due to their work schedules. Furthermore, Curtis seems to place a high emphasis on the actual products of the garden as the measure of success for the site. Based on observations, other gardeners seem to have differing views. For example, a new gardener joined the garden after hearing from her son, who lives in a different state, that he loves his garden's community. The gardener actually has garden space at her home, suggesting she likely joined for factors beyond just food production. While Curtis enjoys his social times with the core group of participants, he spends a lot of time and focus on the actual practice of gardening. Overall, elements of trust and solidarity were not as present at Bluelick, due to Curtis's lack of direct communication with many of the gardeners, a lack of events that bring all the gardeners together at one time, or, potentially, underlying dynamics of power and control that would need to be explored further in future research. Ultimately, collective efficacy does seem to be an enabler for both garden success and self-governance for Louisville community gardens.

### **Recommendations for Community Garden Organizers**

Based on the findings of this study, Louisville's community garden organizers can take a few steps to encourage self-governance and success for their projects, including a)

leadership development, b) community/team building, and c) partnerships with the nearby community.

The leadership of the study's garden sites seemed to affect the community's social cohesion, solidarity, independence, and values. Communication and conflict management with gardeners, management style, and motivations for participating in community gardening were all factors that influenced the success and self-governance levels of gardens in this study, implying that development of these traits in garden leaders is an important step to building gardens with independence and longevity. In Louisville, which has a well-developed network among urban agricultural projects, this effort could look like an annual leadership training or retreat for all community garden managers across the city (Goldstein, 2019). The event could cover goal setting, leadership styles, the importance of leadership and management on garden success, and conflict management skills. Alternatively, leadership development could happen more informally and over an extended period of time, like the Common Earth organizers did with the Peaceful Eden Gardens. While the leaders are reluctant to lead, Nadine did indicate that she had grown in her leadership capabilities. The Common Earth organizers made sure to never make decisions on behalf of the garden leaders. Instead, they posed questions like "what do you think we should do" or provided a list of suggestions from among which the leaders could choose. In these ways, the garden leaders slowly developed agency and the ability to problem solve. Additional practices could be incorporated for conflict management skills and building effective relationships with other gardeners.

Finding times that all the gardeners in a community garden are able to be together and interact appears to be important to developing collective efficacy. Peaceful Eden

holds annual garden meetings where leaders and rules are discussed, while Limerick holds their annual potluck in the summer. At these events, gardeners are able to engage with other participants who they may not regularly come across at the site. Additionally, the events provide opportunities for the gardeners to reflect on why they garden and what they want from their community space. Furthermore, social events and group workdays offer chances to incorporate the neighboring community into the garden space. Limerick's Brightside neighborhood clean-up day is an example of this. Ultimately, more social events and collaborations with nearby partners strengthens the community engagement and support indicator for the garden sites, which can also lead to more self-governance.

Following these recommendations, community garden organizers in Louisville can develop the collective efficacy, internal management, and overall success of their projects. While this case study is not generalizable, as contextual factors of Louisville's urban agricultural culture and organizational systems may contribute to these findings, these recommendations may provide insight to other community gardens in the U.S.



## CONCLUSION

This research project sought to explore the relationship between success and self-governance in three community garden sites in Louisville, Kentucky. The findings suggest that gardens with high levels of independence and self-management tend to be more successful, but factors such as land tenure also hold great significance for a garden's long-term sustainability. Certain factors such as social cohesion, leadership, and engagement with the neighborhood community appear to foster self-governance. Based on this insight, the recommendations for Louisville's community garden organizers and leaders are the following, a) implement leadership development, b) incorporate regular social events and community bonding activities, and c) encourage garden-community collaborations.

The project used community-based, qualitative methods to explore success indicators and management style in three community garden sites. The research questions were developed in collaboration with garden organizers from Jefferson County Cooperative Extension and Common Earth Gardens. The data collection included a three-month period of participant observation and six interviews with garden organizers and leaders. This methodology was chosen in order to enhance the amount of local knowledge in the project and produce results that were relevant and useful to the community. The COVID-19 pandemic and language barriers with most of the gardeners at the Peaceful Eden site limited the data available for analysis for this study. As this project is a case study with the aim of producing results specific to the city of Louisville, the findings are not generalizable. However, they may provide insights for community

gardens in other U.S. locations. Additionally, this data can serve as a historical record for future research into these garden sites.

The results of the analysis identified the apparent levels of success and self-governance for each garden site. Success was measured using an indicator list developed with findings of previous literature. The data was also inductively coded for patterns of leadership, management, and decision-making. Limerick Community Garden was found to have a high level of success and self-governance. The site with the lowest level of self-governance was identified as Bluelick Community Garden. Bluelick's areas of success include its land tenure and ability to mobilize resources. However, the site has a low level of community engagement and poor land quality, implying a medium level of long-term success. Despite meeting most of the indicators, Peaceful Eden Community Garden, has a medium to low level of garden success due to its loss of land tenure. The site appears to have around the same level of independence as Limerick, but with more mechanisms for group decision-making. However, the garden leaders are resistant to the organizer's efforts to build self-sufficiency.

The conclusions of the study support previous literature that identifies land tenure, community engagement and support, resource mobilization, garden design, and self-governance as enablers for long-term success in community gardens. The garden site that met the highest number of codes for the success indicators, Limerick Community Garden, also presented a high-level of self-governance. While the direction of this relationship is unclear, the findings suggest that gardens in Louisville with high levels of independence are likely to be sustainable. This result contrasts the perceived position of Louisville

Metro that gardens managed under a top-down organizational structure are more successful.

While a relationship between leadership, success, and self-governance was revealed in this thesis, further study could be conducted to understand what makes a successful community garden leader. The findings support Gilbert et al.'s (2020) conclusion that collaborative leadership increases volunteer involvement in community garden sites. However, this project introduced new questions about how the garden leader influences the community's goals, values, and community engagement. Future research on this subject could also address the most effective training methods for community garden leaders, specifically focused on vision-building, conflict management, and group decision-making.

This study contributes to the efforts of Louisville's urban agriculture leaders to build successful community gardens that use sustainable environmental and social practices. With a consistent demand for more farming land in the city, support from the metro government is critical to the continued development of community gardening projects. The findings of this study reveal that garden sites with a high-level of independence are also likely to be successful in the long-term. The recommendations offered can contribute to increased self-governance and success levels in Louisville's community gardens and potentially garner more support from the city to expand urban agriculture projects. By understanding the relationships between leadership, social efficacy, management style, and success of community gardening projects, organizers can develop more community gardens that are sustainable and useful to their communities and the entire city.

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## APPENDIX A: COMMUNITY GARDEN ORGANIZER INTERVIEW QUESTIONS

1. What is the process for starting a new community garden? How is the location of the site picked?
2. For each of our research sites, what are the general garden demographics? Have they changed over time?
3. Do you provide any type of leadership/community development activities at the garden sites?
4. How do you generate neighborhood support for the garden site?
5. How do you recruit new gardeners when turnover is high?
6. Are the garden spaces ever used for other activities (social/community events)?
7. What are your goals for your garden sites? Do you communicate them to the garden leaders?
8. How are garden leaders chosen? Is it hard to find motivated people to fill the position?
9. How often do the gardeners call on you for help with acquiring resources, finances, or labor? What networks do they use when they do not call on you for help?
10. In your experience, what are the key elements required to establish a successful, long-lasting community garden?

## APPENDIX B: COMMUNITY GARDEN LEADER INTERVIEW QUESTIONS

1. How and when did you get involved with the community garden?
2. How has the garden changed since you first get involved?
3. What does being a garden leader mean for you?
4. How would you describe your relationship with your Common Earth/Extension agent organizer? Do you communicate often?
5. How often do you interact with other gardeners? How do you communicate with them (in person, email, text, other form?)
6. How often do new gardeners join the garden? How are new gardeners recruited?
7. What have been some of your biggest challenges while being a garden leader?
8. Do you have any goals for your garden site? If you were not limited in resources, what would you change?
9. When a problem occurs in the garden, is there a process for solving it? How do you acquire the resources and labor you need to keep the garden going?
10. Does your garden engage in outreach activities for your garden site? How do you get the community involved?

## APPENDIX C: COOPERATIVE EXTENSION GARDEN USE AGREEMENT

This Community Garden Use Agreement (“Agreement”) outlines the rights and responsibilities of participants in the Louisville Metro Community Garden Program (“Gardeners”). *Gardeners who do not comply with this Agreement at all times in the Community Garden may be removed from the Garden and may be subject to permanent eviction from their plot.* An evicted Gardener will forfeit all rights to continued or future use of the Community Garden, and the Jefferson County Extension Service (“Extension”) will not reimburse Gardener for any gardening expenses, including but not limited to the plot fee.

### 1. Gardener’s Rights:

- a. Extension shall not interfere with Gardener’s rightful use of the Garden.
- b. Gardener may terminate this Agreement and relinquish the plot at any time by notifying Extension or the garden manager. Gardener is responsible for removing any dead plants, weeds, fencing, garden stakes, netting, trellises, etc., installed on the property.
- c. Gardeners have the right to a safe and respectful gardening environment, free of harassment, bullying or intimidation. To that end, gardeners will refrain from words, actions or gestures that are considered obscene, discriminatory or derogatory towards any person or groups of people.
- d. Gardens who are accused of violating 1.c will receive notification via letter and flag in garden plot about the reported violation. Further instances will require a mediated conversation between offending gardener(s) and Extension. Depending on the frequency and/or severity of the reported violation of 1.c, Extension reserves the right to immediately forfeit any garden plots and prohibit the offending gardener from being on community garden property.

### 2. Gardener’s Responsibilities:

- a. Gardener shall prepare site, cultivate and begin planting or maintaining within sixty (60) days of execution of this Agreement. The land shall be used by Gardener for the sole purpose of cultivating and planting a garden. Gardener shall accept the assigned plot(s) in its condition as of the time it is made available to Gardener. Gardener shall be solely responsible for maintenance of the plot(s) and prevention of nuisances during the term of this Agreement.
- b. Gardener shall not sublet the plot(s) under any circumstances. Gardener has no authority to sublet or transfer the plot(s).
- c. Gardener shall keep the plot(s) under cultivation. **Gardener shall notify Extension or garden manager** if Gardener is no longer able to maintain the plot(s), will be

- d. absent for a long period of time (i.e. vacation, medical reasons, etc.) or has arranged for another person to temporarily tend the plot(s).
- e. **Gardener shall keep the plot(s) weed and pest free.** In cases where a plot has not been planted, weeds have become a nuisance or a plot does not meet other requirements of this Agreement, Extension shall provide written notification by mail or email to Gardener. Failure to correct the condition within fourteen (14) days of receipt of written communication shall result in **automatic forfeiture of the plot** for, at a minimum, the remainder of the calendar year. A Gardener who has forfeited a plot may be denied a plot in the future at the sole discretion of Extension.
- f. Gardener shall not sell crops in the Garden or on the premises.
- g. Gardener shall maintain walkways adjacent to their individual plot(s) and shall help maintain the entire Garden area.
- h. Gardener shall be considerate of fellow gardeners and the neighboring community. Gardener shall level the plot(s) at the edges so that soil does not wash off onto other plots, walkways in the Garden, sidewalks, roadways, streets or sewers. Gardener shall not let weeds or plants creep into a neighbor's plot and shall not spray on windy days. Gardener shall not plant sprawling or tall crops that might cause a hazard or nuisance or that may interfere with another plot in the Garden. Gardener shall abide by any special planting requirements and/or limitations on the construction of structures (see the following section h) as required by Extension.
- i. Gardener may install structures, including but not limited to trellises, fences, high or low tunnels, in and around the plot(s) in accordance with the terms of this Agreement, including fences, after consulting with Extension about the placement and design of the structure(s). Structures shall be kept neat and in good repair.
- j. Gardener shall conserve the use of water. Gardener shall use mulch with leaves, grass clippings or straw to reduce water evaporation. Unattended watering is not permitted. Gardener shall notify the garden manager of any leaks in the water line and shall ensure all faucets are off when leaving the garden.
- k. Gardener shall clean all tools before returning them to the tool shed. Gardener shall close the shed door and lock the gate when leaving the Garden.
- l. Gardener shall watch small children or pets they bring into the Garden to ensure no Garden plot is trampled and no fellow gardener's produce is picked. Gardeners shall keep pets on a leash at all times in accordance with the Louisville Metro Code of Ordinances.
- m. Gardener shall notify garden manager if vandalism or theft occurs. Gardener shall not harvest other gardeners' produce without permission. Theft of any kind shall result in loss of plot.
- n. Gardener shall observe the speed limit of 5 mph on all Garden roads and park in designated garden parking areas.

- o. Gardener shall refrain from having open fires (including gas, charcoal, wood burning grills) without written permission from the Cooperative Extension Service and/or approved permits.

**3. Extension's Responsibilities:**

- a. Extension shall receive applications for Community Gardens and shall keep records of Garden assignments.
- b. Extension shall mail Gardener Identification Card as confirmation of plot(s) assignment.
- c. Extension shall inspect all Garden plots to ensure compliance with the terms of this Agreement.
- d. Extension shall notify Gardener of any special planting requirements or limitations on the installation or construction of structures including but not limited to fences that are necessary based on the location of plot(s) in the Garden.
- e. Extension may terminate this Agreement immediately if Gardener violates the terms of this Agreement or abandons plot(s). Extension shall notify Gardener in the event of termination.
- f. Extension reserves the right to clear plots and throw away items left in forfeited garden plots after notification of forfeiture.

**4. Indemnification and Hold Harmless Clause:**

- a. Gardener shall indemnify, hold harmless, and defend Louisville Metro Government, its elected and appointed officials, employees, agents and successors, Jefferson County Extension Service and the property owner, in interest from all claims, damages, losses and expenses including attorneys' fees, arising out of or resulting, directly or indirectly, from the Gardener's performance or breach of the contract provided that such claim, damage, loss, or expense is: (1) attributable to personal injury, bodily injury, sickness, death, or to injury to or destruction of property, including the loss of use resulting therefrom, or breach of contract, and (2) not caused by the negligent act or omission or willful misconduct of Louisville Metro Government, Jefferson County Extension Service, the property owner, elected and appointed officials and employees acting within the scope of their employment. This Indemnification and Hold Harmless Clause shall in no way be limited by any financial responsibility or insurance requirements and shall survive the termination of this Contract.

## APPENDIX D: PEACEFUL EDEN 2019 GARDEN GUIDELINES

1. Fee: 2019 garden fee is \$25.00 and should be paid when you renew your plot at the beginning of each year before starting to work in your plot for the new season.
2. Maintenance: Gardeners will maintain their garden plot and the community space by serving on one of four work teams:
  - Water Management       Compost Management
  - Trash Management       Weed Management
3. Organic: Only use organic pest and weed control methods. Do not use any chemical fertilizers or pesticides in the garden.
4. Tools: You may use tools in the shed. Please respect tools and return them to the shed after each use. If you do not want other gardeners to use your personal tools, please keep them at home and bring them with you each time you visit the garden.
5. Seeds: Please plant seeds and seedlings that are free of pests and diseases.
6. Water: Please use water sparingly and turn off water after every use.
  - Do not use sprinkler in your plot
  - Water no more than 4 days a week
7. Trash: Please place trash in trash cans and help keep the space clean by picking up trash you see around the garden. When trash cans are full, empty them into the dumpster.
8. Compost: Please put all plant waste in compost corrals and bins. If the plants have gone to seed, are diseased, or are infested with pests, dispose of them in garbage cans.
9. Weeds: Please keep your plot weeded. If your plot becomes overgrown with weeds, a yellow flag will be placed in your plot, and you will be expected to weed it within two weeks.
10. Plots: Do not expand your garden plot past its original perimeter, into other plots, or into pathways.
11. Harvesting: Only harvest your own produce. Do not go into another gardener's plot without their permission.
12. Winterizing: Please remove all dead plants from your garden by November 1. Completely clean your plot by December 1 by removing or cutting back all crops and storing all supplies.

If you do not follow these guidelines, you will be given one warning. If the problem persists, you will be asked to give up your plot and it will be reassigned to someone else. You will not receive a refund.

None of the supporting organizations (Catholic Charities, Inc.; Americana World Community Center, Inc.; St. John Vianney Catholic Church) are liable for any incident or injury that may occur at Peaceful Eden Garden.



## APPENDIX E: PEACEFUL EDEN PLOT CONTRACT

### **Indemnification and Hold Harmless Clause:**

Gardener shall indemnify, hold harmless, and defend Americana World Community Center, Common Earth Gardens, and St. John Vianney Church in interest from all claims, damages, losses and expenses including attorneys' fees, arising out of or resulting, directly or indirectly, from the Gardener's performance or breach of the contract provided that such claim, damage, loss, or expense is: (1) attributable to personal injury, bodily injury, sickness, death, or to injury to or destruction of property, including the loss of use resulting therefrom, or breach of contract, and (2) not caused by the negligent act or omission or willful misconduct of Americana World Community Center, Common Earth Gardens, and St. John Vianney Church acting within the scope of their employment. This Indemnification and Hold Harmless Clause shall in no way be limited by any financial responsibility or insurance requirements and shall survive the termination of this Contract.

### **Photo Release**

I agree to grant to Americana, Common Earth Gardens, St. John Vianney and garden partners permission to record on photography film and/or video, pictures of my participation. I further agree that any or all of the material photographed may be used, in any form, as part of any future publications, brochure, or other printed materials used to promote partner organizations, and further that such use shall be without payment of fees, royalties, special credit or other compensation.

### **Agreement**

I have read, understand and agree to abide by the Peaceful Eden Garden Guidelines and Garden Plot Contract, including the Indemnification and Hold Harmless Clause and Photo Release above.