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**Opportunities to Integrate On-site Food Production in Affordable Housing
Developments in Austin, Texas**

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by

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Abstract

Opportunities to Integrate On-site Food Production in Affordable Housing Developments in Austin, Texas

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The University of Texas at Austin, 2011

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Abstract: In order to build community and provide additional amenities at their properties, several affordable housing developers in Austin, Texas have begun integrating on-site food production into their developments. This project explored the experiences of staff and tenants at two agencies that have connected food production and housing. Based on analysis of these narrative data, I identified current opportunities to further integrate and expand on-site food production into affordable housing. I proposed solutions to overcome challenges and recommended policies and incentives that could support the integration.

Table of Contents

Chapter One: Introduction	1
Background	1
Research Question	2
Defining Key Terms	3
Chapter Two: Literature Review	5
Housing Literature Review	5
Review of Local Housing Needs	5
Health and Affordable Housing	7
Community Garden Literature Review	9
Urban Greening	16
Existing Affordable Housing and Gardening Programs	18
Policy Literature Review	21
Community Gardens	21
Affordable Housing	26
Chapter Three: Methods	29
Chapter Four: Overview of Case Study Sites	33
Foundation Communities: Housing Plus Services	33
History	33
Properties	34
Garden Terrace	34
Sierra Ridge	35
Spring Terrace	35
Funding	36
Foundation Communities' Model	37
Service Enriched Housing	37
Business Model	38
Sustainability Focus	38

Leader in Green Building.....	38
Locally Grown	39
Emphasis on Creating a Home for Tenants	39
Focus on Asset-Building.....	40
Board Composition	40
Outcome Measures.....	40
Awards	41
Green Doors: Building Independence, Creating Opportunities	41
Green Doors’ Housing Programs.....	42
Pecan Springs Commons	43
Economic Philosophy	44
Environmental Leadership	45
Awards	45
Chapter Five: Analysis of Case Studies.....	47
Garden Development and Varying Philosophies on Managing the Spaces..	47
The Initial Transformation from Underutilized Space to Food Production	47
The Development of Foundation Communities’ Gardens	48
The Garden Terrace Garden.....	48
Sierra Ridge Garden.....	49
Spring Terrace’s Efforts to Create a Garden.....	51
The Development of Green Doors’ Gardens	51
Benefits of Integrating On-Site Food Production	53
Benefits to the Agency	54
Community Connection	54
Engaging Tenants and Residential Retention	55
Model for Other Affordable Housing Developers	56
Benefits to Tenants	57
Growing and Sharing Food	57
A Place to Pursue a Hobby	60

Other Benefits	60
Challenges of Sustaining the Gardens	61
Tenant Involvement and Management Concerns	61
Staffing and Financial Challenges to Creating and Sustaining Gardens	65
Building Capacity: Gardening Education, Activities, and Partnerships	69
Educating Tenants and Staff about Gardening	69
Creating a Vibrant Community Space and Opportunities for Expansion	72
Partnerships as a Way to Expand Organizational Capacity	73
Sustainability of the Gardens	76
Foundation Communities	77
Green Doors: Relationships and Roles	78
Opportunities to Expand the Integration of Gardens into Affordable Housing	81
Chapter Six: Local Food and Affordable Housing Practitioners' Perspectives on Integrating Food Production into Affordable Housing	83
Local Food Advocates	83
Opportunities to Integrate Food Production into Affordable Housing	85
Challenges to Integrate Food Production into Affordable Housing ...	89
Policy, Planning, and Other Mechanisms to Expand On-Site Food Production	91
Affordable Housing Advocates.....	92
Opportunities to Expand Affordable Housing and Food Production...	94
Challenges to Expand Affordable Housing and Food Production	97
Policies, Planning, and Other Mechanisms to Expand Affordable Housing	101
Chapter Seven: Programmatic and Policy Recommendations to Integrate On-Site Food Production into Affordable Housing Developments	104
Organizational and Organizing Recommendations	104
Planning Phase	104
Develop the Garden Leadership.....	106
Provide a Range of Gardening and Healthy Cooking Education Opportunities in the Garden.....	107

Expand Opportunities to Integrate Volunteers and Other Organizations into the Garden.....	108
Measure and Communicate the Impact of the Community Garden ..	109
Policy Recommendations to Further Integrate On-Site Food Production into Affordable Housing	110
Long-Term Planning	110
Zoning and Regulatory Changes.....	110
Funding and Fee Waivers	111
Public-Private Partnerships	112
Incentivizing Integration of Affordable Housing and Food Production	112
Additional Considerations	113
Conclusion	113
Appendix.....	115
Questions for Housing Advocates and Staff of Case Study Sites.....	115
Additional Questions for Staff at Case Study Sites	116
Questions for Gardeners at Case Study Sites.....	116
Questions for Local Food Advocates.....	117
Partnerships to Support On-Site Food Production in Affordable Housing	119
Bibliography	120
Vita.....	126

Chapter One: Introduction

BACKGROUND

Many negative health impacts are linked to food insecurity and lack of affordable housing and these impacts have negative fiscal implications on other systems, including health care.¹ Connecting affordable housing and healthy food access, specifically on-site food production, is an opportunity for housing providers to address the health and wellness of low-income households.² While there is much research on each of these individual topics (presented in chapter 3), there is a lack of research analyzing the benefits of integrating on-site food production and affordable housing, nor have there been formal evaluations of existing projects that have incorporated on-site food production into affordable housing developments. By reviewing existing research on affordable housing and local food production, interviewing experts in the affordable housing and food advocacy fields, and conducting two case studies of agencies that are currently integrating vegetable gardens into their developments, it appears that connecting the two can be a viable, creative way to promote community and wellness initiatives.

¹ Kimberley Hodgson, Marcia Caton Campbell and Martin Bailkey, *Urban Agriculture: Growing Healthy, Sustainable Places* (Chicago, Illinois: American Planning Association, 2011), p. 20, 87; Noreen Beatley, "Green Housing=Improved Health: A Winning Combination," National Center for Healthy Housing (2011), 16, p.2, 4.; Stockton Williams and Dana L. Bourland, "Greener Homes, Greener Cities: Expanding Affordable Housing and Strengthening Cities Through Sustainable Residential Development," in *Growing Greener Cities*, ed. Eugenie L. Birch and Susan M. Wachter, 106-123 (Philadelphia, Pennsylvania : University of Pennsylvania Press, 2008), p.122.

² Hodgson, *Urban Agriculture*, p. 20, 106.

RESEARCH QUESTION

My research asked how might community development practitioners think about integrating on-site food production in affordable housing developments? I explored the following questions to help me answer my main research question:

- What are some cases where this has been successful?
- What are the benefits for affordable housing developers or local food advocates of integrating on-site food production into affordable housing?
- What are the drawbacks of integrating the systems?
- What resources are required to create and maintain these spaces?
- What can be learned from these cases that is relevant for social service providers, housing advocates, and food advocates?
- What are the opportunities for this to occur?
- What are some policy or regulatory interventions that can promote the integration on-site food production in affordable housing?
- How viable are on-site vegetable gardens at affordable housing developments?

The questions are a mix of practical and conceptual questions. Many of the questions explore people's opinions and experiences related to gardens. Others are focused on the processes and planning that went into connecting on-site food production in affordable housing developments. I also wanted to know what hinders more on-site gardens from being developed. I framed my main research question from a systems

perspective and took an exploratory approach to learn more about integrating on-site food production with affordable housing.

DEFINING KEY TERMS

Terms used throughout the report include cost burdened, affordable housing, low-income household, on-site food production, urban agriculture, and healthy communities. Cost burden has been defined by the government to be “a household spending more than thirty percent of its gross income for shelter” and severely cost burdened to be “one spending more than fifty percent.”³ Cost burdened households spend more on housing and this impacts their ability to pay for other basic needs such as food. Nationally, two-thirds of low-income households, which are households earning eighty percent or less of the area median income (adjusted for household size), are cost burdened.⁴ Affordability is defined in relation to:

Housing cost burdens-the percentage of income spent on income. Housing cost burden can be expressed as the median percentage of income or as the percentage of households facing an excessive or severe cost burden. These measures may apply to the population as a whole or to particular groups, such as low-income, minority, or elderly households.⁵

This is relevant to my project since I define affordable housing as housing for households at 80% or less area median income (AMI) where the rent and utility costs do not exceed thirty percent of the household's income.

³ Alan Mallach, *A Decent Home: Planning, Building, and Preserving Affordable Housing* (Chicago, Illinois: America Planning Association, 2009), p.4.

⁴ Mallach, *A Decent Home*, p. 5

⁵ Alex F. Schwartz, *Housing Policy in the United States* (New York, New York: Routledge, 2006), p. 26.

For the purposes of this project, I define on-site food production as vegetable gardens, fruit and nut trees, and herb gardens. During the course of my research, I added the concept of a food forest into the definition. A food forest is a permaculture concept that mimics a natural forest and seeks “to produce food, to produce forage for beneficial insects, pollinators, chickens and song birds; to create wildlife habitat.”⁶ On-site food production is a component of urban agriculture, which is defined as the “production of fruits and vegetables, raising of animals, and cultivation of fish for local sale and consumption.”⁷

Access to healthy food is one of the factors that contributes to the overall health of a community. Some of the “critical ingredients required to have healthy communities are decent employment and business opportunities, quality health care and social services, healthy foods, safe recreational facilities . . . and affordable high quality housing.”⁸

⁶ Permaculture Institute, *Permaculture Food Forest*, 2011, <http://www.permaculture.org/nm/index.php/site/Permaculture-Food-Forest> (accessed April 22, 2011).

⁷ Hodgson, *Urban Agriculture*, p. 13.

⁸ Victor Rubin, "The Roots of the Urban Greening Movement," in *Growing Greener Cities: Urban Sustainability in the Twenty-First Century*, ed. Eugenie L. Birch and Susan M. Wachter, 187-206 (Philadelphia, Pennsylvania: University of Pennsylvania Press, 2008), p. 198.

Chapter Two: Literature Review

Given the lack of research on integrating affordable housing with on-site food production, I reviewed affordable housing planning documents in Austin, Texas and journal articles and government publications that described the connection between unaffordable housing and its impact on food insecurity. I also reviewed articles that explore the benefits of community gardens and urban greening. Because there is lack of information in journals and other publications on programs that integrate food production into their affordable housing developments, I conducted desktop research to understand what kinds of programs have been developed.

HOUSING LITERATURE REVIEW

Review of Local Housing Needs

To access local housing affordability, I reviewed city and county reports that document the need for additional affordable housing units. The City of Austin's Neighborhood Housing and Community Development office contracted with BBC Research and Consulting to conduct a Comprehensive Housing Market Study in 2009. The report states that "there are 39,150 more renters earning less than \$20,000 per year than units in the market affordable to them, even after accounting for subsidized units and vouchers . . .the mismatch between renter incomes and the availability of units is most

severe for renters earning less than \$10,000 per year.”⁹ Another finding is that Austin will need to develop on average 1,000 rental units per year until 2020 that cost less than \$425 per month to meet the needs of low income households.¹⁰ Given the demand, it is likely that government entities, nonprofits, and for-profit developers will work to create more affordable housing units in Austin; this new housing will in turn create many opportunities to integrate on-site food production into these developments.

The City of Austin Neighborhood Housing and Community Development office also published a report in April 2008 that analyzed affordable housing in the city and ways to preserve the existing affordable housing stock. This study found that most of the affordable units in Austin are privately owned.¹¹ Given that the private market, including nonprofit housing developers, manages the bulk of affordable housing, my research and recommendations focus on the private market.

Another local study is the Community Impact Report that was published by Travis County in 2009. It documents the amount of housing cost burdened households in the county and the increase in housing costs. The report states, “46% of renter households in Travis County spend 30% or more of their income on rent, and about one quarter (24%) of them spend at least half of their income on rent.”¹² This is of relevance to my research since it demonstrates that nearly half of the county’s renters are cost

9 BBC Research and Consulting, “Comprehensive Housing Market Study: City of Austin,” Neighborhood Housing and Community Development (2009), 142, p. 5.

10 BBC Research and Consulting, “Comprehensive Housing Market Study,” p.7.

11 City of Austin, Neighborhood Housing and Community Development, “Preserving Affordable Housing in Austin: A Platform for Action,” (Austin, 2008), 38, p.1.

12 Travis County Health and Human Services and Veterans Services - Planning and Research Division, “Community Impact Report Part I: Community Condition Highlights,” (2010), 67, p. 21.

burdened and as a result, households have less to spend on other basic needs, including food. This suggests that there are tradeoffs associated with unaffordable housing and that unaffordable housing may contribute to food insecurity. For example, in the report *The State of the Nation's Housing*, it states that “high housing outlays cut deep into household budgets . . . Households in the bottom expenditure quartile devoting more than half their spending to housing on average spent \$123 less each month on food, \$86 less on healthcare, and \$20 less on clothing than households that were paying less than 30 percent of outlays for housing.”¹³

Health and Affordable Housing

In addition reviewing local housing data, I reviewed research that explores the connection between health and affordable housing in order to better understand this relationship. Mueller and Tigh looked at empirical evidence to study the link between housing, education, and health outcomes. They found that while the impact of housing conditions on health is well documented, the relationship between health outcomes and neighborhood characteristics is not as established, due to differences in methodology and the “lack of theoretical consensus.”¹⁴ More research is needed to support findings from

13 Joint Center for Housing Studies of Harvard University, “The State of the Nation's Housing 2009,” *Joint Center for Housing Studies*, 2009, <http://www.jchs.harvard.edu/publications/markets/son2009/index.htm> (accessed 2010- 2-December), p. 28.

14 Elizabeth J. Mueller and J. Rosie Tighe, “Making the Case for Affordable Housing: Connecting Housing with Health and Education Outcomes,” *Journal of Planning Literature* 21, no. 4 (May 2007): 371-385, p. 379.

recent studies that link high housing costs to poor health.¹⁵ There is little data on how improvements to housing can impact health and potentially reduce healthcare costs.

The Center for Housing Policy produced a report, *Framing the Issues- the Positive Impacts of Affordable Housing on Health*. Similar to the Mueller and Tigh's study, the authors reviewed existing research on housing and health and then developed nine hypotheses on the impact of affordable housing on health, including: "Affordable housing may improve health outcomes by freeing up family resources for nutritious food and health care expenditures."¹⁶ They found that "families in unaffordable housing tend to spend less on health care than families in affordable housing. A similar trend is apparent in some (but not all) data sources for food expenses."¹⁷

Besides looking at research on the consequences of high housing costs, I also reviewed how building design and a site's amenities can impact health. The University of California Berkeley Health Impact Group studied the redevelopment of public housing in San Francisco through the HOPE VI program. They explored how redevelopment impacts various aspects of health and wellness and they used their findings to inform local policy. The research focused on two HOPE VI sites and they looked at how healthy eating and active living can promote health. They also analyzed which neighborhood factors influence active living and healthy eating.¹⁸ The researchers outlined a series of recommendations to improve the tenants' health. They suggested that funding be

¹⁵ Mueller, "Making the Case for Affordable Housing," p. 382

¹⁶ Jeffrey Lubell, Rosalyn Crain and Rebecca Cohen, "Framing the Issues- the Positive Impacts of Affordable Housing on Health," Center for Housing Policy (2007), 34, p. 2.

¹⁷ Ibid.

¹⁸ UC Berkeley Health Impact Group (UCBHIG), "HOPE VI to HOPE SF, San Francisco Public Housing Redevelopment: A Health Impact Assessment," University of California (Berkeley, 2009), p. HEAL-1.

dedicated for healthy eating programming and that developers of affordable housing should create physical space for healthy living, such as on-site food gardens and community kitchens.¹⁹

COMMUNITY GARDEN LITERATURE REVIEW

There are numerous research studies that focus on the benefits of community gardens. Researchers have studied the health, nutrition, economic, and environmental benefits of gardens and urban agriculture.²⁰ Many of the studies used qualitative methods, including surveys, interviews, focus groups, participant observation, and case studies. Blair et al. looked at the differences in vegetable intake, neighborhood satisfaction, and other factors between gardeners (n=144) involved in the Philadelphia Urban Gardening Project and non-gardeners (n=67). Gardeners were asked what was the main reason that they were involved in the garden project and 95% responded as follows: “Recreation (21%), mental health (19%), physical health and exercise (17%), produce quality and nutrition (14%), spiritual reasons, including contact with nature (10%), self expression/self-fulfillment (7%), and cost and convenience (7%).”²¹ This indicates most individuals are involved in community gardens for health and wellness oriented reasons. The researchers reported that gardeners were more likely than the control group to take part in civic activities, such as neighborhood beautification activities. They also found

19 UC Berkeley Health Impact Group, "HOPE VI to HOPE SF," p. ES-5, ES-7.

20 Hodgson, *Urban Agriculture*, p. 20.

21 Dorothy Blair, Carol C. Giesecke and Sandra Sherman, "A Dietary, Social and Economic Evaluation of the Philadelphia Urban Gardening Project," *The Journal of Nutrition Education* 23 (July/ August 1991): 161-167.

“gardening is related to an increased frequency of vegetable consumption and to the reduced frequency of milk product consumption.”²² The researchers concluded that gardens are one strategy to increase access to vegetables.²³

Kingsley et al. focused on the “ways in which such a facility contributes to the enhancement of health, wellbeing and contact with nature for urban dwellers.”²⁴ The goals of the study were to evaluate the benefits of community gardening and to use the findings to support further development of community gardens to improve health and wellness. The research questions were: (1) what are the motives for becoming a member of an urban community garden and (2) how do members perceive the health and wellbeing benefits of being involved in the garden.”²⁵ The researchers used snowball sampling to interview members from the ‘Dig In’ community garden in Melbourne, Australia and conducted semi-structured interviews with ten key informants, of which six were part of the planning committee. The researchers asked questions related to informants’ perceptions of the health benefits of gardening. Due to the small sample size, they stated that their findings provide an overview of the gardeners’ perceptions and experiences instead of being a “representational or longitudinal analysis.”²⁶

They found that all of the members of the ‘Dig In’ spoke of the health and wellbeing benefits of community gardening. However, some did not perceive any

²² Blair, "A Dietary, Social and Economic Evaluation."

²³ Ibid.

²⁴ Jonathan Kingsley et al., “Cultivating health and wellbeing: members' perceptions of the health benefits of a Port Melbourne community garden,” *Leisure Studies* 28, no. 2 (April 2009): 207-219, p. 207.

²⁵ Kingsley, "Cultivating health and wellbeing," p. 209.

²⁶ Kingsley, "Cultivating health and wellbeing," p. 211.

physical health benefits from participating in the garden.²⁷ This finding differs from other research and one explanation is that the gardeners may have perceived physical health benefits only happen when exercising vigorously.²⁸

The researchers also identified barriers to community gardening, including time restraints and distance.²⁹ Overall, due to the positive health benefits of community gardening, the authors concluded that gardens “offer a grassroots strategy for improving Australian urban population health and wellbeing.”³⁰ The researchers recommended future research on the profile of community gardeners in Australia and studying the impacts of gardens on different groups.³¹ The limitations of this study are that there was a small interview group (ten total) and over half of the individuals interviewed were part of the leadership council, which may have led to biased results. Despite these limitations, this study provides a good baseline outlining benefits and barriers of community gardens.

In another study, Baker explored three community garden cases in Toronto and their relationship to the city’s food security movement. One of the cases, the Riverside Community Garden, is of particular value to my research. A property manager started a garden with the support of local nonprofits and residents who helped transform the space. The researcher found that the “garden became a starting place for making their apartment building more livable, for providing additional recreation opportunities for residents, and

27 Kingsley, "Cultivating health and wellbeing," p. 214.

28 Kingsley, "Cultivating health and wellbeing," p. 215.

29 Kingsley, "Cultivating health and wellbeing," p. 214.

30 Kingsley, "Cultivating health and wellbeing," p. 215.

31 Kingsley., "Cultivating health and wellbeing," p. 216.

for bringing tenants from diverse cultural backgrounds together.”³² Baker’s results were similar to the previous study in that both studies found that gardens provide many benefits, including recreation, nutritional food, and educational workshops on growing and preparing food.³³ A primary limitation of Baker’s study is that it is hard to generalize from these cases since all three cases were located in Toronto. The study was also sponsored by a food security oriented nonprofit, so there may be bias in the study’s design and interpretation of data.

Teig et al. focused on the social processes within community gardens that can promote health and wellness, using a sample of community gardens in Denver, Colorado. It explored the “social processes that might explain the connection between gardens, garden participation, and health.”³⁴ Two of their findings point to the various scales of benefits. First, the researchers found that community gardens have positive social impacts on neighborhoods and that the gardens serve as a “catalyst for other positive place-based social dynamics.”³⁵ This demonstrates that the benefits of community gardens extend beyond individual gardeners and that they can have a positive influence on the surrounding community. Secondly, the research found that “collective efficacy in

32 Lauren E. Baker, “Tending Cultural Landscapes and Food Citizenship in Toronto's Community Gardens,” *Geographical Review* 94, no. 3 (July 2004): 305-325, p. 318.

33 Baker, "Tending Cultural Landscapes," p. 310.

34 Ellen Teig, Joy Amulya, Michael Bardwell, Julie A. Marshall and Jill S. Litt, "Collective efficacy in Denver, Colorado: Strengthening neighborhoods and health through community gardens," *Health and Place* 15 (2009): 1115-1122, p. 1115.

35 Teig, "Collective efficacy in Denver, Colorado," p. 1120.

the garden has the potential to mediate health by encouraging social support and access to resources that are protective against poor health.”³⁶

Milligan, Gatrell, and Bingley also looked at the health and wellness benefits of community gardens among seniors in England. They used ethnography, focus groups, semi-structured interviews and longitudinal data collected from participants’ weekly reports.³⁷ They found that the natural environment contributed “positively, in both active and passive ways, on their mental well-being,” and that the garden was a relaxing and healing place for the elderly.³⁸ The researchers also found the gardens were a “means of combating social isolation and promoting the development of [residents’] social networks.”³⁹ Lastly, they found an element of reciprocity between gardeners. The gardeners would help each other out, such as when they were sick and unable to tend to their plots.⁴⁰

Armstrong looked at community gardens across the upstate New York region. She conducted phone interviews with twenty garden program coordinators and she found that the one of the main reasons why individuals participate in community gardens is to gain “access to fresh/ better tasting food, to enjoy nature, and because of health benefits, including mental health.”⁴¹ It was also observed “in 33% of the gardens, coordinators described additional community organizing which was made possible by a community

36 Ibid.

37 Christine Milligan, Anthony Gatrell and Amanda Bingley, "Cultivating health: therapeutic landscapes and older people in northern England," *Social Science and Medicine* 58 (2004): 1781-1793, p. 1784.

38 Milligan, "Cultivating health," p. 1790.

39 Ibid.

40 Ibid.

41 Donna Armstrong, "A survey of community gardens in upstate New York: Implications for health promotion and community development," *Health and Place* 6 (2000): 319-327, p. 322.

garden.”⁴² This research, similar to the other studies, supports the idea that gardens can have a positive impact on various scales. A major limitation of this study is that researcher interviewed coordinators, so the perception of the benefits was through the lens of program administrators, instead of the community gardeners.

None of the prior studies explored in depth whether or not gardening resulted in reduced food costs for the gardeners. Wakefield et al. filled this gap by researching the potential cost savings aspect of community gardening. In interviews and focus groups, “most participants spoke of improved food access and cost-saving in some way. In some cases, substituting garden-grown produce for store-bought food was seen to make a significant difference in household food costs.”⁴³ Another study of community gardens in Newark, New Jersey found that an “average 720-square foot plot earned \$500 from a \$25 investment.”⁴⁴

McCormack et al. conducted a meta-study using quantitative data on community gardens and farmers markets to determine whether or not there were measurable health outcomes. The researchers did not have any conclusive results on the health benefits of community gardens. They reviewed sixteen studies on community gardens and farmers’ markets and found that there is a lack of well-designed research studies that include

42 Armstrong, "A survey of community gardens," p. 324.

43 Sarah Wakefield, Fiona Yeudall, Carolin Taron, Jennifer Reynolds and Ana Skinner, "Growing urban health: Community gardening in South-East Toronto," *Health Promotion International* 22, no. 2 (2007): 92-101, p. 97.

44 Laura Lawson, *City Bountiful: A Century of Community Gardening in America* (Berkeley, California: University of California Press, 2005), p. 270.

reliable dietary assessments.⁴⁵ The researchers found that “six of the sixteen studies reported that participation in a farmers’ market program or a community garden was associated with a greater intake of fruits and vegetables.”⁴⁶ This definitely leaves some doubt on the effectiveness of community gardens in increasing consumption of fresh food.

Other studies looked at how to sustain community gardens, how they may contribute to a community’s resilience, and the impact on property values. Milburn and Vail determined there are four elements that are critical to developing and sustaining community gardens, including securing land, maintaining interest, and designing it appropriately. Some of their suggestions are to reach out to gardeners and non-gardeners, to provide leadership training, to secure resources from fundraisers, grants, and in-kind donations, to foster “positive relationships among the gardeners,” to create an organizational structure that meets the needs of the community, to ensure it is accessible, and to incorporate gathering spaces into the design of the garden.⁴⁷

Okvat and Zautra examined existing research on community gardens to determine how they could contribute to resilience for individuals, communities, and the environment from a community psychology perspective. They discussed opportunities to expand gardens by building on the efforts of the Victory Gardens in the 1920s where “approximately 20 million gardens were planted under the auspices of the US

45 Lacey Arneson McCormack, Melissa Nelson Laska, Nicole Larson and Mary Story, "Review of the Nutritional Implications of Farmers' Markets and Community Gardens: A Call for Evaluation and Research Efforts," *Journal of the American Dietetic Association*, March 2010: 399-408, p. 399.

46 McCormack, "Review of the Nutritional Implications," p. 406.

47 Lee-Anne S. Milburn and Brooke Adams Vail, "Sowing the Seeds of Success: Cultivating a Future of Community Gardens," *Landscape Journal* 29 (2010): 71-89.

Department of Agriculture with the collaboration of the state governments” and developing a sustainable model. 48 They also suggest policy and regulatory interventions to support the development of more community gardens, such as incentivizing gardens, changing zoning regulations, and making land available for long-term usage.⁴⁹

Another study on community gardens in New York City by Voicu and Been examined the impact of gardens on the property values of neighboring properties. They found a positive relationship where the “effects are driven by the poorest of host neighborhoods (where a garden raises neighborhood property values by as much as 9.4 percentage points within five years of the garden’s opening).”⁵⁰ This demonstrates the potential for gardens at affordable housing developments to have a positive financial impact on surrounding property values.

URBAN GREENING

There is a significant amount of research that suggests a positive relationship between urban greening and improved social conditions, such as a decrease in crime, improved mental health, and increased sense of community. Researchers at the University of Washington found:

Vegetation may be linked to lower levels of crime in residential neighborhoods, particularly poor inner-city neighborhoods. Residential vegetation has been linked to a greater sense of safety, fewer incivilities, and less aggressive and violent

48 Heather A. Okvat and Alex J. Zautra, "Community Gardening: A Parsimonious Path to Individual, Community, and Environmental Resilience," *American Journal of Community Psychology*, January 2011, p. 11

49 Ibid.

50 Ioan Voicu and Vicki Been, "The Effect of Community Gardens on Neighboring Property Values," *Real Estate Economics* 36, no. 2 (2008): 241-283, p. 277.

behavior . . . The presence of trees and well-maintained lower understory vegetation can transform barren spaces / lands into pleasant, welcoming, well-used places.⁵¹

These findings suggest that on-site food gardens can benefit affordable housing developers and communities by increasing safety and improving the overall quality of the site.

A study conducted by Kuo et al. in the late 1990s found that individuals living in areas with more vegetation had more social ties compared to individuals living in barren areas. The researchers suggested that greening “appear[s] to attract people outdoors, increasing opportunities for casual social encounters among neighbors and fostering the development of neighborhood social ties.”⁵² They go on to state, “For individuals who live in poor inner-city neighborhoods and who face an array of difficult circumstances, greener outdoor common spaces may make the world a more supportive place.”⁵³ Similar to this study, Kuo and Sullivan looked at crime rates around ninety-six inner-city apartment complexes and compared the rates to the level of vegetation surrounding each complex. They found a “clear negative relationship between vegetation and crime.”⁵⁴ They found that the denser the vegetation, the lower the crime rate. These findings describe potential impacts of community gardens on the larger community, not just the individual gardener.

51 University of Washington, *Crime and Fear*, March 30, 2011, http://depts.washington.edu/hhwb/Thm_Crime.html (accessed April 25, 2011).

52 Frances E. Kuo et al, “Fertile Ground for Community: Inner-City Neighborhood Common Spaces,” *American Journal of Community Psychology* 26, no. 6 (1998): 823-851, p. 848.

53 Kuo, “Fertile Ground for Community,” p. 848.

54 Frances E. Kuo and William Sullivan, “Environment and Crime in the Inner City: Does Vegetation Reduce Crime?,” *Environment and Behavior* 33, no. 3 (May 2001): 343-367.

EXISTING AFFORDABLE HOUSING AND GARDENING PROGRAMS

In an effort to understand how other localities integrate food into affordable housing, I conducted desktop research to learn about programs throughout the country. Orchards Gardens is an affordable housing development managed by homeWORD in Missoula, Montana. They incorporated food production by having a community garden with ten plots and a one-acre farm on the site. The garden and farm are described as a “unique partnership melding affordable housing and food security issues.”⁵⁵ They were able to rezone the 4.6-acre lot, which allowed for denser housing (thirty-five rental units) on half of the property and they dedicated two acres to open space, including the garden and farm.⁵⁶ The housing developer partnered with Garden City Harvest, an agency that distributes healthy food to low-income households, to manage the garden and farm.

The New York City Housing Authority (NYCHA) has allowed tenants to garden on their properties since the 1960s through the Tenant Garden Program. The program assists tenants with gardening supplies, such as plants and seeds, and educational workshops. In 1996, there were 700 gardens in NYCHA properties with about 5,000 individuals participating in them.⁵⁷ Gardeners said that they included the “troublemakers” in the garden to prevent them from vandalizing it.⁵⁸

Another organization that has integrated food production into its affordable housing is Women Organizing Resources Knowledge and Services (WORKS), which is

⁵⁵ Garden City Harvest, *Community Gardens*, <http://www.gardencityharvest.org/aboutcommunitygardens.html> (accessed 2011 йил 25-Апрil).

⁵⁶ The Home Depot Foundation, "Case Studies," *Resources*, http://www.homedepotfoundation.org/pdfs/homeword_3.pdfs (accessed April 25, 2011).

⁵⁷ Laura Lawson, *City Bountiful*, p. 210

⁵⁸ Lawson, *City Bountiful*, p. 221.

based in Los Angeles. It is a community development and affordable housing organization that has produced over 1,000 affordable units in California and Oregon. WORKS has incorporated herb and vegetable gardens into its senior and farm worker apartment complexes. In describing the gardens at one of their developments, the organization reported that the gardens “have been a source of pride for this tight knit residential community.”⁵⁹

Besides providing housing, WORKS also provides healthy food programs for tenants. A variety of programs are offered, including distributing healthy organic food, an agriculture based job training program, nutrition classes, and a leadership development/ community-organizing program focused on access to healthy food. Additionally, WORKS offers a program that is facilitated by Master Gardeners “who train residents on how to design, build and maintain gardens.”⁶⁰

Groundwork Lawrence, an open space and food security organization in Massachusetts, partnered with a community development organization, Lawrence CommunityWorks, which develops low impact affordable housing. Together they developed the Union & Mechanic Community Gardens project, which “entails an effort to design and construct community gardens in an underutilized, formerly derelict alleyway in concert with new affordable housing being built on several vacant lots.”⁶¹

What is unique about this gardening project is that the organizations worked together to

⁵⁹ Women Organizing Resources Knowledge and Services, *Affordable Housing, Housing*, <http://www.worksusa.org/affordable-housing/housing.html> (accessed April 25, 2011).

⁶⁰ Women Organizing Resources Knowledge and Services, *Affordable Housing*.

⁶¹ Groundwork Lawrence, *Community Gardens*, <http://www.groundworklawrence.org/communitygardens> (accessed April 25, 2011).

develop underutilized space and empty lots to provide projects that furthered both food access and affordable housing. The existing gardeners who were squatting on the site were invited to participate in a charrette to help plan the design and amenities in the garden and they also agreed to some basic guidelines for managing the space.⁶² The garden is now part of a land trust.

While some agencies create gardens to improve access to healthy food, other organizations focus on the physical and therapeutic benefits of gardening. The TODCO Group is an affordable housing organization in San Francisco that created gardens in its senior housing developments “to encourage physical activity and creativity.” They report that gardening has become their most popular program.⁶³

Another group that is incorporating on-site food gardens into their programming, due to the wellness benefits of gardening, is Carrfour Supportive Housing. It is a nonprofit community development and affordable housing organization in Miami, Florida that piloted a community garden and supportive housing project with sixty-five formerly homeless individuals with disabilities. They found that the “gardening project not only provided fresh vegetables and fruits to the residents and taught them better eating habits, but also served as an engaging therapeutic activity.”⁶⁴ Building upon this experience, they are developing the “Verde Gardens Apartments, a complex of 145 units of new,

⁶² Groundwork Lawrence, *Community Gardens*.

⁶³ TODCO Development Co., *Programs*, <http://www.todco.org/residentprograms.html#Anchor-Gardens-3800> (accessed April 25, 2011).

⁶⁴ Citigroup, Inc., *Citi Foundation Partners in Progress (PIP) Grant Program*, 2011, http://www.citigroup.com/citi/foundation/pip_gp.htm#Miami (accessed April 25, 2011).

affordable housing for formerly homeless families, an organic produce nursery and a farmers market retail site on the former Homestead Airforce Base.”⁶⁵

Many gardening projects receive financial support from foundations. For example, a mixed income development in Albuquerque with a community garden and various supportive services received funding from the Enterprise Foundation, the Home Depot Foundation, a bank, and New Mexico Mortgage Finance Authority.⁶⁶ Dedicated local funding is another strategy to fund gardens. For example, voters in Seattle “approved a levy that included \$2 million in funding for new community garden projects.”⁶⁷

POLICY LITERATURE REVIEW

Community Gardens

As urban agriculture, including community gardens, becomes a more significant part of the community food system, it has “implications for urban planning as regulated by local and regional governments and planning agencies.”⁶⁸ Hodgson, Campbell, and Bailkey reported that land use policies can be developed to allow food production on publicly owned land either for temporary or permanent usage. Other policy and programmatic interventions to encourage urban agriculture are providing “tax incentives to landowners who make idle parcels available for urban agricultural use,” land banking

65 Citigroup, Inc., *Citi Foundation Partners in Progress*.

66 New Mexico Business Weekly, *State's first green affordable housing project opens* (Albuquerque, New Mexico, May 18, 2010).

67 City of Seattle, Department of Neighborhoods, *Parks and Green Spaces Levy*, 2011, <http://www.cityofseattle.net/neighborhoods/ppatch/levy.htm> (accessed April 26, 2011).

68 Hodgson, *Urban Agriculture*, p.2.

to manage vacant land, and Abandoned-Property Management Programs, which seek to acquire and dispose of vacant land.⁶⁹ Another policy intervention they mention is altering design guidelines for open space and landscaping to promote on-site food production. Minneapolis has developed guidelines to incentivize urban agriculture in planned unit developments, where proposals that incorporate urban agriculture receive extra points in the review process. The city of Milford, Delaware has adopted a policy, which “permits a 5% density bonus for Residential Neighborhood Development projects that set aside additional open space for community gardens.”⁷⁰ Vancouver created new design guidelines, called *Urban Agriculture Guidelines for the Private Realm* and it:

includes recommendations for the design and siting of shared garden plots and edible landscaping for public and private areas, including patio, balcony, and roof deck spaces, as well as a range of supporting facilities, and green houses. They also stress the importance of locating garden plots with other amenities such as covered outdoor shelters, children’s play areas, community kitchens, and outdoor seating areas, to facilitate and encourage social interaction.⁷¹

The California-based nonprofit, Public Health Law and Policy, took a broader approach by focusing on how the comprehensive planning process in California can promote health. The report provides examples of transportation and environmental quality planning goals from municipalities throughout California. In particular, the report includes an urban agriculture and community gardening section where it outlines policies and goals from comprehensive plans that support urban agriculture. For example, in Sonoma County’s land use element of their comprehensive plan, one of the policy

⁶⁹ Hodgson, *Urban Agriculture*, p. 52-53.

⁷⁰ Hodgson, *Urban Agriculture*, p. 126.

⁷¹ Hodgson, *Urban Agriculture*, p. 54.

objectives is to “encourage food production as an integral part of institutional land uses on public lands where such uses and lands have capacity to grow food.”⁷²

Seattle, Washington is another municipality that integrates urban agriculture into its comprehensive plan. Urban agriculture is viewed as an “integral and necessary component of the city’s network of managed open space.”⁷³ Hou, Johnson, and Lawson suggest:

City agencies should collaborate to create an interconnected network of open space types, to identify potential co-location of recreational and learning facilities with community gardens to build from synergies of interests and activities, and to identify opportunities for community gardens at varied scales and qualities within this open-space network.⁷⁴

Des Moines, Iowa is taking a different approach by expanding food production in public spaces through programmatic initiatives coordinated by their Parks and Recreation Department. For example, the department has created over seventy edible landscapes at shelters, family centers, parks, and other institutions.⁷⁵ While Des Moines used its existing Parks and Recreation Department to expand food production, another strategy proposed by Nordahl is to create a new department within the city’s structure to focus on all aspects of urban agriculture such as community gardens and farms. Alternatively, such projects could be housed under a Department of Sustainability. It is reasoned the

⁷² Public Health Law and Policy, *Healthy Planning Policies*, p. 57

⁷³ Darrin Nordahl, *Public Produce: The New Urban Agriculture* (Washington, DC: Island Press, 2009), p. 58.

⁷⁴ Jeffrey Hou, Julie M. Johnson and Laura J. Lawson, *Greening Cities, Growing Communities: Learning from Seattle's Urban Community Gardens* (Seattle, Washington: University of Washington Press, 2009), p. 193.

⁷⁵ Nordahl, *Public Produce*, p. 146.

“municipalities will need to address food as an important component of urban infrastructure much like housing, transportation, and education.”⁷⁶

While many towns and cities have yet to create a new department for food production, many have created food policy boards to promote local food production and to increase access to healthy food. The Los Angeles Food Policy Task Force issued a report in 2010 that highlights the board’s priority action areas, including growing food in neighborhoods throughout the city. In order to accomplish this goal, the Task Force identified a number of action steps, including one that seeks to incentivize healthy food access in affordable housing developments.⁷⁷ While the report provided no additional details about how the incentivizes would work, this was one of the few documents I reviewed that connected affordable housing to healthy food access. A similar policy recommendation is made in the Community Food Security Coalition’s report. The organization suggests “convert[ing] some of the public lands in urban parks, and around municipal buildings, schools, public housing, hospitals, etc., to food production with plantings of fruit trees, edible landscaping, and vegetable gardens.”⁷⁸ Both policy recommendations point to opportunities to expand food production within existing affordable housing developments.

Similar to the other findings, the National Policy and Legal Analysis Network to Prevent Childhood Obesity (NPLAN) suggests incorporating community gardens into the

⁷⁶ Nordahl, *Public Produce*, p. 106.

⁷⁷ Los Angeles Food Policy Task Force, "The Good Food for All Agenda: Creating a New Regional Food System for Los Angeles," (Los Angeles, 2010), 108, p. 77.

⁷⁸ Katherine H. Brown et al., "Urban Agriculture and Community Food Security in the United States: Farming from the City Center to the Urban Fringe," Urban Agriculture Committee of the Community Food Security Coalition (2002), 30, p. 23.

local government's comprehensive plan. The organization also suggests looking at zoning regulations to ensure that they allow for community gardens either through making public land available for them or through allowing gardens in certain areas.⁷⁹ The report also recommends that cities finance community gardens. For instance, Seattle has funded the development and maintenance of community gardens with "bond monies, public housing funds, and neighborhood matching grants."⁸⁰ Other examples they provide include using a land trust to preserve community gardens and developing public-private partnerships to obtain land and/or assist with operating it.⁸¹ Other policy actions highlighted in the report are to "encourage [or require] all new affordable housing units to contain designated yard or other shared space for residents to garden" and "encourage [or require] all [or some, such as multifamily residential, commercial, institutional or public] new construction to incorporate green roofs, edible landscaping, and encourage the use of existing roof space for community gardening."⁸²

Many of the policies mentioned previously focus on creating and supporting community gardens. Other organizations have focused on the broader issue area of access to healthy food. Researchers from PolicyLink and The Food Trust reviewed 132 studies on food access. Their "findings indicate that policy interventions to increase

79 National Policy and Legal Analysis Network, "Community Gardens," *NPLAN, Childhood Obesity*, October 2009, <http://www.nplanonline.org/nplan/community-gardens> (accessed March 17, 2011).

80 National Policy and Legal Analysis Network, "Model Policy: Establishing Land Use Protections for Community Gardens," *NPLAN: Childhood Obesity*, 2009, <http://www.nplanonline.org/nplan/products/establishing-land-use-protections-community-gardens> (accessed March 17, 2011), p. 5.

81 National Policy and Legal Analysis Network, "Model Policy," p. 6.

82 National Policy and Legal Analysis Network, "Model Policy," p. 9.

access to healthy food in ‘food deserts’ will help people eat a healthy diet.”⁸³ Interventions include community gardens, backyard gardens, and fresh food financing initiatives.⁸⁴

Affordable Housing

Comprehensive plans are one way for communities to set affordable housing goals and develop policies to promote affordable housing. Raleigh, North Carolina’s comprehensive plan include several housing policies such as amending zoning to encourage a variety of housing types and promoting affordable housing in transit corridors.⁸⁵ Other policy goals include expanding the “City’s range of housing assistance programs benefitting low- and moderate-income persons by supplementing existing federal and state programs,” expanding the capacity of nonprofit affordable housing developers, creating a permanent source of local funding for affordable housing, encouraging the preservation of the affordable housing stock, and identifying and removing regulatory barriers to developing affordable housing.⁸⁶ Additional policy goals are to ensure long term affordability, to set aside a certain amount of units as affordable in city developed properties, to make city-owned land available for affordable housing, and to assemble vacant properties to develop more affordable housing.⁸⁷ A few

83 Sarah Treuhaft and Allison Karpyn, "The Grocery Gap: Who Has Access to Healthy Food and Why it Matters," *PolicyLink*, 2010, <http://www.policylink.org> (accessed March 16, 2011), p. 9.

84 Treuhaft, "The Grocery Gap," p. 21-22.

85 City of Raleigh, "2030 Comprehensive Plan," *Official City of Raleigh Website*, 2011, <http://www.raleighnc.gov/home/content/PlanLongRange/Articles/2030ComprehensivePlan.html> (accessed March 12, 2011), p. 167-168.

86 City of Raleigh, "2030 Comprehensive Plan," p. 170.

87 Ibid.

of the plan's action items to achieve the housing policy goals are to "reduce off-street parking requirements for developments containing affordable housing units, and maximize the availability of on-street parking in the vicinity of such developments," to create a land bank program for future affordable housing development, and to "provide an expedited or fast-tracking development review process for housing developments that include at least 10 percent affordable units or 20 percent workforce units."⁸⁸

In addition to incorporating housing into the comprehensive planning process, a Robert Wood Johnson Foundation report highlights other opportunities to create healthier communities. The report recommends connecting housing to the larger community's health goals. The authors state:

As new housing and infrastructure- roads, parks, retail areas- are funded and designed, it is important to consider their future health implications. Safer and healthier housing design, more green spaces and safe streets, access to public transportation and services within walking distance are ways to promote better health.⁸⁹

The report further recommends that these elements should be required if a development is receiving public support and that healthy design features should be incentivized.

Locally, the Urban Land Institute-Austin, HousingWorks Austin, the Real Estate Council of Austin, and the Austin Area Research Organization researched how to preserve and create more affordable housing in Austin. They suggest ensuring that affordable housing is included in the comprehensive plan in a meaningful way, including

⁸⁸ City of Raleigh, "2030 Comprehensive Plan," p. 173-174.

⁸⁹ Robert Wood Johnson Foundation: Commission to Build a Healthier America. (2009 April). *Resources*. Retrieved 2010-28-November from Robert Wood Johnson Foundation: <http://www.commissiononhealth.org>, p. 85.

affordable housing in the 2012 bond election, encouraging public-private partnerships, and working “to harmonize, streamline and implement citywide incentive programs that promote affordable homes in exchange for increased density.”⁹⁰ The report states that “more tools are needed” to meet the demand for affordable housing.⁹¹ In another local report, Way summarizes a variety of tools, including using tax increment financing (TIF), public land, vacant parcels, general obligation bonds, the comprehensive plan, density bonuses, and other incentives that are in place in Texas that can help support the creation of more affordable housing.⁹²

⁹⁰ Urban Land Institute-Austin; HousingWorks Austin; Real Estate Council of Austin; Austin Area Research Organization, "Building and Retaining an Affordable Austin: A Collaborative Report," (Austin, 2010), 29, p. 2.

⁹¹ Urban Land Institute-Austin, "Building and Retaining an Affordable Austin," p. 8.

⁹² Heather K. Way, "The Texas Two-Step: Local Resources and Regulations that Increase Affordable Housing," in *American Bar Association: Forum on Housing and Community Development Law, 18th Annual Conference "Opportunities During Challenging Times"* (2009), 32, p. 3-8.

Chapter Three: Methods

In order to address the main research question, I reviewed existing research on community gardens, food insecurity, affordable housing policy, and planning for urban agriculture in order to understand what is known about the topic and to build upon this research. To gain a better understanding of the local context, I conducted two case studies with Austin-based organizations that have a history of incorporating on-site food production into their affordable housing developments. The cases allowed me to explore the “complexity of the issue.”⁹³ Plus, I interviewed seven housing advocates and five local food advocates to identify what opportunities they perceive exist for integrating gardens into affordable housing from an organizational, city, regional, and state perspective.

After identifying potential organizations for my case studies, Foundation Communities and Green Doors emerged as good fits for further research given that they operate on different scales, they offer a variety of programs, and are at different stages in incorporating gardens into their developments. By no means were my case studies comprehensive because my sample size was small. In total, I conducted six interviews with tenants (three at each case study site) and seven interviews with staff members (four with Foundation Communities and three with Green Doors). I conducted my research from January 2011 through April 2011. The gardens will continue to evolve and this is

⁹³ John W. Creswell, *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*, 2nd Edition (Thousand Oaks, California: Sage, 2007), p. 93.

only a snapshot into how they were managed and integrated into the agency's work at one point in time.

The two case studies involved in-person semi-structured interviews with tenants who participated in garden activities, administrators, case managers, property managers, and volunteer coordinators. I used a set of questions (located in the Appendix) that I developed for each sub-group within the case study (staff members and tenants/gardeners). Depending on the responses, I asked clarifying questions and additional questions to better understand the benefits and challenges of creating and maintaining the gardens.

The interviews with staff were focused on learning about the development of the gardens, tenant involvement, benefits to the agency, perceived benefits to the tenants, and the challenges of maintaining the spaces. These interviews typically lasted forty-five minutes to an hour and were primarily conducted in the offices of the staff person. The interviews with tenants were focused on learning more about the benefits of integrating gardens into housing from a tenant perspective, the level of participation, challenges with integrating gardens into housing, and changes they would like to see in the gardens. The tenant interviews lasted ten to twenty minutes and were conducted in their apartments, in the gardens, and in office space in the affordable housing developments.

Another component of the case studies involved collecting documentation about the agencies and the gardens. Documentation included videos, information on the organizations' websites, meeting fliers, photographs, a press release, thank you letters to volunteer groups, and sign-in sheets. These documents were compiled to gain a deeper

understanding of the gardens, the organizations' values, and the agencies' involvement in developing and supporting the gardens.

In addition to the two case studies, I conducted in-person semi-structured interviews with seven housing advocates and five local food advocates. As noted previously, the purpose was to ascertain what opportunities providers think exist to connect food production into affordable housing developments. Individuals that were interviewed were identified due to their involvement in local affordable housing and food advocacy efforts. For instance, individuals who were actively involved in area coalitions, such as the Austin Community Housing Development Organization (CHDO) Roundtable, the Real Estate Council of Austin, the Ending Community Homelessness Coalition (ECHO), the Sustainable Food Policy Board, and the Coalition of Austin Community Gardens, were identified as potential interviewees and were asked if they would be interested in being interviewed for this project. Interviewees were contacted initially through e-mail. I scheduled interview times with those who responded and the interviews took place in their offices, their homes, and local cafes. Similar to the case study interviews, I asked the interviewees a set of questions (located in the Appendix) related to affordable housing and/or local food and then asked them to identify opportunities and barriers, such as policies and regulations, which either support or hinder the integration of housing and food production.

Individuals who participated in the research project verbally consented to participating after having received a consent form that described the research. The interviews were conducted from February 2011 to April 2011 and all of them were

recorded with an audio recorder. I later transcribed the interviews and sent the transcripts to the interviewees for review. The interviews were coded using the software HyperRESEARCH, where I coded the text according to themes and patterns that emerged from the interviews. I used codes including the development of the gardens, how to sustain the spaces after the initial enthusiasm for the garden subsidies, benefits to the tenants, staff and tenant views of the space, and the philosophy of the organizations, which contributed to the creation of the gardens. I then further analyzed the data to determine overall opportunities, challenges, and potential interventions to expand on-site food production into affordable housing highlighting areas of similarity and points of divergence.

Chapter Four: Overview of Case Study Sites

FOUNDATION COMMUNITIES: HOUSING PLUS SERVICES

Foundation Communities is a nonprofit organization, which provides affordable housing to individuals and families in Austin and Dallas-Fort Worth, Texas. The organization's mission is to "create housing where families succeed" through a housing plus services provision model.⁹⁴ The staff and Board of Directors work towards fulfilling their mission by developing duplex and multifamily developments and by offering a host of services to assist tenants in becoming self-sufficient. Services include mental health services, case management, afterschool programs, summer youth programs, English as a Second Language (ESL) classes, computer classes, financial coaching, a matched savings program, and free tax preparation.⁹⁵ The goal is to provide on-site services to decrease transportation costs and other barriers with accessing services.

History

Foundation Communities was founded in 1990, although its formation began a decade before. Starting in the early 1980s, Francie Ferguson and other University of Texas at Austin students were involved in the Student Housing Cooperatives and collected funds to start the Austin Community Neighborhood Trust, which was a

⁹⁴ Foundation Communities, "Home," *Foundation Communities*, 2011, <http://www.foundcom.org> (accessed 2011-16-April).

⁹⁵ Ibid.

“housing program for low-income households.”⁹⁶ The group eventually began managing affordable housing units and later coordinated a retreat for city leaders to discuss and plan for affordable housing in Austin. In 1990, they devised a plan to acquire as many housing units as possible and incorporated as a non-profit organization. Since its founding, Foundation Communities has developed over 2,000 units of affordable housing and has evolved into an agency that provides more than just shelter.

Properties

Foundation Communities currently operates fourteen developments that house more than 2,000 families.⁹⁷ Their properties are located in Oak Hill, Austin, and Arlington, Texas. They offer a few different types of housing, including duplexes, multifamily developments with one, two and three bedroom apartments, and Single Room Occupancy (SRO) developments. The three SRO properties house 345 individuals, many of whom are formerly homeless. These properties offer services targeted to meeting the particular needs of this population. Foundation Communities has acquired three new properties that are in development, including the M Station in Central East Austin, Suburban Lodge in Southeast Austin, and Sierra Vista in South Austin.

Garden Terrace

Garden Terrace, which is located in South Austin, is one of three SROs that is managed by Foundation Communities. There are 103 units. Through a Department of

⁹⁶ Ibid.

⁹⁷ Ibid.

Housing and Urban Affairs (HUD) program, fifty of the units are dedicated for individuals directly transitioning out of homelessness, so these residents do not need to have any income when they move into these units. The rent for these particular units is one third of an individual's income. The rent for other units at Garden Terrace ranges from \$350 to \$435. Similar to other Foundation Communities' properties, they provide a range of services, including a computer lab, case management, home health attendants, and a food pantry. Three full time Residential Services staff members coordinate these services and programs for tenants. One of the staff members I interviewed mentioned, "There is real sense of community. . . We do lots of social events, at least one big dinner every month." Garden Terrace features an on-site community garden and it was one of the sites that I researched as part of my case study.

Sierra Ridge

Sierra Ridge is a multifamily development located in South Austin that has been managed by Foundation Communities since 1991. It is home to 149 households. It is the site of an active afterschool program and a pre-kindergarten program. This property was the site of an Edible Estates installation in 2008, through which artist Fritz Haeg created a vegetable garden for tenants to demonstrate edible landscaping.

Spring Terrace

Spring Terrace is a SRO development located in the St. John neighborhood in North Austin. There are 140 units and it is always 100% occupied, according to a staff

member. Rents range from \$365 to \$500. All of the units are dedicated to individuals who were formerly homeless. Staff members provide a range of services, including a food pantry, case management, and cooking classes, similar to what is offered at Garden Terrace. This site was selected to be part of my case study due to the difficulties staff encountered with creating a garden, which will be discussed in the following chapter.

Funding

Foundation Communities is well-positioned financially, with the bulk of its income coming from rental revenue. In 2011, Foundation Communities reported that 77% of its operating revenue comes from rent and other property income, 8% comes from earned property fees, and 15% comes from donations/ grants.⁹⁸ While the majority of funding is from rent revenue, Foundation Communities funds new developments through a variety of government funding sources, including the “Low-Income Housing Tax Credits, 501 (c)(3) bonds, City of Austin Affordable Housing Bonds, and grants from Federal Home Loan Banks and the Resolution Trust Corporation.”⁹⁹ Foundation Communities has also accessed funding through Multifamily Private Activity Bonds, Texas Department of Housing and Community Affairs bonds, City of Austin affordable housing programs, and NeighborWorks America. Similar to other nonprofit agencies, they also receive funding from individual donors, charitable foundations, and corporations.

⁹⁸ Foundation Communities, "Affordable Housing+Financial Stability, Creating housing where families succeed," *Handout* (Austin, Texas, 2011).

⁹⁹ Ibid.

Foundation Communities' Model

The Foundation Communities' website outlines elements of their business model which they've determined are unique among nonprofit housing providers, including Service Enriched Housing, their Business Model, and their Focus on Asset Building.¹⁰⁰ Many of the staff members I interviewed also spoke about these elements, which they viewed as critical to the success of the organization. These elements provided the foundation for the formation of on-site vegetable gardens in many of Foundation Communities' properties. The elements are discussed in detail below.

Service Enriched Housing

The organization believes that affordable housing alone will not end the cycle of poverty. Thus, they infuse their housing developments with an array of programs and services to meet the needs of their tenants. Many properties have Community Learning Centers and promote education and literacy through ESL classes and early childhood education.¹⁰¹ Also, at many of the properties, Foundation Communities has invested in providing on-site residential services, such as case management, counseling, and community referrals.

¹⁰⁰ Ibid.

¹⁰¹ Ibid.

Business Model

The website highlights they are among the area's top nonprofit organizations in terms of revenue and assets.¹⁰² Many of the staff members I interviewed attributed the success of the agency to the executive director, Walter Moreau, and his financial background. They stated that his leadership contributes to the agency being managed more like a business than a nonprofit entity.

Sustainability Focus

Foundation Communities is committed to investing in people and buildings over the long term.¹⁰³ They “believe in investing in what works best over the long haul.”¹⁰⁴ This undergirds all of their programming as they work with tenants to become self-sufficient. They acknowledge that it may cost more initially, but believe that it is the right thing to do.

Leader in Green Building

Besides being a leader in providing high quality affordable housing, Foundation Communities has served as a leader in building green affordable housing in Austin for the past decade.¹⁰⁵ They have incorporated green building features into their developments ranging from installing solar panels to replacing carpet with tile to having rainwater-harvesting systems on-site. They have participated in Austin Energy's Green Building

102 Ibid.

103 Ibid.

104 Ibid.

105 Ibid.

program and the Enterprise Foundation's Green Communities program. They have found that green building initiatives and improvements lead to reduced utility costs for tenants and reduced maintenance and upkeep costs over the long-term life of the building.¹⁰⁶ Staff members are constantly looking for ways to be more environmentally friendly, including "encouraging residents to help create 'edible estate' food gardens."¹⁰⁷ This enthusiasm and openness to on-site food production has resulted in six vegetables gardens being created at their properties.

Locally Grown

They pride themselves on being a local, homegrown organization that was founded by graduates of the University of Texas at Austin. They believe that "everyone in Austin should have a nice place to live they can afford near good jobs and schools."¹⁰⁸

Emphasis on Creating a Home for Tenants

The organization wants to provide more than shelter for low-income individuals and families. They want to create a place for residents where it feels like home and where is does not feel or look like affordable housing. In a recent newspaper article, the Foundation Communities' director is quoted as saying, "What sets us apart is that our

¹⁰⁶ Ibid.

¹⁰⁷ Foundation Communities, "Newsletter," *Foundation Communities*, Fall 2008, <http://www.foundcom.org/news-and-events/newsletter/> (accessed April 16, 2011).

¹⁰⁸ Foundation Communities, "Home," 2011.

properties don't look like affordable housing. They are very well-maintained and pass the "I would live here" test. We want people to be proud of where they live."¹⁰⁹

Focus on Asset-Building

In addition to providing housing, Foundation Communities offers low-income individuals and families a range of financial literacy services, including money management classes, matched savings accounts, free income tax preparation, and financial aid application assistance.¹¹⁰

Board Composition

A third of the Foundation Communities' Board of Directors membership is comprised of former or current affordable housing tenants.¹¹¹ This ensures that the recipients of the organization's services or others similarly situated have a voice in the development of the organization.

Outcome Measures

While the elements listed above focus on amenities and organizational philosophy, Foundation Communities also focuses on measurable outcomes and indicators, including occupancy rates, resident satisfaction rates, student's report cards, and turnover rates, to measure quantitatively how they are doing as an organization. For instance, the agency has annually measured resident satisfaction surveys, which includes

¹⁰⁹ Katie Hull, "Foundation Communities receives \$10 million for apartment renovations," *Community Impact Newspaper*, November 24, 2010.

¹¹⁰ Foundation Communities, "Home," 2011.

¹¹¹ Ibid.

a 1 to 5 scaling system with 5 being the best and 1 being the lowest. For the years the results are reported (2002-2007), the overall experience of those who responded ranged from 4.43 to 4.59. These measures give staff a tool for comparing services over multiple years and to target areas for improvement or expansion.

Awards

Foundation Communities has been recognized as a local and national leader in affordable housing development. They have won an array of awards including a Going Green Award by the Austin Business Journal, a National League of Cities award for Municipal Excellence, and a Metropolitan Life/ Enterprise Foundation National Award for Nonprofit Property and Asset Management. This suggests that entities across the country recognize their efforts to provide high quality affordable housing and services.

GREEN DOORS: BUILDING INDEPENDENCE, CREATING OPPORTUNITIES

Green Doors was founded in 1990, the same year that Foundation Communities was formed, by a formerly homeless woman.¹¹² The goal of the organization is to “return residents to self-sufficiency through stable housing, individualized case management and self-sufficiency programs.”¹¹³ The organization’s vision is that “One day, all Central Texas families and individuals will have the opportunity to live in affordable, safe, quality housing” and their mission is “to prevent and help end homelessness and poverty housing for those working to achieve independent living in

¹¹² Green Doors, *Home/ Building Independence, Creating Opportunities*, <http://www.austinhomesless.org> (accessed 2011-16-April).

¹¹³ Ibid

Central Texas.”¹¹⁴ The staff and board carry out their mission by “creating affordable, safe, quality housing; providing residents with access to supportive services; and educating about, and advocating for, individuals and families struggling with homelessness and at-risk for homelessness.”¹¹⁵ One of their staff members articulated their vision of what affordable housing should be by saying, “It should be as nice or nicer than my home. It should have amazing opportunity and have that quality of life.” This belief along with their values informed their decision to create a community garden at their recently opened development in Northeast Austin.

Green Doors’ Housing Programs

Green Doors organizes its work into five programmatic areas. They have a Veterans Transitional Housing Program, an Affordable Housing Program, and a Permanent Supportive Housing Program. Combined, these programs serve over 180 individuals each year in the thirty-six properties they own.¹¹⁶ Their properties, which are located in South Austin, Southeast Austin, Central East Austin, and Central Northeast Austin, include a mix of multifamily developments and scattered site single-family homes. Residents often do not pay more than 30% of their income on rent. Green Doors’ programs are targeted to veterans, single parent households, individuals with disabilities, and those at-risk of homelessness.¹¹⁷ Residents also have access to various supportive services such as case management, a food pantry, and a clothing closet. In

¹¹⁴ Ibid.

¹¹⁵ Ibid.

¹¹⁶ Ibid.

¹¹⁷ Ibid.

addition to the three housing programs, they manage a Homeless Prevention Program that provides basic needs, including food and clothes, and rental assistance. The goal is to assist households in staying housed. The last program area is their Opportunity Mapping Initiative. Begun as a partnership with the Kirwan Institute for Race and Ethnicity in 2006, the program is focused on the “nexus between housing and opportunity, and provides a comprehensive framework (via maps) for the organization and the broader community to understand how housing interacts with other important public policy issues, including public education, economic mobility, public health, environment, and neighborhood stability.”¹¹⁸

Pecan Springs Commons

Pecan Springs Commons is part of Green Doors’ Affordable Housing Program. Once both phases of the development are completed, it will include 116 units of affordable housing among eight buildings in a cul-de-sac in Central Northeast Austin. They decided to move forward with this project for several reasons. They wanted to preserve existing affordable housing, to “complement the Austin Police Department’s broader effort to clean up a part of the Pecan Springs neighborhood that has considerable urban blight (abandoned buildings, high drug activity, prostitution and other illegal activities)” and to provide quality, green affordable housing in an area that has a poor

¹¹⁸ Ibid.

quality housing stock.¹¹⁹ They envision that this project will serve as a “catalyst for reducing crime in the neighborhood and rebuilding community.”¹²⁰

They invested in outdoor amenities with the idea that it would help create a safer neighborhood.¹²¹ For example, Green Doors has installed picnic tables, a barbecue pit, benches, community gardens, a food forest, and fruit trees. They are also creating an indoor community space with a computer lab and library. They hope these actions will engage the tenants and the neighbors and that these efforts will lead the “residents to take ownership of the block to create a more sustainable, vibrant community.”¹²²

Green Doors has partnered with the neighborhood association and the police department to revitalize the block. In their Fall 2010 newsletter, they reported that these efforts have already resulted in positive changes. There has been a “58% decrease in crime” and six drug houses that were operating in the area have closed since the redevelopment of the property began.¹²³

Economic Philosophy

Their housing programs are rooted in the belief that providing housing for homeless individuals and families makes financial sense. On their website, they highlight the financial costs involved with the provision of emergency shelter and health care for homeless individuals. Their belief is that providing housing and employment are cheaper

119 Green Doors, "Green Doors Newsletter Archive," *Green Doors*, Summer 2009, <http://www.austinhomesless.org/about/newsletters.php> (accessed April 21, 2011).

120 Green Doors, "Green Doors Newsletter Archive," *Green Doors*, Fall 2010, <http://www.austinhomesless.org/about/newsletters.php> (accessed April 21, 2011).

121 Ibid.

122 HousingWorks Austin, 2009 "*There's No Place Like Home*" Tour (Austin, Texas, 2009), p. 8.

123 Green Doors, "Green Doors Newsletter Archive," Fall 2010.

than the existing way of responding to homelessness and that individuals who have adequate housing “contribute positively to their community and the local economy.”¹²⁴

Environmental Leadership

Similar to Foundation Communities, Green Doors’ has demonstrated a commitment to green building practices. Two of their recently opened developments, Pecan Springs Commons and Glen Oaks Corner, have been recognized for their green features. At the Pecan Springs Commons property, they incorporated energy efficient appliances, low-flow water fixtures, low-VOC paints, and formaldehyde free insulation.¹²⁵ The City of Austin’s Green Building Program has also recognized these efforts and the buildings have been awarded four-star energy efficiency ratings.¹²⁶ They have also used permaculture concepts in the design of the landscape, which includes using native, drought tolerant plants. At their other property, Glenn Oaks Corner, they “received a five-star green rating for their energy efficiency and green building practices”¹²⁷

Awards

Green Doors received national recognition by MetLife. They were awarded the Community-Police Awards for Neighborhood Revitalization for their efforts to rehabilitate and revitalize Pecan Springs Commons. They were also awarded the

¹²⁴ Ibid.

¹²⁵ Enterprise Green Communities, *Offset Fund Developments*, 2011, http://www.greencommunitiesonline.org/green/offest/offest_fund_developments.asp (accessed April 21, 2011).

¹²⁶ Green Doors, "Green Doors Newsletter Archive," *Green Doors*, Fall 2010.

¹²⁷ Enterprise Green Communities, *Offset Fund Developments*, 2011.

Greenlights for Nonprofit Success' Collaboration award in 2010. Their collaborators included the Austin Community Design and Development Center, Sustainable Food Center, the City of Austin, the Austin Police Department, and Enterprise Foundation.

Chapter Five: Analysis of Case Studies

GARDEN DEVELOPMENT AND VARYING PHILOSOPHIES ON MANAGING THE SPACES

The development of how the gardens started is considerably different in the two case studies. There are also differences with how the agencies view the gardens and the staff's roles. At Foundation Communities, one administrator said the gardens usually come after the building. While it is part of the schematic design, it is not necessarily something that they put into the budget. Green Doors took a different approach by incorporating it into their ongoing planning efforts and they sought funding from several sources to create the garden. Funding for the creation and maintenance of gardens is a challenge and will be discussed later in this chapter.

The Initial Transformation from Underutilized Space to Food Production

The interviews plus photographs and videos from the initial development of the on-site food gardens show large participation rates in both case studies. At Foundation Communities' Sierra Ridge garden, over seventy volunteers transformed the space from a lawn into the Edible Estate. Similarly, at Green Doors' Pecan Springs Commons, they organized volunteer workdays with the Real Estate Council of Austin (RECA) and C3 Presents. Over seventy-five members and employees of these organizations volunteered and they did the majority of the physical improvements to the landscape, such as moving dirt, removing concrete, adding compost to the raised beds, installing sod, and planting trees. Tenants at Green Doors and Foundation Communities worked alongside the

volunteers to transform the spaces from underutilized spaces to vegetable gardens. These major volunteer efforts contributed to the significant transformation of underutilized spaces into places for on-site food production.

The Development of Foundation Communities' Gardens

The Garden Terrace Garden

The gardens at Foundation Communities' Garden Terrace existed before the current staff members started. The garden has a mix of in-ground and raised garden beds and a few compost piles. One individual who I interviewed noted that the garden was well underway and probably was started by tenants or an AmeriCorps member when the property opened in 2003. Since the current staff members were not working at this site when it started, it seems like they have less control over how the space has continued to evolve. For example, the gardeners have continued to expand the gardens without coordinating with staff so the staff will be caught off-guard when they go out to the garden and there are several more holes dug by the tenants for future garden beds. According to the staff member, one gardener responded that he did not know he could not dig more holes. This lack of clarification of who controls or manages the space has created some problems. While staff does not have time to be actively involved in the garden, they also realize that they need to have some boundaries for the tenants to work within. Otherwise, the garden is going to expand in ways that the staff may not view as appropriate. At this point though, staff members, including the maintenance staff,

residential services, and property management, take a hands-off approach and only tend to problems that arise in the garden, such as conflicts between gardeners.

Currently, there are three tenants who are actively involved in the Garden Terrace garden. The staff member noted that at a few years ago there were more tenants who were gardening and it is unclear why fewer individuals are participating in it now. The staff member and gardener at the site mentioned that there are personality conflicts between the gardeners and that all of the current gardeners are highly skilled gardeners. These factors may contribute to fewer people getting involved in the garden because they may be intimidated by the gardeners. They had garden meetings in 2009 but since then, there have not been any garden meetings or workdays.

Sierra Ridge Garden

The development of the Foundation Communities' Sierra Ridge garden was significantly different from the Foundation Communities' Garden Terrace development. The San Francisco-based artist Fritz Haeg wanted to create an Edible Estate in a multifamily development in Austin and he put out a call to Austinites to find an interested building owner who would be willing to collaborate with him to install a garden. He wanted to find someone who was excited about the project, had some gardening knowledge, and was willing to document their progress.¹²⁸ In return for their efforts, he would cover the costs of installation. Foundation Communities expressed interest in the

¹²⁸ Arthouse at the Jones Center, "Call for Garden, Next Edible Estate: Austin, TX."

project for their Sierra Ridge property because the manager supported the idea. They were chosen to be the host site.

The project entailed converting the front lawn of Sierra Ridge into a garden or what the artist calls an Edible Estate. The idea of the project is to take an underutilized space, like a front lawn, and convert it into a “highly productive edible landscape.”¹²⁹ In a press release, Haeg stated:

‘Part of the reason for selecting Sierra Ridge for the site of the next Edible Estate prototype garden is that it is managed by the progressive non-profit organization Foundation Communities. This will insure there will be adequate support for the garden once it is planted, with a thoughtful group of people developing ways for the garden to be woven into the daily lives of the residents. The hope is this garden will serve as a model for other similarly scaled apartment complexes, providing pleasure gardens for people to grow their own food, connecting them to the land in a way that isn’t available for most apartment dwellers.’¹³⁰

The staff distributed fliers to let residents know about the project and to engage them in the process of developing the site. One of the fliers stated, “Find out how you can save money and grow your own vegetables ALL FOR FREE!”¹³¹ They had meetings starting in January 2008 and the transformation of the space took place over one weekend in March 2008. Tenants of all ages came out to help. According to the staff member, it was a great event because many inner-city youth are not aware of where vegetables come from and for her, it was a way to expose them to something new and to give them responsibility. When the garden started, there were sixteen families who

129 Fritz Haeg, Will Allen et al., *Edible Estates, Attack on the Front Lawn, A Project by Fritz Haeg*, 2nd Edition (New York, New York: Metropolis Books, 2010), p. 22.

130 Arthouse at the Jones Center, "Arthouse at the Jones Center and Foundation Communities join efforts to present Edible Estates Regional Prototype Garden #5" (2008).

131 Sierra Ridge, "Come Learn About Our Community Gardening Project" (2008).

signed up to be part of the garden. In recent years, participation has declined and there are between two and eight tenants who currently participate in it.

Spring Terrace's Efforts to Create a Garden

A staff member at Spring Terrace attempted to start a garden but encountered several challenges revolving around compliance with the Americans with Disabilities Act (ADA) and financial challenges. Due to these issues, which will be discussed in the challenges section of this chapter, the staff member was not able to move forward with this project. Instead, she has scaled back the plans for the garden and she is working to develop a container garden in the front of the property. She mentioned that she will seek assistance from one of the tenants who has expressed interest in gardening and she said that she would seek donations from area businesses to help with the initial start-up costs. She said, “We’re going to have to learn to be creative until we have enough money to do it.”

The Development of Green Doors' Gardens

Green Doors developed their gardens in a few ways and they have had different outcomes. At their Veterans House, they partnered with Citizen Gardener, which teaches community members how to grow their own food. The students in the Citizen Gardener class built the raised beds for the tenants. This method combined with the transitional nature of the housing program did not result in an active group of tenants that cared for the garden. One staff member noted that it might be converted into a flowerbed since the

current tenants are not interested in vegetable gardening. On the other hand, they have taken a different approach with the Pecan Springs Commons garden and food forest. For the purpose of this project, the Pecan Springs Commons garden was the main focus.

To determine what amenities or features the community preferred to have in the Pecan Springs Commons development, Green Doors' staff members met with a few of the surrounding neighborhood associations and learned that landscaping was a priority. One association even has a Yard of the Month Program. To foster the relationship with neighbors and gain support for their project, the staff of Green Doors promised that they would pay close attention to the development's outside amenities. According to staff, the relationship with the surrounding community continues to be developed as neighbors have come out to help with the landscaping and gardening efforts. One staff member said she feels like the garden unified the broader neighborhood with their tenants.

Another aspect of the development of the Pecan Springs Commons garden that is unique is that staff conducted a survey to assess the interest level in gardens, public art, and other public space improvements and to determine how they should prioritize the improvements. They found that while most residents had never gardened before and that they did not have access to fresh vegetables, there was interest in gardening. Informed by the survey results, Green Doors decided to invest in an on-site food garden. This led to meetings with Sustainable Food Center and grant applications.

As Green Doors' staff have developed the space with the hope that the tenants will eventually take a lead role in maintaining it, they have tried to make the space inclusive so that whoever wants to participate in it can. Two of the three Green Doors

staff spoke of their efforts to be inclusive. For instance, one staff person mentioned that as community gardening is becoming popular, it can sometimes make people feel like they need to know a lot about gardening. She said that community gardens are a place where people can develop and learn from each other. She stated that her goal at the Pecan Springs Commons garden was to make it as open and accessible as possible.

Another aspect of inclusivity is that the administrator ensured that the garden is handicapped accessible. She stated she wanted all of their residents to be able to garden independently. They invested in raised beds, increased the height of the hose bibs, created an accessible path to the gardens and shed, and made other modifications. While she acknowledged that a significant amount of time and money, between \$40,000 and \$50,000, went into creating the garden, landscaping, and all of the other outdoor amenities, she wanted to ensure everyone had an opportunity to use the space. She estimated that the cost of each garden bed, excluding the paths and other infrastructure costs, was \$250. Currently, there are between six and fifteen individuals who participate in the garden.

BENEFITS OF INTEGRATING ON-SITE FOOD PRODUCTION

The benefits of integrating vegetable gardens into affordable housing developments may be difficult to measure. As one Green Doors staff member said, “I think so many of the benefits are a bit intangible but they are really obvious to the people that experience them.” Other staff members from Green Doors and Foundation Communities held a similar view. While it may be a challenge to quantify the benefits,

below are some of the benefits of on-site food production to the agencies that the staff members identified and the benefits to the tenants that the tenants identified.

Benefits to the Agency

While the staff members spoke in detail about how they perceive the gardens benefit the tenants, articulating how it benefits the organization and the community was a little less clear. Nonetheless, the staff mentioned how the gardens serve a way to connect the development to the larger community. They also mentioned how the garden has helped the organization engage the tenants in their programs and this has contributed to the tenants successfully staying housed. Lastly, the garden projects can reflect positively on the agency's reputation. Because of their efforts to incorporate food production in their developments, they may be seen by other affordable housing developers as being innovators and leaders in the field.

Community Connection

According to staff and tenants at both organizations, the gardens have positively impacted the neighboring community. At the installation of the Sierra Ridge garden, the neighbors got involved with building the garden. The staff member remarked how nice it was to have them helping out the residents. This connection continues. She mentioned that neighbors have helped out with the garden when needed.

Similarly, the neighbors around the Green Doors' garden volunteered to help with building the garden. One staff member said that she would like to have other community

members involved in the garden but she first wanted to ensure the tenants were engaged in the garden's activities first before opening it up to the larger community. One Green Doors' gardener spoke about the potential impact of the garden on the community. He said, "One good thing about it is that other people that come into this community to visit will see the gardens and will see everybody's commitment to it and that will start a social thing, hopefully outside of this community, and start other communities."

One Green Doors staff member has recognized that one of the benefits for the property is a creating a greater sense of community and this benefits the tenants and the neighborhood in general. She mentioned that she is:

seeing the community come together, seeing people that didn't know each other that live next door now saying 'Hey, I'm going to the soup kitchen down the street. Do you want to walk with me?', seeing them nurture friendships and just being a neighborhood watch, that's been the success that I can't really measure.

Another Green Doors staff person mentioned the safety aspect as well. She said, "Having a community garden and having a strong community support network is in fact going to make the neighborhood safer." She also noted that the garden gets tenants outside and that this builds neighborhood security in an area that has historically been crime-ridden. Increasing safety impacts not just the Green Doors' tenants but also the surrounding community.

Engaging Tenants and Residential Retention

At one of the Foundation Communities' sites, a staff member said that the garden has been a good model. She says it is good for tenants to see other tenants being active

and productive. At another property that does not currently have a garden, the staff member mentioned that the garden could be used as a community-building tool. The agency would benefit from the interaction between the employees and the tenants.

All of the Green Doors' staff members I interviewed (three of three) mentioned how the Pecan Springs Commons garden has engaged tenants and that the tenants are enthusiastic about getting involved in it. One staff member mentioned how she views this garden as a success because she has seen tenants blossom and they have great pride in the space. Another staff member mentioned how the garden helps build a sense of community in the development and that in turn results in high tenant satisfaction. She went on to say, "It is always a benefit to us when our tenants are happy and when they are successful."

The tenants' enthusiasm for the garden and the organization has contributed to residential stability. According to one staff member, none of the tenants who have been involved in the garden have moved out since it opened. Even though the tenants are renting, she said that the garden has helped them feel like it is their home. High retention and satisfaction rates save the organization money and time and this also reflects positively on the organization.

Model for Other Affordable Housing Developers

One of the Foundation Communities' staff members remarked that they are the first large-scale affordable housing developer in Austin that has incorporated gardens into their developments. This can possibly lead to other affordable housing developers

adopting similar practices. This would then increase the amount of affordable housing developments with on-site food production. None of the other staff members (seven) mentioned this as a benefit.

Benefits to Tenants

Growing and Sharing Food

Most of the affordable housing staff members (five out of seven) mentioned that there is limited fresh food available through their food pantries and other emergency food sources. Most of what is distributed is canned or frozen. The gardens are a way to provide increased access to fresh food.

The gardeners are growing a variety of produce including potatoes, corn, squash, onions, kale, chard, peppers, broccoli, figs, cucumbers, tomatoes, peaches, pomegranates, strawberries, carrots, and watermelon; however, the amount of food they are producing and/or sharing at any given time is unclear. One staff member from Foundation Communities commented, “The garden yields not a whole lot of things that they share.”

While the level of production may not be extremely high or they may not be sharing much of their harvest, five of the six gardeners I interviewed mentioned that having access to fresh food is a benefit of the garden. One mentioned that the garden is economical. Three of the six gardeners mentioned about how easy it is to pick herbs, such as oregano or cilantro, or other produce from the garden instead of having to go to the grocery store. For instance, one Foundation Communities gardener stated:

Yes, two years ago, the first time I planted it, I got a lot of corn. That is what I like the most because it's not the same as when you buy it at the store, which is also fresh. If you tried one that I grew here, I gave some to the apartment manager, and she also said that it was really good. The taste is very different than what they sell in HEB.

[Si. Hace dos años, la primera vez que sembré, dio muchos elotes. Eso es lo que más me gusta porque no es igual como cuando uno compra en la tienda, que también es fresco, pero si usted probara uno de lo que sembré aquí, yo le di a la manager de los departamentos, este ella también dijo que si estaba muy bueno. Es diferente el sabor a lo que venden en HEB.].

The only gardener who did not identify food as a benefit of gardening had an unproductive growing season where all of her vegetables were destroyed and she also stated that she eats healthy, whether or not she is gardening.

The benefit of having access to fresh food is definitely in line with the agencies' ideas underlying the development of the gardens. At Sierra Ridge, the concept was to create a highly edible landscape and it is currently producing a variety of fresh goods, including corn, squash, and sage. For Green Doors' staff members, one of the goals of the gardening project is to provide tenants with fresh produce. One staff member stated that many residents cannot afford pomegranates, avocados, nuts, and other produce, so the garden is a way to provide tenants with access to a variety of fruits and vegetables. Another staff member said the administrators "want our residents to experience bounty because that's probably something that they have not experienced often."

Another benefit of the gardens is that other tenants and community members reap the benefits of what the gardeners are producing. Five of the six gardeners I interviewed mentioned that they have shared their harvest with others. Two of the Foundation Communities' gardeners mentioned sharing their produce with others, including tenants

and staff members. For example, at Garden Terrace, one gardener mentioned that he shares his harvest with a friend who has helped him out in the past. At Sierra Ridge, one gardener mentioned that once in awhile tenants contact her to see if she will share the produce with them, though at other times, they harvest the produce without asking. This particular gardener did not state that this was problematic, but one staff member did report that this was an issue and that it could be disappointing to the gardeners.

At Green Doors, tenants mentioned sharing their produce similar to what the Foundation Communities' tenants said. A Green Doors gardener stated, "That's the way it's supposed to be. Whatever I planted back here, I don't want to say 'well, that's mine.' I want to share." Another Green Doors' tenant said:

The way that it helps me is to be able to grow something and have something and share that something with someone else. It turns into a sharing process . . . I would use some of the stuff and make things in the house and then I'd share it with some of the other individuals.

This same gardener spoke about how neighbors who live in properties not managed by Green Doors have come by the garden and asked him if they can harvest some of the vegetables. His perspective is that the produce is free for all to harvest and that they have a right to access it. This scenario creates positive dialogue between the neighbors and the Green Doors' tenants and potentially helps create a stronger sense of community. Another tenant also spoke about the community aspect of the garden. She said, "I really wanted to be involved because I felt like this was where I was going to be living and the community is getting together, why not be involved."

A Place to Pursue a Hobby

The three Foundation Communities' gardeners and one of the Green Doors' gardeners have been gardening for some time. As soon as they moved into the development or when the garden was created, they all started gardening. For them, the benefit is that they like gardening and having access to an on-site garden has given them an opportunity to do what they enjoy right where they live. One gardener said he appreciates the garden's accessibility because it is so close to his house. He went on to say, "If I wasn't doing it [gardening] here, I would be doing it somewhere else."

Two of the other gardeners mentioned how gardening connected them to where they grew up. One Foundation Communities' gardener stated: "I just always liked it. Cause I was raised in a really small town and we always had a garden in Oklahoma and then when we moved to Arkansas, we had bigger gardens."

Another Foundation Communities' gardener spoke about how growing food connects her to her home country and family. She stated:

I'm from Guatemala and my father is in agriculture, and it comes from there. Since one misses their own country and misses all of the things that grow there, that's why I like to garden. . . To see the plants reminds me of my country and it fills me with joy.

[Bueno, yo soy de Guatemala y mi papa es agricultor, y pues, viene de allá y yo digo, como uno extraña a su país, y extraña todas cosas que se dan allá, por eso es mi intención sembrar.]_

Other Benefits

Similar to previous research on the benefits of community gardens, tenants mentioned a variety of other benefits besides food production. Two of the three

Foundation Communities' gardeners mentioned exercise as a benefit while one of the Green Doors' gardeners mentioned it. One said he enjoys gardening because of the "fresh air, sunshine, exercise, a chance to make a positive contribution . . . it's a sense of community and I do get that out of it."

Two of the six gardeners mentioned that it gives them something to do. One of the six gardeners mentioned that the garden provides him much satisfaction because he is able to see the progress he has made in making the space look nicer. Another gardener (one of six) mentioned that he likes gardening because of the connection to nature. This tenant also mentioned that there are nutritional and health benefits of the garden because he knows there are no pesticides used on the food.

CHALLENGES OF SUSTAINING THE GARDENS

Tenant Involvement and Management Concerns

Challenges that were identified by the tenants and staff were slightly different in each case. Each agency's staff remarked about the ongoing evolution of the gardens and how best to manage the space. According to three of the four Foundation Communities staff members I interviewed, many of the challenges of creating and maintaining the gardens revolve around the inability to control the growth, the management of the space, and ongoing maintenance concerns. The two Foundation Communities' staff members that I interviewed who oversee the on-site gardens mentioned that they would like to see more tenants involved in their gardens while the other two staff members, who do not directly manage gardens, did not mention this as a challenge.

One staff person stated that they needed to maintain a certain curb appeal, especially in their multifamily complexes. Another staff member who remarked that their garden does not look bad but that it has the look of an organic garden reinforced this concern. Some staff members pointed to opposition from neighborhood associations regarding developing affordable housing. One staff member mentioned that there is a big push against this type of housing because people do not understand it and do not want it in their neighborhood. Thus, the organization places a priority on maintaining a certain appearance to help dispel myths that affordable housing does not look as good as other housing types.

Maintenance and participation often are connected. If there is a lack of participation, maintenance issues can arise. According to a staff member, one of the challenges at Garden Terrace is that they have had several tenants who get a plot and then later abandon it. The Sierra Ridge garden has also had similar challenges according to a staff member and a tenant. A person will initially express interest but then they lose interest. Abandoned plots or untended areas negatively impact the garden's appearance.

The administrator at Sierra Ridge considered expanding the garden to make it more enticing and to improve the appearance of the space. She felt this could be a mechanism to increase participation but later decided against it. She reasoned, "But if I'm not seeing more resident participation, there's no need for me to expand it . . . it's got to be their participation."

To increase and sustain participation and help clarify the garden's growth, the staff member from Garden Terrace said, "I think that would go a long way to help, if the

plots were standardized, more the same size. I think right now nobody is really clear, how big, how small, where, and there is a lot of space right now.” She went on to say that she feels like more organizational structure and financial resources would help resolve some of these challenges.

Since the Green Doors’ garden and food forest is newer than the Foundation Communities’ gardens, there is a higher level of participation and maintenance is not as much of a concern given its newness. One staff and one tenant mentioned some issues that have arisen with maintenance that have since been resolved. According to one staff person, their maintenance team does not like it because it often creates more work for them. Related, one Green Doors’ gardener said:

The maintenance guy wanted to spray chemicals back there [the food forest], weed killer. That’s the other thing. I know how [the staff person] is about being green. She got me more conscious about the being green part. I didn’t want to chemicals back there. You’re going to eat that fruit and if there is chemical back there, there is chemical in the fruit.

Another staff person alluded to potential challenges that could arise. She noted that it has been easy to manage since they don’t have too many plots. She went on to say that things could be less manageable if they had more plots than what the tenants could take care of. This points to the need to have the space scaled to the needs and abilities of the gardeners. Another staff member noted that a challenge for the organization is the possibility of losing control of the garden’s direction since they envision it to be a community managed space. While this is not an issue currently, it could potentially be a problem in the future as the gardening group further develops.

Some of the gardeners at Green Doors and Foundation Communities spoke of the lack of involvement in a similar way that staff spoke about the issue. All of the Foundation Communities' gardeners (three of three) talked about ways to get more involvement because they have two or three tenants actively involved per garden and they would like to see more of their fellow tenants involved. One mentioned how she'd like to see more people gardening and more plants growing but that some people lose interest in it quickly. A Green Doors' gardener also expressed similar frustrations and he said he would like to have more people involved. In particular, he would like other tenants to help out on a more regular basis in community areas, not just during the monthly workdays.

Another concern mentioned by two of the three Foundation Communities' tenants was problems with their vegetables not growing well. Both talked about children playing in the garden and stepping on the plants so the plants died or did not grow very well. This is a challenge since the garden is in a public space and it is designed to be open and accessible to everyone. In response to my question as to what could be done to resolve this issue, both gardeners suggested building a fence around the garden to prevent children from playing in the garden unsupervised. Both also talked about expanding the garden. In particular, one of the two gardeners suggested that the garden should be in a place with more sun. One of the gardeners whom I interviewed ultimately withdrew from the gardening group due to these maintenance and structural challenges.

Staffing and Financial Challenges to Creating and Sustaining Gardens

Other challenges that were mentioned in both cases were staffing and the costs associated with supporting the garden. While staff interviewed from both organizations brought up both issues, the two cases approached these challenges differently. Three of the four Foundation Communities' staff members identified that they have limited time and are unable to dedicate time to managing and/or finding more resources for the garden. The Foundation Communities' staff members that manage the gardens (two of the four staff members interviewed) stated that the staff spend two to twelve hours per month on the garden. Due to limited time and a desire for the group to be self-managed, one Foundation Communities staff member said:

We try to stay out of it and let them self govern . . . The sort of conundrum is: If we're putting money into it, then we have to sort of control the resources. That takes a huge amount of time and effort. So, therefore, we don't put any money in it, so therefore, they don't have any resources. So, it's just kind of like this circular thing.

Plus, she mentioned that if she were to get more involved, she would spend twenty hours a week mediating the disagreements between the two gardeners who do not get along. Another staff member said, "I can't make it [the garden] my main priority. I'm doing a gazillion things." As a result of these constraints and the need to prioritize other job functions, there is not a concerted effort to obtain money or resources to support the gardens.

Like Foundations Communities' staff, all of the Green Doors' staff members mentioned that dedicating time to the garden and prioritizing it have been a challenge.

One of the three staff members noted that making the time to attend workdays on the weekend has been a struggle for her. Another staff member remarked:

Sometimes the crises that occur as an organization, they divert the resources from the garden, which now is becoming self-sustaining, so it's not a problem, but it [the garden] got delayed for at least six months just because we needed to get roofs over people's heads before we worried about a garden. One of the challenges was sometimes keeping it prioritized in the grand scheme of [things].

The amount of time each staff member spent on working on the garden project depended on the phase of the garden's development. The administrator estimated that it required fifty hours of staff time per month in the start up phase. Since the garden has been installed, the staff members said that they devote between two and eight hours a month on the garden. Plus, one of the staff members said that the maintenance team spends one day a month tending to the garden.

While time may be an issue, the Green Doors administrator I interviewed wants staff to remain involved in the garden. The goal is to decrease the level of involvement as the garden group becomes self-sufficient. The administrator explained that having a dedicated staff person to oversee the gardens and who likes gardening is important to the success of the garden. She said, "Carefully identifying who you have lead it is probably the best advice and making sure they like dirt and plants and ideally they garden themselves."

For Green Doors, staff involvement in the garden serves a dual purpose. First, the garden serves as a way for staff to connect with tenants. One staff member noted, "they'd always talked to me about it and it's a conversation piece... It was definitely

something that they were able to talk to us about and talk to the neighbors about.” Second, the garden serves as a break for staff members who deal with very difficult and serious issues on a daily basis. The administrator pointed out that the regular job duties of a case manager are stressful so the gardening work has been something positive for the staff members to get involved in.

Besides staffing challenges, the cost of building and supporting a garden can be a significant burden for affordable housing providers. All of the Foundation Communities staff members I interviewed (four of four) noted that funding a garden can be a significant challenge. The cost varies depending on the scale and features of the garden. One staff member said it costs about \$800 to install a garden, which covers basic garden supplies including soil and mulch. However, the costs can be much higher. At Garden Terrace, the garden was found not be in compliance with American with Disabilities Act (ADA) during a state audit and they were required to resolve this issue. It cost over \$3,000 to install the ADA accessible path from the complex to the garden. Another Foundation Communities staff person noted that they are unable to create a garden despite tenant and staff interest due to the high costs of creating an accessible path to the garden and between the garden beds. She estimated that it would cost up to \$6,000 to build a garden, including the paths, and they did not have enough money in their budget to cover this cost.

In addition to the initial infrastructure costs, such as raised beds, water access, and paths, one of the four Foundation Communities’ staff members I interviewed mentioned that ongoing funding has been an issue. She said that they budget a few hundred dollars a

year to help supply the garden with needed resources, such as mulch and compost. This property supplements the organization's contribution with in-kind donations, such as tools and seeds. At Sierra Ridge, the staff member mentioned that they cover the cost hand tools and a palette of mulch each year, which is around \$475 to \$575. Since the garden opened, the staff manager said that they have not received any donations. The tenants are responsible for covering the cost of seeds, transplants, and other gardening supplies.

While all four Foundation Communities staff members I interviewed mentioned the financial challenges of installing and maintaining gardens, only one of the three Green Doors staff mentioned it as a challenge. This may be due to the fact that the Green Doors' garden was incorporated into the site plan and they were able to financially plan for the cost of the garden, including the ADA accessible paths and raised beds for individuals who use wheelchairs. While the costs were high, finances did not impede the development of it. By planning for the garden in the initial stages of the site development, staff were able to raise the necessary resources to fund the essential infrastructure in the garden, including water access, wheelchair accessible beds, and wheelchair accessible paths.

Green Doors received funds from a few different sources, which helped offset the high cost of installing the garden. The funding also helped assist with community building and leadership development activities. They received funding from Sustainable Food Center and a capacity building grant from the OneStar Foundation, a state agency dedicated to supporting nonprofits, to create the garden. With the foundation's funding,

they purchased seeds, plants, benches, tables, lighting, barbecue pits, gardening and food related books for their community library, and furniture for their community room. The grant also allowed them to use the funds for food at garden meetings. According to one staff member, having food at the meetings helped create a welcoming, pleasant space for the gardeners. She went on to say that having the funding made organizing the group easier since she had the freedom to purchase the needed supplies to support the group. She noted that she did not need to devote staff time to solicit donations for garden materials and food. Instead, she could focus on developing the garden group.

BUILDING CAPACITY: GARDENING EDUCATION, ACTIVITIES, AND PARTNERSHIPS

Educating Tenants and Staff about Gardening

Three of the seven staff members interviewed spoke about how the gardens are a place to teach adults and youth about the environment. One staff member at Green Doors mentioned how they would like to educate youth about the properties' green features while another staff member would like for residents, especially youth, to start growing their vegetables from seed so they can see how the growing process works. A staff member at Sierra Ridge stated that their pre-kindergarten class gardens occasionally. She said that it is important to teach young people about the environment, including how vegetables grow. Another idea that was mentioned by a Green Doors staff member is to include more native plants and pollinator plants to teach tenants more about nature.

Some of the staff (four of seven) and tenants (two of six) spoke about or alluded to the need for gardening education. One staff person from Foundation Communities

mentioned that a best practice might be to offer instructional gardening classes or workshops. For some of their environmental workshops, Foundation Communities offers incentives to attendees and this concept could be adopted for gardening oriented classes and workshops. Two of the three Green Doors' gardeners mentioned that they needed help with knowing about the plants, such as when to plant things, which ones are edible, and when the vegetables are ready to be harvested.

While most of the Green Doors gardeners I interviewed (two of three) expressed wanting to gain more knowledge about gardening, the three Foundation Communities' gardeners I interviewed have been gardening for years and did not state that they need gardening education. One of the Foundation Communities' staff members remarked that the "level of skill out there right now is through the roof, so, if I didn't know anything about gardening, I'd be intimidated."

This points to an opportunity since some of the existing, more experienced gardeners may be able to mentor other tenants or they could provide a gardening training for tenants. The experienced gardeners also identified that their fellow tenants may benefit from gardening classes. One stated that some of the tenants do not know how to grow certain things they plant and that others get easily discouraged. Even if the tenants who are most involved in the garden do not need basic gardening classes, other tenants may benefit from gardening education classes and this may even help sustain participation since they would learn what to plant at what time and what to expect.

In addition to structured gardening classes, there is informal peer-to-peer education. A Green Doors' staff member mentioned the hands-on nature of gardening

and stated that as the tenants work together, they can have conversations about gardening and ask each other how to do certain things. One of the Green Doors' tenants mentioned he had gardened previously but that he was learning a lot from one gardener in particular. Another Green Doors' gardener shares a garden plot with another tenant. She said that she learns about gardening and how to do things when she is gardening with others.

Another education related need expressed by one of the Green Doors' staff members is for tenants to know what to do with the produce they are growing. One way that they have addressed this issue is by featuring a vegetable they are growing and showing them ways to prepare it at garden meetings. Similarly, a Sierra Ridge gardener and a Garden Terrace administrator mentioned the idea of having a potluck or showcasing what the gardeners are producing. Using the harvest to highlight what is being grown and ways to cook it are opportunities to educate the tenants in a fun, hands-on way.

Tenants are not the only ones who benefit from education and training. At Green Doors, one staff member explained that she participated in Bank of America's Neighborhood Builders Program, which provided leadership training and operational support. The training introduced her to a host of agencies that were focused on community development and reducing crime in neighborhoods throughout the United States and Canada. She learned how programs tapped into the assets of individuals within the community to build a stronger sense of community and she learned about housing programs that integrated gardens into their developments. This exposure to best practices fueled her desire to create a garden for community development and food

production purposes in their next development. She viewed gardens and planting trees as a way to develop and grow the community.

Creating a Vibrant Community Space and Opportunities for Expansion

Tenants and staff members from both agencies spoke about ways to expand the scope of the gardens and to program them with more community-based activities. One tactic could be to provide fun, engaging activities where tenants want to remain involved. For example, one Green Doors' tenant said that the staff member "makes it so much fun that you can't say no."

As mentioned previously, one Foundation Communities' tenant and one of the staff members mentioned having a potluck where gardeners could feature what they are growing. This could be a way to highlight the gardeners' work and to outreach to other tenants to see if any are interested in getting involved in the garden. The tenant also mentioned having a garden club where the gardeners could meet and share ideas. Similar to these ideas, a Green Doors' staff member mentioned having cooking get-togethers, such as pizza parties, where tenants could cook a meal together in the community kitchen using ingredients from the garden.

Three staff members (one from Foundation Communities and two from Green Doors) mentioned partnering the gardens with their food pantries. One Foundation Communities staff member noted, "We tried at first to have their produce incorporated into our food pantry days but it was too inconsistent and it did not really work out." A Green Doors' staff member mentioned that some of the gardeners are donating some of

their produce to the food pantry. She mentioned that one of the tenants told her, “‘I depended on that food pantry to eat’ and he’s like ‘I don’t have money to go buy groceries and donate to the food pantry, but I can put some sweat equity in and take and feed people that also need food.’” She went on to say that she feels like their connection to the garden and sharing it with the food bank has increased their self-esteem and self-worth.

As some of the staff and tenants have suggested, increasing connections between the gardeners and the agencies’ programs may be a good way to give the gardeners a more active role in the property and showcase their talents. While the garden and food bank coordination did not work out the first time at one of the sites, there may be new opportunities or ways to work with the gardeners to create new avenues for sharing, either through the food pantries or some other venue.

Partnerships as a Way to Expand Organizational Capacity

To provide gardening education activities and to help sustain the gardens, each organization has developed partnerships with local environmental, gardening, and food advocacy organizations. These partnerships were looked at positively by the organizations. Partnerships helped expand the scope of the services and education opportunities offered to tenants. A chart illustrating the web of organizations that an affordable housing developer can partner with is in the Appendix.

The organizations collaborate with agencies to help build the gardens, provide gardening classes, and teach healthy cooking classes. For instance, Capital Area Food

Bank partners with Green Doors and Foundation Communities to stock food in their food pantries. The food bank also has provided a cooking series at Garden Terrace and has offered to teach Green Doors' tenants how to grow their own food at the food bank's Teaching Garden.

Foundation Communities offers a few healthy eating workshops. They partner with Keep it Healthy to offer cooking classes to tenants. They provided various stations including how to make good food choices in a grocery store and how to save money and still eat well. Residents also have access to other healthy cooking classes offered by Keep it Healthy. At one of the sites, a case manager through the AmeriCorps-VISTA (Volunteers in Service to America) program coordinates their healthy eating classes. While Green Doors currently does not offer healthy cooking classes, one staff person said that they have discussed partnering with students from the University of Texas or other organizations for this purpose.

In addition to the partnerships with Keep it Healthy and the Capital Area Food Bank, both agencies have partnered with Sustainable Food Center (SFC). One Foundation Communities staff person said SFC is the best partnership they have with local food organizations while another one said it has worked to an extent. At the M Station, Foundation Communities' newest multifamily development, they are partnering with the Sustainable Food Center to have vegetable plots for the tenants. SFC is opening a new office across the street from the M station and they are going to include a community garden. One Foundation Communities staff member noted that it is the

perfect situation for them since they do not have to oversee the garden but at the same time, their tenants will have access to growing their own food.

In the case of Green Doors partnering with SFC, timing was an important factor. At the same time that Green Doors was developing their site, SFC had determined that there was a need for a community garden in the 78723 zip code, which is where the Pecan Springs Commons development is located. SFC had earmarked funding in their budget to support the creation of a new garden in the zip code and they were looking for an organization to partner with to develop it. They decided to collaborate and Green Doors received tools, a shed, a composter, wheelbarrows, and garden gloves. Green Doors also received support and technical assistance from SFC to develop the gardening group. Green Doors then matched Sustainable Food Center's contribution by agreeing to provide dirt, seeds, and plants. Their partnership extends beyond the initial installation. Green Doors can receive technical assistance for the life of the garden and SFC has offered to provide gardening classes or healthy cooking classes for tenants.

Both organizations have also partnered with the Citizen Gardener program, which is "designed to engage more Austin area residents in growing food locally" and which recently became a program of Sustainable Food Center.¹³² The volunteers from Citizen Gardener built raised beds at Garden Terrace.¹³³ They also helped build a garden at the Green Doors' Veterans house. This illustrates how volunteers and partnerships have helped create new gardens in affordable housing developments. In addition to creating

¹³² Citizen Gardener, *Home*, 2011, <http://citizengardener.groupy.com/> (accessed April 22, 2011).

¹³³ Garden Terrace, "Garden Guild Meeting Agenda" (May 20, 2009). Garden Terrace, "Garden Guild Meeting Agenda" (May 20, 2009).

the garden beds, they also provided a couple of workshops on gardening basics, which the tenants could attend too. While this model may seem ideal since it helped create the necessary garden infrastructure and it provided gardening education, both organizations did not see increased participation as a result of these efforts. This may suggest that education and outreach efforts must be ongoing to sustain a group instead of one-time opportunities.

SUSTAINABILITY OF THE GARDENS

After the initial installation of the garden, there are many ways to sustain the garden. It may include obtaining enough resources, receiving support by the sponsoring organization, engaging volunteers, and donors, involving tenants, coordinating gardening activities and programs, and continuing to engage the community.¹³⁴ There was a slight divergence in how each agency went about ensuring the sustainability of the gardens, which I will detail below.

In both case studies, volunteer involvement tapered off after the initial garden installation. According to staff at Foundation Communities, they will occasionally coordinate with a volunteer group to work in the gardens. For example, one volunteer group helped with cleaning up the garden and then they donated all of the tools they brought to the gardening group. Another volunteer group created stone pathways while another group built benches for the garden. At one site, an individual volunteer helped create ADA accessible garden beds. Fostering ongoing relationships with volunteers can

¹³⁴ Laura Lawson, *A Brief History of Urban Garden Programs in the United States* (New Brunswick, New Jersey, October 2009).

build the capacity of the gardening group and the volunteers could assist with maintaining the site, offering educational activities, and/or obtaining donations for the garden.

Another idea to increase volunteer involvement after the initial development in the garden is to develop a volunteer garden mentor program. One of the Green Doors' staff members spoke about how a long-term volunteer or mentor could guide the tenants throughout the garden season and they could be a reliable source of information and encouragement. She said, "I'd love for our residents to find someone in the community, cause then they know that there is someone who is not getting paid that really cares about the well being of that community." This could be an opportunity to show tenants that there is a community of support.

Foundation Communities

Two of the four Foundation Communities' staff members I interviewed spoke about the need for residents to take the lead in the garden. One mentioned that they distribute gardening information to tenants but that it is really up to them to take responsibility for the garden. The other staff person said she conveyed to tenants that they were responsible for the gardens and she wants them to take initiative. She said that she wants tenants to take ownership of the space so when they ask permission to plant something, she tells them that it is their garden, not hers, and that they can do whatever they want with the space. She stated, "It's just a matter of getting the residents to take the

reins and go at it on their own and not having to depend on someone else. . . It needs to be them becoming self-sufficient.”

She would like to see the tenants motivate other tenants to get involved, instead of management trying to motivate them. From the interviews with her and two of the tenants, this well-intentioned strategy has not resulted in more tenants participating in the garden. While there were more tenants involved in the garden when it first opened, it has waned in the last two years. However, there appears to be many opportunities to increase participation and activities in the garden, such as coordinating gardening activities with the on-site youth program, starting a garden club, or hosting gardening or healthy eating workshops for tenants and featuring some of the produce.

Green Doors: Relationships and Roles

Being that Green Doors’ Pecan Springs Garden is much newer than the Foundation Communities’ gardens, staff members are moderately involved in order to help develop and build the gardening group. The Green Doors’ staff members hope to eventually decrease involvement as the group becomes more self-sufficient. Given the difference in the length of time that they have been open, comparing how each sustains the gardens is not an even comparison . Despite this difference, each case provides information on how staff members interact with tenants and how and the gardens evolve.

One of the Green Doors’ staff members communicated a philosophy about creating ownership similar to what a Foundation Communities staff member said but they have had different outcomes. The Green Doors’ staff member said:

It's their garden. From the beginning, I've said that. I think they thought I was crazy cause they're like, 'what are we going to plant?' You tell me. And [a staff member] started laughing. I was serious. 'You tell me. It's your garden. I'm not telling you what to plant. I gave you a list of what you could plant but it's your garden.'

Along with this idea of creating ownership of the garden, relationships were vital to the creation and ongoing development of the Pecan Springs garden. One staff member remarked that the residents had lived at other Green Doors' properties prior to moving into this development and that they had a deep respect for the agency and a rapport with staff. These relationships were used to get tenants to come to the first meeting where over 75% of the tenants attended. This initial organizing effort has likely contributed to their ongoing participation in the garden.

To sustain the garden, the Green Doors' staff members arranged monthly on-site garden meetings and they have encouraged tenants to take on various roles within the garden. For instance, when the temperature dipped down below freezing, the tenants coordinated with each other to ensure that their plants were covered and uncovered each day so as to prevent the plants from dying. One staff member encouraged tenants to take on various roles, including watering the trees and assisting other tenants with physical disabilities. These roles led the tenants to interact with each other and created ownership over the shared space. Knowing the tenants interests and abilities, the staff explicitly asked tenants to take on various roles that they felt the tenant would be interested in doing. Another staff member stated that the tenants share with staff how they want to be

involved. The staff involvement helped shape how tenants have been involved in the garden and has helped keep them connected to the space and to each other.

The administrator said she intentionally found a way for each tenant to be critical to the success of the garden. She went on to say that from her relationships with the tenants, she knew what each could give. She also wanted to create an environment where everyone felt valued. She continued that if they all showed up to a meeting or workday and nobody had a job, then why would they show up to the next gardening activity. After six months of the garden's opening, it appears that this strategy is helping to sustain interest and involvement in the garden.

All three Green Doors' staff members mentioned that their goal is to become less involved as the group develops and is able to manage the garden and food forest without much staff support. They want them to know the basics of gardening, such as when to plant certain things and when to harvest them. At the same time, they want to be available if any problems arise and if there is a need for resources, such as compost or seeds.

In order to get to this point, they were very intentional about developing their gardening group. Before the garden was created, they had a series of meetings. They discussed which vegetables they wanted to plant, how often they wanted to meet, and other relevant gardening topics. These meetings were a crucial piece of the development of the gardening group where they got to know each other and make decisions about the shared space. The meetings have continued to be a forum for tenants to share resources and gardening information. One staff member said of her role in the meetings:

As opposed to me being the person who is giving all of the information, it's more like I'm bringing resources and facilitating people being able to share their stories with each other. And that is what I much prefer in any sort of community leadership role.

One of the tenants mentioned that she looks forward to getting together for the workdays and meetings because it helps her learn how to garden.

In addition to the staff's involvement in building the gardening group, the tenants have also been active in ensuring that the garden continues to develop. An example where the tenants have helped sustain involvement in the garden is by communicating with other tenants about upcoming meetings, workdays, and other events. One tenant calls other tenants to invite them the garden meetings and she also creates and distributes fliers announcing garden events. This has helped facilitate communication between the Green Doors' staff and the tenants.

OPPORTUNITIES TO EXPAND THE INTEGRATION OF GARDENS INTO AFFORDABLE HOUSING

All of the staff members I interviewed spoke of many opportunities to integrate gardens into affordable housing developments. Gardens are being incorporated into the planning process for Foundation Communities' M Station and the Suburban Lodge. One staff member at Foundation Communities mentioned that there are many opportunities to expand the integration and that she would recommend it. Despite having a small group of tenants participating in the garden, she felt like it is worth the effort. One Foundation Communities staff member mentioned that they can integrate the Sierra Ridge garden

with Sierra Vista, which is being redeveloped and is located across the street from Sierra Ridge. She stated that including tenants from the other property might increase involvement in the garden. In addition to the development of more traditional gardens in new properties, one staff member mentioned that they are going to start a container garden with herbs and vegetables at Spring Terrace.

Green Doors' staff are also thinking about the future and linking gardens into their new developments. One staff said, "Absolutely without reservations I recommend it if you have a population that is interested. I think my greatest recommendation would be survey people before you put in the cost and the staff time." This staff person also spoke about how they plan to integrate gardens in their future developments. She said, "As long as there is interest. Every community manager that I'm hiring for our new properties, it's with the understanding they'll lead a garden if the residents choose to have one." Green Doors' plans to have various community-building amenities, such as gardens, employment assistance, and yoga, in their new properties. They will determine what the specific amenities are at each property based on the tenants' interests and the goal is to improve the tenants' quality of life by providing an array of relevant services.

Chapter Six: Local Food and Affordable Housing Practitioners’ Perspectives on Integrating Food Production into Affordable Housing

The two case studies featured in Chapter Five provide an in-depth view of how two local affordable housing providers have integrated food production into their properties with some success. In order to gain a broader perspective of how other local food advocates and affordable housing practitioners connect their work to each other, I conducted a series of interviews with local experts in these fields.

LOCAL FOOD ADVOCATES

As was noted in the previous chapter, a couple of affordable housing developers have partnered with local food organizations. To gain a deeper understanding of how the food community thinks of opportunities to work with affordable housing developers, I interviewed five individuals who advocate for the creation of local, sustainable food systems. I asked them a series of questions related to the expansion of on-site food production in affordable housing developments.

Three of the five advocates have partnered with affordable housing providers. One community gardening advocate works with an affordable housing development to encourage tenants to join the garden while another advocate provides fresh food from a farm to emergency housing providers, such as Caritas of Austin, SafePlace, and Casa Marianella. The other advocate partners with affordable housing providers to occasionally create gardens in their properties. One advocate who does not work with

affordable housing developers stated, “It seems to me like there isn’t enough affordable housing, for sure, but linking these things is really important for sustainability.”

The advocates I interviewed mentioned how local food is becoming more integrated into the city’s fabric. They spoke of the increases in customers shopping at farmers’ markets and participants in various gardening programs as a way to gauge interest in local food systems. Due to the enthusiasm around local food, this may suggest that it is an ideal time to further integrate on-site food production into affordable housing developments.

Three of the five advocates spoke about how on-site food production can increase access to fresh food, and how this is relevant to affordable housing providers who are considering how this connection could benefit their tenants. One stated:

It seems like, just like people having a place to go where they can access good food has to be a priority, and then if they can supplement that with growing their own stuff, that would be great. At least based on the research that we’ve seen, that makes sense. To have more widespread healthy options for people to access food, good food.

This highlights that gardens are not the main solution to create a more food-secure community but it can be a good way to supplement someone’s food supply. Another food advocate spoke of how gardens can be designed to produce more food. He said, “If you look at some of the studies and the things that we can do in our own garden, if you look at models of places where there is a big commitment to it, I think it [community gardens] can be a solution.”

Opportunities to Integrate Food Production into Affordable Housing

There were several themes from the interview with food advocates that were similar to my findings from the case studies. In particular, four of the five advocates mentioned organizations that housing providers could partner with to develop or support their gardens. One of the advocates mentioned that there are many local food organizations, such as the Sustainable Food Center, the Green Corn Project, and Urban Patchwork Neighborhood Farm, that housing providers could potentially work with to integrate gardens into their developments. Another advocate mentioned the Citizen Gardener project, Travis County Master Gardeners, and the Permaculture Network as other local gardening resources. She also mentioned that the community garden she is a member of received a grant by the Austin Parks Foundation to install the new garden. The foundation, along with other local, state, and national foundations, could be viable sources of funding to develop new gardens in affordable housing developments. Another advocate mentioned the Texas Food Policy Roundtable as a statewide resource for information on community food security and sustainable food access.

The Coalition of Austin Community Gardens, which is an advocacy group for community gardens, is another potential resource for affordable housing developers. This group of dedicated garden leaders could share information and resources with affordable housing developers about creating and sustaining gardens. The coalition can also be an avenue for them to connect with the larger Austin community gardening community.

Another relationship that affordable housing developers could nurture is with the Austin/ Travis County Sustainable Food Policy Board. The board recommends policies that are focused on improving access to food and building the local food economy. While the board has not focused on incorporating on-site food production into housing, the board recently changed its organizational structure, which will likely produce opportunities for community members to get more involved through their work groups. The board could potentially address any policy barriers that affordable housing developers have to integrate food production into their properties.

All of the advocates suggested that the local urban agriculture ordinances that were passed by the Austin City Council in February 2011 could further promote the idea of integrating food production into affordable housing. One of the ordinances will allow community gardens to be developed on city-owned land and the city will aid community members in identifying available parcels. If the city owns land near affordable housing developments, this may be an opportunity for developments to partner with the city to create a garden. While it would not be an on-site garden, it still could be an opportunity for tenants to grow their own food and participate in the larger community. These advocacy efforts also resulted in the city creating two Urban Agriculture positions within the Parks and Recreation Department. They will be dedicated to coordinating urban agriculture activities, including facilitating the creation of new community gardens on city owned and privately owned land. These new staff members may be a good resource for housing developers as they seek information and assistance about integrating on-site gardens into their developments.

Another opportunity that one of the five local advocates mentioned was coordinating with the city's Chief Sustainability Officer, Lucia Athens, who is interested in food systems. The City of Austin will be creating sustainability goals using a national system of indicators, called the STAR Index, and food access and housing affordability are among the eighty-one goals in the index. The purpose of the food goal is to:

ensure community food security and equitable physical and economic access to safe, nutritious, and culturally appropriate food at all times for every resident across a community; provide opportunities for residents to grow their own food; educate residents about nutrition and food- from farm to plate.¹³⁵

The STAR Index may be a way to further promote on-site food production by incorporating it into the city's sustainability goals. There could be indicators to measure on-site food production and strategies to promote and expand food production in residential uses, including affordable housing.

All five advocates I interviewed mentioned gardening education as important factor to consider when integrating food production into housing. In keeping with the findings from the case studies, two advocates mentioned that some people already know how to garden while others do not. This is important for housing providers to consider as they decide what kinds of gardening education and training they want to offer to tenants. Another advocate mentioned how classes are structured is important. She said that they have found that education works best if they have:

¹³⁵ ICELI Local Governments for Sustainability, "STAR Community Index, Sustainability Goals and Guiding Principles," (2010), 25, p. 19.

Hands-on classes and then after that, being in an environment where there are other people gardening around them so they can ask questions and have a support network. People have learned a whole lot from some of our classes where it's been talking through a lot of the material and then taking them out and showing participants and including participants in building a raised bed or building a compost pile or double digging and then doing demos where they are planting transplants with appropriate spacing or seeds, just really getting people involved and witnessing and participating in what they are going to be needing to do.

Another way that one of the organizations is expanding local food production and providing education is through sponsoring day-long workshops throughout the state. They offer urban agriculture presentations and tours in the morning, which are followed by afternoon sessions to plan community gardens. The organization provided the materials and leadership training and they build the raised beds together at community centers and churches. One opportunity would be coordinate similar workshops with affordable housing providers and tenants to create the physical infrastructure and develop the gardening group. Following the initial installation, this organization could offer periodic gardening classes.

In order to design relevant gardening classes and workshops, affordable housing developers may want to consider the results of a pilot study conducted at a farmers' market by one of the advocates. The survey respondents said that they did not buy food that they had never tried. However, they said that they would purchase the food if they had recipes or if there were cooking demonstrations that featured the item. This finding may be helpful for affordable housing providers in terms of designing activities that involve demonstrations and recipes on how to cook with the vegetables they are growing.

Because gardens can take a significant amount of time to create, affordable housing providers could benefit from having an AmeriCorps member or interns on staff to assist with supporting the garden. One of the advocates mentioned having AmeriCorps members serve as Community Health Organizers while another advocate mentioned having interns conduct research on local food access. Affordable housing providers could apply for state or national funding to have AmeriCorps members and/or they could recruit interns to help develop the gardens, build the leadership group, and document outcomes.

Challenges to Integrate Food Production into Affordable Housing

Four of five food advocates voiced a concern about sustaining gardens in affordable housing developments. Similar to the case study results, the majority of food advocates talked about how individuals will express interest in gardening and then they soon find out it is harder than they think it is or they lose interest quickly because they do not know what to do. Related, they mentioned ensuring that the space is maintained and that it is important to have designated people to organize and lead the group. While it can be relatively easy to create the physical garden, one advocate noted that there are other aspects to developing a garden. She said:

I don't think anybody realizes the importance of the people part of it. It's what we call the invisible structures. They're really just seeing the visible structures and getting those in and not realizing the success depends on how well the people are working with each other and cooperating with each other.

She went on to say that gardens are successful when everyone has a role and has a way to participate. She added that it is ideal for a community organizer to offer leadership trainings and eventually leave the group once they become self-sufficient. This type of leadership development strategy for the garden would provide housing developers an opportunity to engage and empower their residents.

Three of the five advocates mentioned costs, such as water and initial infrastructure, as being a challenge. One advocate mentioned getting access to land has been difficult while another one said, “I think also funding and technical expertise, actually that’s probably even above funding as a barrier or at least a challenge. In multiple ways, gardening skills can be overcome by having people attend classes, presenting them with the opportunity to attend classes.”

Later in the conversation, she mentioned funding again. She stated:

There is huge opportunity. It’s just a matter of getting folks interested and getting staff at those entities interested, and then giving them the information they need to get the garden started. I think funding is necessary. But I think interested either residents or staff would be pretty much the key, the first step, because funding can be found and there is land. It seems like a great opportunity honestly.

As was demonstrated in the Green Doors’ case study, funding often comes from multiple sources to support a project. One possible source of funding and support is for affordable housing developers to partner with Sustainable Food Center. They have allocated funding each year to develop two new gardens. In addition, they provide a host

of other services to connect future gardeners with resources, such as education, seeds, transplants, and compost, and they may be able to suggest other funding options.

Policy, Planning, and Other Mechanisms to Expand On-Site Food Production

One of the new city ordinances exempts water installation fees for city supported community gardens. Since gardens in affordable housing will likely not be designated as city supported community gardens, one suggestion mentioned by two of the advocates was looking at how city regulations could be altered to reduce water rates at affordable housing developments with on-site food gardens. While they did not offer a specific policy, options could include adopting similar policies as the ordinance, such as waiving certain water installation fees or eliminating the wastewater fees or reducing water rates for affordable housing properties that have on-site food production.

Another suggestion one of the five advocates mentioned is to use the comprehensive planning process, Imagine Austin, to integrate food into Austin's long term planning efforts. She expressed concern that food has been largely ignored in the planning efforts. Thus, there is opportunity to advocate for urban agriculture to be incorporated into the plan, including integrating food production into residential developments.

One advocate mentioned the success of the Sustainable Food Center's Spread the Harvest Program, which provides free seeds, seedlings, and compost to gardeners. One option may be for Sustainable Food Center to conduct outreach to affordable housing developers to let them know about the program and encourage them to take part in it.

Another option could be to expand the city-funded Spread the Harvest Program and/or for the city to dedicate additional funding to support community gardening projects. For example, one advocate mentioned that it would be helpful to have a city-funded grant program that would provide funding to assist with the start up costs of creating a garden.

Another idea that one of the five advocates mentioned is a bill in the Texas legislature to allow community gardens to be developed on state-owned land. The challenge would be to find available state land near existing or planned affordable housing developments. Nonetheless, if the bill gets passed, it could provide additional opportunities to expand food production near affordable housing sites.

AFFORDABLE HOUSING ADVOCATES

I interviewed seven housing experts, who have various roles in planning and developing affordable housing in Austin. Four of the seven are local nonprofit housing providers whereas the other three are involved in advocating for affordable housing policies at the city, state, and/or federal levels and they do not develop or manage affordable housing. For the purpose of this section, I will use the term developer to refer to the individuals involved in developing or providing housing. I will use the term advocate to describe the individuals involved in affordable housing policy development and/or advocacy. good

I interviewed housing experts to gain a better idea of how individuals in the housing field think of on-site food production in relation to affordable housing. As I began interviewing them, it soon became evident that many affordable housing

developers are already integrating gardens into their properties. All of the housing developers I interviewed (four of four) have integrated on-site food production in their projects. They have partnered with Citizen Gardener, Sustainable Food Center, the Green Corn Project, a local nursery, The Happy Kitchen, and volunteers to develop gardens in a mix of housing types. Three developers have between one and six gardens each at their rental properties (duplexes, single family homes, and multifamily apartment complexes) while the other developer oversee the development of several gardens per year through in their homeownership units.

Three of the four developers mentioned the importance of planning for a garden in the early stages of the site development. If it is not in the plans, one housing provider mentioned that it is easy to forget about it. He said that planning might solely be to make sure there is space available for a future garden or that the needed infrastructure, such as water bibs, are installed during the project's construction phase.

Half of the developers (two of four) mentioned talking to the tenants to assess their needs and getting them involved in the planning so that there is a sense of ownership in the overall project. One of the four housing developers spoke extensively about their process. They provide homeownership units so the future homeowners get to pick whether or not they want a garden, whether they want it in the front yard or the backyard, and whether or not they want fruit trees.

The developers chose to include gardens for many different reasons. Many point to the benefits associated with gardens and below are some responses regarding their motivation to integrate food production into their developments. One developer said:

There is a healing quality to working the dirt . . . For people with serious and persistent mental illness and with significant substance abuse diagnosis, it's a real positive. And it can create an atmosphere of healing. And be a real positive for people that want to participate in something like that.

Another developer mentioned the cost savings aspect of gardening as a benefit of on-site food production. She said:

Since our ideal is for the house or the homestead, as you might want to think of it, ideally it becomes a revenue generator for the family as opposed to a revenue drain. As so, if people can be using their land to grow food, then it's a revenue generator for them.

Beyond individual benefits to on-site food production, one of the advocates spoke of the environmental benefits. He stated:

There's no question that we need more urban farms, we need urban agriculture woven into existing developments, especially infill developments. It helps with your environmental footprint, in terms of where you get your food from and from a health standpoint in terms of having locally sourced products.

Opportunities to Expand Affordable Housing and Food Production

The developers and advocates mentioned an array of ways to integrate and expand on-site food production in affordable housing. One way to expand capacity is to build on the success of housing providers that are already providing high quality housing and who have integrated food production into their developments. They can serve as models for other agencies interested in connecting food production and housing. One advocate said:

I think without a doubt that we are fortunate to have some just top-notch nonprofits doing some really high quality affordable housing development. I mean a group like Foundation Communities I would definitely say model success

where they are putting in place long-term affordable housing, high quality, that is looking at the larger needs of the residents too, and not just the housing, but looking at other needs they have to help those families to succeed.

Another advocate stated, “Something like what Green Doors is doing at Pecan Springs is great, [it] could be a great best practices model for other developers around town.”

Many lessons can be learned from the developers who have integrated food production into their projects. One suggestion is to determine the right scale for a gardening project. For example, the Real Estate Council of Austin (RECA) partnered with Mobile Loaves and Fishes to build small, individual vegetable gardens using fifteen to twenty gallon storage containers in a mobile home park. Another idea is to build partnerships with gardening organizations. One developer said the Green Corn Project has made it easy for his agency to integrate food production into some of their developments because the Green Corn Project does all of the work. Another developer spoke of how her organization partners with tenants and volunteers to support the gardens and their other community development work. She said:

It definitely starts with the people who are involved. It’s partnerships, it’s people, it’s ongoing relationships between volunteers and the community, volunteers who really love gardening and who can help people . . . In community development, it’s important to have a combination between paid staff and passionate volunteers and there is something irreplaceable about both.

Another housing provider had a similar philosophy on opportunities to sustain the gardens:

The gardens being planted and maintained are going to ebb and flow given the interests of the participants. A way to support that and make that less of an impact is to perhaps recruit some volunteers who are interested in gardening who would regularly help maintain it alongside the program participants, so that we know that somebody is always taking care of things. So, that's a challenge but an opportunity too.

Three of the four developers have relied on volunteers to create and/or help maintain the gardens. Two of the four developers have also offered healthy cooking classes in connection with the garden.

In terms of having enough space for the gardens, three of the seven housing experts mentioned that there are many opportunities to add food production into housing developments due to Austin's low-density development patterns. One advocate mentioned, "I'm just thinking of all the different developments that I know and it seems like most of them have plenty of space and opportunity to integrate that." A developer spoke about similar opportunities. She said, "They are very compatible as partnerships because affordable housing places have land and they have people that can use it." Another developer mentioned, "We've got it [opportunity] pretty much everywhere where we've got land and a housing unit, then we've got an opportunity."

Another opportunity for expansion is that as more affordable housing is developed, there will be even more opportunities to integrate food production into them. All of the developers mentioned projects they are working to develop, including permanent supportive housing, single-family detached homes in subdivisions, townhomes, small apartment complexes, and duplexes. One housing developer stated:

There is definitely a lot of opportunity there [new project]. It has a lot of implications to supply our food pantry. Any place where we can make that happen then I think that we should do that. We actually have leased units out in the community that are more like single family housing where we do some transitional housing and there are some real opportunities there in those yards to do gardening.

Another developer mentioned incorporating gardens into his new project, “There is space for community gardens and we are definitely planning a community center there- an art and education center- where I made it clear to the designers that I want space to store shovels, hoses, and all those thing, so we can do the community garden.” He also stated, “We should somehow figure out a way to think about, rather than putting up fencing, let’s put up hedgerows that have some sort of production, everywhere where it is possible to do some sort of production of food, do it!” These are just a few of the projects where developers are connecting food production with housing. It is clear that there is a desire and excitement among housing providers to integrate the two.

Challenges to Expand Affordable Housing and Food Production

One barrier in creating more affordable housing that one of the advocates mentioned is how affordable housing is prioritized among other competing interests within the city. He stated:

In the pecking order of how we prioritize needs, it’s definitely been the environment, the character of neighborhoods, preserving existing housing stock, and the history of neighborhoods. We have all these different values that we have elevated way above affordable housing, and so these things start to layer upon one another and nobody has ever stepped back and looked at the big picture. We’re at the point now where it’s all been done and we’re trying to not undo all that, but

just evaluate how this system has impacted our ability to deliver an affordable housing stock.

One of the developers echoed this sentiment by saying there are competing priorities, which can negatively impact affordable housing developers. He said that as a result of the City's Tree Ordinance, which is meant to preserve trees, his organization is required to pay \$42,000 in mitigation fees. In order to develop the units, they are cutting trees but they are also planting over 800 trees and the development includes many sustainability features including a biofiltration pond and solar panels. Despite these amenities and planting hundreds of trees, they still are responsible for paying thousands of dollars to the city to mitigate the impact of cutting down the trees, which drives up the cost of developing affordable units.

Similarly, two of the seven housing experts (one developer and one advocate) mentioned that city regulations have negatively impacted affordability. One advocate said, "The problem is not in terms of what they're delivering [housing product], the problem is our land use policies." He stated that changes to land use ordinances and policies would make it easier for developers to build affordable housing and allow for denser development, which would potentially decrease the cost per unit. The advocate went on to say that the city zones parcels for one land use. He gave the example that a multifamily development can only be a multifamily development and not an urban farm and multifamily complex. He believes that allowing for multiple uses would result in more creative ways of using the land and could increase urban agricultural opportunities for housing developers.

Two of the three advocates mentioned that one challenge to develop affordable housing is getting the neighborhood's approval, which is aligned with my case study findings. Similar to the techniques used by Foundation Communities to dispel myths about affordable housing, one advocate recommended showing pictures of affordable housing developments because she said people often automatically think affordable housing is scary or dilapidated. The advocate also mentioned that it is good to highlight that affordable housing makes sense fiscally and that there are on-site social services at the properties.

Another constraint that three of the four developers mentioned is limited organizational capacity to expand. Many nonprofit housing developers said they run lean operations with a couple of paid staff members and the majority of their operating expenses coming from rental income. These developers noted that they have grown incrementally. While they have plans to expand, they also recognized there is limited staff capacity.

Another challenge that one of the seven housing experts mentioned is that growing food is foreign to many people and this could be a challenge in getting the necessary participation in the gardens. She said, "I think we've lost touch with that [growing food] as a way of life or most of us have. Certainly in my family, it's been generation since people actively gardened. I think that's the same for a lot of folks, low-income as well as middle class."

A related challenge is maintaining the garden and sustaining interest in it. This idea is aligned with my findings from the case studies. Three of the seven housing

experts said that maintaining the gardens could be a challenge for housing developers. One housing provider with an on-site garden stated, “There are two or three that are very interested in maintaining it and then the others that aren’t so interested. It’s like anything in life. Different people have different interests.” Another developer mentioned a similar opportunity and challenge by saying, “We have done it consistently for the last few projects and there is a lot of opportunity. The opportunity of developing gardens is a lot easier than of maintaining the gardens.”

Another challenge mentioned by most of the housing experts was limited funding for affordable housing development and gardens. One advocate said, “Funding is really the key piece.” One of the developers voiced a similar concern. He said:

There are tons and tons and tons of opportunities. All you got to do is walk around and look at things that are not developed that could be developed. Vacant land that sits around, underdeveloped, it could be redeveloped and so on. There are thousands and thousands of units that could be developed. The question is where are the resources to do it, which is mainly money. So, that’s the issue.

Another challenge is that the City’s Neighborhood Housing and Community Development office has not given much attention to the connection between food access and affordable housing and they administer the city’s affordable housing funds. The advocate mentioned that they have not partnered with any food groups but there are opportunities. She stated, “It’s definitely something that our leadership might be interested in exploring.”

Policies, Planning, and Other Mechanisms to Expand Affordable Housing

While funding is a challenge, many pointed to the success of the \$55 million Affordable Housing General Obligation Bond package that was passed in 2006. Four of the seven housing experts mentioned the proposed 2012 bond election that will ask voters to approve the issuance of \$110 million worth of bonds to finance more affordable housing. They see this a significant opportunity for the city to expand its role in supporting affordable housing development.

Besides more funding, one developer and one advocate mentioned how that having access to land would help create more affordable housing. One advocate mentioned that there is an opportunity to use state and city land to develop more affordable housing in Austin. She stated there is excess land that is either vacant or underdeveloped that could be used for affordable housing. While it is an opportunity, she mentioned, “The city has been involved in that too, of how to maximize the use of state owned land. I doubt there has been any discussion of affordable housing”

One developer mentioned another opportunity to integrate more food production into affordable housing is through incentivizing it or adding it to the criteria in green building programs. For example, the City of Austin’s Green Building program does not include community gardens in the criteria, but the criteria could be amended to include community gardens, which would create an incentive for owners to incorporate food production into new developments. The Neighborhood Housing and Community Development office could also revise their scoring criteria for the Affordable Housing

General Obligation funds to give an extra point to developers that include on-site food production in their proposed developments.

For long term planning purposes, one advocate spoke about to the importance of incorporating affordable housing goals into the city's planning efforts, such as the comprehensive plan, the East Riverside Corridor Master Plan, and the Transit Oriented Development corridor plans. She mentioned how the comprehensive planning process is an important opportunity for the city to work with stakeholders to come up with concrete affordable housing goals with numbers and affordability levels. As more affordable housing is developed, there will be corresponding opportunities to integrate food production into new developments.

In addition to increasing housing through long term planning efforts, one advocate mentioned strengthening regulatory measures to create and/or preserve more affordable housing such as inclusionary zoning and condominium conversion protections, along with creating a revolving loan fund and community land trust for affordable housing. All of the advocates mentioned the density bonus programs as a way to create more affordable housing, though they cautioned that the incentives need to be structured properly so that developers take advantage of these incentives to create the units.

Another creative idea related to regulation is to reduce parking requirements in affordable housing developments in order to free up part of the parcel for on-site food production. The advocate noted that there are some complexes where the parking requirements are excessive. For instance, he mentioned that at a senior affordable housing development in East Austin, the developer was required to develop a certain

amount of parking spaces, even though most of the tenants do not drive or they do not own their own transportation. He said that if the city reduced the amount of parking spaces, they could have built more units or used the space more effectively. Another idea is to make better use of the compatibility set back. As the advocate explained, this space is often underutilized and developers are restricted in what they can do with the space. He said, “If there was a way to use that space in a non-intensive way, then I think that’s a no-brainer for everybody. You should be able to do something.” He suggested one option could be to create an urban farm or garden in the set back.

Another developer mentioned changing other regulations to create more food production in residential areas. She advocated for changes to the homeowner association rules to allow for gardens in the front yard. For instance, she said her organization asked for exceptions to the rules as a condition for buying land in a subdivision. They wanted to let the homeowners have vegetable gardens in their front yards along with having chickens and clotheslines. She said that on-site gardens could be a selling point for developers and one of the advocates mentioned this too.

Two of the seven housing experts mentioned preservation strategies as an opportunity to maintain affordable units in Austin. One housing developer said an opportunity would be to incentivize keeping affordable market rate housing and expiring Section 8 project based developments affordable by providing developers with forgivable loans or other funding mechanisms to support preserving these units.

Chapter Seven: Programmatic and Policy Recommendations to Integrate On-Site Food Production into Affordable Housing Developments

Among the housing organization staff, housing advocates, and local food advocates interviewed herein, there is a significant support and enthusiasm for expanding on-site food production into affordable housing. As many of them mentioned, there are a host of benefits to integrating the two. The on-site food gardens offer tenants another food choice and way to access fresh, healthy food. Resources and figuring out how to sustain the gardens were the two biggest challenges in integrating on-site affordable housing developments. Recognizing the challenges and benefits of connecting the two, I recommend programmatic and policy strategies to further expand on-site production into affordable housing developments in Austin, Texas.

ORGANIZATIONAL AND ORGANIZING RECOMMENDATIONS

Planning Phase

Because organizing on-site food production is much more difficult post-occupancy, my first recommendation is that the agencies plan for on-site food production by incorporating it into the development's site plan. Accessibility and scale are important elements to consider in the development process. It is important to think of the type of housing, the targeted population (families, individuals with disabilities, seniors, etc.), and where it would be best located on the site (sunlight, slope, soil quality, etc.). I also

recommend that the staff members discuss and come to some agreements as to the objectives they have for the space. Is the garden solely for the production of food? Is the goal to educate tenants about healthy food? Are there community development goals and if so, what are they? It is best if the objectives are clear and achievable.

By planning for the garden, the needed infrastructure, such as accessible paths and water access, can be installed during the construction phase. At the same time, the organization can apply for grants from Keep Austin Beautiful, Tree Folks' Community Trees Programs, Tree Folks' Urban Orchard Program, Weed and Seed, and other local funders.¹³⁶ They can also seek in-kind donations, such as fencing, tools, seeds, and compost, from local businesses

The planning phase could be an ideal time to plan within the organization how they would like to manage the garden and to identify a staff person who would like to be involved in the garden. Having a dedicated staff person from the agency is a crucial component to the garden. Also, during the planning and start up phase, it is important to think of potential partnerships with neighborhood associations, faith-based organizations, schools, social service agencies, local politicians, and other civic groups. These relationships can help support the development and ongoing maintenance of the garden.¹³⁷

¹³⁶ Sustainable Food Center, "Community Garden Leadership Training: How to Start and Sustain a Community Garden" (Austin, Texas, 2010).

¹³⁷ Enterprise Foundation, "Neighborhood Green: A Guide for Community-Based Organizations," (New York, 2002), p. 5.

Develop the Garden Leadership

The American Community Gardening Association's (ACGA) *Growing Communities: How to Build Community Through Community Gardening* and Sustainable Food Center's *Community Garden Leadership Training* materials include many useful documents that focus on a variety of topics, including how to start a community garden, how to organize a group, sample documents, sample budgets, and resource lists. These groups and documents might be useful for affordable housing staff members to use to determine how best to develop the garden leadership. The ACGA provides recommendations for school gardens that are also applicable to affordable housing developers. They recommend that organizers start small, provide training to staff, volunteers, and mentors, secure funding and supplies, partner with teachers to integrate it into the curriculum, create a plan to sustain the garden, work with students to develop ownership over the space, involve community members throughout the gardening project, and gain the support of administrators, teachers, and parents.¹³⁸ Housing providers might use a similar model as they are developing on-site food gardens.

In the organizing phase, I recommend that a staff member reach out to tenants to start developing relationships and inviting them to meetings and events. For example, they may want to conduct a charrette to determine what tenants envision for the space. The group may also want to discuss various roles and figure out what training the tenants need and want. It may also be beneficial to incorporate leadership development training

¹³⁸ American Community Gardening Association, "The Community Greening Review," *25 Years of Community Gardening* (2004-2005), p. 28.

into the meetings to help develop the garden leaders and give them the tools necessary for them to manage and sustain the garden. Once the tenants are more self-managing, the organization would then shift to less of a role in the garden. Nevertheless, it is recommended that the organization provide some level of ongoing technical assistance and resources.

Provide a Range of Gardening and Healthy Cooking Education Opportunities in the Garden

Affordable housing developers can use the gardens to engage and educate both gardeners and non-gardeners. Based on the experiences of the case study sites and the advocates, I suggest coordinating activities are interactive and hands-on where tenants can learn and practice how to double dig, plant transplants, cook nutritious food, etc. Another idea is to offer social activities, such as food or garden oriented book clubs or movie nights. Many individuals I interviewed also mentioned incorporating youth activities to engage young people along with their parents. Building on their ideas, staff or tenants could coordinate youth gardening activities at workdays or through other services offered by the agency, such as afterschool and summer programs. Other ways to engage and educate tenants are through potlucks and cooking classes where individuals can share recipes and learn new ways to cook what they are growing. Some other ideas could be to tour other community gardens as a group and to have volunteer recognition celebrations.

Given that participation in the garden is often hard to sustain and the turnover within rental developments, I suggest continuously offering activities to engage existing and new tenants. I recommended that agencies create a plan to inform new tenants about the activities in the garden and how they can get involved. Also, I suggest that the agency survey tenants annually to determine their needs and interests in gardening and food related educational activities. I also recommend that the housing provider looking into ways to incentivize participation in gardening education programs and healthy cooking workshops. For example, if a tenant is interested in gardening, then they could attend a gardening series and then they could receive a garden oriented incentive for participation, such as seeds, transplants, a gardening book, or gardening tools.

Expand Opportunities to Integrate Volunteers and Other Organizations into the Garden

Many of the individuals I interviewed mentioned how volunteers and other agencies expanded the capacity of their organizations. There were hundreds of volunteers who helped create the gardens and the organizations occasionally partner with other agencies to offer classes or help with creating new garden infrastructure, such as raised beds. To help sustain the gardens, one option would be to develop ongoing individual and group volunteer opportunities so that volunteers could assist with maintenance, teach classes, sponsor activities, and mentor gardeners. Another option would be to recruit volunteers to help with developing partnerships with civic organizations, soliciting

donations from local businesses, and applying for small community gardening grants. This may help get needed resources to the gardeners and agencies.

Another volunteer option may be to hire an AmeriCorps and/or VISTA member to coordinate the gardening activities. They could help support the gardens by assisting with ongoing maintenance, offering educational workshops, creating new garden infrastructure, measuring tangible outcomes from the gardens, and/or helping build the leadership capacity of the gardening group.

Measure and Communicate the Impact of the Community Garden

As was mentioned by several staff members of Foundation Communities and Green Doors, it is difficult to measure the impact of the gardens. Many staff members have stories about how the gardens have impacted their tenants, but it is hard to determine if it is worth the monetary investment to create and sustain it. To get a better snapshot of the garden's benefits, organizations could measure the number of tenants involved (unique individuals, frequency and duration of involvement), how much they are harvesting, how much time the gardeners are spending outdoors, the number of volunteer hours, a pre and post survey regarding nutrition habits, changes in crime rate in the neighborhood, the number of plots being used, and housing retention. It would be ideal to compare the gardeners' results to non-gardeners to determine if there are any differences between them. Another idea is to highlight the successes of the garden by using the agency's newsletter and social media to communicate the value of the garden and how it fits into the program's mission.

POLICY RECOMMENDATIONS TO FURTHER INTEGRATE ON-SITE FOOD PRODUCTION INTO AFFORDABLE HOUSING

Long-Term Planning

As the literature review and several of the advocates mentioned, I recommended that the city integrate urban agriculture and affordable housing goals into the comprehensive plan and other planning documents. There are other planning efforts including corridor plans, transit oriented development station area plans, and neighborhood plans which are also opportunities to incorporate affordable housing and access to food into the plans. One of the urban agriculture goals could be to encourage and incentivize food production, including gardens, food forests, and other edible landscaping, in affordable housing developments. For affordable housing, it is recommended that the plans focus on preserving the existing housing stock, increasing local funds for housing assistance, expanding the capacity of nonprofit affordable housing developers, creating affordable housing goals (number of units, affordability levels), making city owned land available for affordable housing and gardens, and expediting the review process for affordable housing developers.

Zoning and Regulatory Changes

As one of the housing experts mentioned, it is recommended that the city examine how its zoning policies and regulations are a barrier to creating affordable housing and community gardens. One recommendation is to zone for multiple uses. For instance, a

parcel zoned for multifamily development could be amended to allow for an urban farm or garden and a multifamily complex. Another idea that was mentioned by a housing provider is to alter parking regulations, which would potentially create more space for edible gardens and/or more units. Another regulatory change would be to allow low-intensive uses of setbacks and right-of-ways for food production.

Funding and Fee Waivers

There are limited resources for both the development of affordable housing and community gardens. As the advocates mentioned, more funding is needed. Some options include ensuring that the 2012 bond election includes an affordable housing component and creating more tax increment financing (TIF) districts and dedicating a percentage of the TIF revenue to affordable housing. For gardens, it is suggested that the city develop a small community gardening grant program where developers could access funds to help cover the initial start-up costs or help cover the cost of needed improvements.

Other options include creating a funding mechanism to preserve subsidized and market rate affordable housing, fast tracking the permitting process for developers that include affordable housing, and creating a land bank for vacant properties to be used for affordable housing and gardens. Another option would be to reduce the wastewater fee for affordable housing developments with on-site food production because the majority of water used for the garden remains on the property instead of entering the wastewater system.

Public-Private Partnerships

Building on existing partnerships, I suggest that nonprofit affordable housing developers and the city explore ways to further partner with private entities to develop more high quality affordable housing. These new relationships could result in many more affordable units being built due to added investment from the private market. They may also help develop new housing types to better serve the needs of low-income individuals and households.

Incentivizing Integration of Affordable Housing and Food Production

The Sustainable Sites Initiative, the Enterprise Green Communities' criteria, and the Leadership in Energy and Environmental Design (LEED) for Neighborhood Development program have incorporated food production or gardening into their scoring criteria for green building and landscapes. For instance, one of the options in the 2011 Enterprise's Green Communities Criteria is to develop a neighborhood farm or garden in the project.¹³⁹ Currently, the Austin Housing Finance Corporation's scoring criteria for General Obligation Bond funds awards points for experience, qualifications, the budget, and leveraging funds. Given the current structure, it does not award any points for sustainability features, including urban agriculture. I recommend that the administrators consider amending the criteria to award points for sustainable features, including food production, because it aligns with the goals of the City's Sustainable Food Policy Board and other sustainability efforts.

¹³⁹ Enterprise Foundation, "Enterprise Green Communities Criteria," *Enterprise Green Communities*, 2011, <http://www.greencommunitiesonline.org/tools/criteria> (accessed March 16, 2011).

Additional Considerations

In order to inform more developers and owners about the potential to incorporate food production into a site, I suggest that a city staff could review projects for their urban agricultural potential. As the developers and city planners negotiate deals, there could be more opportunities to integrate food production into residential developments. Another option is to provide a density bonus to developers that provide on-site food production.

In addition to site plan reviews and density bonuses to incentivize affordable housing, I recommend that the city look into establishing a food or sustainability office. Ideally, this would help the City plan and support local, sustainable food systems, identify barriers, and develop new funding streams to support the expansion.

Food production does not necessarily need to be focused on new developments. I suggest that the Housing Authority of the City of Austin (HACA) and owners of placed based Section 8 units look into incorporating food production into their existing affordable housing developments. Additionally, a land trust could be created to preserve both affordable housing and urban agriculture. This strategy would allow for the permanent preservation of these spaces and it would be an innovative strategy to integrate the two issues.

CONCLUSION

The current political and social environment in Austin provides considerable opportunities to further expand the integration of on-site food production into the development of affordable housing. The private and public sectors in Austin have

already made substantial investments both in developing affordable housing and in building urban agriculture infrastructure. While these efforts have historically remained largely independent of one another, the programmatic and political interventions addressed in the previous section can promote the incorporation of food production into affordable housing, supporting the creation of active, productive gardens and community spaces. Interviews with stakeholders in the affordable housing and urban agriculture communities revealed broad cultural and political interest in the concept. Furthermore, this approach is aligned with and builds upon Austin's sustainability efforts. Because incorporating food production into housing addresses all three aspects of sustainability - environment, equity and economic- this can serve as a model strategy for the city to address all aspects of sustainability.

Appendix

QUESTIONS FOR HOUSING ADVOCATES AND STAFF OF CASE STUDY SITES

- First, can you tell me about your organization, your role, and how long you've worked for [agency name]?
- Could you tell me about your involvement in developing and/or advocating for affordable housing?
- What opportunities exist to develop more affordable units in the next decade?
- What types of projects do you think your agency will be involved in developing?
- What resources do your residents have to access fresh, healthy food?
- Has your organization worked with any local food advocacy organizations and if so, how and in what capacity?
- How is your program successful? How is your program not successful?
- What opportunities do you think exist to integrate vegetable gardens into affordable housing developments?
- What are the barriers or challenges to linking the two?
- What kind of incentives or policies could be adopted to encourage the creation of more affordable housing and community gardens?

- If you could give advice to an agency wanting to link on-site food production and affordable housing, what would you tell them?
- Do you have any documentation (reports, presentations, etc.) that I could review to learn more about your program?
- Is there anything else that I should know?

ADDITIONAL QUESTIONS FOR STAFF AT CASE STUDY SITES

- How do you assess success in the garden?
- What are the benefits for the agency of having an on-site vegetable garden?
- What are the benefits for the tenants of having an on-site vegetable garden?
- What are the challenges in maintaining and supporting the garden and the gardeners?
- How much staff time goes into supporting the garden?
- Are volunteers involved in the garden and if so, in what capacity?
- What are the costs involved in creating and maintaining the vegetable gardens?
- Are there any changes you'd like to see in the garden if you had unlimited time and resources and if so, what would they be?

QUESTIONS FOR GARDENERS AT CASE STUDY SITES

- Can you tell me about your involvement in the garden?
- What motivated you to get involved in the garden?

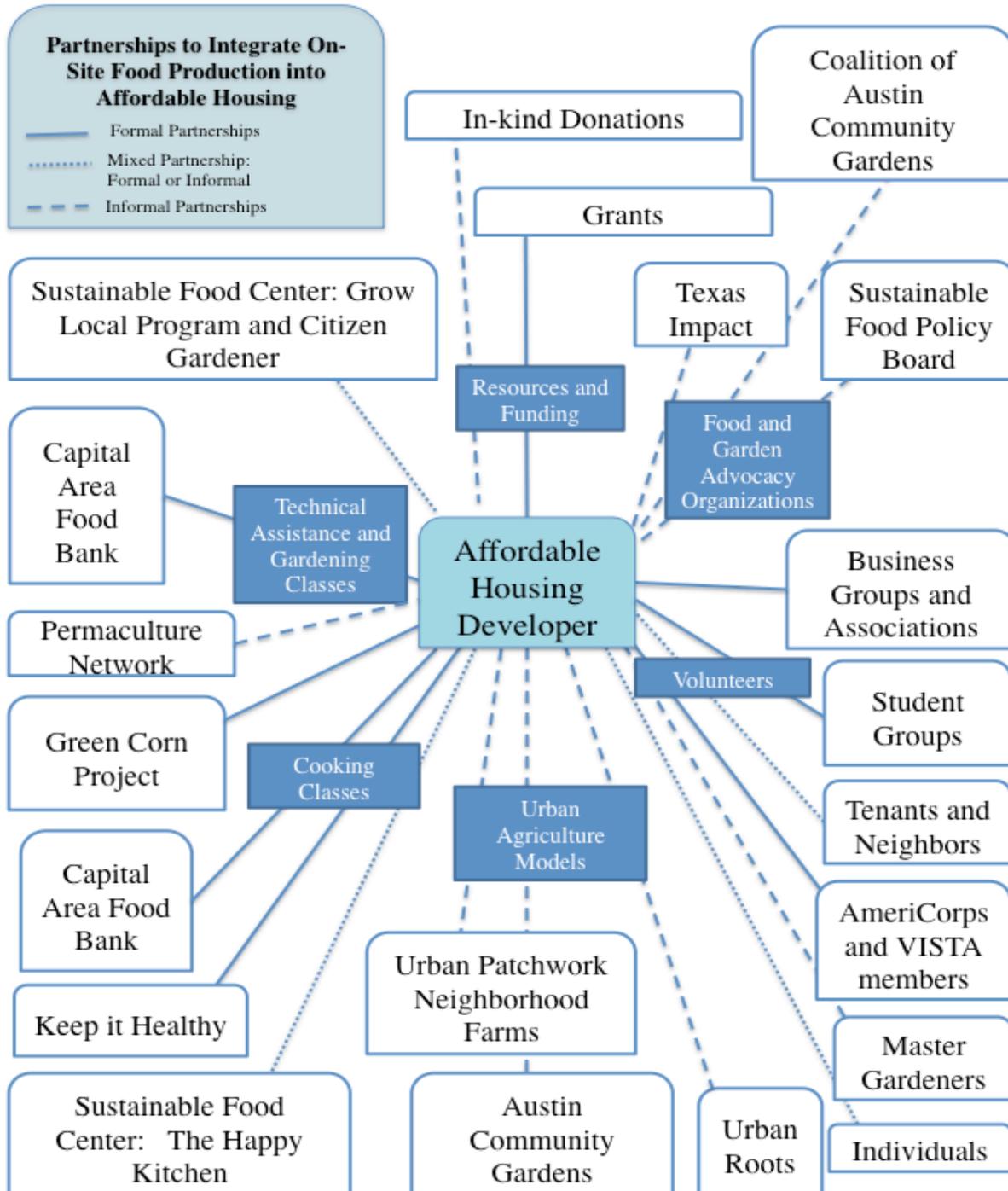
- How long you've been gardening in this particular garden?
- Are there benefits from participating in the garden? If so, what are the benefits?
- Are there any challenges of being involved in the garden? If so, what are they?
- Would you like to see any changes or improvements in the garden and if so, what would you like to see changed?
- Is there anything else that I should know?

QUESTIONS FOR LOCAL FOOD ADVOCATES

- Could you tell me about your involvement in local food advocacy or community gardening?
- What are some effective ways to expand local food production in Austin?
- How effective do you think community or onsite gardens are at expanding local, healthy food access?
- Has your organization worked with any affordable housing developers and if so, how and in what capacity?
- What opportunities exist to integrate more gardens into affordable housing developments?
- What barriers exist in integrating vegetable gardens into affordable housing developments?
- What policies or incentives exist that support or hinder local food access?

- What policies or incentives would you like to see implemented to promote more local food production?
- Do you have any documentation (reports, presentations, etc.) that I could review to learn more about your program?
- Is there anything else that I should know?

PARTNERSHIPS TO SUPPORT ON-SITE FOOD PRODUCTION IN AFFORDABLE HOUSING



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