

Copyright
by
Kathryn Koebert Vickery
2014

**The Report Committee for Kathryn Koebert Vickery
Certifies that this is the approved version of the following report:**

**Barriers to and Opportunities for Commercial Urban Farming:
Case Studies from Austin, Texas and New Orleans, Louisiana**

**APPROVED BY
SUPERVISING COMMITTEE:**

Supervisor:

Sarah Dooling

Robert Wilson

**Barriers to and Opportunities for Commercial Urban Farming:
Case Studies from Austin, Texas and New Orleans, Louisiana**

by

Kathryn Koebert Vickery, B.A.

Report

Presented to the Faculty of the Graduate School of

The University of Texas at Austin

in Partial Fulfillment

of the Requirements

for the Degrees of

Master of Science in Community and Regional Planning

and

Master of Public Affairs

The University of Texas at Austin

May 2014

Acknowledgements

First and foremost, I would like to thank the generous folks who agreed to participate in this study, including practitioners, farmers, policy makers, and planners in both New Orleans and Austin. In Austin, this included Dorsey Barger, Greg Gurnsey, Michael Hanan, Dean Hayward, Lloyd Minick, Steve Oliver, Ronda Rutledge, Dylan Siegler, Jack Waite, and Frank Young. In New Orleans, thank you to Marianne Cufone, Alyssa Denny, Dan Ethridge, Macon Fry, Johnanna Gilligan, Sanjay Kharod, Tony Lee, David Lessinger, Khai Nguyen, Kweku Nyaawi, Thaddeus Prosper, and Emilie Taylor. These wise experts helped me understand the complexities and challenges around urban farming. I am eternally grateful to Max Elliott for connecting me to many of my New Orleans contacts and for being the most thoughtful urban farmer I know.

My inspiration for this project was born out of eight months working for the City of Austin's Sustainable Urban Agriculture and Community Garden Program. During this time, I co-chaired a working group responsible for making recommendations on the regulations governing urban farms. This was the most educational professional experience I have ever had and I am grateful to have been able to work with all of the members of the working group, particularly Heather Frambach, Katherine Nicely, Mindy Cooper, Paula McDermott, Jack Waite, Cliff Kaplan, Dorsey Barger, Paige Hill, and Michael Hanan. Working closely with city staff members including Andy Moore, Greg Dutton, Jerry Rusthoven, Lucia Athens, and Margaret Shaw was also a privilege. Thank you also to the huge number of farmers community members who spoke out about the

urban farm code throughout 2013, including Susana Almanza, Daniel Llanes, Carmen Llanes Pulido, David Cortez, David King, Larry Butler, Carol Ann Sayle, Glenn Foore, Paula Foore, Susan Hausmann, Stephanie Scherzer, Erin Flynn, and countless others. I have a more nuanced understanding of how urban farming fits into the landscape of a city because of all of you.

Thank you also to my professors at the LBJ School of Public Affairs and the School of Architecture's Community and Regional Planning program. My advisor Sarah Dooling provided invaluable support and guidance throughout this research project and during the classes I was lucky to take from and TA with her. My second reader Robert Wilson encouraged me to craft careful research questions and be clear in my analytical approach. Thank you also to all the professors who have shaped the way that I think about public policy, social justice, and urban planning, particularly Michele Dietch, Angela Evans, Bill Spellman, Shirley Franklin, Bjorn Sletto, Elizabeth Mueller, Rachael Rawlins, and Bob Patterson.

Finally, thank you to my Austin community, particularly my fellow LBJ and CRP students who have influenced my thinking on food systems including Amy Madore, Jeanie Donovan, Megan Randall, and Heather Frambach. To my friends and family, and especially my other half, Kyle Shelton, your support, encouragement and love throughout my graduate career has been the light at the end of this long tunnel.

Abstract

Barriers to and Opportunities for Commercial Urban Farming: Case Studies from Austin, Texas and New Orleans, Louisiana

Kathryn Koeber Vickery, MSCRP/MPAff

The University of Texas at Austin, 2014

Supervisor: Sarah Dooling

This professional report addresses 1) where urban agriculture is developing in cities and why; 2) the primary constraints affecting the development of long-term commercial urban farm operations within the boundaries of large metropolitan cities; and 3) how cities are planning and creating policies for commercial urban agriculture under different environmental, economic, and land-use constraints. Using case studies from Austin, Texas and New Orleans, Louisiana, I address these questions through a qualitative analysis of current efforts to reform land use policies for urban farming, existing literature, and interviews with practitioners, farmers, policy makers, and planners. The history and context of each case study is addressed, honing in on specific environmental, social, regulatory, economic, and land use barriers to commercial urban farming.

Table of Contents

Acknowledgements	iv
Abstract	vi
List of Tables	ix
List of Figures	x
Chapter 1: Introduction	1
Chapter 2: Literature Review	3
A brief history of urban agriculture	5
Urban agriculture in planning	8
Benefits of urban agriculture	10
Sustainability and green infrastructure	11
Community development	15
Economic development	17
Barriers to urban agriculture	19
Critiques of urban agriculture	23
Conclusion	28
Chapter 3: Methodology	29
Selection of Case Studies	30
Formal Interviews	36
Defining Terms	39
Chapter 4: Urban Agriculture in Austin, TX	41
Framing urban farming in Austin	41
Benefits of urban agriculture in Austin	49
Regulatory environment for urban farms in Austin	52
Revisions to urban farm regulations	55
Outcomes of the regulation revision process	68
Barriers to urban agriculture in Austin	72

Land use issues	72
Affordability	76
Making a living as a farmer	79
Environmental challenges	81
The future of Austin’s urban farming	82
Conclusion	85
Chapter 5: Urban Agriculture in New Orleans, LA	87
Framing urban farming in New Orleans	87
Benefits of urban agriculture in New Orleans	102
Regulatory environment for urban farms in New Orleans.....	104
Revisions to urban farm regulations	114
Barriers to urban agriculture in New Orleans	119
Land use issues	119
Distribution of vacant land.....	120
Long-term Land Tenure	125
Affordability	126
Making a living as a farmer	129
Environmental challenges	132
The future of New Orleans’ urban farming	134
Conclusion	137
Chapter 6: Analysis and Conclusions	139
Central Research Questions	143
Future Avenues of Inquiry	148
Appendix A: Interview Guide.....	150
Appendix B: NORA’s Vacant Land Disposition Decision Tree	151
Acronyms Used in Report.....	152
Works Cited	153

List of Tables

Table 2.1: Benefits attributed to UA in Austin and New Orleans city plans.....	10
Table 3.1: Vacancy Statistics - Austin and New Orleans	32
Table 3.2: Demographic characteristics of Austin and New Orleans	35
Table 3.3: Austin Interviewees	38
Table 3.4: New Orleans Interviewees	38
Table 4.1: Austin Farms Included in Study	45
Table 4.2: Current regulations for Austin urban farms, revised Nov. 2013	67
Table 5.1: New Orleans Farms Included in Study	97
Table 5.2: Urban farm regulations in current New Orleans CZO.....	111
Table 5.3: Proposed regulations for NOLA urban farms, under review	118
Table 6.1: Summary of constraints for urban farms in Austin & NOLA	143

List of Figures

Figure 3.1: Population change in Austin and New Orleans, 1900-2012	33
Figure 3.2: Household Income Disparity by Race in Austin and New Orleans	36
Figure 4.1: Location of Prime Agricultural Soils, Travis County, Texas.....	42
Figure 4.2: Location of Austin’s commercial urban agriculture.....	47
Figure 5.1: Location of Prime Agricultural Soils, Orleans Parish, Louisiana	88
Figure 5.2: Location of NOLA’s commercial urban agriculture	100
Figure 6.1: Austin and New Orleans views on urban farm constraints	146

Chapter 1: Introduction

“Nobody grows vegetables on a small scale for money, glory, attention from the opposite sex or any of the reasons that motivate people. You have to be intrinsically motivated to do it. It has to be something that brings you pleasure.”

– Macon Fry, the “garden guy” of New Orleans, LA

Over the past decade, an enormous increase in the visibility of and interest in local and sustainable food has translated into many cities developing local food-oriented land use policy. In seeking to achieve multiple and overlapping public benefits, including increasing the availability of fresh and healthy foods, bringing together community members around neighborhood projects, and turning underutilized lands into productive, vibrant spaces, municipalities around the nation have tasked themselves with developing new policies that remove barriers to producing local food within cities and incentivize new methods of production, distribution, and sales.

Much of the literature emerging from the local and sustainable food field tends to depict these efforts as almost universally lauded, widely beneficial, and wins for both municipal decision makers and residents seeking low-cost, high-impact solutions that contribute to the health and sustainability of cities and regions. However, as local governments begin or continue to relax barriers and adopt new ordinance language that encourages growing food in the city, conflicts are beginning to emerge that challenge the supposed universality of the values of urban food production. In addition, a host of challenges exist for growers interested in starting commercial urban farm operations in cities. Commercial operations are growing in number, but must be supported by land use policies, environmental and economic conditions, and a social system that allows farmers

to make a sustainable living. One of the key constraints for commercial urban farmers has historically been getting access to land, which tends to be more expensive inside municipal boundaries, and comes with additional direct and indirect costs including water, soil contamination, and constrained land parcels sizes. Urban farms also face increased scrutiny about their practices because they are typically located in residential areas with nearby neighbors.

This study examines the barriers to and opportunities for commercial urban farming, using case studies from Austin, Texas and New Orleans, Louisiana. Austin and New Orleans are both in the process of revising their land development regulations, specifically the regulations around urban farms. Because of this, city employees, particularly those in the planning departments, as well as key community stakeholders have a heightened awareness of the regulatory environment for urban farms. Both cities have experienced growth in urban agriculture operations in the past 10 years, and both are warm-climate cities with year-round growing seasons facing unique questions about long-term water quality and quantity. Each is also facing tensions about development – in the case of Austin – and re-development – in the case of post-Hurricane Katrina New Orleans. Issues of residential displacement and neighborhood gentrification make for complex decisions about land-use and development in both cities. This study explores the relationship among land scarcity, efforts to create sustainable urban farms in both cities, and the environmental, social, regulatory, economic, and land use constraints facing commercial urban farms.

Chapter 2: Literature Review

The growth of urban agriculture operations echoes the growth in scholarship and popular writing about the negative ecological, economic, and public health impacts of the dominant, industrialized food system.¹ This work has led to an increasing demand for local and organic food,² an explosion of local food policy councils,³ changes in state legislation supporting small scale and local agriculture,⁴ and even national policy shifts. The Agricultural Act of 2014,⁵ for example, made unprecedented increases in funding for small and organic growers of fruits and vegetables while decreasing funding for traditional commodity crop subsidy programs.⁶ Bartling (2012) credits “sustainable cities discourse, popular critiques of globalization and the industrial production of food [and] increase in in the popularity of gardening” as being the key ingredients for the resurgence

¹ A few examples: Kloppenburg, J., Hendrickson, J., and Stevenson, G.W. (1996). Coming in to the foodshed. *Agriculture and Human Values*, 14 (3), 33–42.; Kimbrell, A. (Ed.). (2002). *The fatal harvest reader: The tragedy of industrial agriculture*. California: Foundation for Deep Ecology with Island Press.; Pollan, M. (2006). *The omnivore's dilemma: a natural history of four meals*. New York: Penguin Press.; Food and Water Watch. (2012). The economic cost of food monopolies. Washington DC: Food and Water Watch. Available: <https://www.foodandwaterwatch.org/reports/the-economic-cost-of-food-monopolies/>; Patel, R. (2012). *Stuffed and starved: The hidden battle for the world food system*. Brooklyn, NY: Melville House Publishing.; Nestle, M. (2013). *Food politics*. Berkeley, CA: University of California Press.

² Martinez, S., et al. (2010). Local food systems: Concepts, impacts, and issues. United States Department of Agriculture: Economic Research Report No. 97. Retrieved from <http://www.ers.usda.gov>.

³ Community Food Security Coalition and Winne, M. (2012, May). CFSC List of Food Policy Councils in North America. Available: <http://www.markwinne.com/resource-materials/>

⁴ Examples include the Texas House Farm-to-Table Caucus, created in 2012 to focus on Texas family farms, ranches and coastal fishing operations, food security, childhood obesity and hunger and increasing the availability of locally produced and harvested edible goods to Texas consumers. More information available: <http://www.texasfoodcaucus.org/about.html>. See also the Urban Agriculture State Legislation section of the National Conference of State Legislatures website: <http://www.ncsl.org/research/agriculture-and-rural-development/urban-agriculture-state-legislation.aspx>

⁵ Commonly called the “farm bill,” this omnibus legislation is passed approximately every five years and covers the majority of federal food, farming, and nutrition assistance policies/programs.

⁶ Steinhauer, J. (2014, March 8). Farm bill reflects shifting American menu and a senator's persistent tilling. *The New York Times*. Retrieved from <http://www.nytimes.com>.

in urban farming and backyard poultry raising.⁷ Because of these changes, urban agriculture is now “not only growing plants and raising animals for consumption, but also the processing, distribution, marketing and sale of food products and food by-products, such as compost.”⁸

What makes urban agriculture (UA) different from rural agriculture? Scholars have increasingly come to understand that urban agriculture is not “urban” because it is located within a city’s boundaries. Rather, UA is unique because of its integration into urban ecological and economic systems. Luc Mougeot of the International Development Research Center offers this often-cited definition:

UA is an industry located within (intra-urban) or on the fringe (peri-urban) of a town, a city or a metropolis, which grows or raises, processes and distributes a diversity of food and non-food products, (re-)using largely human and material resources, products and services found in and around that urban area, and in turn supplying human and material resources, products and services largely to that urban area.⁹

The producers and consumers of urban agriculture are connected in a way that “traditional” rural agriculture are not - consumers of urban agriculture are more likely to have met the grower of their tomatoes. At the same time, growers rely on a nearby network of consumers as well as municipal services like water, waste collection, and a

⁷ Bartling, H. (2012). A chicken ain’t nothin’ but a bird: local food production and the politics of land-use change. *Local Environment* 17(1): 23-34, pp. 29.

⁸ Hodgson, K., Caton-Campbell, M., Bailkey, M. (2011). *Urban agriculture: Growing healthy, sustainable places*. Chicago, IL: American Planning Association., pp. 1.

⁹ Mougeot, L.J.A. (2000). Urban agriculture: definition, presence, potentials and risks, and policy challenges. Cities Feeding People Series: Report 31. International Development Research Center (IDRC). Available: <http://idl-bnc.idrc.ca/dspace/bitstream/10625/26429/12/117785.pdf>, pp. 11. This definition accurately describes the urban farms included in both case studies in this report.

variety of land-use permissions necessary to operate a farm in a city.¹⁰ It is important to note that a significant amount of the literature on urban agriculture focuses on international case studies, particularly in the global south, where UA is seen as a key component of increasing food security and economic stability.¹¹ For this report, however, literature about UA in the United States and Canada will be used almost exclusively, both for its relevance to the American case studies and the sake of brevity.

A BRIEF HISTORY OF URBAN AGRICULTURE

Historically, urban agriculture – of both animals and vegetables – was well integrated into urban places because cities developed on or near prime soils and water resources. Indeed, U.S. metropolitan areas have more prime agricultural soils – and account for more than 50% of farm sales – than rural areas for precisely this reason.¹² Kitchen gardens were particularly common during the colonial period and well into the 19th century.¹³ As cities began to industrialize, however, the symbiotic relationship between cities and agriculture began to change. In particular, the urbanization of meat processing in the mid-to-late nineteenth century, which caused pollution and congestion in rapidly growing cities, led to an increasing hostility towards livestock within city limits.¹⁴ As large animal-processing facilities were moved to exurban areas, small

¹⁰ Mukherji, N. and Morales, A. (2010). Zoning for Urban Agriculture. Zoning Practice No. 3. American Planning Association.

¹¹ A few examples: Webb, N. (1998). Urban agriculture: environment, ecology, and the urban poor. *Urban Forum* 9(1): 95-107.; Mougeot 2000; Mougeot, L.J.A. (2005). *Agropolis: the social, political, and environmental dimensions of urban agriculture*. London: Earthscan.; Cabannes, Y. (2012). Financing urban agriculture. *Environment and Urbanization*, vol. 24(2): 665-683.; Pourjavid, S. et al. (2013). Analysis of constraints facing urban agriculture development in Tehran, Iran. *International Journal of Agricultural Management and Development* 3(1): 43-51.

¹² Brinkley, C. (2012). Evaluating the benefits of peri-urban agriculture. *Journal of Planning Literature*, 27(3): 259-269.

¹³ Maloney, S. A. (2013). Putting paradise in the parking lot: Using zoning to promote urban agriculture. *Notre Dame Law Review*, 88(5): 2551-2596., pp. 2558.

¹⁴ Philo, C. (1998). Animals, geography and the city: notes on inclusions and exclusions. In: J. Wolch and J. Emel, eds. *Animal Geographies: place, politics, and identity in the nature-culture borderlands*. London: Verso, 51–71.; Weigeldt, N. (2012). “Chickens in the city: The urban agriculture movement.” In A. Dale, W. Dushenko, & P. Robinson (Eds.)

animals often remained in individual backyards for family consumption.¹⁵ There is ample evidence that concerns about chickens in the city were often and loudly voiced against immigrant populations. A 1909 *Chicago Daily Tribune* article asserted, “in short, wherever immigrants who stand on the lowest scale of industry live, thousands of chickens are being raised.”¹⁶ Undoubtedly, tightening restrictions on urban agriculture generally, and animal-raising specifically, were deeply connected to race, ethnicity, and class biases in industrializing cities. At the same time, the outward expansion of cities led to increasing conflicts between new residents and existing agricultural enterprises¹⁷ just as *Euclid v. Ambler* opened the door for zoning regulations based on land use categories in 1926, resulting in increasingly segregated land uses.¹⁸

The Great Depression and both World Wars led to massive food shortages and a resurgence in urban agriculture as federal and local governments encouraged patriots to plant victory gardens to feed their families as well as the unemployed and the poor.¹⁹ Post-WWII urbanization and suburbanization, however, led to the residential development of land once used for agriculture. Zoning codes also increasingly reflected a new set of priorities where agriculture was not the “highest and best use” of urban land.²⁰ As a result, urban farming increasingly, though certainly not exclusively, became a suburbanite hobby.²¹ At the same time, the agricultural industry was changing. Small farming operations were increasingly replaced by large “agribusinesses” which relied on chemical fertilizers and pesticides and massive amounts of land while simultaneously,

Urban Sustainability: Reconnecting space and place. Toronto: University of Toronto Press.

¹⁵ Bartling 2012, pp. 26.

¹⁶ Many chicken farms in Chicago slums. (1909, May 9). *Chicago Daily Tribune*, pp. H2.

¹⁷ Bartling 2012, pp. 27.

¹⁸ *Euclid v. Ambler*. 272 U.S. 365. (1926).

¹⁹ Maloney 2013, pp. 2558

²⁰ Hodgson, Caton-Campbell, and Bailkey 2011

²¹ Mukherji and Morales 2010

local greengrocers were replaced by supermarkets featuring food products from all over the world.²² As a result of these continued trends, the number of farms in the United States has fallen from over 6 million in 1940 to 2.1 million in 2012, with the majority of the loss coming from small, family farms under 50 acres.²³

The current resurgence in small-scale urban agriculture is often traced to the social activism – mostly by middle-class, white urbanites²⁴ – of the 1960s and 70s, which focused on “the energy crisis, food quality and price, environmental problems, and urban decline.”²⁵ From this period on, social organizations, non-profits, and likeminded individuals devoted to community improvement have been the primary leaders of the urban agriculture movement, and the alternative food movement generally. It is only in the past 20 years or so that policy makers in cities have taken an interest in proactively encouraging urban agriculture and protecting it from development or even gentrification.²⁶ The role of cities in fostering urban agriculture tends to fall into three broad categories:

1. Addressing urban agriculture as a component of land-use and food policy in planning processes;
2. Creating, enabling, or funding community garden programs and urban agriculture organizations; and
3. Creating zoning and permitting processes friendly to urban agriculture.²⁷

²² Maloney 2013; Mukherji and Morales 2010

²³ Farm number data from the U.S. Department of Agriculture Census of Agriculture, 1940 and 2012. Data accessed: <http://www.agcensus.usda.gov/index.php>

²⁴ Guthman, J., “‘If they only knew’: The unbearable whiteness of alternative food.” In. A.H. Alkon and J. Agyeman (Eds.) (2011). *Cultivating food justice: Race, class, and sustainability*. Cambridge, MA: The MIT Press.

²⁵ Mukherji and Morales 2010, pp. 3

²⁶ Mukherji and Morales 2010, pp. 3

²⁷ Mukherji and Morales 2010, pp. 3. In this report, I will show evidence of how city governments are actually failing at this goal to protect urban agriculture from development and gentrification pressures, despite the fact that the literature often cites this as a goal of local policy.

Simultaneously, the consumer demand for local agriculture has increased, demonstrated by the increase in the number of farmers markets, farm stands and direct-to-consumer sales.²⁸ Today, a wide variety of individuals are connected to the urban agriculture movement, which includes everything from community gardens, backyard chicken-raising, to commercial urban farms. Specifically, commercial urban farmers tend to be “practical, high-energy individuals willing to take advantage of the significantly higher margin the urban farmer can sell to retail, over against the rural farmer. The successful urban farmer must have marketing savvy, finding niches not served by the corporate food system.”²⁹

URBAN AGRICULTURE IN PLANNING

An increasing number of planning scholars believe that ensuring local food security is a key component of long-term sustainability for a city or region.³⁰ However, considering food access in planning and policy-making is a relatively new phenomenon, though finding reliable and meaningful indicators to measure success is challenging. The American Planning Association created its first Food Interest Group in 2005, adopted its first policy guidelines on community and regional food system planning in 2007 and issued its first Planning Advisory Service (PAS) report, “A Planners Guide to

²⁸ Tropp, D. (2013, October 26). Why local food matters: The importance of locally-grown food in the U.S. food system. USDA Agricultural Marketing Service. Presentation to 4th Annual Virginia Women’s Conference. Available: <http://www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELPRDC5105706>

²⁹ Brown, K. et al. (2002). Urban agriculture and community food security in the United States: Farming from the city center to the urban fringe. Available: http://www.recoverypark.org/wp-content/uploads/11-11/Urban_Agriculture/Urban%20Ag%20Studies/urbanagpaper.pdf, pp. 16.

³⁰ Pothukuchi, K. and Kaufman, J. (2000). The food system. *Journal of the American Planning Association*, 66(2): 113-124.; Caton-Campbell, M. (2003). Building a common table: The role for planning in community food systems. *Journal of Planning Education and Research* 23: 341–55.; Goodman, D. (2003). The quality “turn” and alternative food practices: Reflections and agenda. *Journal of Rural Studies* 19 (1): 1–7.; Pothukuchi, K. (2004). Community food assessment: A first step in planning for community food security. *Journal of the American Planning Association*, 23(4): 365-377.

Community and Regional Food Planning: Transforming Food Environments, Facilitating Healthy Eating” in 2008.³¹ The National Policy & Legal Analysis Network to Prevent Childhood Obesity released a study called “Seeding the City: Land Use Policies to Promote Urban Agriculture” in 2011, offering recommendations for how cities and planners can promote UA on behalf of public health. An increasing number of planners believe they should “not only become educated about their communities’ food issues, but that the basic points of community food security actually mirror planning concerns: the needs of low-income residents, the importance and identification of community assets, and urban sustainability.”³²

Over the past decade, increasing numbers of communities and regions – notably Seattle, Minneapolis, Philadelphia and locations in California – have begun implementing planning initiatives that address food access and security.³³ A recent study found that 12% of the comprehensive plans of cities surveyed address aspects of local or regional food systems.³⁴ So-called “shrinking cities,” deindustrializing rust belt municipalities like Baltimore, Detroit and Cleveland have created vacant land use plans that call out urban agriculture as an important land re-use strategy.³⁵ New Orleans’ *Plan for the 21st Century*

³¹ American Planning Association. (2007). Policy guide on community and regional food planning. Available: <http://www.planning.org/policy/guides/adopted/food.htm>; Raja, S., Born, B., and Kozlowski Russell, J. (2008). A planners guide to community and regional food Planning: Transforming food environments, facilitating healthy eating. *PAS Report, Issue 554*. Washington, DC: American Planning Association, Planning Advisory Service.

³² Weigeldt in Dale, Dushenko, & Robinson (Eds.) 2012, pp.153.

³³ Hodgson, K. (2012). Planning for food access and community-based food systems: A national scan and evaluation of local comprehensive and sustainability plans. Washington, DC: American Planning Association, Planning and Regional Health Planning Center.

³⁴ Hodgson 2012, pp. 7

³⁵ LaCroix, C. (2010). Urban agriculture and other green uses: remaking the shrinking city. *The Urban Lawyer* 42(2); McClintock, N., Cooper, J., and Khandeshi, S. (2013). Assessing the potential contribution of vacant land to urban vegetable production and consumption in Oakland, California. *Landscape and Urban Planning* 111(2013): 46-58. See:

Master Plan, adopted in 2010, and Austin’s *Imagine Austin* Comprehensive Plan, adopted in 2012 are among this growing number of master and comprehensive planning documents that explicitly address urban agriculture and its benefits. The table below includes the list of benefits of urban agriculture from the Austin and New Orleans planning documents.

Imagine Austin (Austin comprehensive plan)	Plan for the 21st Century (New Orleans master plan)
Component of green infrastructure network	Productive use of vacant land and blight elimination
Promotes healthy food choices and nutrition	Improved access to fresh foods improves public health and reduces chronic diseases affected by food choices
Component of recreation and open space network	Lowered food costs and positive environmental impact due to decreased packaging, storage, and shipping waste
Can create healthy food access points, particularly in under-served areas	Profitable business opportunities for growers
Method for protect environmentally sensitive areas and integrate nature into the city	Community building and increasing social capital through special programs and training

Table 2.1: Benefits attributed to UA in Austin and New Orleans city plans

BENEFITS OF URBAN AGRICULTURE

Scholars of urban planning, public health, community development and natural sciences fields have dramatically expanded the literature on urban agriculture over the past decade, citing a wide range of benefits. A recent report commissioned by the Funder’s Network for Smart Growth and Livable Communities provides a summary of

the potential benefits of urban agriculture, drawing from a number of scholarly sources and interviews with experts.³⁶ Those benefits include:

- productive reuse of contaminated land
- stormwater runoff reduction
- air pollution reduction
- increased biodiversity
- increased access to fruits and vegetables
- increased opportunities for public health programming
- increased community economic security
- increased social interactions among diverse populations
- increased opportunities for place-based community programs
- possible reuse of vacant land that can cut down on trash accumulation, illegal dumping, fires, etc.
- decreased public land-maintenance costs
- capitalization of underused resources
- increase property values
- multiplier effect of attracting new food-related businesses

These benefits cover a lot of ground and the evidence to support these claims is based primarily on case-study examples rather than large-scale evaluations. For the purpose of understanding this study of New Orleans and Austin, I examine the literature on several of these benefits, focusing on the environmental, social, and economic benefits.³⁷

Sustainability and green infrastructure

Some scholars argue that urban agriculture generally is a key component to increasing a city's resiliency and sustainability because of its focus on health, increased inter-resident interaction, economic opportunities for food producers, and the ecological

³⁶ Hodgson, K. (2011). *Investing in healthy, sustainable places through urban agriculture*. Funders' Network for Smart Growth and Livable Communities, Coral Gables, FL. Available: http://www.fundersnetwork.org/files/learn/Investing_in_Urban_Agriculture_Final_110713.pdf

³⁷ While improvements in nutrition are certainly an increasingly documented outcome of urban agriculture, public health is not the primary focus of this report.

benefits of shorter supply chains.³⁸ Decreasing a city's carbon footprint by reducing the mileage that food and food inputs have to travel is a reoccurring theme in arguments for urban agriculture. Consumers of urban agriculture tend to live within the same city as the farms themselves, so the distance that food travels from field to plate tend to be very short. In addition, farmers who simultaneously raise animals and vegetables can recirculate animal and food scraps into nutrient dense fertilizer without having to purchase and transport artificial fertilizers.³⁹ Composting and feeding food scraps to animals raised on farms can also increase the amount of food waste diverted from landfills. The EPA estimates that while food waste makes up the largest portion of municipal solid waste nationally (approximately 21%), only 5% is diverted through composting, anaerobic digestion, or other methods.⁴⁰ Urban farms often use food waste from homes, restaurants, and supermarkets to create organic fertilizer, particularly in cities without municipal composting programs.⁴¹

Studies conducted in the United Kingdom have concluded that the production, processing and retailing of food produce approximately 20% of greenhouse gas emissions and as much as 30% of the national carbon footprint.⁴² A recent life cycle assessment study indicated that greenhouse gas emissions from agriculture may be significantly reduced by replacing certain types of imported food with food grown on a local

³⁸ Weigeldt in Dale, Dushenko, & Robinson (Eds.) 2012, pp.151.

³⁹ Bartling 2012, pp. 30; Weigeldt in Dale, Dushenko, & Robinson (Eds.) 2012

⁴⁰ Food Waste Basics. Environmental Protection Agency. Accessed March 9, 2014. Available: <http://www.epa.gov/foodrecovery/>

⁴¹ Kaufman, J. and Bailkey, M. (2000). Farming inside cities: Entrepreneurial urban agriculture in the United States. Working Paper of the Lincoln Institute of Land Policy. Available: <http://www.urbantilth.org/wp-content/uploads/2008/10/farminginsidocities.pdf>

⁴² Studies cited in Kulak, M. (2013). Reducing greenhouse gas emissions with urban agriculture: A life cycle assessment perspective. *Landscape and Urban Planning*, 111(2013): 68-78.

community farm.⁴³ The study concludes that a community farm contributes to greenhouse gas emission reductions by rates that exceed the carbon sequestration parks and urban forests.⁴⁴ Despite the fact that this is one of the only empirical studies of its kind, the environmental benefits of urban agriculture are asserted throughout the literature. Jac Smit, often called the “father of urban agriculture,” wrote in his seminal 2001 study:

Nutritional gains are clearly the greatest health benefit from urban farming, but they are far from the only benefit. Farming also cleans and greens the living environment, reducing pollution and disease-causing pathogens and vectors. Household waste and refuse can also be recycled for agricultural uses, providing additional environmental and human benefits by reducing waste scattered around the urban environment.⁴⁵

UA is also attributed to managing stormwater run-off, cleaning the air and mitigating against urban heat island effect by maintaining pervious land cover.⁴⁶ Urban agriculture – particularly high-tech operations like hydroponics, rooftop gardens, and aquaponics – has even been identified as a potential solution to the global decline in food yields as a result of climate change.⁴⁷

Further, a growing body of literature is beginning to show that agricultural landscapes offer significant ecosystem services beyond the direct economic value of the

⁴³ Kulak 2013. This type of analysis is rare and there are very few of these studies that show conclusive evidence of this type of environmental benefit.

⁴⁴ Kulak 2013, pp. 76.

⁴⁵ Smit, J. et al. (2001). *Urban agriculture: Food, jobs, and sustainable cities*. The Urban Agriculture Network, Inc. Available: <http://jacsmi.com/book.html>, pp. 7.11.

⁴⁶ Wachter, S. et al. (2010). Redevelopment Authority of the City of Philadelphia: Land use and policy study. Final Report by Penn Institute for Urban Research and Econsult Corporation. Available: http://pennur.upenn.edu/uploads/media_items/urban-agriculture-final-report.original.pdf

⁴⁷ Dixon et al. (2009). Functional foods and urban agriculture: two responses to climate change-related food security. *NSW Public Health Bulletin* 20(1-2): 14-18.

products grown or raised.⁴⁸ Arable farming “is a contributor to improved social well-being as well as increased food production,” and systems that are organic and diverse provide greater benefits than those that are large monocultures.⁴⁹ “Multifunctional agriculture,” which features a mixture of perennial, annual and covercrops provides the greatest ecosystem services benefits because it “seeks complex land-use/land-cover systems that can meet multiple human needs from diverse ecosystems while sustaining these ecosystems over multiple generations.”⁵⁰ In almost every urban agriculture operation discussed in the literature, a wide variety of crops and products are being produced, primarily because these farms are often supported by a community supported agriculture (CSA) business model and therefore rely on a diverse crop mix to satisfy customer needs. While Jordan and Warner (2013) do not explicitly discuss urban agriculture, the characteristics of an agricultural system with significant ecosystem services benefits match closely with the characteristics of most urban farms, albeit at a smaller scale. In addition, the negative effects of pesticide pollution and soil depletion often diminish the services provided by large-scale agriculture, while urban agriculture operations are by in large using organic growing methods, few if any chemical inputs, and regular organic soil amendment processes.⁵¹

⁴⁸ Brinkley 2012; Wratten et al. (Eds.). (2013). *Ecosystem Services in Agricultural and Urban Landscapes*. West Sussex: John Wiley & Sons, Ltd.

⁴⁹ Sandhu, H., Porter, J., and Wratten, S. (2013). Experimental assessment of ecosystem services in agriculture. In S. Wratten et al. (Eds.), *Ecosystem Services in Agricultural and Urban Landscapes* (122-135). West Sussex: John Wiley & Sons, Ltd., pp. 133.

⁵⁰ Jordan, N. and Warner, K.D. (2013). Towards multifunctional agricultural landscapes for the upper Midwest region of the USA. In S. Wratten et al. (Eds.), *Ecosystem Services in Agricultural and Urban Landscapes* (139-156). West Sussex: John Wiley & Sons, Ltd., pp. 133.

⁵¹ Brown, et al. 2002; Kaufman and Bailkey 2000

Community development

Much of the literature, particularly that which focuses on international case studies, emphasizes the potential of UA to create economic opportunities for low-income families and individuals.⁵² Families can dramatically cut down on expenses by growing their own food, thereby increasing food security, particularly in extremely poor regions with little access to commercial grocery retailers.⁵³ In low-income areas with vast amounts of vacant land, urban agriculture may be used as a mechanism for converting “blighted and vacant properties into productive spaces.”⁵⁴ UA as an alternative vacant-land reuse strategy has been shown to “decrease or prevent crime, trash accumulation, illegal dumping, littering, and fires, and [act] as a catalyst for additional community development activities and positive place-based programs.”⁵⁵ From a planning perspective, however, agriculture is not necessarily seen as the “highest and best use” of urban land. “The definition of ‘best use’ puts agriculture at the bottom of the heap” even in places like Detroit, where there is still a hope that a resurgence in manufacturing jobs will attract the population to return, eliminating the need to convert the city’s vacant land into large farms.⁵⁶ Urban farms as uses for vacant land are still seen by some to be temporary holding strategies until a higher and better use comes along.

Further, there is a clear sense in much of the literature that urban agriculture is simply *good* for communities because of a number of intangible social benefits. If, as urban agriculture expert Edwin Marty surmises, the “legal separation of the city from its food system put into action steps that inevitably created a broken [food] system,” then it

⁵² See particularly Smit, et al. 2001; Hodgson, Caton-Campbell, and Bailkey 2011

⁵³ Brown, et al. 2002

⁵⁴ Maloney 2013, pp. 2565

⁵⁵ Hodgson, Caton-Campbell, and Bailkey 2011, pp. 20

⁵⁶ Hanson, D. and Marty, E. (2012). *Breaking through concrete: Building an urban farm revival*. Berkeley: University of California Press.

follows that reconnecting cities with their food supplies could fix the food system.⁵⁷

Others discuss the community benefits in almost religious terms:

There is a quiet revolution stirring in our food system. It is a revolution that is providing poor people with an important safety net where they can grow some nourishment and income for themselves and their families. *And it is providing an oasis for the human spirit where urban people can gather, preserve something of their culture through native seeds and foods, and teach their children about food and the earth.* The revolution is taking place in small gardens, under railroad tracks and power lines, on rooftops, at farmers' markets, and in the most unlikely of places. It is a movement that has the potential to address a multitude of issues: economic, environmental, personal health, and cultural.⁵⁸

Despite the fact that these benefits are difficult to quantify, the community benefits are touted by advocates and activists working towards growing the UA movement.

Vitiello and Wolf-Powers study (2014) of six cities with high profile urban farming operations found that the impacts of urban agriculture are not quantifiable simply in dollars. Urban farms, they found, promote both economic development as well as social equity because the most successful projects are mission based and include multiple goals outside of simply growing food for sale. "People who cultivate urban land to supplement their income, feed neighbours or build jobs skills create economic value that purely commercial farming does not."⁵⁹ The "overall success" of urban agriculture,

⁵⁷ Hanson and Marty 2012, pp. 2.

⁵⁸ Emphasis added. Michael Ableman quoted in Lazarus, C. (2000). Urban agriculture: Join the revolution. New Village: Building Sustainable Cultures, Issue 2. Accessed March 15, 2014. Available: <http://www.newvillage.net/Journal/Issue2/2urbanagriculture.html>

⁵⁹ Vitiello, D. and Wolf-Powers, L. (2014). Growing food to grow cities? The potential of agriculture for economic and community development in the urban United States. *Community Development Journal* and Oxford University Press., pp. 13

argues Martin Bailkey, must be measured by their “cumulative” impact, which is more than just employment and revenues.⁶⁰

Studies have also found that introducing farm stands selling local produce, often grown at urban farms, into communities with limited access to high quality fruits and vegetables increases resident’s consumption of fruits and vegetables.⁶¹ Similarly, many advocates argue that bringing farming closer to where people live can increase awareness of the benefits of fresh fruits and vegetables while providing access points for schools groups to do education about healthy food and nutrition. An Austin, Texas study found that middle-school students who are exposed to “garden-based interventions” including farm-to-school meals, farmers’ visits to schools, taste testing, and field trips to farms are significantly more likely to have higher intake of fruits and vegetables.⁶² In general, the health benefits of eating fresh, healthy produce is well documented, but not the primary focus of this analysis.

Economic development

It is estimated that about 12% of the world’s population eat food produced by urban farmers.⁶³ According to the United States Department of Agriculture (USDA), locally marketed food is more likely to be produced on small farms located in or very

⁶⁰ Quoted in Vitiello and Wolf-Powers 2014, pp. 10

⁶¹ Evans, A., et al. (2012). Introduction of farm stands in low-income communities increases fruit and vegetable consumption among community residents. *Heath & Place* 18(2012): 1137-1143; Litt et al. (2011). The influence of social involvement, neighborhood aesthetics, and community garden participation on fruit and vegetable consumption. *American Journal of Public Health*, 101(8): 1466-1473.

⁶² Evans, A., et al. (2012). Exposure to multiple components of garden-based intervention for middle school students increases fruit and vegetable consumption. *Health Promotion Practice* 13(5): 608-616.

⁶³ Ladner, P. (2011). *The urban food revolution: changing the way we feed cities*. British Columbia: New Society Publishers, pp. 21.

near metropolitan areas.⁶⁴ These types of farms – many of which would fit the aforementioned definition of an urban farm – often use direct-to-consumer marketing such as community supported agriculture (CSA), which represents a very small, but growing percentages of U.S. agricultural sales.⁶⁵ Estimates for the number of CSAs in operation in 2010 numbered more than 1,400, up from 400 in 2001, while the number of farm-to-school programs more than quadrupled from 2004 to 2009.⁶⁶

The impact of local agriculture on a region may be calculated by the multiplier effect of spending money locally. A locally owned urban farm is more likely to use local seed, soil and other farm input sources, marketing resources, mechanics, technicians, and labor.⁶⁷ As a result, money spent at a local business tends to circulates through other local businesses. A study based in Austin found that a dollar spent at a local bookstore generated three times the local economic impact than that same dollar spent at a national chain.⁶⁸ The same may be easily assumed for a local farm.

Urban farms are also often attributed to opportunities for entrepreneurship and job creation, particularly among “under-served populations.”⁶⁹ While urban farms may employ far fewer employees than larger, rural farms – many rely on volunteer labor – there is also ample evidence that urban farms offer benefits in terms of workforce development and job training. Milwaukee’s Growing Power and Chicago’s Growing

⁶⁴ Martinez et al. 2010

⁶⁵ Martinez et al. 2010, pp. iii

⁶⁶ Ibid.

⁶⁷ Ladner 2011, pp. 105

⁶⁸ Civic Economics. (2002). Economic impact analysis: a case study: local merchants vs. chain retailers. Prepared for Livable City and Austin Independent Business Alliance, pp. 4.

⁶⁹ Maloney 2013, pp. 2566; Kaufman and Bailkey 2000

Home in particular have helped create hundreds of jobs for people who are traditionally hard to employ, including the formerly homeless and/or incarcerated, through transitional job training programs.⁷⁰ This is only a small sampling of the variety of benefits that advocates and analysts attribute to urban agriculture, and practitioners in New Orleans and Austin will echo many of these themes in Chapters 4 and 5 of this study.

BARRIERS TO URBAN AGRICULTURE

Much has been written about the barriers to commercial urban agriculture, which will be the primary focus of the analysis of New Orleans and Austin in this study. In general, the primary constraints fall into the following categories:⁷¹

- Lack of agricultural knowledge/skills in production, processing, marketing and growing among growers;
- High start-up costs and operating costs of growing and marketing;
- Inadequate financial resources to ensure long-term financial viability;
- Land tenure challenges and high property taxes;
- Seasonal and scale limitations on production;
- Inadequate access to markets;
- Soil contamination, particularly on former brownfields;
- Vandalism and crime;
- Local government impediments, including land use policies that limit the ability of farms to locate in certain areas or sell products from the farm site;
- Inappropriately managed operations resulting in noise, odor, and unsightliness;
- Access to and expense of municipal water sources.

Specifically, Kaufman and Bailkey's 2000 study of the nearly 70 commercial urban agriculture operations in the United States at the time examined skepticism about the

⁷⁰ Vitiello and Wolf-Powers 2014

⁷¹ Compiled from Kaufman and Bailkey 2000; Brown et al. 2002; Hodgson, Caton-Campbell, and Bailkey 2011

long-term viability of these types of operations. Their study called commercial urban farms “entrepreneurial” projects to highlight the fact that these operations often had sole operators and were organized to make a profit, making them particularly risky ventures. These concerns were articulated by a wide range of expert sources and are summarized in the following statements:

1. entrepreneurial urban agriculture projects cannot be sited on vacant city lots, because these parcels are too contaminated;
2. entrepreneurial urban agriculture projects located in crime-ridden neighborhoods are undermined by considerable vandalism;
3. entrepreneurial urban agriculture projects are not economically viable as profit generators, nor as operations seeking only to cover expenses, thus they are not worth initiating or supporting;
4. entrepreneurial urban agriculture projects are run by people who, although energetic and committed, lack the necessary management and business skills to make such ventures successful;
5. entrepreneurial urban agriculture practitioners operate too independently, and fail to work together to promote the potential and overall value of city farming;
6. entrepreneurial urban agriculture projects represent a temporary land use, lasting only until “real” revenue-producing development occurs.⁷²

Almost any study on UA touches on at least one of these barriers and there are ample examples of urban farms that have failed because of them. For the purposes of this study, concerns about economic viability and city regulations are particularly relevant.

Like large-scale rural agriculture, few metropolitan farms are financially viable without off-farm income and many rely on volunteer labor.⁷³ Many commercial urban agriculture operations – many of which operate under a non-profit status - rely on grant

⁷² Kaufman and Bailkey 2000, pp. 67-68

⁷³ Heimlich, R. and Barnard, C. (1992). Agricultural adaptation to urbanization: Farm types in northeast metropolitan areas. *Journal of Agricultural and Resource Economics* (April 1992): 50-60.; Brown et al. 2002; Jarosz, L. (2008). The city in the country: Growing alternative food networks in metropolitan areas. *Journal of Rural Studies* 24(2008): 231-244.

funding, philanthropy, and government assistance.⁷⁴ One source of funding is the USDA's Community Food Projects competitive grants program, which has funded small projects across the United States since its establishment in 1996. As of 2000, approximately 30% of those grants went to commercial urban agriculture projects.⁷⁵ Studies find that while demand for local food grows, making a secure sustainable livelihood through small-scale and urban farming is challenging.⁷⁶ Even Milwaukee's Growing Power, one of the largest and most successful commercial urban farms in the country, gets two-thirds of its annual budget from philanthropy and public support.⁷⁷

On the regulatory side, cities tend to employ two key types of rules governing urban agriculture – those regulating the appropriate nature and location of agriculture as a land use in urban areas and those regulating the commercial nature of urban farms. Generally, agriculture is either a zoning category in and of itself, which often permits a wide range of agricultural activities, including raising crops and animals, typically in rural and peri-urban districts.⁷⁸ Alternatively, urban agriculture may be a use category that may be permitted, conditional or restricted in particular zoning districts.⁷⁹ Zoning and land use regulations are undoubtedly one of the most important tools for promoting and controlling urban agriculture in a city. Indeed, creating specific zoning and/or land use categories for urban agriculture clarifies where and under what specific conditions UA can operate while simultaneously addressing the land tenure issue that many UA operations face.⁸⁰ As planners Mukherji and Morales explain,

⁷⁴ Brown et al. 2002; Vitiello and Wolf-Powers 2014

⁷⁵ Kaufman and Bailkey 2000, pp. 10

⁷⁶ Jarosz 2008, pp. 242

⁷⁷ Lepeska, D. (2013). Betting the farm: Is there an urban agriculture bubble? *Forefront* 2(40). Retrieved from: <https://www.nextcity.org/>

⁷⁸ Mukherji and Morales 2010

⁷⁹ Ibid.

⁸⁰ Ibid.

Many community gardens and urban farms face ambiguous land tenure, for instance, if they are run by a nonprofit that leases land for a nominal sum. An urban agricultural designation can protect a garden or farm if agriculture is a particularly good use for that parcel. This rationale may apply when a parcel contains a long-established garden that serves an important social or cultural function, when an agricultural use can help to supply food to an area underserved by grocery stores, when the garden or farm serves an educational purpose, when the parcel helps to fulfill an open space goal, or when the use is in an environmentally sensitive area that should not be developed. If a city wants to protect a garden from future changes, an urban garden designation creates a hurdle for future development.⁸¹

In most cities, regulations of urban agriculture begin with restrictions on the keeping of animals, particularly backyard poultry, most often raised for non-commercial purposes.⁸² While a few older cities like New York City and Chicago never formally restricted poultry-keeping, strict regulations about how many chickens a resident may have, where those chickens may live, and how far they must be from a neighbor are common regulations in U.S. cities.⁸³ Examining these regulations offers insight into the way that different cities conceptualize what is “appropriate” for urban and suburban regions. Bartling’s 2012 study examining changes to municipal ordinances around poultry raising concluded that movements to loosen restrictions were led by highly organized groups of advocates with well-developed arguments focusing on ecology, education, health, and alternative models of protein consumption. Opponents to amending restrictive ordinances “tended to be isolated individuals or skeptical officials who were not necessarily convinced that reform would be in the best interests of their respective cities.”⁸⁴ These opponents often articulate a concern about small farm animals, particularly chickens, as being “gateway animals” that could lead to less-compatible

⁸¹ Mukherji and Morales 2010, pp. 5

⁸² McClintock, N., Pallana, E., Wooten, H. (2014). Urban livestock ownership, management, and regulation in the United States: An exploratory survey and research agenda. *Land Use Policy* 38(2014): 426-440.

⁸³ Bartling 2012, pp. 23

⁸⁴ Ibid., pp. 30

animals being raised in residential areas.⁸⁵ The somewhat arbitrary nature of classifying animals into categories for land-use regulations also plays a role here. “Under the dominant logic of urban zoning policy, animals are either pets (accepted and regulated), wild (managed), or livestock (prohibited). Chickens do not conform to this typology and in this sense their hybridic nature is difficult for non-enthusiasts to embrace.”⁸⁶

The specific barriers to urban agriculture certainly vary from city to city, but the ones discussed in this brief section seem to be relatively universal across the literature. While urban farming has been a robust part of many cities for centuries, it is relatively new in its current form, particularly farms that are trying to become self-sufficient businesses with employees. The small scale of these operations, the uncertainty and sometimes fear about what an urban farm might mean for its neighbors, and the fact that many cities rely on Euclidian zoning codes that emphasize a strict separation of land uses creates unique challenges for urban farmers that most rural farmers do not face. The discussion about these barriers could go on much longer here, but the specific barriers discussed by practitioners in Austin and New Orleans will provide a more nuanced and robust illustration about the challenges facing commercial urban farmers.

CRITIQUES OF URBAN AGRICULTURE

One of the most significant critiques of urban agriculture is about land use compatibility and the concerns neighbors may have about the risks of living near a farm. Some point specifically to “soil contamination, contamination of ground and surface waters, air pollution, increased water demand, potentially higher load on sewage systems, and the potential for the production of harmful waste materials” as risks associated with

⁸⁵ Bartling 2012, pp. 32

⁸⁶ Ibid., pp. 31

urban farming⁸⁷ Participants in urban agriculture operations have varying levels of awareness and concern about the possible negative health effects of these risks.⁸⁸ Rural and peri-urban agricultural businesses, particularly farms with livestock, have traditionally sought to be located far away from residential neighbors in order to limit potential complaints about these, and other issues.

Understandably, living nearby a farm can result in predictable nuisances such as noises from equipment, livestock and chickens and odors from animals and/or manure.⁸⁹ Poor air quality is increasingly found in areas with confined animal feeding operations (CAFOs), which have increased in number and size as the food system has industrialized. CAFOs have very few regulatory constraints despite a host of environmental concerns, particularly air and water quality around CAFO sites.⁹⁰ Despite the fact that these types of operations could never be located on an urban farm due to the small size and zoning regulations, the negative association of livestock on farms often results in neighborhood concerns about urban farms that also raise livestock. Even “chickens and other fowl raise issues of nuisance, including noise, un-cleanliness from excrement and smell, unsightly coop construction, rodents, and disease.”⁹¹ The aversion to animal-raising also translates into “little enthusiasm for permitting on-site butchering in reform efforts.”⁹²

⁸⁷ Mogk, J. E. (2012). “Urban agriculture poses health and safety issues.” In N. Dziedzic & L. Zott (Eds.). *Urban Agriculture*. Opposing Viewpoints in Context Collection. Detroit: Greenhaven Press.

⁸⁸ Kim, B. et al. (2014). Urban community gardeners’ knowledge and perceptions of soil contaminant risks. *PLoS ONE* 9(2).

⁸⁹ Ladner 2011, pp. 40

⁹⁰ Facts about CAFOs. Michigan Sierra Club. Accessed March 9, 2014. Available: <http://michigan.sierraclub.org/issues/greatlakes/articles/cafofacts.html>

⁹¹ Mogk in Dziedzic & Zott (Eds.) 2012

⁹² Bartling 2012, pp. 31

A 2000 study by Kaufman and Bailkey focused on more than 120 informants from 27 cities with commercial urban agriculture projects. Their purpose was to document the “*vision and reality*” of attitudes towards urban agriculture. Their findings highlight the fact that while there is much enthusiasm for commercial urban agriculture, there is also extensive skepticism and doubt.

There are some true believers, enthusiastic supporters who see entrepreneurial urban agriculture as having a promising future. Others, open to the idea and expressing hope that urban agriculture will succeed, still raise questions about whether such projects can be economically viable, create a sufficient number of jobs, and deliver on its potential. Some are downright skeptical, questioning whether such projects are anything more than a fanciful flight of the imagination, unlikely to take root in the urban setting to any significant degree. And finally, some, positioned to assist entrepreneurial urban agriculture ventures, were basically indifferent to the idea.⁹³

The skepticism expressed by these participants has continued in the subsequent decade. During a visit to Detroit in 2010, Rev. Jesse Jackson called the idea of urban agriculture “cute but foolish.” “We need industrialization, not farming,” he said, “Detroit needs a battery plant. Let farmers farm...we are not offering a farming plan for Baghdad.”⁹⁴ He further alluded to urban agriculture being a mechanism for driving Detroiters out of the city and getting “trapped into a gentrification process.” Richard Longworth, senior fellow at the Chicago Council on Global Affairs agrees that what places like Detroit need are supermarkets and jobs, not urban farms.⁹⁵

⁹³ Kaufman and Bailkey 2000, pp. 8

⁹⁴ Winter, M. (2010, Sept. 7). “In Detroit, Jesse Jackson calls urban farming ‘cute but foolish.’ *USA Today*. Available: <http://content.usatoday.com/communities/ondeadline/post/2010/09/in-detroit-jesse-jackson-calls-urban-farming-cute-but-foolish/1#.UyX-H-ddVL4>

⁹⁵ Longworth, R. (2012). “The urban poor need supermarkets, not urban agriculture.” In N. Dziedzic & L. Zott (Eds.) (2012), *Urban Agriculture*. Opposing Viewpoints in Context Collection. Detroit: Greenhaven Press.

There's nothing wrong with this growth in small farming, so far as it goes: even foodies deserve to eat well. But these niche farms are just that—a niche. With their low yields, they can't possibly meet global demand. And they're off limits to all but urbanites who can afford their higher prices and who have the time to sort through the piles of *haricots verts* [French green beans] and heirloom tomatoes and then find recipes for them. There's no place in this rarified universe for average people working long hours to afford the lower prices at the local supermarket.⁹⁶

The questions raised here are those about who reaps the benefits of urban agriculture as well as a sense of inherent superiority in the products grown on urban farms. Indeed, there is a growing body of literature exploring the racial, ethnic, and socioeconomic barriers inherent in the local, sustainable and “alternative” food movement.⁹⁷

In fact, most small, for-profit farms – especially rooftop and indoor farms - employ very few people and sell a significant amount of their products to high-end restaurants that are far outside of the financial reach of the neighborhoods that urban farms tend to locate in.⁹⁸ An extensive study by Julie Guthman found that farmers markets and especially CSAs tend to serve primarily white, middle- to upper-income populations, even when located in more racially mixed areas.⁹⁹ Further, CSA and market managers tend to attribute the lack of diversity in their customers to a lack of education, specifically about nutrition and food quality. If those customers had those values, many local food advocates believe it would “necessarily trigger desire for local, organic food

⁹⁶ Longworth in Dziedzic & Zott 2012

⁹⁷ See Alkon, A.H. and Agyeman, J. (Eds.). (2011). *Cultivating food justice: Race, class, and sustainability*. Cambridge, MA: The MIT Press.; Guthman, J. (2011). *Weighing in: Obesity, food justice, and the limits of capitalism*. Berkeley, CA: University of California Press.; Alkon, A.H. (2012). *Black, white, and green: Farmers markets, race, and the green economy*. Athens, GA: University of Georgia Press.

⁹⁸ Vitiello and Wolf-Powers 2014

⁹⁹ Guthman in. Alkon & Agyeman (Eds.) 2011

and people would be willing to pay for it.”¹⁰⁰ Guthman and others have expressed concern with the racism buried in comments like these, which attribute personal failures rather than institutional and structural failures in creating an unjust food system.¹⁰¹ Also, “it is important to recall that U.S. agricultural land and labor relations are fundamentally predicated on white privilege” and the romanticized picture of bucolic agricultural systems painted by writers like Wendell Barry might not resonate with people who have not historically benefitted from these systems.¹⁰² The Kaufman and Bailkey study found that “African-Americans in particular see in urban farming echoes of the slavery and sharecropping left behind in the migration of Southern blacks to Northern cities.”¹⁰³

In addition, planners Born and Purcell (2006) have begun to question the blind faith that many advocates have in the benefits of the “localness” of local food movements. They call the phenomenon of assuming that local is inherently good the “local trap.” They argue instead that “there is nothing inherent about any scale. Local-scale food systems are equally likely to be just or unjust, sustainable or unsustainable, secure or insecure.”¹⁰⁴ Advocates for alternative food systems often conflate the means with the ends. The ends, Born and Purcell argue, include improved food-quality, food-security, and environmental benefits. Local systems may be a means towards those ends, but large-scale strategies may actually have greater impacts than small, local projects. In

¹⁰⁰ Guthman 2011, pp. 263

¹⁰¹ Kato, Y. (2013). Not just the price of food: challenges of an urban agriculture organization in engaging local residents. *Sociological Inquiry* 83(3): 369-391.

¹⁰² Guthman 2011, pp. 275-276

¹⁰³ Kaufman and Bailkey 2000, pp. 62

¹⁰⁴ Born, B. and Prucell, M. (2006). Avoiding the Local Trap: Scale and Food Systems in Planning Research. *Journal of Planning Education and Research*, 26: 195-207, pp. 195.

addition, they call into question whether the previously discussed economic benefit of keeping local money circulating in local economies is righteous. “There is certainly no social justice in Beverly Hills’ capturing more of its own wealth for local investment...Local as an end, for its own sake, is merely nativism, a defensive localism that frequently is not allied with social-justice goals.”¹⁰⁵

CONCLUSION

This review has presented some of the relevant literature on urban agriculture, focusing specifically on the benefits, challenges, and critiques of commercial urban farms. There is undoubtedly unwavering enthusiasm and a growing body of literature to support efforts of policy makers and planners to expand the current network of urban farms in cities. There are also disquieting problems facing UA today, including its seeming inability to create stable job opportunities for farmers, questions of permanent land tenure, and real concerns about the equitability of the distributions of benefits. In the following chapters, I will explore these questions as they pertain to two case studies: Austin, Texas and New Orleans, Louisiana.

¹⁰⁵ Born and Purcell 2006, pp.202

Chapter 3: Methodology

The purpose of this study is to examine the challenges facing urban farms in major metropolitan areas. Specifically, three central research questions define the parameters of inquiry:

1. Where is urban agriculture developing in cities and why?
2. What are the primary constraints affecting the development of long-term commercial urban farm operations within the boundaries of large metropolitan cities?
3. How are cities planning and creating policies for commercial urban agriculture under different environmental, economic, and land-use constraints?

To fully analyze these questions, an extensive review of urban agriculture practice and the policies regulating those operations across the country is needed. For this study, however, I chose a deep dive into two case studies rather than a broader analysis of numerous cities. Using the case study model allowed me to examine the challenges facing urban farms in extensive detail within the specific context of two major metropolitan areas. While some criticize the case study method as having less validity and generalizability than large scale quantitative analysis, Flyvbjerg and others make a strong case for using case studies for hypothesis testing, theory building, and making large contributions to scientific development.¹⁰⁶ Because of the number of variables constraining urban agriculture, particularly the complex and highly contextualized nature of land-use regulatory regimes, this study was best served by using the case study model and carefully choosing two cities with sufficient variation.¹⁰⁷

¹⁰⁶ Flyvbjerg, B. (2011). Case Study. In N.K. Denzin & Y.S. Lincoln (Eds.), *The SAGE handbook of qualitative research* (4th ed., pp. 301-317). Los Angeles, CA: SAGE Publications Inc.

¹⁰⁷ Ibid., pp. 307

SELECTION OF CASE STUDIES

Austin, Texas and New Orleans, Louisiana were chosen because of several key similarities and differences that these cities share. Austin and New Orleans are both in the process of completely revising their land development regulations, and specifically dealing with the regulations around urban food production and urban farms as a commercial and/or residential land-use. Because of this, city employees, particularly those in the planning departments, as well as key community stakeholders are more familiar with urban farm regulations than they have been in the past. Both cities have experienced growth in urban agriculture operations in the past ten years with a corresponding increase in the number of stakeholders interested in various aspects of the urban farming movement. Environmentally, both are southern, warm-climate cities with year-round growing seasons facing unique questions about long-term water quality and quantity and about how water resources will be allocated among municipal and agricultural users. Culturally, both are well known tourist-destinations with nationally recognized food scenes. Each is also facing tensions about development – in the case of Austin – and re-development – in the case of New Orleans post-Hurricane Katrina. Issues of residential displacement and neighborhood gentrification make for complex decisions about land-use and development in both cities.

In terms of availability of land for food production, however, these two cities are very different, and this provides a key distinction for an analysis of urban agriculture. Most significant is the actual amount of land area each city has to work with. New Orleans covers 350 square miles while Austin covers 305 square miles, but 52% of the New Orleans city limits is actually Gulf of Mexico water, while 97% of Austin is dry land.¹⁰⁸ While the amount of land in New Orleans that is ill-suited for urban agriculture is

¹⁰⁸ American Community Survey 2008-2012 five-year estimates.

large, this is counter-balanced by the fact that New Orleans has an estimated 35,700 blighted homes and empty lots. This number has steadily decreased from a peak of over 65,000 since Hurricane Katrina, but that still accounts for over 20% of the residential addresses in the city.¹⁰⁹ Of New Orleans vacant housing units, only 35% are actively on the rental or sale market; 66% are classified as “other vacancy,” which are most likely to be abandoned completely.¹¹⁰ These high vacancy rates can be attributed to both pre-and post-Katrina population decline, as well as systematic demolition of blighted homes in the post-Katrina rebuilding process. Austin, on the other hand, has a residential vacancy rate of less than 8%,¹¹¹ no mechanism for measuring “blight” on properties, and one of the fastest growing populations, real estate markets, and job markets in the United States.¹¹² Of the vacant housing units in Austin, half are actively on the rental or sale market (see Table 3.1 below for details). As a result, the stock of vacant land in Austin that could be available for urban agriculture is miniscule compared to that of New Orleans.

¹⁰⁹ Plyer, A. and Ortiz, E. (2012, August 21). Benchmarks for blight: How much blight does New Orleans have? The Data Center (formerly Greater New Orleans Community Data Center). Accessed March 3, 2014. Available: http://www.datacenterresearch.org/reports_analysis/benchmarks-for-blight/

¹¹⁰ Scholars like Schilling and Logan (2008) are particularly concerned with areas that have a high “other vacancy” rates as these will require the most concerted efforts by the city to remedy. This type of vacancy is thought to contribute to crime and a loss in vitality of residential and commercial areas. These properties also pose a fiscal challenge due to the loss in tax revenue, which can make it difficult to provide city services to these areas.

¹¹¹ American Community Survey 2008-2012 five-year estimates

¹¹² PwC and the Urban Land Institute. (2012). *Emerging Trends in Real Estate® 2013*. Washington, D.C.: PwC and the Urban Land Institute. Available: <http://www.uli.org/wp-content/uploads/ULI-Documents/Emerging-Trends-in-Real-Estate-US-2013.pdf>

	Austin		New Orleans	
Housing units		354,901		186,987
Occupied	92%	325,991	77%	143,851
Vacant	8%	28,910	23%	43,136
Occupied Housing Units		325,991		143,851
Owner Occupied	45%	146,901	48%	68,505
Renter Occupied	55%	179,090	52%	75,346
Vacant Housing Units		28,910		43,136
For rent	40%	11,708	25%	10,699
For sale only	10%	3,025	9%	3,871
Other vacant	49%	14,177	66%	28,566

Table 3.1: Vacancy Statistics - Austin and New Orleans¹¹³

This is complicated by the fact that the actual population of both cities has grown dramatically since 2010 – Austin grew 6.6% from 2010 to 2012 while New Orleans’s population increased 7.4% in that same period.¹¹⁴ American Community Survey estimates for 2012 put Austin’s population at 842,595 and New Orleans’s at 369,250. Despite the difference in the absolute number of people – Austin is almost 2.5 times larger than New Orleans – the cities share the challenge of a growing population, but under very different historical land-use constraints.

¹¹³ Data source: American Community Survey 2008-2012 five-year estimates

¹¹⁴ 2010 U.S. Census and American Community Survey 2012 one-year estimates

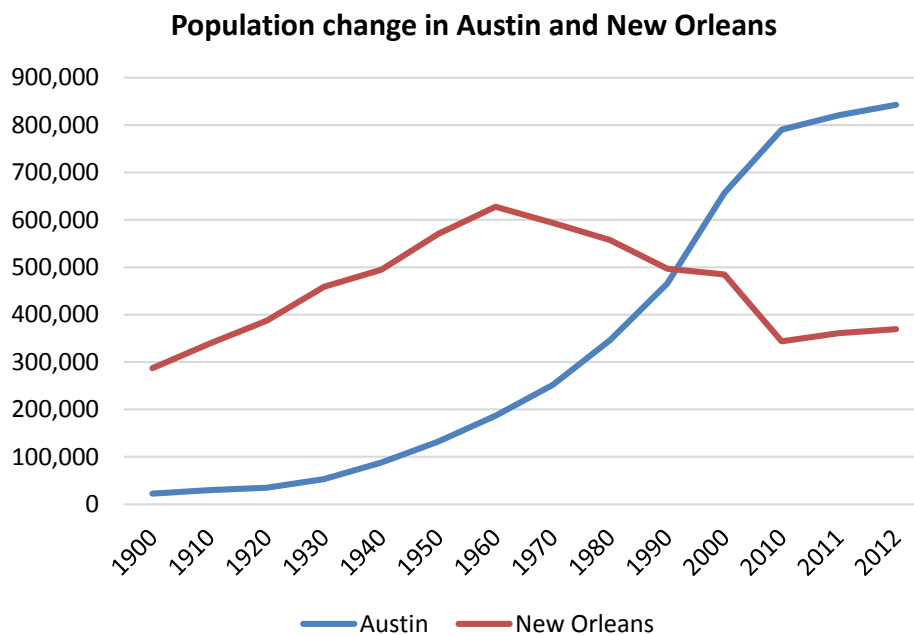


Figure 3.1: Population change in Austin and New Orleans, 1900-2012¹¹⁵

It is useful here to get a sense of the additional demographic differences between Austin and New Orleans as these differences provide important context for the analysis on perceived constraints for urban farms. Overall, Austin is somewhat younger than New Orleans, with 48% of the population between the ages of 25 and 54 and 18% over 55 compared to 43% and 23% in New Orleans, respectively. New Orleans has a smaller white population than Austin (30.4% compared to 48.6%) and New Orleans' non-white population is primarily African American (59.7%), while Austin's is majority Hispanic or Latino (35.2%). Austin has a higher percentage of married-couple families (68%) than New Orleans (53%), which is a factor that likely contributes to the Austin's higher median family income (\$53,199 vs. \$36,681). Correspondingly, New Orleans has a greater proportion of its population living under the poverty threshold than Austin, 41% of youth under 18 and 25% of its adult population, ages 18-64. Another factor affecting

¹¹⁵ Data source: 2010 U.S. Decennial Census and American Community Survey 2011 and 2012 one-year estimates.

the income disparity is the level of education in each city. While 40% of New Orleans' residents over 25 years old have a high school diploma or less (compared to 30% in Austin), 45% of Austin's residents have Bachelor's or graduate degrees (compared to 33% in New Orleans). New Orleans' unemployment rate for residents over 16 years of age actively in the labor force is 12% compared to 7% in Austin.

Income disparity in both cities dramatically corresponds to racial categories, as seen in Figure 3.2 and Table 3.2. African Americans in both cities have median household incomes between 66-71% of the city-wide median household income. Hispanic/Latino households in New Orleans make 114% of the average median household income, while those families in Austin make 74% of the city-wide median. Most striking, perhaps, is the degree to which white privilege is prevalent in the picture New Orleans' income inequality. White New Orleanians make over 163% of the city-wide median household income, while white Austinites make 109% of the city-wide average. This is a dramatic picture of racial inequality, particularly for New Orleans, where only 30% of the total population is white. These racial trends are important component of the context for understanding land use issues in New Orleans and Austin.

	Austin	New Orleans
Age		
17 and under	22%	22%
18-24 years	14%	12%
25-54 years	48%	43%
55-74 years	13%	18%
75 and over	3%	5%
Race		
African American	8%	60%
White	49%	30%
Hispanic or Latino	35%	5%
Asian	6%	3%
Two or More races	2%	1%
Other Race	<1%	<1%
Family Households		
Married-couple Family	68%	53%
Other Family	32%	47%
Education of Population >25		
High School/GED or Less	30%	40%
Some College	25%	27%
Bachelor's Degree	28%	19%
Graduate or Professional Degree	17%	14%
Employment of Population >16 in Labor Force		
Employed	93%	88%
Unemployed	7%	12%
Income		
Median Household Income	\$ 53,199	\$ 36,681
<i>Median Household Income by Householder Race</i>		
<i>African American</i>	\$ 35,337	\$ 26,215
<i>White</i>	\$ 58,198	\$ 59,807
<i>Hispanic or Latino</i>	\$ 39,591	\$ 41,758
<i>Asian</i>	\$ 63,127	\$ 43,085
<i>Two or More races</i>	\$ 47,307	\$ 41,607
<i>Other Race</i>	\$ 44,246	\$ 24,266
Population Living in Poverty		
Under 18 years old	27%	41%
18-64 years old	18%	25%

Table 3.2: Demographic characteristics of Austin and New Orleans¹¹⁶

¹¹⁶ Data source: American Community Survey 2008-2012 five-year estimates

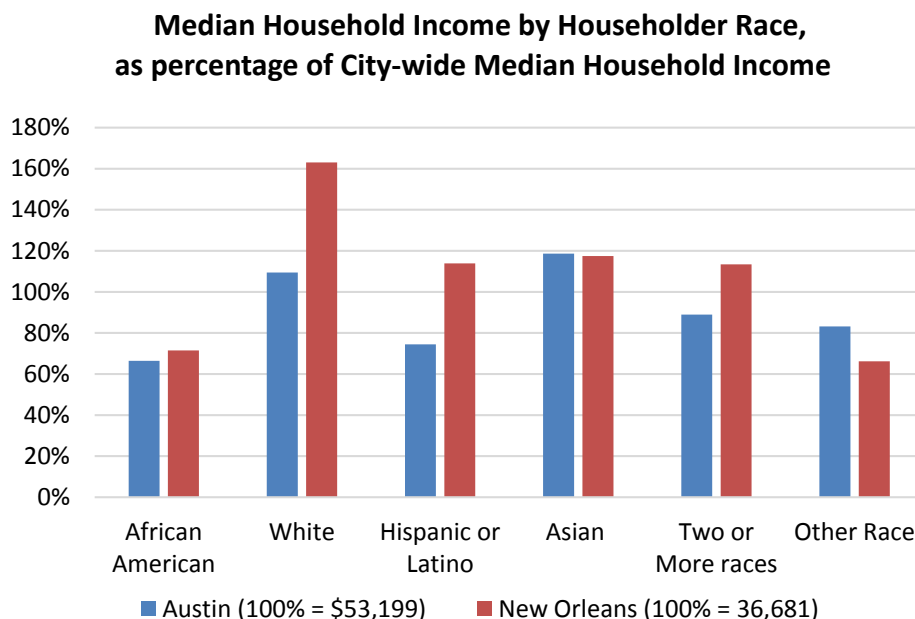


Figure 3.2: Household Income Disparity by Race in Austin and New Orleans¹¹⁷

For the myriad reasons outlined above, Austin and New Orleans are appropriate case studies for this analysis. Additional case studies should be conducted in order to increase the generalizability of the results, but the variation between these two cities certainly provides sufficient data to draw meaningful conclusions about the constraints and challenges facing urban farms in major metropolitan areas.

FORMAL INTERVIEWS

The primary data collection method for this study was a series of semi-structured interviews, guided by a pre-established interview guide. Interviewees include city/county employees, university researchers, non-profits working within the urban agriculture field, and urban farmers/growers in both cities. I generated a list of potential interviewees by searching for urban agriculture operations online, reading media articles, and through

¹¹⁷ Data source: American Community Survey 2008-2012 five-year estimates

personal contacts. In addition, after each interview, the interviewee was asked if he/she had any recommendations for other possible interviewees, based on the types of questions being asked. These recommendations helped me find additional contacts, particularly urban growers, who were less publically visible. Each interviewee was being asked questions related to his/her own professional and personal experience and access to each interviewee was direct; I did not have to work through any formal “gatekeepers” to gain access to sources. Being able to mention to new potential interviewees that I was already familiar with certain members of the food community, however, provided important evidence of my trustworthiness as a researcher. Each final interviewee was selected for their expertise in the urban agriculture field, their knowledge of the regulations pertaining to urban farming, their experiences navigating the challenges facing urban agriculture in Austin and New Orleans, and their availability during the research period.

Twenty-three formal interviews were conducted in January and February 2014. Nine interviews with New Orleans practioners were conducted during a reasearch trip to New Orleans January 9th through January 12th and the remaining three by phone January 22nd through February 6th. Ten in-person interviews were conducted in Austin between February 10th and February 22nd. Interviewees were offered the oportunity to remain anonymous in the final report, though only one person chose this option. All interviewees agreed to be audio-recorded and each audio recording was transcribed by me and subsequently coded using AtlasTI, a qualitative data analysis software package. Tables 3.1 and 3.2 list the interviewees, the organization or farm with which they are affiliated

and the interviewee's role within their organization. Several interviewees are affiliated with multiple relevant organizations as noted below.

Name	Organization	Role
Dorsey Barger	HausBar Farm	Co-owner/grower
Greg Gurnsey	City of Austin Planning and Development Review Department	Planning Director
Michael Hanan	Ten Acre Organics	Co-owner/grower
Dean Hayward	Decker Lane farm (cows, horses)	Owner/grower
Lloyd Minick	Ten Acre Organics	Co-owner/grower
Steve Oliver	Congress for New Urbanism/City of Austin Planning Commission	Board Member/Commissioner
Ronda Rutledge	Sustainable Food Center/Sustainable Food Policy Board	Executive Director/ Board President
Dylan Siegler	City of Austin – Office of Sustainability	Sustainability Manager
Jack Waite	Agua Dulce Aquaponics Farm	Owner/grower
Frank Young	Harold Court farm (chickens, goats, eggs)	Owner/grower

Table 3.3: Austin Interviewees

Name	Organization	Role
Anonymous	New Orleans City Planning Commission	City Planner
Marianne Cufone	Recirculating Farms Coalition	Executive Director and Founder
Alyssa Denny	Hollygrove Market and Farm	Produce Buyer and Community Coordinator
Dan Etheridge	Tulane City Center	Former Associate Director
Macon Fry	Hollygrove Market and Farm/Gathering Tree Growers Cooperative	Mentor Farmer/Garden Leader
Johanna Gilligan	Grow Dat Youth Farm	Executive Director
Sanjay Kharod	New Orleans Food and Farm Network	Executive Director
Tony Lee	Magellan Street Garden (Parkway Partners)	Garden Leader
David Lessinger	New Orleans Redevelopment Authority	Director of Planning and Strategy
Khai Nguyen	VEGGI Farmer's Cooperative	Manager & Public Relations
Kweku Nyaawie	Hollygrove Market and Farm	Mentor Farmer
Thaddeus Prosper	Sheaux Fresh Sustainable Foods	Owner/grower
Emilie Taylor	Tulane City Center	Design/Build Manager

Table 3.4: New Orleans Interviewees

As mentioned above, the interviews were structured by a pre-established interview guide (Appendix A). Using this guide as a starting point, I also asked individual interviewees further clarifying questions to encourage them to elaborate on their responses to particular questions. Using these types of probes and prompts allowed me to elicit additional richness and depth from the interviewees, particularly by drawing on the interviewees particular expertise and knowledge. This technique is widely used in interviews with study participants.¹¹⁸

DEFINING TERMS

Urban agriculture encompasses an extraordinarily wide variety of food production typologies, both commercial and non-commercial. Noncommercial projects often include private gardens, community gardens, institutional gardens, demonstration gardens, edible landscapes, guerrilla gardens, hobby beekeeping, and hobby chicken keeping. Urban commercial food-production endeavors most often include market gardens, urban farms, peri-urban farms, and medium- to large-scale beekeeping.¹¹⁹ This report is primarily concerned with commercial operations, those which typically have one primary farmer, land tenure held by the farmer either through fee-simple ownership or a lease, and at least some product being sold for profit. The U.S. Department of Agriculture defines a farm as “any place from which \$1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the year.”¹²⁰ This report is primarily concerned with operations that would fall into the USDA’s definition and that provide jobs for the primary farm operator. Farms included in this study grow and sell a wide variety of

¹¹⁸ King, N. and Horrocks, C. (2010). *Interviews in Qualitative Research*. London: SAGE Publications Ltd., pp. 37-40.

¹¹⁹ Hodgson 2011

¹²⁰ United States Department of Agriculture. Glossary. Accessed March 6, 2014. Available: <http://www.ers.usda.gov/topics/farm-economy/farm-household-well-being/glossary.aspx>

edible products including vegetables, fish raised in aquaponics systems (the symbiotic raising of fish and leafy vegetables), small animals, compost and other farm outputs.

As in rural agriculture, farmers may or may not live on the property where the farm is located. Land where urban farmers both live and farm – often in the case in Austin - are extraordinarily challenging for regulators because they attempt to be simultaneously commercial and residential. Most urban farms also purport to provide the community benefits affiliated with urban agriculture, discussed at length in the previous chapter. Throughout this report, “urban farms” will be primarily, though not exclusively, addressed. One should assume, however, unless explicitly noted, that references to urban agriculture in this report refers to commercial urban farming operations, not community gardens or other growing methods meant primarily for personal consumption. In addition, farmers interviewed for this study are all operating within the city limits of Austin and New Orleans because these farms fall under the greatest number of regulations, from federal, state, and municipal levels.

Chapter 4: Urban Agriculture in Austin, TX

FRAMING URBAN FARMING IN AUSTIN

Like many other cities, Austin's urban agricultural history and present context is complex, and varies based on what entity or individual is consulted. In the early 1970s, a loose coalition of community gardens formed, and was eventually merged in the early 1990s with the Sustainable Food Center (SFC), a large and well-known not-for-profit organization that provides technical assistance and fiscal sponsorship to existing and emerging community gardens, as well as various other sustainable food-related initiatives.¹²¹ Though SFC is not formally connected to any existing urban farms in the city, "Anything we can do to make it easier for people to grow food here is really our mission, and that's why the agency started 40 years ago as Austin Community Gardens."¹²² SFC, with its roots in the community garden movement, remains a key player in the local food movement.¹²³

Austin is culturally and spatially divided by I-35, a large federal interstate that bifurcates the city from east to west. Austin's 1928 Comprehensive Plan formally forced people of color east of I-35 and simultaneously paved the way for a disproportionate concentration of toxic industrial uses in the area including a gasoline tank farm, a power plant, and a large chicken processor through zoning. Historically, however, East Austin has also served as an agricultural oasis for the Central Texas region because of its

¹²¹ History. Sustainable Food Center. Accessed April 1, 2014. Available: <http://www.sustainablefoodcenter.org/about/history>

¹²² Interview: Ronda Rutledge

¹²³ For information on the Sustainable Food Center, see: <http://www.sustainablefoodcenter.org/>

abundant farm-friendly soil (see Figure 4.1 below). Large livestock ranches as well as farms growing row crops dotted the central Texas region throughout the 19th century. The number of large farms and ranches has steadily declined as drought and economic forces put increasing pressure on farmers in Texas and all over the United States.

PRIME AGRICULTURAL SOILS

TRAVIS COUNTY, TEXAS

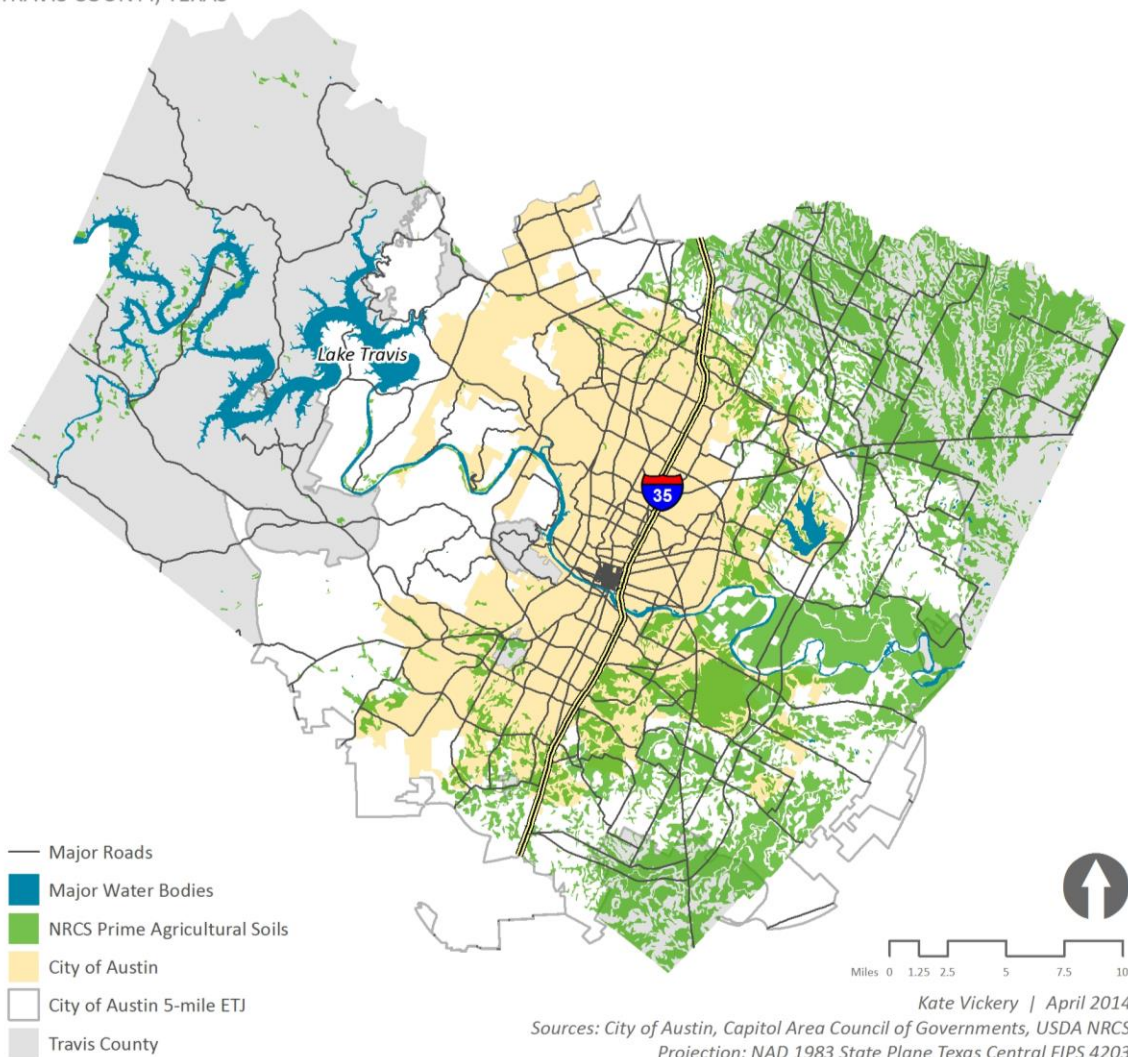


Figure 4.1: Location of Prime Agricultural Soils, Travis County, Texas

The oldest urban farm in Austin is Boggy Creek Farm, a five-acre remnant of a large 19th century plantation, complete with the original farmhouse; the land has been farmed for over 150 years. Purchased by Carol Ann Sayles and Larry Butler in 1992, Boggy Creek is one of the oldest urban farms in the country.¹²⁴ According to Glenn Foore, owner of Springdale Farm, his land has also only been used for farming in the same time period. The owners of HausBar Farm, located near Boggy Creek and Springdale are similarly confident that the land they now farm was a cotton farm as far back as the 1940s and a free range turkey farm was located across the street.¹²⁵ Frank Young's farm, in far East Austin, was rural when he started raising chickens, goats, and pigs 30 years ago, while Dean Hayward's cattle farm – 80 acres on the far eastern edge of the city limits – has also been agricultural for as long as he can recall.

HausBar Farm and Rain Lily Farm, both of which opened in the past five years, frame the history of their urban farms in terms of the improvements that they have made to the land. While many of the farms in Austin may be located on land that was at one time a farm, as Austin urbanized, these properties were subdivided and converted to other uses. "When we first saw it, there were two shacks used as crack houses and a love nest for prostitutes," remembers Dorsey Barger, co-owner of HausBar.¹²⁶ As they cleaned the property they found "rubble...shotgun shells, blocks of cement, abandoned houses that had to be dealt with." When Jack Waite began clearing the land for his southeast Austin

¹²⁴ History of the Farm. Boggy Creek Farm. Accessed April 1, 2013. Available: <http://www.boggycreekfarm.com/main/history/>

¹²⁵ Interview: Dorsey Barger

¹²⁶ Quoted in Gandara, R. (2012, Dec. 6). Urban farm, neighbor collide in East Austin. *Austin American Statesman*. Available: <http://www.statesman.com/news/news/local/urban-farm-neighbor-collide-in-east-austin/nTYBb/>

aquaponics farm, he found “spoons everywhere, needles, bullets, stuff like that.” Stephanie Scherzer, owner of Rain Lily Farm tells a similar story, saying, “I bought this property in 2003, filled with garbage, filled with trash. Mattresses, homeless camps, cars, forties, bottles. I was inspired to clean it up and protect the earth and her resources.”¹²⁷

Many of the farms in Austin have opened in the last ten years. “We’ve reached a new appreciation for things that are authentic...and not mass produced. To go to an urban farm, it feels like you’re getting something special,” remarked Steve Oliver about the growth of Austin’s urban farming movement. Michael Hanan credits the business interest and cultural excitement about local food. Dylan Siegler noted that “our relationship as a country with food has been shifting” which has spawned a new generation of farmers who “tend to be people with Master’s degrees” looking to do something that “will in theory improve our lives.” Long-time farmers like Frank Young and Dean Howard don’t talk about themselves as being part of this movement, however. “I’ve been doing it all my life” said Dean with finality. There is a definitely a divide between farmers who see themselves as life-time food producers and those who have gotten into the business later in life like HausBar, Rain Lily, Ten Acre Organics, and others.

¹²⁷ Quoted in Stephanie Scherzer on behalf of urban farms. (2013, Nov. 4). Available: <https://www.youtube.com/watch?v=16Q2yBxnRF0>. The reference to the “earth and her resources” is a quip about the name of an environmental justice organization called People Organized in Defense of Earth and her Resources (PODER). PODER came out in opposition to commercial urban farms located in residential neighborhoods during a widely publicized process to revise the land development code for urban farms in 2013. This controversy will be discussed in detail later in this chapter.

Farm	Primary Products	Sole source of farmer income?	Where farm sells products	To whom farm sells products	Does farmer live on site?
HausBar Farm (Dorsey Barger)	Vegetables, chickens, rabbits, eggs	Yes	Mostly direct delivery, some on site	Restaurants; few individuals; online retailers (Greenling, FarmShare)	Yes
Ten Acre Organics (Michael Hanan and Lloyd Minick)	"Integrated agriculture": Vegetables, fruit, mushrooms, eggs, fish (aquaponics)	No	On-site; direct delivery	CSA members, few restaurants	Yes
Decker Lane farm (Dean Hayward)	Cows	Yes	Auctions in Travis county	Individuals	No
Agua Dulce Aquaponics Farm (Jack Waite)	Aquaponics: leafy greens, culinary seaweed, some fish	Yes	Direct delivery, some on-site	Restaurants; online retailers (Greenling, FarmShare)	No
Harold Court farm (Frank Young)	Chickens, goats, eggs, some vegetables	No	On-site	Individuals	Yes

Table 4.1: Austin Farms Included in Study

Many of the most visible players in the urban farming scene in Austin are those newer farms, including Urban Roots, a non-profit youth development program that uses sustainable agriculture to “transforms the lives of young people and increase access to healthy food in Austin.” Established in 2007, the 3.5 acre farm in East Austin plays host to thousands of volunteers, community events, as well as the day-to-day programming of the internship program for youth ages 14-17 who come from diverse background all over Austin.¹²⁸ A number of other small urban farming operations that have been established since 2008, have done so with the support of Urban Patchwork, a non-profit organization

¹²⁸ Urban Roots. Accessed April 1, 2014. Available: <http://www.urbanrootsatx.org/about/>

that works to reengage underutilized public and private lands in order to turn it into productive urban gardens and farms. Urban Patchwork founder Paige Hill is a tireless advocate on behalf of very small scale producers, strongly encouraging backyard gardeners to generate supplemental income by selling excess products.¹²⁹ All told, there are roughly 20 small commercial agricultural operations (See Figure 4.2, below), most of which are located east of I-35. More than half of these operations are under one acre in size, and all commercially-oriented urban farms have a house on site with the farmer and/or farm-workers living in the home. Five of the farms are located in a single neighborhood, the Govalle/Johnston Terrace Neighborhood planning area, including Springdale, Boggy Creek, Rain Lily and HausBar. These four farms are undoubtedly the most widely known of the urban farms in Austin, and are extremely unique in that are two to five acres in size, closely clustered together – within one mile of each other – and for-profit. These farms also function as community event spaces for events including fundraisers, weddings, theater, and an annual East Austin Urban Farm Tour.¹³⁰ Two of the four have weekly on-site farm stands.

¹²⁹ Urban Patchwork. Accessed April 1, 2014. Available: <http://www.urbanpatchwork.org/>

¹³⁰ For more about the East Austin Urban Farm Tour, see <http://eastaustinurbanfarmtour.com/>

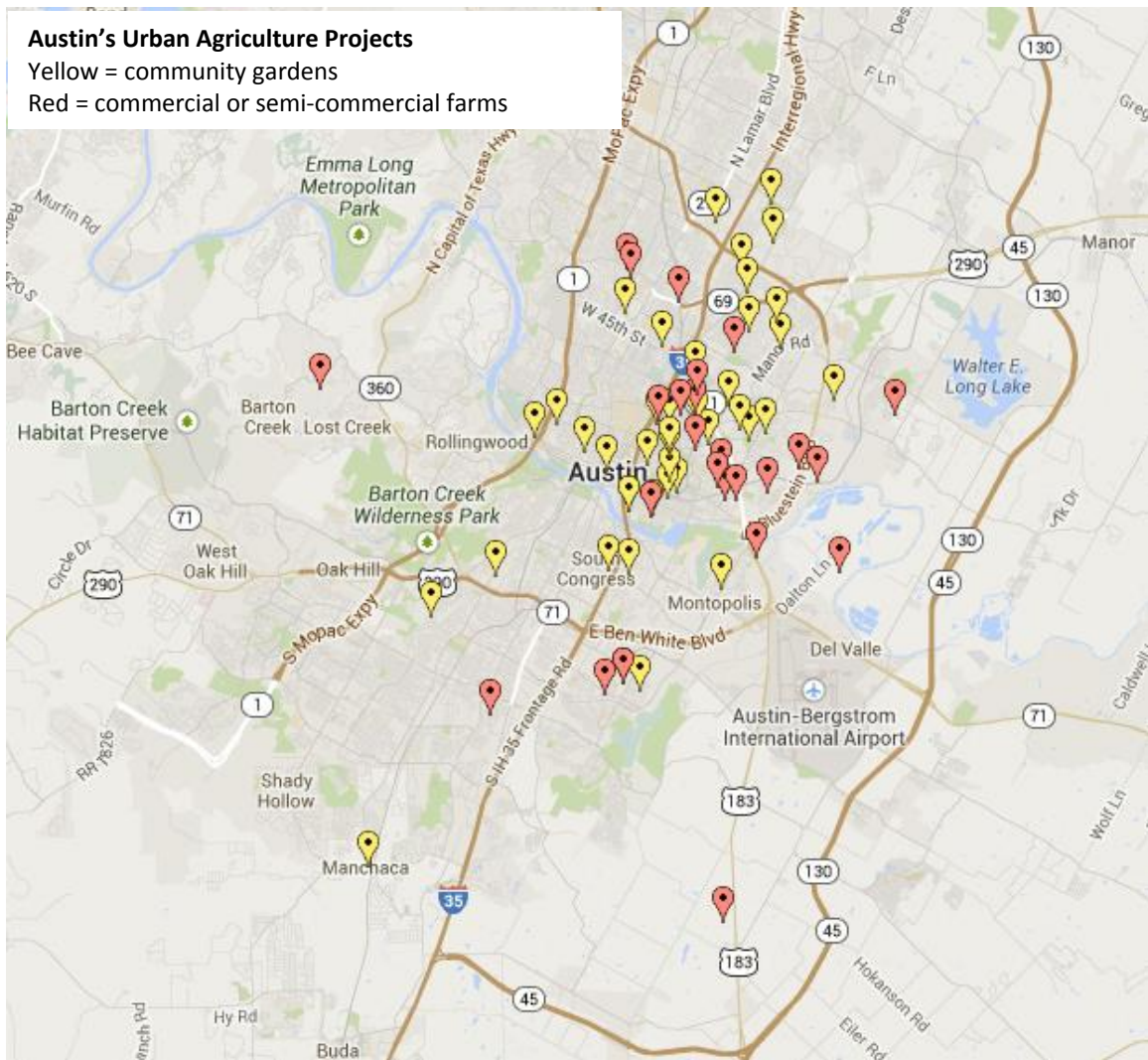


Figure 4.2: Location of Austin's commercial urban agriculture

The concentration of urban farms in East Austin has been the source of some controversy. While the urban farmers point to the history of their land as cultivated farmland, prominent neighborhood and environmental justice advocate Daniel Llanes has made the point that before these lands were farms, they were “the reservation” inhabited by native people and ethnic Mexicans.

Remember, this was the reservation in 1928. At the Human Rights Commission meeting,¹³¹ one of the farmers said, East Austin has been a farming community since 1883. But she left out that in 1928, all of the farmers on the east side – because of the crash of the ‘20s – they could no longer farm so they sold off their farms. And then the city of Austin passed a law that no Latino or African American could live west of I-35. That’s how East Austin started with the gentrification....the gentrification and the white supremacy is continuing in these very insidious, very invisible way...like an odorless gas.”¹³²

The growth of the urban farming movement over the past decade and the fact that many of the most visible urban farmers are white and their farms are located in neighborhoods historically populated by people of color provides an important framework for understanding the urban farming community in Austin.

It is also important to note that the city has taken an increasingly active role in the urban agriculture scene. The first major change came with the creation of the Sustainable Food Policy Board (SFPB), a 13-member volunteer citizen board created in 2008. The Board's charges include advising Council and the Commissioners Court on measures to improve the local food economy and the availability, accessibility and quality of food.¹³³ Shortly after the board’s creation, the Parks and Recreation Department started a small program with one staff member called the Sustainable Urban Agriculture and Community Garden program. While primarily charged with providing “a single point of contact and streamline the process for establishing community gardens and sustainable urban agriculture on city land,”¹³⁴ the program’s first staff member was widely involved in a

¹³¹ This is a reference to a meeting that occurred during the efforts to revise the land development code for urban farms. The meeting took place on June 24, 2013.

¹³² Quote from Llanes remarks at La Raza Roundtable, June 27, 2013.

¹³³ Sustainable Food Policy Board. Accessed April 1, 2014. Available: <http://www.austintexas.gov/sustainability/food>

¹³⁴ Sustainable Urban Agriculture and Community Garden Program. Accessed April 2, 2014. Available: <http://www.austintexas.gov/departments/sustainable-urban-agriculture>

variety of food-related issues throughout the city. In 2013, the department's focus was narrowed to exclusively focus on starting community gardens on city owned land, particularly public parks. Also in 2013, the city commissioned a \$50,000 economic impact analysis study of the local food economy in Austin,¹³⁵ the results of which drew a significant amount of attention by City Council. The food sector in Austin brings in as much money as the entertainment industry, which has historically been Austin's bread and butter in terms of economic development. The study and the advocacy of the SFPB also led to the creation of a new full-time staff position within the Office of Sustainability dedicated exclusively to food policy in 2014. These changes to the city's management of urban agricultural operations have been significant, but have still left urban farms without a clear point of contact within the city. "There has been a lot of uncertainty and a lot of reluctance to take [urban agriculture] on"¹³⁶ because of a general lack of familiarity with the issues involved, even as the number of urban farming operations has grown.

BENEFITS OF URBAN AGRICULTURE IN AUSTIN

Interviewees in Austin spoke of a wide array of benefits that urban farms bring to the city, many of which echo those benefits discussed in the literature review. Frank Young spoke about the benefits have having multiple small growers than help keep the price of food lower than it is in many larger metropolitan areas. Dean Hayward and Frank Young both focused on the fact that the meat that they raise is healthy chemical-free,

¹³⁵ TXP, Inc. (2013). The economic impact of Austin's food sector. Available: http://www.austintexas.gov/sites/default/files/files/Redevelopment/Economic_Development/TXP_Austin_Food_Sector_Report_03282013_FINALv1.pdf

¹³⁶ Interview: Dylan Siegler

unlike most conventional meat. Director of Planning Greg Guernsey said that urban farms “brings better food choices back to people close in that they might not normally have” particularly in areas where grocery stores are in scarce supply, like Austin’s east side.¹³⁷ Farm-fresh food also “actually taste like something. You can buy corn that had been picked that day. [On my grandfather’s farm], peas and all that stuff...the taste was always much better. I’m not a nutritionist, but I’m sure they are also better for you.” The Ten Acre Organics farmers talk about urban farming as the “most essential human industry” that is “creating opportunity for entrepreneurship.” Jack Waite, whose operations is entirely aquaponics is also motivated by improving food security through innovation. “It’s innovation and technology...coming up with new ways you can replicate [aquaponics] across the world. [My farm is] a modular idea with a fish tank that goes to a filter that goes to a grow bed, and then circles back. Replicate that six times you have our farm, replicate that 20 times, you have a farm in New Delhi, replicate it 50 times you have rooftop space in Sao Palo.”

Dorsey Barger of HausBar is a self-proclaimed idealist who credits Michael Pollan’s *Omnivore’s Dilemma* for opening her eyes to the problem in the conventional food system. Pollan has even spoken at an event at her farm.

One of the reasons I wanted to start a farm is because I wanted to very consciously be an example of how people could, instead of making the world a worse place by farming, making the world a better place through farming. I’m not a doomsday person, but I do think that big ag is ruining the world really quickly and I think that urban farmers are doing a good job hollering about that and

¹³⁷ Donovan, J., Madore, A., Randall, M., and Vickery, K. (2013). Farmers market incentive programs: Vehicles for increasing local food access among nutrition assistance beneficiaries. Available: http://www.sustainablefoodcenter.org/_files/reports/Farmers_Market_Incentive_Programs_report_LBJ_2013.pdf

people in the world ought to listen. Big ag will maybe do irreparable damage to the planet, to our seed stock, and to our ability to grow food, so I think it's pretty urgent.

Humanely raising and slaughtering a small number of chickens and rabbits on her farm is the centerpiece of how she hopes to make farming more sustainable.

Austin urban farmers tout their social benefits – including food access, environmental sustainability, education about healthy and local eating, and community improvement. The coalition of East Austin urban farms that formed during the land development code revision process offer the following in answer to the question: Why are urban farms important?

- Austin Urban Farms use only organic methods to maintain and produce crops and proteins, eliminating all synthetics and chemicals. The resulting food is safe, fresh and nutritious.
- Austin Urban Farms are good stewards of the land, collecting rainwater and protecting the soil. The farms recycle, reuse and adapt materials to new uses.
- Austin Urban Farms care about our community. The farms' hold regular markets, host school field trips, farm tours, supper clubs and fundraisers; all of which provide safe, healthy and educational community gathering points.
- Austin Urban Farms bring dollars to Austin through agritourism. Visitors that come from out of town to see the farms subsequently spend money on hotels, rental cars, sightseeing, personal purchases, restaurants and bar visits.¹³⁸

Planning Commissioner Steve Oliver believes that Austin being known as “the urban farming community” has inherent benefits and hopes the city is careful about not creating an environment that discourages the practice.

¹³⁸ Austin Urban Farms. Accessed March 31, 2014. Available: <http://www.austinurbanfarms.org/main/>

REGULATORY ENVIRONMENT FOR URBAN FARMS IN AUSTIN

There are several layers of the regulatory environment for urban farms in Austin. From an administrative perspective, the Planning and Development Review Department (PDRD) has direct jurisdiction over enforcing the zoning and land use restrictions that affect urban farms. The first urban farm ordinance went into effect in the land development code in on April 6, 2000. Ordinance 000406-86 defined an urban farm as an agricultural use with the following restrictions: the property must be 1-5 acres in size and have a 50-foot setback from all houses and neighboring lots. Production had to be at least 20 feet from utility, water and sewer lines using and only organic fertilizer could be used. An urban farm could have a small sign no larger than four square feet as well as one employee per acre, rounded up to the next acre. They were also permitted to raise fowl and livestock within the existing limitations for animals in the city limits. Agricultural products raised on the property were permitted to be sold from the site. Most significantly, the ordinance made urban farms a permitted use in most zoning districts, including single-family residential, Austin's most restrictive zoning category. Residential zoning otherwise prohibits commercial activities, employees, and signs, unless it qualifies under a "home occupation use," available for a small number of low-traffic businesses.¹³⁹ Importantly, however, the ordinance included a restriction that urban farms would have to obtain a conditional use permit in residential districts in the Drinking Water Protection Zone (a watershed protection category covering most of west Austin, home to the major aquifer that supplies the city's drinking water), or for lots in a 100 or

¹³⁹ Austin City Code § 25-2-900. Retrieved: <http://austintexas.gov/resident/city-code>

25 year flood plain.¹⁴⁰ These regulations were the sum total of land use regulations for urban farms until 2013. The ordinance was originated by a request by a citizen who was farming in a residential zone, and the language was proposed by the Smart Growth Task Force. The language was revised and formalized by city staff and approved with little fanfare by the Planning Commission and City Council.

In order to become an urban farm, a farmer needed to apply for a “certificate of occupancy” in order to change the land use designation of the property, but did not need to apply for a change of zoning. Use changes are a primarily administrative activity managed by PDRD staff members, unless a conditional use permit is required. A change of zoning or conditional use, on the other hand, requires a legislative action by the Planning Commission, and, if the property is located within one of Austin’s 29 neighborhood planning areas, permission from the neighborhood planning contact teams.¹⁴¹ As of 2013, only one urban farm (Agua Dulce Farm, owned by interviewee Jack Waite) had ever received a certificate of occupancy as an urban farm, despite the fact that approximately twenty farms are operating within the city limits, most in residential neighborhoods. It took Jack nearly two years to finish the permitting process for his aquaponics farm, in part because the PDRD staff members he worked with were unaware of the existing regulations. They told him he needed a change of zoning, and it was Jack himself who did the research to find the 2000 ordinance that created the urban farm use allowed in any zoning district. “I had to print all that stuff out and start gently talking to

¹⁴⁰ City of Austin. (2000, April 6). Ordinance No. 000404-86. Available: <http://www.cityofaustin.org/edims/document.cfm?id=59006>

¹⁴¹ There are 29 of these teams throughout the City, corresponding roughly with neighborhood association boundaries. For more information: <http://austintexas.gov/page/neighborhood-planning-areas>

people at the city. Educating them in a non-pushy way. I wasn't trying to be a jerk, I was just trying to start a farm.” Planning Director Greg Guernsey noted that the growth in the number of community gardens has contributed to the growth in urban farms. When the first urban farm came to the city, however, the department wasn't sure how to deal with it, but “the ability to buy eggs from your neighbor seemed like a great idea.”

From a city planning perspective, *Imagine Austin*, Austin's newest comprehensive plan, completed in 2012, contains key language in support of numerous sustainable food objectives that include urban agriculture. See Table 2.1 for a summary of the benefits of urban agriculture articulated by the plan. Examples of this language include:

- E P18. Develop a sustainable local food system by encouraging all sectors of the local food economy, including production, processing, distribution, consumption and waste recovery.
- S A9. Make healthy and local foods accessible, particularly in underserved areas by removing barriers and providing incentives for the establishment of sustainable community gardens, urban farms, neighborhood grocery stores, farmers markets, and farm stands and mobile vegetable sales carts.
- HN P10. Create complete neighborhoods across Austin that have a mix of housing types and land uses, affordable housing and transportation options, and access to healthy food, schools, retail, employment, community services, and parks and recreation options.¹⁴²

This language about promoting urban farms as a mechanism for improving food security and the local food economy is a direct result of the advocacy of the Sustainable Food Policy Board (SFPB). The board is made up primarily of local food advocates and professionals who work in various fields related to food, including non-profits, local government, and urban planning firms. Each member of the board is appointed by a city

¹⁴² City of Austin. (2012). *Imagine Austin Comprehensive Plan*. Austin, TX. Available: <http://www.austintexas.gov/imagineaustin>

councilperson, the mayor, county commissioner, or county judge and with few exceptions, board members tend to be white women. This group has made a significant impact on the local food scene over its short history, including leading a process to revise the land development code for urban farms in 2013. All city ordinances dealing with land development, including Ordinance 000406-86 discussed above, are integrated into Title 25 of the city code, commonly referred to as the land development code (LDC). Urban farms can be found in the zoning chapter 25-2-863.

Revisions to urban farm regulations

The SFPB had its eye on revising the section of the LDC dealing with urban agriculture starting in 2008, when it initiated a number of changes to the code dealing with community gardens. At the time, members of the board noted that the urban farm section lacked specificity and making recommendations to revise it was on the list of items the Board hoped to tackle. In late 2012, they got the impetus they were looking for. In November, Louis Polanco, a 50-year resident of the Govalle neighborhood in East Austin placed a call to Austin's citizen information service to complain about a foul smell coming from a neighbor's property. "I'm complaining about a bad smell coming from across the street....a lady that has chickens and donkeys and goats," he said to an Austin American Statesman reporter a few weeks later. "I'm worried about the smell...and I'm wondering if it's going to happen again."¹⁴³ The lady with chickens and donkeys and goats was Dorsey Barger, co-owner of HausBar Farms, a 1.8-acre urban farm located on Louis' block. "What we're doing here is trying to live in a way that creates absolute

¹⁴³ Quoted from Austin American Statesman video, included in Gandara 2012

harmony between day to day living and creating food [while] recycling and composting everything,” explained Dorsey to the same reporter. “And sometimes that smells a little bit....it’s my goal to be able to keep every little bit out of the landfill.”¹⁴⁴

The culprit of the smell was a fully-enclosed black soldier fly compost system used to decompose chicken scraps – mostly internal organs - left over from the farm’s small chicken processing operation. Dorsey had been slaughtering and selling about 20 chickens per week for two years, selling or eating as much of the chicken as possible, and composting the remaining organs and bones in her unique compost system, which is used in other small-scale urban farming operations as well. As she explains, the system is incredibly environmentally sustainable as possible, but if it gets “out of whack,” there can be an unpleasant smell primarily attributed to the musky pheromones of the flies.¹⁴⁵

Dorsey and her partner Susan Hausmann purchased the land that is now HausBar Farm in 2009, a single-family zoned lot in a quiet, historically Mexican-American neighborhood. Dorsey, the founder and former co-owner of one of Austin’s most iconic restaurants, sold her share of the restaurant in 2011 in order to focus full time on HausBar, and the couple quickly began converting the property from a fallow lot with two uninhabitable structures into a working urban farm. They moved a 780-square-foot cottage onto the lot for their own home, repurposed the dilapidated dwellings into a hen house and a barn, and converted the garage into a commercial kitchen and poultry processing facility. They obtained the necessary permits to construct their “dream home”

¹⁴⁴ Quoted from Austin American Statesman video, included in Gandara 2012

¹⁴⁵ Personal communication with Dorsey Barger, June 2013

on the property as well, bringing the total number of dwellings up to two.¹⁴⁶ In addition to the chicken operation, they grow abundant vegetables and harvest eggs from their hens. Shortly before the neighbor's complaint about the compost system, Dorsey had begun expanding operations to include rabbit production and processing and were close to opening the original cottage up as a short-term vacation rental on the farm.

Mr. Polanco's calls to 3-1-1 eventually triggered a host of visits from various city departments, which uncovered several aspects of the farm's operation that were out of compliance with code, or at least appeared to be. HausBar never obtained a certificate of occupancy because they didn't know it was a requirement to start an urban farm. They talked to their urban farming colleagues at Boggy Creek and Rain Lily farm, who told them, "Well, you sort of just start farming." All of the architectural plans they brought to the city for permitting for their new house had the words "HausBar Farm" on them, which Dorsey assumed would have triggered any additional permitting process that a farm had to go through. Instead, "they said you have to turn in this and this and this, and here you go, you're permitted."¹⁴⁷ As a residentially zoned property, the commercial nature of their operation and the chicken processing operation were clearly not in compliance with residential requirements, but the city began evaluating the farm against the existing land development code for urban farms.

The lack of specificity in the LDC became a source of frustration for Dorsey and city departments gave her increasingly unclear instructions on what she was and was not

¹⁴⁶ Toon, A. (2013, April 12). Communication Breakdown. *Austin Chronicle*. Available: <http://www.austinchronicle.com/food/2013-04-12/communication-breakdown/>

¹⁴⁷ Interview: Dorsey Barger

allowed to do on her farm. While certain violations were obvious, including a few missing permits related to a barn and the rainwater harvesting system, others were ambiguous. For example, under existing code, farms are permitted “raise fowl,” which the planning department had interpreted as implied permission to also slaughter and process fowl. Code Compliance partially disagreed and expressed concern that the code did not specify a limit for raising or slaughtering. Though Dorsey had obtained a permit from the Texas Department of Agriculture to process and sell both fowl and rabbits, rabbits are not mentioned at all in Austin’s code. Additionally, the definition of an urban farm explicitly allows only one dwelling on site, yet Dorsey was already well underway in constructing a second dwelling, for which she had been granted a building permit from the City. Finally, the commercial kitchen located in the former garage had not been properly inspected by the Austin/Travis County Health Department, though it had been permitted by the state, and Code Compliance as well as the planning department protested that the commercial kitchen was an inappropriate use in a single family zone.¹⁴⁸ Finally, in late January, HausBar Farms was shut down entirely; no sales were allowed and the chicken processing operation ceased.¹⁴⁹

Needless to say, HausBar Farms’ owners have been frustrated with the entire process. “We built our farm in good faith,” Barger told a reporter as they continued to work with city staff to determine how best to get themselves back in business. “We obtained the only licensing we were aware that we needed to have in order to process chickens and eggs from the state of Texas. We’ve proceeded in good faith in all of our

¹⁴⁸ Toon 2013

¹⁴⁹ Interview with Dorsey Barger, June 1, 2013

efforts to start an urban farm with the city of Austin's blessing and now find ourselves unable to sell any of our product...If we were able to get back in business while we go through the permitting process, we could make this work, but as much as individual departments in the city would like to help us, they've been unable to even tell us how to proceed to get into compliance.”¹⁵⁰ In essence, Dorsey was desperate to remedy any and all code violations in order to obtain the certificate of occupancy that would transform HausBar into an official urban farm and enable her to continue farming, but city staff provided limited and contradictory guidance on how to move forward.

Members of the Sustainable Food Policy Board (SFPB), chaired by a prominent local food advocate, were well aware of HausBar’s predicament and in January 2013, passed a resolution recommending that the Planning Commission initiate an amendment to the land development code to clarify the definition of an urban farm.¹⁵¹ The Planning Commission responded by “initiating an ordinance to amend Chapter 25-2 of the City of Austin Land Development code to clarify, update and revise regulations related to urban farms, livestock, size of farm, employees and dwelling.”¹⁵² Rather unusually for this type of ordinance initiation, the SFPB was charged with drafting the recommendations. In its original resolution to the Planning Commission, the SFPB resolved to “work with the Planning Commission and City staff to review zoning for additional opportunities to

¹⁵⁰ Quoted in Toon 2013

¹⁵¹ Sustainable Food Policy Board. (2013, January 28). Resolution for Urban Farm Definition Update. Available: <http://www.austintexas.gov/sites/default/files/files/Health/SustainableFood/Urban%20Farm%20Definition%20Update.pdf>

¹⁵² City of Austin Planning Commission. (2013, February 26). Regular Meeting Minutes (revised). Available: <http://www.austintexas.gov/edims/document.cfm?id=185889>, pp. 8.

increase local food production.”¹⁵³ The “whereas” clauses of this resolution note that the SFPB has a charge to “increase the production of local, sustainable foods to improve the health, economy and natural resources” and that “major cities, including Chicago, Atlanta, Boston, Minneapolis and Portland have amended zoning codes to encourage greater and more diverse urban agricultural production.”¹⁵⁴ It is fair to say that the primary motivating factors for the SFPB were to help HausBar Farms quickly get back in business while simultaneously increasing opportunities for new urban farming operations through the code amendment, a long-term goal for the Board.

The Board formed a working group, chaired by a board member, to do public engagement and draft a set of recommendations for the Planning Commission, and eventually City Council to consider. The working group met weekly from April through November, 2013 and used a Context Sensitive Solutions strategy in order to engage stakeholders,¹⁵⁵ starting with four public sessions aimed at gathering data on areas of concern about the current code. Session #1 covered the topics of Animal Raising and Aquaponics, Session #2 was about Site Requirements, Wholesaling and Labor, and Session #3 covered Byproducts, Environmental Health and Sustainability. Each of the public sessions was attended by more than 70 people. The working group presented its first draft recommendations at a Town Hall meeting and received feedback from stakeholders. Throughout the process, the draft recommendations were housed on the

¹⁵³ Sustainable Food Policy Board 2013

¹⁵⁴ Sustainable Food Policy Board 2013

¹⁵⁵ It should be noted that I was a member of this working group as well as an employee of the City of Austin’s Sustainable Urban Agriculture and Community Garden Program during this period. For information on the Context Sensitive Solutions model, see: <http://contextsensitivesolutions.org/>

Sustainable Urban Agriculture and Community Garden website and the group maintained a stakeholder list that received periodic updates and announcements.

In addition to the public meetings, the working group gave presentations about the progress of drafting the recommendations to a number of additional groups, including the Govalle/Johnston Terrance Neighborhood Contact Team, the Austin Neighborhood Council-East neighborhood association, the Human Rights Commission, and the Community Development Commission (both commissions are city advisory bodies equivalent to the SFPB).¹⁵⁶ In addition, the recommendations were reviewed by staff in the Office of Sustainability, Planning and Development Review, Code Compliance, Environmental Health, and Watershed Protection Department. This was an unusual amount of input for a code revision that would affect a very small number of property owners in the city, but because of a highly publicized conflict emerging outside of city hall, the need for many levels of input became increasingly necessary.

During the February Planning Commission meeting where the original resolution calling for revisions to the LDC for urban farms had been passed, two prominent community activists, Susana Almanza and Daniel Llanes spoke out against urban farms in single family neighborhoods, focusing particularly on HausBar Farm. Susana called the farm a slaughterhouse, which represented an unacceptable callback to East Austin's historic role as a dumping ground for toxic industry. A well-known community activist, and Mexican-American native of East Austin, Susana is the founder of People Organized in Defense of Earth and her Resources (PODER), an environmental justice organization

¹⁵⁶ Planning Director Greg Guernsey notes that the ordinance went before an unusually large number of boards, in part because it had garnered so much public attention.

established in 1991 to challenge industrial uses in East Austin. She spearheaded a grassroots organizing effort to remove or relocate the aforementioned tank farm, power plant, and chicken processor, and became a champion for various other causes that affected the environmental health of historic East Austin residents. Susana has a long track record of advocating for the protection, preservation, and enhancement of public parkland for longtime residents as well as for the meaningful inclusion of Mexican-Americans and African-Americans in planning and zoning decisions after decades of frustrating exclusion from these processes.

Daniel Llanes represents the Govalle/Johnston Terrance neighborhood contact team, the neighborhood planning area¹⁵⁷ that contains HausBar, as well as four other urban farms, and of which PODER is an active member. According to the neighborhood plan, which was adopted in 2003, a pattern of incompatible uses was the result of not only the concentration of industrial uses, but also the practice of cumulative zoning, which permits more restrictive uses in less restrictive zones. According to the neighborhood contact team, this resulted in a patchwork of incompatible uses that disproportionately exposed residents of color to industrially-generated nuisances, including noise, air, and water pollution. The combined efforts of PODER and the neighborhood contact team to downzone large swaths of the area to single-family residential have resulted largely in cautious victory for area activists. In the ten years that

¹⁵⁷ Neighborhood planning has a unique history in Austin. After the city failed to formally adopt and implement a comprehensive plan in the late 1980s after a long, contentious plan writing process, an uneven patchwork of neighborhood plans were written and adopted across Austin in the 1990s and 2000s with varying degrees of staff input, control, neighborhood size, governance, and implementation. Envisioned as a promising tool for neighborhood empowerment, they are also the backdrop for constant battles and negotiations between neighborhoods and city staff over decision making processes. For more information, see Neighboraustin, a resource hub created by University of Texas at Austin planning students in 2006: <http://neighboraustin.com>.

have passed since the adoption of the neighborhood plan, Susana, Daniel, and the other citizens on the contact team have remained highly vigilant of potential threats to now mostly de-industrialized East Austin.

Both Susana and Daniel were are highly involved in city politics – Susana has served on multiple boards and commissions over the years – and spoke out against about the urban farm code at every possible opportunity, including various City Council and Planning Commission meetings. As the urban farm code update wore on, they began to articulate additional concerns about how farms might contribute to a loss of affordable housing, the commercialization of single-family land, and the impact that large events has on the neighborhood’s character. Susana made this case in front of the Human Rights Commission, which was considering a making a resolution requested by PODER stating that urban farms should be excluded entirely from single-family zones.

East Austin is facing a housing crisis. I don’t care which report you see, you will see that we are being displaced heavily and that single family land is at a premium. And now we have people looking to come in and buy 1-5 acres of land and even smaller pieces of land...and are going to be selling produce from their site...If you tried to do this in Tarrytown [an upscale, primarily white neighborhood in West Austin] and do an urban farm and slaughter chickens, it wouldn’t happen. It’s a human rights violation.¹⁵⁸

Careful to couch her narrative in her own history as a Mexican-American immigrant who grew up growing and cooking her own fresh vegetables and chickens, Susana made the case about commercializing residential properties. Unlimited commercial activity could incentivize the conversion of homes to farms, she argued, leading to a loss of affordable housing and community cohesion. Although there has been

¹⁵⁸ City of Austin Human Rights Commission. (2013, June 24). Meeting video.

no documented case of an urban farm displacing an affordably-priced home, Susana's narrative is consistent with the neighborhood contact team's priorities for East Austin.

Meanwhile, the Austin American Statesman article that broke the original story about the closing of HuasBar Farm opened the floodgates to public comments on the issue of whether or not the farm operation is appropriate in a neighborhood setting in the first place. "Perhaps the "circle of life" is better suited for unincorporated areas of the county, not within the city limits. This is just common sense, folks," chimed in one commenter, suggesting that animal slaughtering may not be appropriate in a residential area.¹⁵⁹ Another commenter questioned the legitimacy of Mr. Polanco's complaint, saying, "Louis Polanco needs to move to the suburbs if he wants to live in a bland, do nothing community. East Austin is far more creative and sustainable than he can appreciate."¹⁶⁰ Further comments along these lines highlighted tensions central themes of the debate: race, class, and property rights.

In addition, I cannot help but think there are some cultural, class, and (sadly) racial differences which are exacerbating the issues involved. I believe its hard of Ms. Barger and Mr. Polanco to communicate each other because of their different life experiences, their different cultural backgrounds, and clearly, their views of the neighborhood which is changing from Hispanic to white.¹⁶¹

The previous poster wastes time and space in his attempt to assign racial/ethnic classifications and motives to the protagonists. This has nothing to do with the underlying issue, which is property rights. You don't like what a neighbor is doing on his or her legally-owned property? Move.¹⁶²

At a later Planning Commission meeting, Susana and Daniel, leading a group of Mexican-American East Austinites with red bandannas wrapped around their heads,

¹⁵⁹ Online comment from Gandara 2012

¹⁶⁰ Ibid.

¹⁶¹ Ibid.

¹⁶² Ibid.

performed an Aztec-inspired ceremony in front of City Hall before the meeting in protest of the recommendations, which they view as a violation of neighborhood autonomy. After the Planning Commission meeting, a member of PODER published a YouTube video showing Almanza's testimony at the meeting, dubbing the urban farm ordinance as "The East Austin Land Grab."¹⁶³ Testimony also included concerns about the price of food grown on urban farms and whether it is affordable for lower income residents of the neighborhood. Planning Commissioners, however, focused most heavily on the animal processing sections of the recommendations before them. Commissioner Oliver noted, "More than anything else in the entire debate, the onsite processing of animals was the element that I thought was most problematic. That element of farming is very different than the growing of fruits and vegetables. They are not on the same plane. That's not to say that there aren't good ways to do it." This debate was essentially only about HausBar as no other farm in Austin has attempted to process animals for sale, though the slaughter of animals for personal consumption on private property is not prohibited.

In response to the protests, the four farms in the Govalle/Johnston Terrace neighborhood formed a coalition¹⁶⁴ with the help of a local food activist and public relations professional. The purpose of the coalition was to rally public support for their key concerns with the proposed recommendations, which include some limitations on the number of events, particularly evening events, a farm could host on site and a limit on the sale of third-party agricultural products. The farmers articulated their positions through

¹⁶³ Learn More about the East Austin Land Grab. Will East Austin retain its Single Family Zoning? (2013, September 20). Available: <http://www.youtube.com/watch?v=EXIznZiQtrM>

¹⁶⁴ For information about the coalition, see <http://www.austinurbanfarms.org/>

key talking points, framing the debate in terms of the larger social and environmental benefits of a strong local food system. The farms had a strong contingent of allies who are vocal supporters of the local food movement and who purchase food grown on urban farms in Austin. These supporters represented a significant portion of those who attended the series of public sessions and were generally in favor of very few restrictions on urban farms. Most of these allies were not residents of the Govalle/Johnston Terrace neighborhood, and some have been critical of the neighborhood concerns about the farm operations. Allies have created Facebook page called “Austin Citizens in Support of Urban Farms,” which garnered 1,500 “likes” in its first 24 hours, and started a Moveon.org petition to a local food-supportive councilman to “keep urban farming alive in Austin,” which got 1,300 signatures in the first 24 hours. Recall that only one urban farm was properly permitted under the existing LDC, but there had been no incidents or neighbor complaints until the HausBarn issue. It is also important to state explicitly here that the debate that was being framed as “pro-farm” vs. “anti-farm”¹⁶⁵ was being drawn along racial and class lines. Neighborhood activists were almost entirely Mexican Americans, while the majority of the farm activists were white, with a few exceptions.

At the end of November, the final recommendations cleared all of the necessary hurdles to make it before City Council. More than 400 people showed up to the public hearing – more than any other issue the council had considered in recent memory – the majority of whom wore green shirts provided by urban farms and their allies. Neighborhood advocates wore red. Council heard testimony from both sides again and

¹⁶⁵ This mischaracterizes the debate, of course, because the issues were not about whether farms are good or bad, but how they should be integrated into residential neighborhoods.

made a number of changes to the recommendations from the dais, most significantly eliminating the right to process a small number of chickens and rabbits on urban farms zoned residential. They kept the recommendation that would create a new category of urban farm, called “market garden,” which would allow sales from a site under one acre in size. Council passed the ordinance language (see Table 4.1), but gave a four month grace period for urban farms to come into compliance.

Austin’s Land Development Code Regulations for Urban Farms		
	Urban Farm	Market Garden
<i>Size</i>	1-5 acres	Under 1 acre
<i>Zoning</i>	Permitted in any zoning district.	Permitted in any zoning district.
<i>Dwellings</i>	Dwelling units must follow base zoning regulations, max of two. Residentially zoned lots must have a house on site.	Dwelling units must follow base zoning regulations. Residentially zoned lots must have a house on site.
<i>Employees</i>	2 full-time, non-seasonal employees per acre (rounded up)	1 full-time employee (not the property owner)
<i>Environmental health</i>	Required: water conservation practices Prohibited: synthetic inputs	Required: water conservation practices Prohibited: synthetic inputs
<i>Animal raising and processing</i>	For residential zoning: raising fowl, rabbits, and aquatic foods is allowed. Processing and composting not allowed. For non-residential zoning: raising, slaughtering, processing, and composting fowl, rabbits, and aquatic foods is allowed out of public view. One animal may be processed per 1/10 th acre per week.	For all zoning: raising fowl, rabbits, and aquatic foods is allowed. Processing and composting not allowed.
<i>Events</i>	Educational events allowed by right (volunteer programs, tours, youth programs, farming classes). Other events (fundraisers, weddings) permitted up to 6 times per year with special permit.	Educational events allowed by right (volunteer programs, farm tours, youth programs, farming classes).
<i>Sales/retail operations</i>	Products raised by the farmer may be sold from the site at a farm stand. Up to 20% of the retail area may be used to sell third-party products from other farms.	Products raised on the site may be sold from the site, but not at a farm-stand. Sales must be conducted out of public view, limited to three customer trips/day.

Table 4.2: Current regulations for Austin urban farms, revised Nov. 2013¹⁶⁶

¹⁶⁶ City of Austin. (2013, Nov. 21). Ordinance No. 20131121-105. Available: <http://www.ci.austin.tx.us/edims/document.cfm?id=205937>

Outcomes of the regulation revision process

One of the most significant impacts of the Urban Farm Ordinance (UFO) is that the ability to slaughter animals for commercial purposes on a farm in a residential zone is explicitly forbidden. This was a huge blow to the HausBar operations and in Dorsey's words, "a very serious move away from sustainability" on the part of the city. "My drive is to be more and more and more sustainable all the time. The city says that that is also its goal. I plan to keep working towards until I die." Dylan Siegler of the City's Office of Sustainability agrees that the UFO did little to "cement our commitment to urban agriculture...I think the grassroots, sustainable local farm movement isn't necessarily embraced by city government and is not considered to be a priority." On the other hand, the process brought a significant amount of publicity to all of the urban farms – "everything became much more visible¹⁶⁷ – and city staff have been exposed to the regulations, which is likely to help new urban farms looking to get permitted.

Dorsey also expresses concerns with the limitations placed on farms wanting to do events like cooking classes, weddings, and other activities. These are important income generating activities for many of the farms in Austin, but the new regulations cap these events at six per year. Staff from PDRD argued that these events are not directly tied to "farming operations" and therefore should not be permitted by right. Dorsey sees inconsistency with the fact that schools and churches do carnivals or fairs are exempt from the types of permits that farms now have to obtain. "The city staff said in front of city council that churches and schools have always done fairs and carnivals and everyone

¹⁶⁷ Interview: Ronda Rutledge

said yes that's true, so that should be allowed. And that's really silly because what they said to us was that teaching cooking classes was not farming." Dorsey believes that each farm should be evaluated on its own merits about its ability to handle crowds and host events. The blanket regulations about events are troubling for her because it assumes all farms have the same capacity for parking, crowds, and noise and does not consider whether a farm even has residential neighbors. Farmers are concerned that these regulations will also make it difficult for farmers to make a living. Greg Guernsey and Greg Dutton of PDRD noted that the city tends not to proactively examine a regulation's potential impact on business operation unless those business owners actively object.

Another significant outcome of the process is that farms seem far more cognizant of the importance of neighbor relations. Jack Waite said he learned "that you want your neighbors to like you...something that I strive to do every day. I give them trees, I give them plants, I give them food, I come to their church meetings and donate food. I employ them." Michael Hanan and his colleagues watched what happened with HausBar Farm and decided "okay, we can never let that happen," and have since made stronger efforts to get to know their neighbors. These efforts have paid off with an award from their neighborhood association for having the "Yard of the Month" and "neighbors who stop every time they pass our yard and say 'we love this.'" Dorsey has also increased the number small events she hosts on her farm for her neighbors.

Ronda Rutledge of the Sustainable Food Center – and member of the Sustainable Food Policy Board – expresses frustration over the fight about whether or not farms should be located in neighborhoods. "There is a bigger enemy. We are spending a lot of

time fighting over here when there is a big old fat broken food system that needs to be fixed and we have the potential to come closer to that in Central Texas if we can do some bridge building around these issues.” It seems clear, however, that the debate over the urban farm ordinance has created a very wide rift between neighborhood activists and existing urban farms, which many believe is actually all about politics and not at all about the farms themselves. “I don’t think they really care about urban farms,” says Dorsey. “What they want is a platform...to further an agenda.” It is well known that Susana Almanza of PODER is running for a City Council seat in 2014 and issues of gentrification are likely to be a key campaign issue.

Because the rift became increasingly framed around issues of race, a growing number of food justice and anti-racist groups began to host events about race and class issues within the local food system.¹⁶⁸ Ronda Rutledge and others, however, expressed doubt about the accuracy of describing the “face of our farming community as white. In reality there are a lot of folks from a lot of different backgrounds growing food simply to feed themselves and their families. They could also be selling that food; some of them are growing enough that they could share it and sell it at a small scale at a market.” Dylan Siegler’s final thoughts about the urban farm ordinance involve the equity gap. “We have to address it more wholeheartedly and more holistically...we don’t really address environmental justice...and I’d like for us to start thinking about it.”

Interestingly, Frank Young and Dean Hayward, both African American, who have been farming in Austin longer than any of the other prominent urban farms central to the

¹⁶⁸ Interview: Ronda Rutledge

policy revision process, were completely disconnected from the process. They were vaguely aware of the fact that the revisions were happening, but were not engaged. Dean's farm, while in the city limits, is zoned agricultural, while Frank's is zoned commercial. Technically, Frank should be obtaining a certificate of occupancy from the city to run a farm from his land, but this is not a concern for him. He has an agricultural permit from the state that gives him discounts on sales tax and his vehicle registration, which is all that he says he needs.

At the end of the day, there is doubt about whether the new regulations will actually make urban farms any better. One member of the planning staff who had been very involved in the process of drafting the new regulations has said that he thinks it should only take a few weeks for existing urban farms to get the needed permits to bring them into compliance. Jack Waite retorts,

I don't agree with that assessment at all. I know a lot more attention has been given to this stuff, but even when Jake Stewart¹⁶⁹ was working on this stuff and doing a lot of back-door stuff with staff and the council...even he was met with complete resistance. Walls everywhere. If walls went up, it was because someone was pissed at you for pushing about something, not because there was a problem with an overarching policy thing.

There is a general sense from the farmers interviewed that regulations should really focus on the most risky part of growing food for consumption – any regulation that increases the burden on a farmer without actually improving food safety is seen as unnecessary bureaucracy.¹⁷⁰ Dorsey wishes that she had been able to just deal with the issue directly with her neighbor without the need to trigger the entire policy re-write process, especially

¹⁶⁹ The original staff member of the Sustainable Urban Agriculture and Community Garden Program.

¹⁷⁰ Interview: Michael Hanan

since nearly all of the existing urban farms have been operating complaint free without the proper permitting from the city.¹⁷¹ “I don’t think anybody’s life was improved by [the ordinance]. I don’t think the City of Austin is made better by it, I don’t think our neighbors are made better by it. I know urban farms aren’t made better than it.” Whether the results of the new LDC help or hurt the neighborhoods or the farms will be something to examine in future versions of this study.

BARRIERS TO URBAN AGRICULTURE IN AUSTIN

While the debate over the land development code outlined above touches on a wide variety of the issues that present barriers to urban farms, including neighborhood relations, zoning, lack of clarity in city regulations, and lax enforcement mechanisms, there are a number of other issues that interviewees discussed.

Land use issues

The question of neighborhood compatibility is perhaps the most central issue for urban farms in Austin. Many of the urban farms have on-site farm stands, weekly markets, and are community gathering places for a variety of events, from weddings to fundraisers for food-related non-profit organizations. Commissioner Oliver sees the catch-22 in this situation. “We obviously want to support sustainable practices,” but when farms surrounded by houses are hosting weddings every weekend, there needs to be a balance. If Austin wants urban farms, however, “we better put carrots out so those farms can actually be close to where we want a higher density of population...otherwise its

¹⁷¹ Planning Director Greg Guernsey notes that code enforcement in Austin has traditionally been very complaint driven. The Code Compliance Department is chronically understaffed and unable to proactively seek out code violations.

always at the fringe, always in a neighborhood in transition, which shouldn't be the only area where they happen." Everyone interviewed talked about the need to balance the needs of farms with the locations they are situated, but in general, the farmers believe "we should put urban agriculture anywhere that it doesn't create a nuisance."¹⁷²

As discussed at length in the literature review, animals tend to be the most pernicious issue straining relationships between farms and non-farms. Undoubtedly, this is at the root of the issue that HausBar Farm had with their neighbor, though it is important to note that the farm had been raising and processing chickens for two years before the complaint was filed. HausBar's operation was unique in Austin in that they were the first and only farm trying to do small-scale commercial animal slaughtering on site and compost excess animal products. While the HausBar farmers believed that they were doing everything in their power to create the most sustainable and hyper-local system possible, a neighbor's complaint about a foul smell coming from their animal composting system – a fully-enclosed black soldier fly system – was enough to call into question their entire processing operation.

Frank Young relies on the fact that his lot is 300 feet away from the nearest house, though he imagines that when the planned apartment complex is built across the street, he may start getting complaints. He believes, however, that he falls under "the grandfather clause. I was here before anyone else here and if you moved here and then complained, they would say 'you knew he had these animals before you moved in.'" While no such city regulation is apparent, it is instructive to understand the way that

¹⁷² Interview: Michael Hanan

Frank frames his relationships with his potential neighbors. Frank does not slaughter his own animals, instead selling them live to customers, many of whom include taco truck vendors seeking inexpensive goat meat for their tacos.

The other set of land use issues that looms large in Austin is the unique fact that almost every urban farm is also a residence. Indeed, the changes to the land development code codified that urban farmers must have a dwelling on-site if the farm is zoned residential. The fact that commercial urban farms can be located on residentially zoned land, however, has created consternation for the Planning and Development Review Department who have been unsure whether to permit an urban farm under residential or commercial permitting systems. In East Austin, where neighborhood planning teams have worked for decades to separate residential land from potentially harmful commercial and industrial uses (recall the previous discussion about PODER's work to remove the "tank farm" and other toxic land uses), neighborhood activists are on high alert to zoning changes that allow commercial uses in residential neighborhoods. Susanna Almanza of PODER reiterated the following complaint in every public meeting about the possible impact of allowing commercial urban farms in residential neighborhoods:

The current proposed Urban Farm Ordinance would allow the commercialization of single family zoned land in East Austin and throughout the city. In essence, the ordinance would blanket zone all single family zoned land in East Austin for commercial use, which would transform the property's use as Commercial Service Mix Use zoning (CS-MU). Even though this would be a city-wide ordinance, it would basically impact East Austin.¹⁷³

¹⁷³ Quoted in Saldana, P. (2013, October 9). The taking of East Austin single family zoned land by the proposed City of Austin urban farm ordinance. Habla Austin News/Blog. Accessed April 26, 2014. Available: <http://hablaaustin.squarespace.com/news/2013/10/9/proposed-city-of-austin-urban-farm-ordinance-the-taking-of-east-austin-single-family-zoned-land>

While Susana over-simplifies the process that a farm must go through to be able to legally change its use to allow commercial activities, her point is that farms have the potential to bring commercial activities to residential areas. Susanna and the constituents of PODER were not the only ones to express concerns about how commercial urban farms fit into the fabric of primarily residential neighborhoods. Representatives of the powerful Austin Neighborhood Council, which represents neighborhood councils all over Austin, also vocalized concerns about the commercialization of single-family land, especially the traffic impact of farm-stand customers and attendees of the various events that many of the larger urban farms frequently host. Urban farmers, including the owners of Sprindale and Boggy Creek Farm who are full-time farmers, insist that the ability to host events on their farms is a necessity. They rely on income generated from these events, which include fundraisers and weddings, to supplement income derived from sales of farm products. Hosting events is fundamentally a farming activity, the owner of Springdale Farm often says, because every time someone gets married on their farm, they are learning about sustainable agriculture and the benefits of urban farming.¹⁷⁴

What is and is not a farming activity – hosting events, growing vegetables, slaughtering animals – and where those activities should be allowed to take place within a city are questions that Austin is wrestling with through its revisions to the land development code as it relates to urban farms. These questions are all fundamentally land use issues that are sticky precisely because commercial urban farms in Austin are located in the heart of residential neighborhoods.

¹⁷⁴ Personal communication: Sprindale Farm owners

Affordability

Dorsey Barger of HausBar Farms spoke at length about the fact that she strongly believes that her urban farm has made a significant improvement to her neighborhood. Homeowners near her have told her that they were in “bidding wars” with other potential buyers specifically because they wanted to own a home near her farm. She feels that this is direct evidence of the benefit of her farm operation – people want to live in her neighborhood because of her. On the other hand, urban farms have received criticism about the fact that the benefits they provide aren’t equally distributed. Particularly for farms located in lower-income areas, there have been complaints that the food they sell isn’t affordable for neighbors who live closest. Additionally, critics have noted that an increase the desirability of a neighborhood due to new urban farms may speed up the gentrification process, increasing property values and tax burdens to the point of pricing out long-time residents. Dorsey offers this rebuttal:

[T]hey are implying that just because lower income people who live around us can’t afford our food, that they get no benefit from it. [They say] we came in here, we stole their land and they get no benefit from it, which is absolutely untrue. It’s an absolutely false logic. We bring people from our neighborhood to the farm all the time...all the farms do. There’s a huge educational thing going on here. If a poorer person can’t afford to eat this food, maybe their dad or their mom or their neighbor is working here at a living wage, taking home food grown on the property, and that’s how they benefit. Also, the school down the street that visits here five, six, seven times a year is benefiting very directly. Our neighbors are benefiting very directly by seeing vegetables being grown, how chickens are raised, where eggs come from...those things are very important.

Dorsey makes the case that the affordability of the food isn’t the main issue – the other benefits more than make up for the fact that the food they produce is more expensive than conventionally grown food. Steve Oliver of the planning commission takes a similar

stance. “If I was living next to a farm that I couldn’t afford, that doesn’t mean that I’m not going to reach out to them and say, ‘I can’t afford to shop here, but I am your next door neighbor and I would love to benefit from this amazing thing that you’re doing next door to me...and you can benefit from me being next door to you.’” The “amazingness” of having an urban farm next door trumps the affordability question for Steve.

These ideas run counter to the philosophy of Frank Young, however, who sells the eggs he raises for \$2.50/dozen even though he is well aware that he could sell them for more than twice that much at the downtown farmers market. “I don’t think I would want [to sell them for that price]. I got some regular people who depend on me for this and they’ve been coming for years and years and years and it would be hard for me to just turn away from them for a couple of bucks.” Frank doesn’t depend on his farm to generate all of his income – his social security benefits make up the majority of his earnings – so his margins are likely slimmer than Dorsey’s, but his philosophy is different in terms of the social benefit of providing low-cost, healthy food to low-income consumers. Frank also notes that food sold at other urban farms is more expensive than his because “they’ve got more overhead” due to the cost of employees. Indeed, says Dorsey, “One is that one of the reasons that our food is not very affordable is that we pay our workers. We respect the people working for us and we pay them a living wage and they get to take food home grown organically and they are working in agriculture without being subjected to toxic chemicals. The toxic chemicals make the food that lower income people can afford affordable.” Frank also raises his animals and vegetables without the use of chemical fertilizers, but is also an entirely different type of farm than the ones run

by Dorsey and her farm neighbors in the Govalle/Johnston Terrace neighborhood. Frank's farm is not what one would describe as beautiful. It doesn't feature long rows of jewel-colored vegetables, instead, small patches of veggies grow scattered around the dirt yard. The chickens live in large coops cobbled together with recycled pallets, chicken wire, and wood; chicken manure coats nearly every surface. A dozen goats roam in a similar pen and when one is born stillborn, its carcass is thrown over the fence into the neighboring empty lot. It's clearly a working farm that is packing a lot of productivity into small spaces, but not doubling as a social gathering space or intending to be beautiful.

The question of affordability as a social/economic barrier preventing certain people from accessing urban farms is also about the economic viability of these very small-scale businesses. As Jack Waite explains, "I can't sell my lettuce in my neighborhood to people who are making minimum wage. It's not exorbitantly priced, but I have to make my margin. It's not a sustainable business model to be able to sell your stuff at a cut rate when people can get a \$0.79 head of iceberg lettuce at Fiesta.¹⁷⁵ I can't compete with that." Eventually, Jack is planning on using the non-profit side of his business to get grants to subsidize the prices of his produce. Within the next three months, he hopes to know whether business is profitable, and if he clears that hurdle, he can start thinking about ways of making some of his product cheaper through subsidies.

Green Gate Farm, located just outside the city limits, and therefore technically outside the scope of this analysis, is the only farm in the area that accepts Supplemental

¹⁷⁵ A large, commercial grocery store known for inexpensive food.

Nutrition Assistance Program (SNAP)¹⁷⁶ benefits at its bi-weekly farm stand. It receives funding through the Sustainable Food Center's Double Dollar Incentive Program to offer incentive coupons to SNAP customers that double the value of their SNAP benefits at the farm stand. The administration of the program is burdensome for the farm and the funding to support incentive programs is not always easy to obtain or maintain in the long run.¹⁷⁷ While the Sustainable Food Policy Board has made recommendations to city council to require farm stands and farmers markets to accept SNAP and WIC benefits, this recommendation has not been taken up.¹⁷⁸ It is also important to note here that making sure a farm stand can accept SNAP benefits doesn't address the entire affordability question because prices may still be far out of reach for people who are low-income, but who do not qualify for the benefits.

Making a living as a farmer

All of the interviewees in Austin discussed the challenges of making a living as an urban farmer and, as previously mentioned, a number of the urban farms rely on supplemental income from hosting events, or, in the case of HausBar, operating a short-term rental house for tourists. Jack Waite, who currently relies solely on income derived from his farming operation, sees other farms doing aquaponics systems like his going out of business all over the country because few entrepreneurial farmers have the business savvy for sound financial planning. "It's an awful thing to do that's a pain in the butt," he complains, "but you have to do it and do projections and figure out how to maximize."

¹⁷⁶ Federal food assistance benefits formerly known as "food stamps."

¹⁷⁷ Personal interview with Erin Flynn, owner of Green Gate Farm.

¹⁷⁸ For more on this, see Donovan, Madore, Randall, and Vickery 2013

Jack says if “several things hadn’t clicked into place for me,” including finding affordable land, a friendly landlord, and an angel investor for his operation, his chances of becoming profitable within the first four years of operations would have been sunk. The farmers from Ten Acre Organics, who are currently running a tiny farm in the backyard of their rental property that they hope will be the model for a 10-acre version some day, have relied on a Kickstarter campaign and several small grants to raise the start-up capital; they plan on offering a Series A investment share offering soon. All three of the farm employees have full time jobs that pay the bills, but the business plan is for the larger version of their farm to provide an income for two full-time farmers.

Frank Young and Dean Hayward are both retired and use their farms to generate extra income, which takes the pressure off in regards to being profitable. Other farms in Austin rely on additional business income from hosting weddings and events, or from produce grown on larger farms well outside of the city. Springdale Farm rents a high-end food trailer to a local chef, bringing in hundreds of customers every weekend for a farm-to-table meal for \$70/person. “I would say it is impossible to make a living off an urban farm...Okay, so not impossible, but one would have to adjust their income goals, live in a very modest house, pretty much live off the land and maybe not own a car.” says Dorsey Barger. Steve Oliver notes that this isn’t exclusively about urban farming – farmers nationwide rely on other activities and incomes to supplement farm income. Frank Young insists that the farming lifestyle is most important. “Profit is important, but pride and your self dignity...money is not everything because if it was for money, you wouldn’t do it.”

The limitations on growing food for profit on urban farms are mostly about production limitations, not demand. The Sustainable Food Center (SFC) works to bring farm produce to 50 of the 120 campuses in the Austin Independent School District. The farms they work with are all over the Central Texas region, however, and very little of the produce comes from urban farms. SFC executive director Ronda Rutledge believes this is a big source of untapped demand for urban farms, but the limitation is production capacity. For Frank Young, he is satisfied with selling his goats, chickens and eggs to about 15 loyal customers, who are mostly Hispanic, he notes. He gives away the vegetables he sells, refusing to take any money for them. Ten Acre Organics is also producing only enough to sell to about 10 CSA customers a week along with a handful of restaurants, though they eventually hope to find a 10 acre piece of land that can produce much more. Agua Dulce will soon be producing at capacity and will rely mostly on organic delivery companies and restaurants to purchase their products.

Environmental challenges

Urban farmers in Austin discuss water as one of the key limitations for growing food, especially those that rely on municipal water supply, like Ten Acre Organics and Frank Young. Both farms are careful to use as little water as possible. Several farms, including HausBar and Boggy Creek, have independent wells, but wells are expensive to install – as much as \$10,000 estimates Jack Waite. Others rely on rainwater catchment for at least some of their water supply, though that depends on available rain and surfaces on which to catch water. “The city’s constantly going to be in a battle with state water issues about who has the right to water; it’s always the upstream people [that get the water

now], but if that changes in the next five years, you could have your total urban farm collapse.”¹⁷⁹ The ability of urban farms to access affordable water is a key constraint moving forward. As Central Texas becomes increasingly hot and dry, this constraint will undoubtedly become increasingly challenging for all farmers, urban or rural.

Appropriate soil is also a challenge. Much of west Austin has a thin layer of top soil on top of limestone, which is a major reason why most farms are located in the “20-30 feet of former river bottom soil” of eastern Travis County (see Figure 4.1).¹⁸⁰ Soil contamination is not a significant concern in Austin, though most farmers are aware of what types of activities occurred on the property before they began farming. Michael Hanan points to the fact that the research is shows that most plants “don’t really take up much” toxic chemicals anyway, though he is concerned about the loss of prime agricultural soils in Central Texas as a result of growth and development. With the exception of the aquaponics farms, crops are grown directly in the ground in Austin rather than in raised beds. None of the farmers interviewed for this study conducted tests for lead contamination, though, as will be apparent in the later chapter on New Orleans, this is a significant concern for farmers in other cities.

THE FUTURE OF AUSTIN’S URBAN FARMING

Interviewees discussed the challenges facing the future of urban farms, pointing specifically to Austin’s explosive growth as a key pressure on new and existing farms. “All the farmland is being bought up and taken away, so small farmers basically are

¹⁷⁹ Interview: Jack Waite

¹⁸⁰ Interviews: Dorsey Barger, Michael Hanan, Greg Guernsey

being put out of business.”¹⁸¹ Rising property values and tax burdens, and a decreasing supply of available land provide real challenges for urban farmers.¹⁸² Development pressure from nearby residential construction may also present a threat for farms living nearby.¹⁸³ Dylan Siegler suggests that farms may be able to continue to have a “flagship” within the city limits, but do most production outside of the city, which is the model of Boggy Creek Farm. Lloyd Minick of Ten Acre Organics believes that “aquaponics and hydroponics are both going to be a huge part of the future of agriculture in Texas because they are more water efficient than growing crops in the ground; as much as 20 times more water efficient.” Jack Waite agrees that the future is not about more crops in the dirt.

People need to be innovative. You can’t do the normal thing. You can’t do what [Springdale and Boggy Creek] have done because that land isn’t there anymore. I think innovation and thinking differently is really going to help. Aquaponics, or doing modified aquaponics on the banks of a lake, or farming in a flood plain, rooftop gardens, aquaponics on rooftops, hydroponic gardens in your house. But doing it in the old fashioned way – and I don’t say that in a disrespectful way – just isn’t going to work anymore in Austin.

While there may be decreasing opportunities for new farms larger than an acre, there are ample “homes with unused yards or lots between them that are unbuildable. You can drive around neighborhoods and see the opportunity for food production.”¹⁸⁴ Maximizing production on these small spaces may also help urban farmers.¹⁸⁵ Greg Guernsey suggests that urban farms could be used as an “interim step” to some other kinds of more profitable development on certain plots of land. Developers could “hold this land and

¹⁸¹ Interview: Dean Hayward

¹⁸² Interviews: Greg Guernsey, Dylan Siegler, Frank Young, Dean Hayward, Ronda Rutledge, Michael Hanan

¹⁸³ Interview: Frank Young

¹⁸⁴ Interview: Ronda Rutledge

¹⁸⁵ Interview: Michael Hanan

wait for the right price, but instead of being a parking lot or some temporary storage, [they could] make it an urban farm.”

As Austin grows, farms, along with all other non-housing land uses will likely continue to face challenges from neighborhoods. Greg Guernsey reflected on that the debates he was part of when a member of a “gentrification task force” fifteen years ago are the same debates facing urban farms today. The new development could be “an urban farm, it could be a recycling company, could be an oil supply, all of those are in competition for the same land and we are finding that all over Austin.” As housing and land becomes increasingly expensive, the fights to maintain housing, particularly affordable housing, will undoubtedly continue. Farmers believe the debate over the urban farm ordinance unfairly attributed rising property values and gentrification to their operations in neighborhoods.

Rising property value is a huge issues that is about economics and city policy, not an issue of urban farming or sustainability. Honest to God, I don’t want to live in a lily white hipster neighborhood. I began living here in 1988 because it was diverse, because it was a culturally beautiful place to be. I do not want to live in a neighborhood that’s lily white. Period. The end. So I want gentrification just as much as the long-time residents want gentrification...which is not. I want a mixture of people, a mixture of businesses, I want diversity, I don’t want homogeneity. So all we have to do is to figure out how to have enough funds for our city to have enough money, good streets, enough cops and firefighters, and let these wonderful neighborhoods stay here. I think we can figure that out.¹⁸⁶

Others, like Planning Commissioner Steve Oliver, go so far as to say that “an urban farm trumps a single family house” in terms of importance in a neighborhood.

These debates may result in the city being asked to make public land that is otherwise unavailable for housing, available to urban farmers. Some advocates, and even

¹⁸⁶ Interview: Dorsey Barger

Greg Guernsey, suggests that land located within floodplains could be made available for urban farms since homes are not allowed to be built in these areas. There is opposition to this proposal, however, articulated by Dylan Siegler who does not understand why the city would encourage farm development on land at higher risk of flooding. “It’s already so hard to farm in our climate and it’s so hard to make a living on a small farm even in the best of circumstances. The reason we’re not building in the floodplain is because it floods...are we really suggesting that [it matters less because] it’s just zucchini?” In general, the future of urban farming is bleak unless land tenure can be ensured. The proposals to make urban farms a holding strategy for land or use floodplain land, however, seems likely to put urban farms on uncertain footing in terms of long-term land tenure, which is what interviewees attribute the problem to in the first place.

CONCLUSION

As the narrative of this chapter suggests, the urban farming scene in Austin has been dramatically affected by the highly publicized and contentious process to revise city policies for urban farms. Most urban farmers were unaware of policies they were out of compliance with, and over the course of the process were made to feel that they had to justify their very existence in the urban fabric of the city. The process also highlighted the pernicious issues of whether urban farming is the most sustainable land use for a city growing as fast as Austin. As many interviewees mentioned, the future of urban farming is complex; farms are as likely to be squeezed out by rising land costs and development pressures as their residential neighbors. In addition, the fact that Austin was even having a debate about whether animals should be allowed to be slaughtered for commercial

purposes on an urban farm is somewhat astonishing. Few, if any, other cities have regulations that allow animal processing on land in residential areas.

They key debates in Austin will undoubtedly continue to include boundary-pushing practices that farms see as being about environmental sustainability, but that run into conflicts with city regulations and neighborhood concerns. The real and perceived inequities in the local food movement as a whole, and urban farms specifically will also continue to present challenges as Austin's wealth gap will undoubtedly continue to grow. Finally, the environmental challenges of soil and water, social challenges around neighborhood relationships, economic challenges of affordability and the ability to make a living, and regulatory challenges around land uses deeply affect Austin's urban farming community.

Chapter 5: Urban Agriculture in New Orleans, LA

FRAMING URBAN FARMING IN NEW ORLEANS

New Orleans's rich alluvial soil and status as a port-city has meant a long history of agricultural production – including cotton and sugar cane – and within the city itself, backyard and community gardens have been sprouting for many years. “Most people have a tradition of growing food here: black, white, Vietnamese, whatever your culture is, everyone here has experience here growing food, but they don’t have the space.”¹⁸⁷ Indeed, unlike Austin, which has more lots over an acre, New Orleans has relatively few.¹⁸⁸ While the generations of old-timers engaged urban agriculture have largely passed away or ceased to grow food in the city, some New Orleanians see the current era of urban farming to be a “rebirth” of those old traditions into a new generation of younger farmers.¹⁸⁹ The tradition of New Orleans food culture also informs the way many people think about what food access should look like in the city. “You have look at the history of the city,” says farmer Kweku Nyaawie. “We have always had corner stores and there have always been local bakeries and local meat markets, especially in the Ninth Ward...there have always been truck farmers who have grown food in these areas. That tradition is well established here in New Orleans.” Urban agriculture has flourished throughout New Orleans’ history, but particularly post-Hurricane Katrina, which struck the city in 2005. Scholars note that post-Katrina urban agriculture is increasingly political and instigated by individuals who are not originally from New Orleans and of a different

¹⁸⁷ Interview: Marianne Cufone

¹⁸⁸ Interview: David Lessinger

¹⁸⁹ Interview: Kweku Nyaawie

race and socioeconomic status than the people that the project is designed to serve.¹⁹⁰

PRIME AGRICULTURAL SOILS

ORLEANS PARISH, LOUISIANA

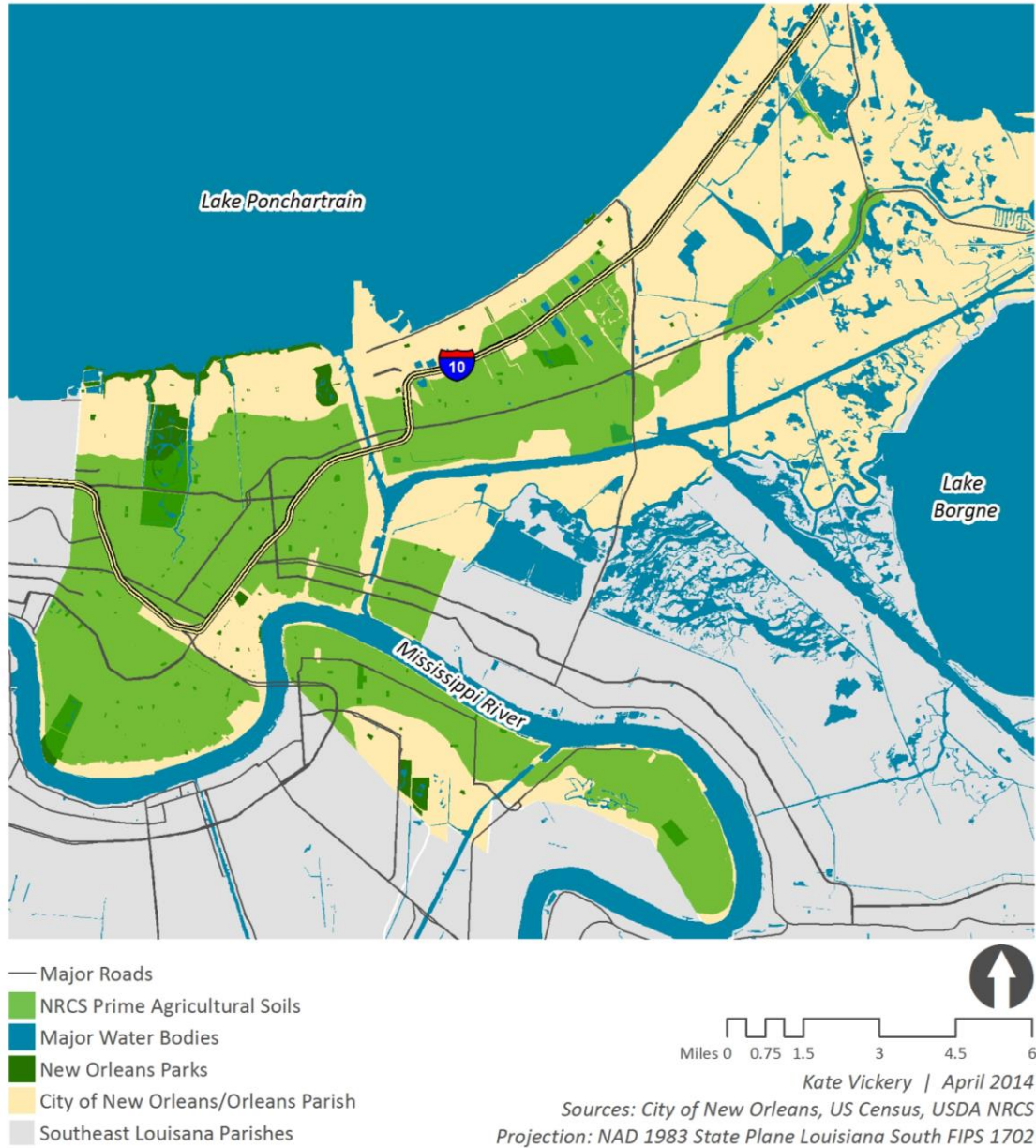


Figure 5.1: Location of Prime Agricultural Soils, Orleans Parish, Louisiana

¹⁹⁰ Kato, Y., Passidomo, C., and Harvey, D. (2013). Political gardening in a post-disaster city: lessons from New Orleans. *Urban Studies*: 1-17.

It is impossible to discuss any type of land use in New Orleans, urban farming or otherwise, without discussing its unique wetland geography, status as a shrinking city, and the impacts of Hurricane Katrina. The founders of New Orleans realized the risk of building on the low-lying area that was prone to flooding even during the earliest settlement in 1719.¹⁹¹ The invention of the Wood pump in the late 1880s allowed the city to drain out the cypress swamps, creating dry land below the level of Lake Pontchartrain.¹⁹² From 1930 to 2005, unsustainable fishing, ship-channel construction, and industrial development caused massive coastal erosion, eliminating the wetlands that serve as a natural buffer for storms and pollutants.¹⁹³ As noted in Chapter 3, over 50% of the city's total area is technically water and 50% of the state's population lived in coastal parishes in 2005, which are anywhere from six to eleven feet below sea-level.¹⁹⁴ Historically wealthier neighborhoods, including the French Quarter, Garden District, and Uptown were built on natural levees and homes tended to be clustered together and built on piers/beams, providing additional flood resistance.¹⁹⁵ These oldest residential districts provide much of the historic backbone of the city and were a reason that New Orleans was the first U.S. city to designate a historic preservation commission in 1921.¹⁹⁶

¹⁹¹ Brinkley, D. (2007). *The Great Deluge: Hurricane Katrina, New Orleans, and the Mississippi Gulf Coast*. New York, NY: HarperCollins Publishers, Inc., pp. 6.

¹⁹² Ford, K. (2010). *The trouble with city planning: What New Orleans can teach us*. New Haven: Yale University Press, pp. 20.

¹⁹³ Brinkley 2007, pp. 10

¹⁹⁴ Ibid., pp. 13

¹⁹⁵ Ford, 2010, pp. 19

¹⁹⁶ American Planning Association Texas Chapter. Planning history 1785-2000. Available: http://www.txplanning.org/media/files/page/Planning_History_1785_to_2000.pdf

The population of New Orleans peaked in the 1960s at nearly 650,000, making it the city the 15th largest in the United States.¹⁹⁷ As in most American cities, the population boomed and new housing starts flourished post WWII. Low-lying parishes were quickly settled by returning veterans and their families in homes built on concrete slabs with large yards, construction techniques that are not as flood resistant as those of older homes.¹⁹⁸ As noted in Chapter 3, however, the population of New Orleans declined dramatically after 1970; the city lost over 45% of its residents by 2010. These population and development trends helped set the stage for the unprecedented destruction that Hurricane Katrina brought to New Orleans in August, 2005.

While the hurricane itself is well outside the scope of this study, it is helpful to be reminded of a few key impacts of the storm.¹⁹⁹ The category five hurricane itself and the subsequent failure of the levee system that protects New Orleans from Lake Ponchartrain caused the flooding of 80% of the city, with water levels rising anywhere from one to ten feet. The estimated death toll exceeded 1,300 people,²⁰⁰ nearly half of whom were over 74. More than one million Gulf Coast residents were displaced, and the city itself lost

¹⁹⁷ United States Census Bureau. Population of the 100 Largest Urban Places: 1960. Accessed April 14, 2014. Available: <http://www.census.gov/population/www/documentation/twps0027/tab19.txt>

¹⁹⁸ Ford 2010, pp. 20

¹⁹⁹ These figures, unless otherwise noted, are summarized by The Data Center (formerly the Greater New Orleans Community Data Center). Available: <http://www.datacenterresearch.org/data-resources/katrina/facts-for-impact/>

²⁰⁰ The exact death toll remains unknown. This figure is taken from the Federal Emergency Management Agency's 2005 Summary Report on Building Performance.

half of its population as a result of the storm. In the Lower Ninth Ward alone, over 20,000 residents were displaced.²⁰¹

The damage to low-lying neighborhoods like the Lower Ninth Ward, Lakeview, Gentilly, New Orleans East, and Bywater disproportionately impacted African American residents, renters, and households living in poverty.²⁰² At the time of the storm, the system of levees had not been improved since the 1960s-era storms, rendering it inadequate for a category five.²⁰³ The economic cost of the damage is estimated at nearly \$200 billion, making Katrina the costliest natural disaster in U.S. history.²⁰⁴ Key services and businesses shut down and many national retail chains did not return to the city during the rebuilding process. Former New Orleans planning director, Kristina Ford, notes that the damage can also be attributed to New Orleans' increasingly lax stance on land use and development control, particularly in low-lying areas.

In purely historical terms, *any* street that appeared on a map of New Orleans drawn in the nineteenth century...probably did not flood. Correspondingly, the most devastated areas were those built on low land, and notably built *after* a planning commission had been installed in New Orleans city government. One could justly say that building the original New Orleans had been a project constrained by the primal facts of its flood-prone site, while building the *new* New Orleans was a different kind of animal – one built on the certainty that technology could overcome those primal facts and free planners to concentrate on schemes for increasing commerce and for housing new residents.²⁰⁵

²⁰¹ Bates, L.K. and R. Green (2009). "Housing Recovery in the Ninth Ward: Disparities in Policy, Process, and Prospects." in *Race, Place, and Environmental Justice After Hurricane Katrina: Struggles to Reclaim, Rebuild and Revitalize New Orleans and the Gulf Coast*, eds. Robert D. Bullard and Beverly Wright, Westview Press.

²⁰² Logan, J. (n.d.). The impact of Katrina: race and class in storm-damaged neighborhoods. Accessed April 14, 2014. Available: <http://www.s4.brown.edu/katrina/report.pdf>

²⁰³ Brinkley 2007, pp. 4

²⁰⁴ Burby, R. (2006). Hurricane Katrina and the paradoxes of government disaster policy: Bringing about wise governmental decisions for hazardous areas. *The Annals of the American Academy*.

²⁰⁵ Ford 2010, pp. 26-27

While dramatic population decline after 2005 can be attributed to Hurricane Katrina, earlier losses were caused by slow job growth and shrinking employment opportunities, growing concentrated poverty, and the flight of mostly, though not exclusively, white New Orleanians to suburban parishes.²⁰⁶ Unlike Austin, which has seen a steady increase in population, pre-Katrina New Orleans follows the trajectory of many post-industrial “shrinking” cities like Detroit, Cleveland, Baltimore, and Birmingham. Residents are quick to point out, however, that New Orleans is no longer shrinking and “a lot of people would be very hurt to hear term shrinking city used.”²⁰⁷ As noted in Chapter 3, the city’s population grew even faster than Austin’s from 2010-2012 (7.4% compared to 6.6%), a trajectory that residents are anxious to see continue. Despite the recent growth however, New Orleans has an uphill battle to deal with the massive historical and Katrina-related housing and land vacancy.

Population loss has many effects, but one of the most pressing is the effect that a declining population has on the housing stock. As residents leave for greener pastures, neighborhoods are left with vacant lots and abandoned housing that are challenging to fill. Vacancies of this nature also pose a fiscal challenge due to the loss in tax revenue, which can make it difficult to provide city services to these areas.²⁰⁸ A 2008 study found that just three of Cleveland, Ohio’s “most vacant” neighborhoods cost the city over \$35

²⁰⁶ Brookings Institution. (2005, October). New Orleans after the storm: Lessons from the past, a plan for the future. Special Report. Available:

http://www.brookings.edu/~media/research/files/reports/2005/10/metropolitanpolicy/20051012_neworleans.pdf.

²⁰⁷ Interview: anonymous City Planning Commission staff member

²⁰⁸ Schilling, J., and Logan, J. (2008). Greening the Rust Belt: A Green Infrastructure Model for Right Sizing America’s Shrinking Cities. *Journal of the American Planning Association*, 74(4), 451-466. DOI: 10.1080/01944360802354956, pp. 452

million in annual demolition and boarding costs, grass and trash services, and tax revenue losses.²⁰⁹ New Orleans' current stock of over 37,000 vacant parcels has a similar financial impact on the city; agencies spend an estimated \$450/year on mowing alone for each lot.²¹⁰ The massive number of vacant lots and homes led the city to create a Blight Reduction Strategy in 2010 with the goal to eliminate 10,000 blighted properties from the city by 2014, which it achieved.²¹¹ "Blight" is defined as property or homes that are not maintained in a "clean, safe, secure and sanitary condition."²¹² A property owner found guilty in an administrative hearing of allowing blight can be fined up to \$500 per violation per day and the city can then remediate the property through demolition and/or lot clearing; failure to pay fines provides the city with the legal authority foreclose on the property and sell it to a new owner.²¹³ This process has resulted in the transfer of thousands of properties to new owners, millions in city revenue, and is one of the reasons that vacant lots are available to New Orleanians interested in urban agriculture.

As will be discussed in detail shortly, urban agriculture as a land use strategy is included in the 2010 Master Plan. Undeniably, urban agriculture is more abundant in present-day New Orleans than it was before Katrina, noted by nearly every person interviewed. The theories about why include the abundance of newcomers and "educated

²⁰⁹ Community Research Partners and Rebuild Ohio. (2008, February). *\$60 Million and Counting: The cost of vacant and abandoned properties to eight Ohio cities*. Columbus, OH. Available: <http://www.greaterohio.org/files/policy-research/execsummary.pdf>

²¹⁰ Interview: David Lessinger

²¹¹ Office of Mayor Mitch Landrieu. (2014, Jan. 9). Press release: City surpasses blight reduction milestone of 10,000 units by 2014. Accessed April 15, 2014. Available: <http://www.nola.gov/mayor/press-releases/2014/20140109-blight/>

²¹² City of New Orleans. City Code § 26-156(c). Retrieved: <http://library.municode.com/index.aspx?clientId=10040&stateID=18&statename=Louisiana>

²¹³ City of New Orleans. (2013). New Orleans blight reduction report. Available: http://nola.gov/getattachment/Performance-and-Accountability/Initiatives-and-Reports/BlightSTAT/Blight-Report_web.pdf/

white people” moving to New Orleans interested in starting urban farming projects on the abundant vacant land.²¹⁴ Urban planner and architect, Emilie Taylor, believes that the growth of urban farms can be attributed to the fact that “there is just a lot of land and people are trying to be inventive about the [vacant] land” and especially the areas more vulnerable to flooding. There are also ample examples of long-time New Orleanians who became interested in growing their own food in the city because the landscape of food access was so decimated after Katrina.²¹⁵ Today, for example, only 22 grocery stores serve the city, and it took nearly two years for grocers to return to some neighborhoods. “Fast food came back, gas stations with Brothers Chicken came back...you could get all of the beer and liquor you wanted...but produce...good meats...things like that you couldn’t get.”²¹⁶ Many of the farmers interviewed for this study cited the lack of fresh groceries post-Katrina as a motivating factor for seriously growing food. Simultaneously, “the fresh food urban cultural buzz hit the country,”²¹⁷ and “New Orleans, just like everyone else, has a rising consciousness about where our food comes from.”²¹⁸

Major players in New Orleans’ urban farming economy include farmers, chefs, and a host of non-profit support organizations. Indeed, New Orleans’ reputation as a “food city” with roots in Creole cuisine is also an important component of the food production scene.²¹⁹ The number of farm-to-table restaurants has increased in the city,

²¹⁴ Interviews: Mariane Cufone, Dan Ethridge, Thaddeus Prosper

²¹⁵ Interviews: Mariane Cufone, Dan Ethridge, Thaddeus Prosper

²¹⁶ Interviews: Marianne Cufone, Tony Lee

²¹⁷ Interview: Thaddeus Prosper

²¹⁸ Interview: Dan Ethridge

²¹⁹ Tucker, S. and Starr, S. F. (2009). *New Orleans cuisine: Fourteen signature dishes and their histories*. Jackson, MS: University Press of Mississippi.

and well-known restaurateurs like Emeril Lagasse and John Besh are champions of urban agriculture. Lagasse's Emeril Lagasse Foundation provides substantial financial support to projects like Edible Schoolyard NOLA – a teaching garden and kitchen program – and purchases certain produce for his New Orleans restaurants from urban farmer Thaddeus Propser.²²⁰ Besh is a champion of aquaponics, has been a celebrity judge for PitchNOLA: Lots of Progress which looks for innovative greening and food production projects to give vacant lots to,²²¹ and runs a foundation that gives grants to small farmers looking to scale up their operations.²²² Almost every commercial urban farmer in New Orleans sells a large portion of their products to local restaurants (see Table 5.1).

The leading support organization for urban farmers in New Orleans is the New Orleans Food and Farm Network (NOFFN), founded in 2002 and currently headed by executive director Sanjay Kharod. NOFFN's mission is to support and provide capacity-building and technical assistance to a wide range of urban agricultural projects, particularly urban farms. Kharod is particularly focused on two related goals: getting commercial operations to become more self-sufficient and profitable, and helping aspiring growers to gain access to land. He sees a lot of the urban agriculture projects in New Orleans organized as non-profits with education missions, which he believes limits the possible growing capacity of those farms. "If you're an education center, you don't

²²⁰ Emeril Lagasse is an American celebrity chef of Portuguese and French descent who has adopted New Orleans as his culinary home, opening his first restaurant there in 1990. For more about the Emeril Lagasse Foundation, see <http://emeril.org/>.

²²¹ This program is a partnership between Propeller, a social entrepreneurship incubator, and the New Orleans Redevelopment Authority (NORA), which owns the lots that are up for grabs during the competition. This will be discussed at length in a later section.

²²² John Besh is also a celebrity chef, raised in south Louisiana with multiple restaurants in New Orleans. For more about the John Besh Foundation: <http://www.johnbeshfoundation.org/>.

have to grow a lot. It's a little bit of a cop-out," he says. The organization conducts workshops for urban growers and created the FarmCity Toolbox, a collection of free tools for growers to learn about land issues, financing, market development, training and mentoring.²²³ Another recent project is Living Lots NOLA, an interactive mapping tool where growers can identify publicly-owned land as well as private land that may be available for urban agriculture. The majority of the publically-owned land on the map are adjudicated properties owned by the New Orleans Redevelopment Authority (discussed in detail in a later section), while the private lots have current blight liens, or are owned by individuals who have told NOFFN that they would like to contribute their lot to an agricultural project.²²⁴ NOFFN believes that improving the transparency around what land may be available will help "empower neighborhoods to step up and do something before other things happen because they are not part of the development decisions"²²⁵ that the city is making. In general, NOFFN is the go-to organization for people seeking assistance with any kind of urban farming operation and is active in advocating for clearer regulatory processes with the City and the Redevelopment Authority.

²²³ The FarmCity Toolbox is available for download: <http://www.noffn.org/nola-farms-toolbox/>

²²⁴ The Living Lots NOLA map is available: <https://livinglotsnola.org/#12/29.9906/-90.0649>

²²⁵ Interview: Sanjay Kharod

Farm	Primary Products	Sole source of farmer income?	Where farm sells products	To whom farm sells products	Does the farmer live on site?
Hollygrove Market and Farm/Gathering Tree Growers Cooperative (Macon Fry)	Vegetables, esp. arugula	No	Hollygrove Market; direct delivery	Restaurants; individuals	No
Grow Dat Youth Farm (Johanna Gilligan)	Vegetables	No (non-profit; sales make up 40% of budget)	Crescent City farmers market; on-site farm stand	Individuals; CSA members	No
Magellan Street Garden (Tony Lee)	Vegetables, herbs	No	On-site	Individuals; some restaurants	No
VEGGI Farmer's Cooperative (Khai Nguyen)	Vegetables (aquaponics)	No	Hollygrove Market; direct delivery	Individuals; restaurants	No
Hollygrove Market and Farm (Kweku Nyaawie)	Vegetables	No	Hollygrove Market	Individuals; restaurants	No
Sheaux Fresh Sustainable Foods (Thaddeus Prosper)	Vegetables, esp. micro-greens	Yes	Direct delivery	Restaurants	No

Table 5.1: New Orleans Farms Included in Study

In addition to NOFFN, an organization called GrowDat Youth Farm is one of the best-known urban agriculture programs in the city. Modeled after Austin's Urban Roots,²²⁶ GrowDat is also a youth development program using an urban farm as its primary transformative tool, donating 40% of its harvest to local food banks and hunger relief programs. The farm is located in City Park, New Orleans' largest and most-visited public space and has two acres under cultivation as well as an education center and weekly farm-stand. The organization was founded in 2010 in partnership with NOFFN and the Tulane City Center (TCC), a research and design-build program of Tulane University's School of Architecture. TCC has been an important partner for many of the

²²⁶ Urban Roots founder, Max Elliott, has roots in New Orleans and is a founding member of NOFFN.

small urban farm projects that have developed post-Katrina – almost half of their recent projects have an agricultural component. “We didn’t decide urban ag is great,” says former associate director, Dan Etheridge. “We presented ourselves as a technical service provider and explained what we do and communities came to us overwhelmingly for urban ag.” TCC built the education center for GrowDat, helped create the NOFFN Toolkit, renovated farmer Tony Lee’s small urban farm and the Hollygrove Market and Farm, and have designed plans for a number of green infrastructure and community garden projects.²²⁷

TCC was very involved with the early planning phases of the Viet Village Urban Farm, an ambitious urban farm project that failed to materialize due to political and land use conflicts between the organizers and the City of New Orleans. The City has been home to a large Vietnamese population since the 1970s, when thousands of Catholic Vietnamese refugees immigrated to the Village de l’Est neighborhood in east New Orleans. Originally settled into a public housing development called Versailles Arms, the Vietnamese community today is widely known as Versailles and is politically and socially organized around the Mary Queen of Vietnam Catholic Church and Mary Queen of Vietnam Community Development Corporation (MQVN CDC). Upon arrival to the United States, the community maintained an extensive network of community and private gardens, and an estimated one in three became gulf-coast fishermen. The weekly farmers market in Versailles features exclusively Vietnamese growers and fish mongers. This community was devastated by Hurricane Katrina, but was also one of the first to return

²²⁷ More about the Tulane City Center’s urban agriculture projects can be found: <http://www.tulaneccitycenter.org/programs/urban-agriculture-initiatives>

and rebuild, despite the fact that the City provided almost no unique support for this mostly Vietnamese-speaking community.²²⁸ In 2008, the MQVN CDC and TCC developed a plan for a 28-acre urban farm that would feature aquaculture and an on-site farmers market. While the plan received an American Society of Landscape Architecture Award and the project received wide publicity, it has been stalled since 2011. The Army Corps of Engineers discovered that the site, owned by the Mary Queen of Vietnam Church, is designated a “jurisdictional wetland” that requires a land-swap or purchase of environmental credits in order to develop, a cost that the Church cannot absorb.²²⁹

Even as this project stalled, however, the community was hit with another disaster, even more devastating than Katrina. The BP oil spill of 2010 decimated the livelihoods of many Vietnamese fishermen, which were already difficult. “I don’t want to compare tragedies,” says community member Khai Nguyen, “but in our community, Katrina was a lot of damage, but people were able to come back and fix up their home. But the oil spill, so many people were relying on the fishing industry, that they lost their jobs. Their livelihoods haven’t been able to come back.” Khai is one of a group of youth who came together to organize the VEGGI Farmer’s Co-op, which has a 2-acre site with raised growing beds and aquaponics systems that would help farmers find alternative ways of making a living. They currently have 12 farmers who are members of the co-op, making approximately \$500/week in sales to restaurants and the Hollygrove Market and

²²⁸ The history of the community and the various organizing efforts undertaken in the wake of Katrina, including ongoing fights to prevent landfills from being established near the community, are illuminated in the 2010 documentary *A Village Called Versailles* (<http://avillagecalledversailles.com/>). Facts about the recovery of the community can be found in this fact sheet provided by the MQVN CDC: <http://avillagecalledversailles.com/>.

²²⁹ Truitt, A. (2012). The Viet Village urban farm and the politics of neighborhood viability in Post-Katrina New Orleans. *City & Society* 24(3): 321-338.

Farm, which is one of the only grocers that exclusively markets local produce.

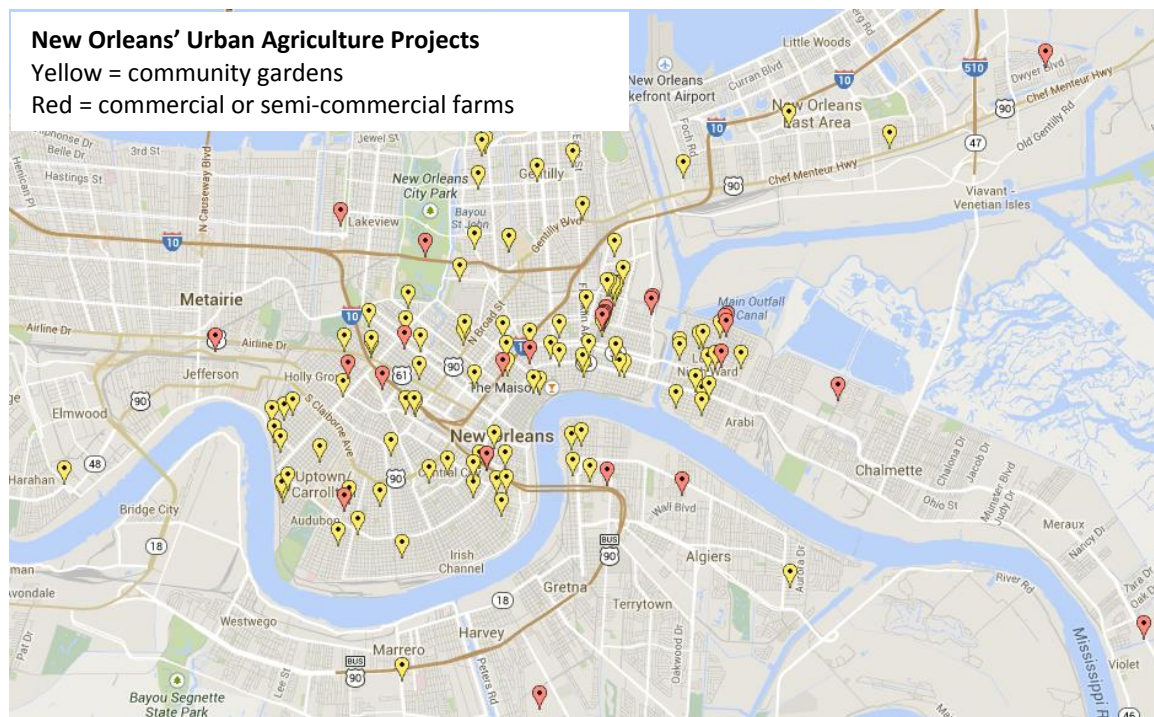


Figure 5.2: Location of NOLA's commercial urban agriculture

While the VEGGI Co-op's mission is to help farmers bring in supplemental income, and hopes to continue to grow so that farmers can make a sustainable living, in general, there few for-profit farms in New Orleans. Recall that Austin has approximately 20 small agricultural operations from which the primary operators derive at least some income. The New Orleans Food and Farm Network (NOFFN) estimates that approximately 17 of the 130 urban agriculture projects they are aware of are commercial or semi-commercial operations (see figure 5.2 above). Most of these commercial operations operate on multiple lots clustered together, and the only full-time farmer seems to be Thaddeus Prosper, owner of Sheaux Fresh Sustainable Foods, who markets his produce – primarily micro-greens – to restaurants, including Emeril Lagasse's

flagship. Most of the farmers interviewed for this study are making a very small amount of income from the farm, or, in the case of GrowDat Youth Farm, use the profits from vegetable sales for the program's budget. I was unable to visit many urban farms during my research trip to New Orleans, but my impression is that few of the projects on NOFFN's list of urban agriculture projects are actually fully functional. Many have online presences that have not been updated since 2011 or 2012. More research should be done to ground truth the list of projects with what is actually being grown in New Orleans. It is clear, however, that the maturity of New Orleans' commercial urban farms lags far behind that of Austin's commercial urban farms. In general, the farms are very small – typically one or more residential lot – and are used almost exclusively for growing food. No one I interviewed in New Orleans discussed urban farms being used for other activities like hosting events, as is the case in Austin.

Despite the fact that New Orleans seems to have fewer mature commercial urban farms than Austin, urban farming is certainly part of the rhetoric of restoration the post-Katrina city. David Lessinger of NORA notes that there urban agriculture advocates have a “general misconception that we can kind of community garden our way out of our vacant land problem and if NORA made every vacant lot available for gardens then we would have this lush city no vacant and overgrown lots. I think people are starting to realize how much work it is.” Johanna Gilligan agrees that the rhetoric about growing food may be much stronger than the realistic outcomes. “I think there are a lot of conversations in New Orleans and other cities like New Orleans about urban farming that it's going to be this silver bullet solution to all the vacant land problems. That

conversation was really strong when I was with NOFFN 4-5 years ago in the post-disaster context. I think people have a more realistic sense of how challenging it is to actually run a farm and make money with a farm.”

BENEFITS OF URBAN AGRICULTURE IN NEW ORLEANS

As in Austin, New Orleans interviewees spoke of a wide array of benefits that urban farms bring to the city that go beyond the rhetoric about reusing vacant land. New Orleanians focus on restoration, health, and food access to a greater extent than Austinites. Across the board, interviewees discussed the potential of urban farms to improve food access for areas that lack grocery stores, particularly post-Katrina.²³⁰ The Lower Ninth Ward is frequently called out for its lack of food access and is the location of many non-profit urban agriculture projects. In general farmer Kweku Nyaawie believes that urban farms should be “in close proximity to the people they are serving. We have what’s known as food deserts – neighborhoods and entire areas where there are no or very limited access to fresh food and fresh produce, but traditionally, every neighborhood had one of those markets where you could buy fresh fish and fresh produce and everything was in walking distance, this being a walking city.” Marianne Cufone of Recirculating Farms Coalition says “people really do feel here that the farms are replacing grocery stores.” Thaddeus Prosper notes that “a lot of people who grew food for themselves who were already here [before Katrina], we got into it because there are no grocery stores...people who lived downtown had to drive five miles to get to a store

²³⁰ Interviews: Marianne Cufone, Khai Nguyen, Thaddeus Prosper, Alyssa Denny, Kweku Nyaawie, Tony Lee, Sanjay Kharod

[that sold something other than] hot plates, Nabisco and Kraft products.” Thaddeus and Tony Lee, the two African American farmers interviewed for this study, spoke at length about the improvements in health that can come from eating more fresh food grown locally. Tony in particular feels it is his mission to educate anyone who comes to his Magellan Street Farm about the health benefits of the food that he grows and the joy he gets from experimenting with growing new vegetables.

Interviewees also spoke about using UA as a tool for community development. The Viet Village farm was an “obvious connection” because of the long tradition of backyard gardening, while Hollygrove Market and Farm was less obvious because the community did not have an urban farming background. Located in the Hollygrove neighborhood, the Market was developed in partnership with NOFFN, TCC, and the Carrollton-Hollygrove Community Development Corporation to provide a source of fresh food in a low-income area. Marianne Cufone credits Hollygrove with helping the neighborhood become safer, encouraging people from outside the community to shop the market; indeed, non-Hollygrove residents make up the majority of the market’s customers.²³¹ While many have criticized the market for not adequately serving the members of its immediate community primarily because of its higher prices, Marianne sees this as a community benefit. “It has been super interesting to see the willingness of people who would previously have never been comfortable going [to that neighborhood] walking around; there have been some interesting changes around people’s comfort level with the farm.” Dan Etheridge credits urban agriculture with being able to “turn ugly

²³¹ Interview: Alyssa Denny

vacant lots into beautiful productive spaces.” Alyssa Denny, buyer for Hollygrove, agrees. The Lower Ninth Ward in particular, “seems desolate, so having a little bit of beauty around would probably help lift up everybody’s spirits.”

REGULATORY ENVIRONMENT FOR URBAN FARMS IN NEW ORLEANS

Land use regulation in New Orleans has a long and complex history, but for the purpose of this study, the past ten years are most instructive. The City Charter mandates the adoption of a master plan to guide the city’s long-term development, but it took Hurricane Katrina and the need to rebuild much of the city to catalyze this process.²³² The current New Orleans Master Plan, officially called the *Plan for the 21st Century*, is a framework for the core systems that shape New Orleans’ physical, social, environmental, and economic future. The Master Plan “reflects the values and priorities that emerged through a community participation process and is grounded in information assembled for the first time in one place.”²³³ With a timeline reaching to 2030, the Master Plan envisions a New Orleans that has enhanced quality of life that preserves the city’s character, expanded opportunities that ensures everyone has an equitable chance to share benefits, and is more environmentally resilient and sustainable.²³⁴ Unanimously adopted by both the City Planning Commission and the City Council and signed by Mayor Mitchell Landrieu in 2010, the Plan is the last in a long series of planning initiatives post-Katrina.

²³² Egger, B. (2010, Jan. 26). New Orleans master plan wins approval of city planning commission. *The Times-Picayune*. Accessed April 11, 2014. Available:

http://www.nola.com/politics/index.ssf/2010/01/new_orleans_planning_commissio.html

²³³ City of New Orleans. Master Plan. Accessed April 11, 2014. Available: <http://www.nola.gov/city-planning/master-plan/>

²³⁴ City of New Orleans. (2010). Master Plan Executive Summary. Available:

<http://www.nola.gov/getattachment/4dcf72fd-b189-4937-bd69-dba2958a483e/Vol-1-Executive-Summary/>

Elected leadership hired consultants and sponsored five phases of planning efforts aimed at rebuilding the city, only two of which were ultimately adopted: the current Master Plan, and the Unified New Orleans Plan.²³⁵ Adopted in 2006, the Unified Plan was a required step for getting federal reconstruction money released to New Orleans in the wake of Katrina. These planning efforts were informed by the planning community's sincere desire not to recreate the conditions of New Orleans that allowed the storm's impacts to have such devastating effects. As the Brookings Institute said in a report in October, 2005, "Before the storm, metropolitan New Orleans was a racially divided, low-wage metropolis built on a marsh in hurricane country. Consequently, to replicate such a place more or less as it was now that the storm is over would be not just short-sided [sic] and wasteful, but wrong."²³⁶

The first of these post-Katrina planning efforts was called Bring Back New Orleans, led by then-Mayor Ray Nagin, the Urban Land Institute and Wallace, Roberts & Todd, LLC.²³⁷ The Bring New Orleans Back (BNOB) Commission included nineteen members appointed by Mayor Nagin, chosen deliberately for their expertise as well as their racial diversity. An important component of the commission was that there be an equal number of white and black members in order to quell the growing distrust between black and white New Orleanians. Racial tensions, always present in New Orleans, were fueled in the wake of the storm by questions about why levy failures destroyed poorer

²³⁵ Ford 2010, Appendix. For a detailed assessment of these phases, see Olshansky, B. and Johnson, L. (2010). *Clear as mud: Planning for the rebuilding of New Orleans*. Chicago, IL: American Planning Association.

²³⁶ Brookings Institution, 2005, pp. 2.

²³⁷ The Urban Land Institute is a non-profit research institution out of Washington, D.C. (<http://uli.org/>). Wallace, Roberts & Todd is a nationally renowned planning firm headquartered in Philadelphia with offices in San Francisco and Miami (<http://www.wrtdesign.com/>).

areas of the city where African Americans disproportionately lived and why the rescue response and revitalization efforts seemed to slower in those areas.²³⁸

Adding even more fuel to this already burning fire was the BNOB Commission's draft plan, presented to the community in early 2006. The plan proposed, among other things, "to transform ruined, hurricane-wrecked neighborhoods where people once lived into parkland where future floodwaters could flow."²³⁹ The plan was accompanied by a now-infamous map with green circles placed on top of areas of the city that should be turned into green space.²⁴⁰ The plan was based on sound planning research and was undoubtedly a good faith effort to minimize risks for future New Orleans residents, but the map and the plan itself failed to explain where the citizens currently living in these areas and those who hoped to return would live. "To have a one-time cataclysmic occurrence that brings water over 80 percent of the city and then just redline certain neighborhoods is extremely troubling," said Cynthia Willard-Lewis, the Lower Ninth Ward's City Council member in 2006.²⁴¹ Many white residents disagreed with the assessment that non-white New Orleanians were disproportionately affected by the storm or neglected in the rescue and rebuilding efforts.

²³⁸ Much has been written about racial tensions post-Katrina. Page, S. and Puente, M. (2005, Sept. 13). Views of whites, blacks differ starkly on disaster: Divide could affect debate on rebuilding. *USA Today*. Available: <http://usatoday30.usatoday.com/educate/college/firstyear/articles/20050918.htm>; Brookings Institution, 2005; Witt, H. (2006, May 8). Suspicions fire racial tensions. *Chicago Tribune*. Available: http://articles.chicagotribune.com/2013-05-08/news/chi-suspicions-fire-racial-tensions-20130508_1_cynthia-willard-lewis-gentilly-new-orleans; McCulley, R. (2007, Aug. 27). Healing Katrina's racial wounds. *Time*. Available: <http://content.time.com/time/nation/article/0,8599,1656660,00.html>

²³⁹ Ford 2010, pp. 52

²⁴⁰ See presentation slides from Bring New Orleans Back Commission and Wallace Roberts & Todd, LLC. (2006, Jan. 11). Action plan for New Orleans: The new American city. Available: <http://www.npr.org/documents/2006/jan/CityPlanningFinalReport.pdf>

²⁴¹ Quoted in Witt 2006

One white member of the BNOB commission said at the time, “Those who want to see this city rebuilt want to see it done in a completely different way, demographically, geographically, and politically.”²⁴² Kristina Ford, New Orleans’ Planning Director from 1992 to 2000 reflects that this quote summarizes what many were saying at the time and “while some residents understood his meaning as hopeful, most New Orleanians – particularly those who’d been displaced by the storm – found his words ominous: that the city would have fewer poor people, would be reduced in physical extent, and would vote into office a different set of leaders.”²⁴³ This interpretation was further fueled by statements from other prominent figures such as Rep. Richard Baker (R-La.), who told the *Wall Street Journal* “We finally cleaned up public housing in New Orleans. We couldn’t do it, but God did.”²⁴⁴ Alphonso Jackson, the Secretary of the U.S. Department of Housing and Urban Development (HUD) told the *Houston Chronicle*, “New Orleans is not going to be as black as it was for a long time, if ever again.”²⁴⁵ This is just a tiny snapshot of the narrative of the future of New Orleans in 2005-2006, a narrative that has continued to shape the way that urban planning and land use are considered today.

Another result of the BNOB Commission’s proposal, and the four subsequent phases of planning initiatives that ended in 2010 with the adoption of the current Master Plan was that New Orleanians were suffering from “planning fatigue.” Citizens participated in hundreds of public engagement meetings, answering the same questions

242 Quoted in Cooper, C. (2005, Sept. 8). Old-Line Families Escape Worst of Flood and Plot the Future. *The Wall Street Journal*. Available: http://www.tulanelink.com/tulanelink/oldlinefamilies_box.htm

243 Ford 2010, pp. 242-243

244 Quoted in Witt 2006

245 Quoted in Witt 2006

from different consultants for nearly five years.²⁴⁶ These planning processes also left residents with a suspicion of large-scale land use strategies that might prevent residential and commercial development. The current Master Plan essentially continues to allow the city to develop as it did before the devastation of Hurricane Katrina, albeit with better flood mitigation techniques. Gone is any mention of shrinking the footprint where people can live in the city; these ideas have been replaced by priorities to enhance environmental resilience and to preserve the character of historic and traditional neighborhoods.²⁴⁷ In contrast to the BNOB plan, the Master Plan does nothing to limit development in any particular areas of the city, though a \$14.5-billion network of levees, floodwalls, and pumps are being constructed in order to mitigate future flood damage.²⁴⁸

In the context of the Master Plan, urban farming plays a relatively minor role, though one of the findings from the public engagement process was that “interest in urban agriculture and community gardens is on the rise throughout New Orleans.”²⁴⁹ Urban agriculture is highlighted as a mechanism for improving green infrastructure, access to healthy food, and overall environmental quality. In particular, residents who participated in the planning process focused on using community gardens in public parks

²⁴⁶ Ford 2010, pp. 37

²⁴⁷ See City of New Orleans Master Plan Executive Summary, 2010

²⁴⁸ Schleifstein, M. (2013, Aug. 16). Upgraded metro New Orleans levees will greatly reduce flooding, even in 500-year storms. *The Times-Picayune*. Available:

http://www.nola.com/hurricane/index.ssf/2013/08/upgraded_metro_new_orleans_lev.html

²⁴⁹ City of New Orleans. (2010). Master Plan Chapter 13 – Environmental Quality. Available:

<http://www.nola.gov/getattachment/b8ed57b9-2565-41e4-8cde-0723cfa7b2bc/Vol-2-Ch-13-Environmental-Quality/>, pp. 13.4.

as a component to the green infrastructure system.²⁵⁰ Further, the plan calls for the city to support and promote urban agriculture on public and private land within the first five years of the plan's implementation. Specific strategies to promote urban agriculture and gardening include:

- Removing zoning and regulatory barriers;
- Performing an inventory of possible gardening sites and determining suitability for growing food, including soil testing;
- Making blighted and adjudicated property available to private and nonprofit partners who will maintain the land as public community gardens;
- Exploring community orchards as an interim use for vacant land;
- Providing incentives (e.g. debris removal, reduced water fees) to encourage reuse of vacant properties for urban agriculture;
- Exploring a conditional use permit for sales of urban agriculture products from the site;
- Exploring additional funding opportunities for urban agriculture.²⁵¹

The plan also calls for encouraging “food growing on public and private property that is compatible with the character of the surrounding neighborhood, from the backyard garden to the entrepreneurial farm, through partnerships with private and nonprofit partners.”²⁵² It is notable that the Master Plan's urban agriculture goals are prioritized in the first five years of implementation given the vast suite of priorities that the city has. These goals should also be largely seen as a reaction to what was already going on in New Orleans. Urban farming projects had been literally sprouting all over the city, even without explicit regulatory permissions or city intervention.

²⁵⁰ City of New Orleans. (2010). Master Plan Chapter 7 – Green Infrastructure: Parks, Open Space and Recreation. Available: <http://www.nola.gov/getattachment/5c3021f1-cf1a-4df6-8c72-c72c2a01d007/Vol-2-Ch-7-Green-Infrastructure/>

²⁵¹ City of New Orleans Master Plan Chapter 13, 2010, pp. 13.10-11

²⁵² Ibid.

While the master plan provides the legislative guidance for land use decisions, it is the comprehensive zoning ordinance (CZO) that is the law governing land use throughout the city. The current CZO is a hodgepodge of regulations originally drafted in the 1970s and revised hundreds of times by the Planning Commission. Urban farming is not prominently featured in the current CZO; in fact, there is no mention of “urban farm” as a land use designation at all. However, farming, which includes the “usual farm buildings and structures, and animals raising, trapping and fishing” is a permitted use in certain residential, commercial, and industrial districts. In addition, “private gardens, truck gardens, and nurseries for the cultivation of plants” are also allowed in certain districts. Table 5.2 below details the current regulations for urban food production in New Orleans. The lack of details is striking compared to the Austin regulations, as is the fact that farming is only allowed by right on sites over five acres. A variance is required for a farm to legally operate on a site under five acres. According to a New Orleans City Planning Commission staff member, there are maybe five or six parcels of that size within the city.

Permitted Urban Farming Uses		
<i>Zoning district</i>	Farming	Private Gardens/Truck Gardens/Nurseries
<i>Residential (single or multi-family)</i>	Permitted on sites over five acres.	Permitted, but products may not be sold from the site.
<i>Business and Commercial</i>	Permitted on sites over five acres.	Permitted.
<i>Industrial</i>	Permitted on sites over ten acres.	Permitted. Commercial animal, poultry and bird raising permitted. Animal slaughtering allowed in certain types of industrial zones.
<i>Historic</i>	Not permitted	Not permitted
<i>Lake Area</i>	Not permitted	Permitted, but products may not be sold from the site.

Table 5.2: Urban farm regulations in current New Orleans CZO²⁵³

Despite these formal regulations, most of the urban farmers I interviewed had little to say about the way that the City affects their operations – “people really aren’t fussed about rules and regulations.”²⁵⁴ “If you’re going to put the money into an [urban farm] endeavor,” says Macon Fry, the self-declared Garden Guy, “you want to make sure you can do what you want to do with the land. Though I’ve never known of anyone who really worried about or had to seek special permits for agriculture. You just do it.” The support organizations like NOFFN and Recirculating Farm Network are concerned about the regulatory environment and are the most vocal advocates for creating regulations that work in favor of urban farms. At the same time, however, both organizations note that the biggest hurdles for urban farms is the availability of land and the lack of business acumen. Both organizations spend a significant amount of time offering workshops on

²⁵³ Compiled from City of New Orleans. Current Comprehensive Zoning Ordinance. Accessed February 2013. Available: <http://www.nola.gov/city-planning/current-comprehensive-zoning-ordinance/>

²⁵⁴ Interview: Alyssa Denny

business planning, growing techniques, marketing, and legal considerations in terms of food safety and liability. From farmer Kweku Nyaawie's perspective, "There's a Laissez-faire attitude here...if you're not really hurting anyone, nobody is going to give you a hard time. There are plenty of vacant lots around and you can just go and take over an overgrown lot and guerilla grow on that."

Not everyone would agree with Kweku's assessment, of course, as many of those overgrown lots are often owned by the New Orleans Redevelopment Authority (NORA), which has the legal authority to acquire real properties through negotiation, gift, or expropriation; dispose of said properties by sale, lease or donation; borrow money; issue bonds; and provide security to support slum clearance and neighborhood development.²⁵⁵ Originally founded in 1968 with a mission to eliminate blight and prevent the "spread of slums" in the city, the organization had little authority and even less funding for its first 30 years. Back then, the agency was basically "dealing with the problems that a lot of other post-industrial cities were facing then...job loss, white flight, suburbanization, population loss...inner cities where properties were being abandoned and falling apart," explains David Lessinger, NORA's Director of Planning and Strategy. NORA's mission has changed over its history and in the wake of Hurricane Katrina took on a new role with an entirely new staff and sources of funding, including \$30 million in direct funding from Phase 2 of HUD's Neighborhood Stabilization Program (NSP2).

Rather than dealing with single blighted properties, NORA is now responsible for large-scale residential and commercial redevelopment and has over 5,000 lots under its

²⁵⁵ New Orleans Redevelopment Authority. History. Accessed April 12, 2014. Available: <http://www.noraworks.org/about/history>

control, a small portion of the 35,000 vacant lots in the city. Some of these properties are transferred to NORA by the City as a result of the blight reduction program, described above. The majority of properties came to NORA through the Road Home Program, one of the federal government's homeowner assistance programs for Louisiana residents whose homes were destroyed or damaged by Hurricane Katrina. One option for those residents was to sell lot and any remaining house to the state, using the money to purchase a new house in Louisiana or elsewhere (the program was set up to incentivize residents to stay in Louisiana). More than 5,000 properties in New Orleans were eventually transferred to NORA, whose goal is to get those parcels "returned to commerce."²⁵⁶ NORA has returned nearly half of those properties to New Orleans residents, most commonly through the Lot Next Door program, which sells lots to the neighbors of vacant parcels. NORA has a special incentive program called Growing Home, which reduces the purchase price by \$10,000 in exchange for the new owner making an equal investment in "greening" the property, which can include landscaping and gardening. While this program is not about promoting urban agriculture per se, creating new green spaces is significant, says NORA's David Lessinger. "When you think about 1,000 or more additional green spaces that are now under control of someone who is putting them under some kind of productive and responsible use, that's a really significant change in our land use overall."

NORA has also created a newer initiative to get vacant lots into productive use called the Alternative Land Use (ALU) Program. Through this program, individuals

²⁵⁶ Interview: David Lessinger. For more on the Road Home Program in Louisiana: <https://www.road2la.org/>

submit an application to NORA with a project idea for a particular parcel of land. NORA is specifically looking for projects with positive community impact such as pocket parks, community gardens, and urban agriculture. If NORA approves the application, the applicant may either purchase the parcel or sign a one-year lease at NORA's discretion. While only 41 individual parcels have been disposed of in this way – about half of which are leases – this is one of only mechanisms for individuals looking for inexpensive vacant land for urban agriculture efforts. Because many of these parcels are residentially zoned and well under the 5-acre minimum requirement for commercial farming operations, many applications for ALU properties have to go through a variance process before a lease or purchase option can be approved. Many urban agriculture advocates are hopeful that the revisions to the Comprehensive Zoning Ordinance (CZO) will eliminate the need to get variances for these ALU projects.

Revisions to urban farm regulations

According to the 2010 Master Plan, “one of the most important steps in implementing the Master Plan will be creation of a new comprehensive zoning ordinance (CZO). After adoption of the Plan, the City Planning Commission will move forward to complete a new CZO, including a zoning map that reflects the policies of the Master Plan.”²⁵⁷ This process began in earnest in 2011 with the first public draft of the new CZO released to the public in the fall. A staff member of the City's Planning Commission notes that the regulatory changes for urban farms are needed because “people are seeing urban ag as somewhat of an economic development tool. [You could grow a vegetable

²⁵⁷ City of New Orleans Master Plan Executive Summary, 2010

patch in your backyard] under current zoning. The whole issue here is if someone wants to grow plants and be able to sell them and/or package them and sell them to restaurants or sell them from a farm stand. That could be a good source of income for people and a good source of income for the city.” Similar to Austin, the changes to the regulations on urban farms are mostly concerned about commercial uses, environmental health, and regulations of animals. However, all of the interviewees in New Orleans noted that the level of attention and concern about the land use regulations for urban farms is not high on New Orleanians’ priority lists. “For one, people are more laid back because they are both more beaten down and culturally more laid back, but it’s also...people just have much bigger problems,” notes Johanna Gilligan of GrowDat Youth Farm.

Urban agriculture as a land use category was included in the original draft CZO, released in 2011. A staff member from the New Orleans City Planning Commission explained that a working group of “urban ag folks” and some city staff members led the process of revising the urban agriculture section. The working group was primarily convened by the NOFFN, a group the City appears to trust to be able to gather an adequate group of stakeholders interested in urban agriculture. Planning Commission staff member noted that NOFFN’s understandable interest is in having “a legal regime in place so that they know what the standards are, they can get licenses, they can sleep easily at night knowing that no one from city hall is going to come down and tell them that they are operating illegally.” After the initial draft was released, this working group was invited to comment on the proposed CZO as was the public in general, through the City’s website and public engagement meetings.

During the public meetings convened by the City to gather public input on the draft CZO, Alyssa Denny remembers some residents raising concerns about animals being raised on urban farms and the potential for people to slaughter them. Tony Lee remembers that a few residents were concerned about the potential problems with living next door to a composting operation, though he also notes that farmers who are doing their composting correctly should never cause a smell. NORA also provided input to the urban agriculture regulations, in particular about reducing the size requirements for an urban farm. Some of NORA's applicants for the Alternative Land Use program had faced hurdles with the City when they had to obtain a variance in order to use the small residential lots for growing food. In general, notes Planning Commission staffer, the city has received very few written public comments on the urban agriculture section of the new code.²⁵⁸ Those it has received tend to be about animal raising, which, it should be noted, is very rare on any of the urban farms currently operating, though some farms do have chickens.

I think that in the urban neighborhoods, it's really an issue of livestock versus plants. I really haven't heard people complain about someone wanting to grow vegetables and sell them to restaurants...or wanting to get young people out there working the land because they want them to learn skills but they are very reluctant about people having animals. It's interesting, though, because there is a long history in this city of people having roosters and chickens on their lots but a lot of people don't really like the rooster thing...but if you set that aside, I think the concern is really about larger animals.²⁵⁹

The most significant change in the proposed regulations is doing away with the regulation of an urban farm's size being based on its zoning. Instead, staff noted that the

²⁵⁸ City of New Orleans. Public Comments on Draft CZO. Available: [http://www.nola.gov/city-planning/draft-comprehensive-zoning-ordinances-\(czo\)/draft-czo-comments/](http://www.nola.gov/city-planning/draft-comprehensive-zoning-ordinances-(czo)/draft-czo-comments/)

²⁵⁹ Interview: anonymous City Planning Commission staff member

key concerns from residents were really about animal raising, so they created two uses: agriculture-no livestock and agriculture-livestock. The livestock use is proposed to be a conditional use in all of the districts, meaning that farmers would have to “go through the public review process and meet the standards about how the animals have to be cared for, the types of structures and fencing you have to have, what number of square feet of land per animal is required.”²⁶⁰ Another significant change is to allow multiple small lots to be under the same land use designation so long as they are managed by a single urban farm manager. The 2013 draft CZO has received very little negative feedback from working group and the Planning Commission staff member expects that the current draft will be approved in its current state when it goes before Council later this year. The Planning Commission is currently in the process of reviewing public comments on the second draft of the CZO, with the goal of getting the full Ordinance passed in 2014. A summary of the draft regulations can be found in Table 5.3, below.

Draft Comprehensive Zoning Ordinance (Pending City Council Approval)		
	Agriculture – no livestock	Agriculture – with livestock
<i>Size</i>	No limit	One acre minimum.
<i>Zoning</i>	Permitted in most zoning districts, including historic districts. Not permitted in certain high-density commercial districts, downtown, or industrial districts.	Conditionally permitted in most zoning districts. Not permitted in residential historic districts, certain high-density commercial districts, downtown, or industrial districts.
<i>Dwellings</i>	It is not required that a dwelling be on site, even in residential zoning.	It is not required that a dwelling be on site, even in residential zoning.

²⁶⁰ Interview: anonymous City Planning Commission staff member

Table 5.3 cont.

<i>Employees</i>	No regulations	No regulations
<i>Environmental health</i>	<p>Soil testing for nutrients, heavy metals and contaminants is required unless growing in raised planter boxes.</p> <p>Dead plants, produce, and trash (non-compost) must be removed within 48 hours.</p> <p>Chemicals, fertilizers and toxins may not drain into adjacent properties, waterways, or public right-of-ways.</p>	<p>Soil testing for nutrients, heavy metals and contaminants is required unless growing in raised planter boxes.</p> <p>Dead plants, produce, and trash (non-compost) must be removed within 48 hours.</p> <p>Chemicals, fertilizers and toxins may not drain into adjacent properties, waterways, or public right-of-ways.</p>
<i>Animal raising</i>	<p>Up to six chickens may be raised on a farm without obtaining a conditional use permit to for agriculture-with livestock. Roosters are not permitted. Private slaughtering not permitted.</p>	<p>Horses, mules, cows, llama, goats, sheep, swine, rabbit, duck/fowl, chickens may be kept (no roosters), in keeping with minimum lot area per animal regulations.</p> <p>Animals may not cause “adverse impact” and must be kept within appropriate structures 25 feet from any lot line. A small setback is allowed for apiaries, chicken coops, pigeon coops, and aquaponics structures.</p>
<i>Events</i>	No regulations	No regulations
<i>Sales/retail operations</i>	<p>Retail sales at farm stands are permitted in open space districts, rural development districts, and non-residential districts. Only products grown/raised on the farm may be sold from the site.</p>	<p>Retail sales at farm stands are permitted in open space districts, rural development districts, and non-residential districts. Only products grown/raised on the farm may be sold from the site.</p>
<i>Food processing</i>	<p>No food preparation or processing allowed in residential districts, except for canning plants or plant products.</p> <p>Food preparation or processing is permitted in non-residential districts where food processing is a permitted use. A conditional use permit may be applied for except in residential districts.</p>	<p>No processing of animals is permitted, except in non-residential districts where processing is permitted.</p>

Table 5.3: Proposed regulations for NOLA urban farms, under review²⁶¹

²⁶¹ Compiled from City of New Orleans. Draft Comprehensive Zoning Ordinance and Maps. Available: [http://www.nola.gov/city-planning/draft-comprehensive-zoning-ordinances-\(czo\)/full-czo-text/](http://www.nola.gov/city-planning/draft-comprehensive-zoning-ordinances-(czo)/full-czo-text/). Use standards found primarily in Article 20.

One other significant regulatory issue for some urban farmers is the City’s Sewer and Water Board, which has strict standards for water infrastructure. Many growers complained about the complexity of getting water service to their farm. The administrative headache and cost of getting a water meter and backflow preventer has been described as “ridiculous”²⁶² and employees of the agency “a bunch of nitwits.”²⁶³ Fixing this administrative issue is outside of the purview of the revisions to the CZO.

In general, it should be noted that, similar to in Austin, none of the current urban farm projects in New Orleans have permits with the city, even under the current regulations. While the highly-publicized debate around animals processing raised the level of urgency about the regulatory environment for urban farms in Austin, there is a lack of urgency around the rules themselves in New Orleans. It is also notable that the regulations say nothing about events or employees, both of which were important issues in the debates around Austin’s regulations.

BARRIERS TO URBAN AGRICULTURE IN NEW ORLEANS

Land use issues

There are a number of land-use issues that New Orleanians identify as being barriers to urban agriculture. For example, a dilapidated or unsightly lot can earn the owner a blight lien and hefty fines in New Orleans, a policy that has been created in order to combat the negative effects of massive land vacancy. Because of this, however, there are concerns about how off-season farms could be cited for blight. “We had a lot of people moving next to gardens and then complaining because gardens are seasonal and in

²⁶² Interview: Dan Etheridge

²⁶³ Interview: Macon Fry

the winter, a garden doesn't look the same.”²⁶⁴ There are also some concerns about how urban farms fit into residential neighborhoods, where most are situated. While the fervor about these concerns has not resulted in the kind of publicity that it has in Austin, the city's work on revising the CZO has given residents an opportunity to express concerns, even hypothetical ones.

Across the board, however, the most commonly-cited barrier for urban farming in New Orleans is about access to land, which is somewhat ironic given the vast number of vacant parcels in the city. There seems to be two main themes within this larger concern about access: land tenure and distribution of the city's inventory of vacant land.

Distribution of vacant land

One of NOFFN's primary areas of advocacy has been to increase access to the city's inventory of vacant land. As noted previously, many of the vacant parcels in the city are owned and managed by NORA, which uses two main programs to return these properties “to commerce” (e.g. get them back on the tax rolls). The Lot Next Door is one of those programs, but NOFFN has spent most of its effort on the Alternative Land Use (ALU) Program. “We've forced the Redevelopment Authority, whether they like it or not, to acknowledge that people are going to ask for land and we want it to be a clear and transparent process,” says Sanjay Kharod of NOFFN. Sanjay insists that NORA has never actually approved an ALU application for a farming project. NORA's David Lessinger, however, provided a list of nearly 40 properties that are now under some kind of agricultural use through the ALU program. NOFFN believes that they are

²⁶⁴ Interview: Tony Lee

inappropriately taking credit for some of these projects, but it seems clear that these 40 parcels are either being leased or have been sold to the people operating the agriculture project. Sanjay and other urban agriculture advocates, however, are concerned that NORA is stingy with their efforts to lease or sell these properties to new farmers because NORA would rather see a more lucrative land use. Marianne Cufone particularly expressed concern that properties in the Lower Ninth Ward seem to be disproportionately available for urban agriculture projects, even when farmers express interest in properties in other parts of the city. NORA's David Lessinger says that they make decisions about each property in their portfolio using a decision-tree (Appendix B) informed by Detroit Future City and the Brookings Institute's Alan Mallach.²⁶⁵ The decision about how to dispose of an individual vacant lot is based on a number of nested criteria, including scale, marketability, potential for green infrastructure benefits, and market demand. Properties appropriate for the Alternative Land Use program are those that not able to assembled with other parcels into a larger lot, has only long-term development potential, is not immediately appropriate for long-term green space, and is not adjacent to other viable land uses.

Clearly, the decision tree (Appendix B) shows that NORA is weighing a huge number of individual criteria when evaluating an individual vacant parcel, made more complicated by the fact that they have “gap-toothed ownership” in many areas rather than large contiguous parcels. Urban agriculture is only “one of the many tools that we

²⁶⁵ Mallach is a housing and redevelopment expert, former director of New Jersey's Department of Housing and Urban Development, and senior fellow of both the Brookings Institute and National Housing Institute.

have available to us” for vacant land.²⁶⁶ Indeed, the City Planning Commission staff member notes that urban agriculture may be best suited as a temporary land use strategy, echoing what he has heard many people say during the CZO revision process.

I think that people generally prefer to see vacant land and vacant buildings re-used for residential and commercial purposes, but we haven’t heard a ton of concern about urban agriculture being a part of a neighborhood or being used on an interim basis. In terms of taking that vacant land and using it for a farm now and if someone wants to buy it and build a home on it 5-10 years from now, maybe that’s the way that the city will go. In the meantime, people like the idea of taking vacant land and doing something with it because one of the big problems is that no one is there make sure bad things aren’t happening.²⁶⁷

This may be particularly important in areas with the largest number of vacant properties, like the Lower Ninth Ward, which also suffered the greatest Katrina-related damage. Dan Ethridge notes that NORA is right to handle redevelopment in these areas carefully. NORA is “not perfect, but they do their analysis they are stewarding our public resources. They try and sell what they can for top dollar and they figure out which markets can handle another 20 properties getting released for sale. But they aren’t just going to start giving away property all over the place for any use just because some people want to do urban farming and are convinced it’s the future. It doesn’t mean neighbors in that neighborhood [are convinced] because it’s better for their home value if another house goes in.” Skeptics call this kind of picking and choosing a “political” process designed to

²⁶⁶ Interview: David Lessinger

²⁶⁷ Interview: anonymous City Planning Commission staff member

benefit people who are “hooked up,”²⁶⁸ or “moneymaking” “land speculation”²⁶⁹ or even a “land grab.”²⁷⁰

NORA has tried other approaches to advertise the properties it would like to unload through the ALU program. PitchNOLA: Lots of Progress, for example,²⁷¹ was a program piloted by the NORA in 2013 with the intention of awarding three vacant parcels in its inventory through a public competition program. The program was designed to draw attention to the ALU, which typically operates through a poorly-advertised online application. For the Lots of Progress competition, New Orleanians were invited to “pitch an idea that utilizes vacant lots to benefit the community.” Winners were chosen by a panel of celebrity judges, including Chef John Besh, and awarded a cash prize and one of 49 pre-selected NORA-owned properties, many of which are located in the Lower Ninth Ward, home to the largest concentration of vacant lots. The three winners were all urban agriculture projects proposed by non-native New Orleanians and according to NOFFN, only one of the three have been implemented. “What happened was that those were imposed ideas and NORA didn’t really involve the community; they just picked lots based on some kind of criteria,” notes Sanjay Kharod. Sanjay also believes that the 2014 competition will have revised standards for applicants to robustly demonstrate community support for their project.

²⁶⁸ Interview: Macon Fry

²⁶⁹ Interview: Sanjay Kharod

²⁷⁰ Interview: Johanna Gilligan

²⁷¹ Lots of Progress is a spinoff of PitchNOLA, an annual competition for fellowships from Propeller, a local social entrepreneurship foundation. Propeller offers 10-month Social Venture Accelerator fellowships to New Orleanians with innovative social impact projects, many of which have been related to urban agriculture. While the fellowship does not come with direct financial assistance, the organization touts its ability to connect fellows to “potential funders, customers, advocates, and financing partners.” More about Propeller and PitchNOLA can be found here: <http://gopropeller.org/pitchnola/>

One of 2013's winning projects was a proposal for a farm that would raise goats to be used for lawn maintenance. Sanjay notes that he has heard concerns about what the impact of such an operation would be on the neighbors and has his own concerns about whether the entrepreneur who proposed the plan has the expertise to get the project off the ground. Indeed, this project has not come to fruition. Thaddeus Propsper would call these winners "carpetbaggers" – mostly young, mostly privileged, mostly white - do-gooders who have come to New Orleans looking to help "rescue" the city after Katrina:

I love New Orleans, my family and my roots are here, but New Orleans is a very convoluted place. I'm not sure if it's the desire to keep a group of people where they are or if it's the desire to not see that same group of people be the first to do something, I don't know what it is, but for some reason or another, the people who live here and have been here, who understand the climate and the soil and the way to grow certain things here seem not to be able to get their hands on the land or the grants or whatever other resources. The carpetbaggers are the ones that get funding and get access to land.

While Thaddeus is hesitant to say it directly, his assertion of New Orleans being a "convoluted" place is both about his frustrations about the city's bureaucracy and the inequities among people of different races in terms of access to resources and land. "The locals are getting looked over in terms of getting land," he says. He tells the story of an African American woman who was deemed ineligible for a NORA lot because she had been two days late in paying her taxes on another property she owned. Thaddeus expresses disgust that a small, temporary issue like that would preclude someone from participating in NORA's programs. "I hate to bring race up," he says, "but after reconstruction, New Orleans was the first town to institute Jim Crow-like laws to keep the Negro in place. Even though those people who enacted those laws are gone, the spirit of a lot of that is here. People don't like to talk about it and no one likes to be called a racist, but in my opinion, if you're doing nothing, then you are doing everything to keep things the way

they are. And so I hate to make it a race thing, but all of the local growers being looked over are all black and all the people who have come in and got the grants are all white.” In general, the questions about who gets access to NORA’s vacant land and the transparency of that distribution process was a common theme for interviewees.

Long-term Land Tenure

Another common theme was about the long-term land tenure, which can be a significant concern for urban farm projects. Hollygrove Market and the VEGGI Co-op for example are operating on land that they do not own, but rent from landlords who could theoretically decide not to renew their leases at any time, though both groups are confident that their landlords are committed to their projects long-term. While I did not conduct a complete inventory, it seems that few growers own the land that they grow on, though many expressed interest in doing so because it would increase their security on their land. Organizations like Parkway Partners, which has a process for starting community gardens on adjudicated property, seem to fill the gap for people who just want to plant some vegetables without the concerns of ownership. As Emilie Taylor of the Tulane City Center notes, “At any point, though, someone could reclaim that property. It’s some heartbreaking thing that at any time you could have to give it up. There was a property in my neighborhood that was a garden and then one day it got bulldozed and a house was built. There was an email on the neighborhood listserve that said, ‘Hey, they’re about to bulldoze the garden, if you have anything you want, go grab it.’” This lack of land security is a concern for many in the urban agriculture community in New Orleans.

NORA’s approach to vacant land distribution contributes to these concerns. Indeed, most of the parcels that NORA has distributed through the ALU program come with a one-year lease with opportunities to renew. NORA prefers leases for these kinds of

projects in order “to protect ourselves from having to take back property from people we sold it to and then weren’t able to fulfill the mission or keep up with the maintenance of the property. It’s not like a house that gets sold to a homeowner who then has the responsibility at the end of the day.”²⁷² NORA recognizes that one year is unlikely to be long enough for a grower to figure out if a farm project is actually viable, and is willing to consider a two-year lease on a case-by-case basis.

Advocates like NOFFN and the Recirculating Farm Network have been working with NORA to establish a “Grow to Own” program where farmers who demonstrate long-term commitment, talent, and sustainability could eventually take over ownership of a property they have previously leased.²⁷³ NORA is interested in this idea, but “we want it to be performance based; we don’t just want [to sell land] because some people has great qualifications but then don’t perform well and vice versa.” In general, they are careful about drumming up too much demand for these kinds of properties because they don’t want to have to “Come back and say, ‘oh, well the market has changed and we want to put some development [on this land].’”²⁷⁴ It seems clear from NORA’s statements that the agency does not see urban agriculture as the highest and best use for vacant land, nor the use with the most significant impact on the city’s redevelopment long-term, despite the rhetoric of urban agriculture advocates.

Affordability

As in Austin, New Orleans’ farmers and local food purveyors struggle with being able sell their products at a price that the lowest-income residents can afford, though this was a less-discussed topic than in Austin. As noted previously, the majority of the

²⁷² Interview: David Lessinger

²⁷³ Interview: Sanjay Kharod, Marianne Cufone

²⁷⁴ Interview: David Legginger

commercial urban farms in New Orleans are selling most of their produce to restaurants rather than individual buyers. This is undoubtedly a result of the fact that sales are not generally allowed from farm sites themselves, so farmers find other market outlets, such as Hollygrove Market and Farm (HMF), which sells products from a variety of rural and urban farms, including the farm beds on the site itself. HMF has received some criticism about the fact that they are located in a low-income neighborhood, but sell their food to a clientele who primarily do not live in the Carrollton/Hollygrove area and who are more affluent, leading to an increasing sense of disconnect between the market and the neighborhood.²⁷⁵ After five years of operation, HMF is just starting to turn a profit, however, having been floated by grants and a bootstrap staff for the first few years. The Market has made an effort to improve its image in the pricing regard, but “we haven’t necessarily re-advertised that to the neighborhood.”²⁷⁶ Residents of the neighborhood can get a resident discount card worth 20% off all produce, and SNAP recipients also receive a 20% discount, which reduces the prices of their CSA boxes from \$25 to \$20. Unlike traditional CSA services, HMF does not require a subscription. Anyone can walk into the store and pick up a box, but residents are often hesitant to buy a box of local produce of which they have no control over the contents. Alyssa Denny notes, “lot of people from the neighborhood don’t necessarily want the box; even when I tell them it’s the best deal, they want to choose their own stuff. And then the other problem we find is that people come by and they always want onions and bell peppers, no matter what season it is.” Hollygrove is now having discussions about whether to start stocking conventional foods from Mexico, like bell peppers and onions, in order to meet the demand they are hearing

²⁷⁵ Kato 2013

²⁷⁶ Interview: Alyssa Denny

from the residents. They are faced with the question of whether *food access* or *local food access* is more important to their mission.

The Carrollton/Hollygrove CDC originally envisioned HMF as a market to help increase food access in the Hollygrove/Carrollton neighborhoods, but when NOFFN became a project partner, the mission expanded to include a focus on supporting local farmers.²⁷⁷ While the mission of the market is still ostensibly about improving food access in an area with a dearth of grocery stores, the clientele primarily does not live in the neighborhood and the cost of food is one reason for this. Thaddeus Prosper has faced similar challenges. When he started farming, his goal was to grow culturally appropriate and inexpensive food for people who live in his neighborhood, but he discovered that his neighbors weren't interested in what he was growing. In order to keep growing and to make a living as a farmer, he changed his product mix to include more items that restaurants would purchase. "My original ambitious goal to put fresh food gardens in the middle of the hardest hit areas. Even though I was growing the stuff that everyone said they liked to eat, no one was coming to buy it. So now, I'm not addressing the food justice issue," he says sadly, "which means I'm not really going after what I want to do." He is passionate about growing food in the city, but he is concerned that the only way to grow abundant and inexpensive food may be to exit the city limits entirely and start a farm in a non-urban parish where large tracts of land are more abundant.

Tony Lee, though his goal is not to make a living as a farmer, is mostly concerned with getting his healthy, fresh foods into people's hands. He struggles to get his neighbors to want to buy the lettuce he grows over of the lettuce they are used to buying from the grocery store, even though he sells them for less. He was selling his romaine lettuce for \$1/head, but found that people were still more comfortable buying the bags of

²⁷⁷ Interview: Alyssa Denny

lettuce from the grocery store for \$3.99. Tony's language is similar to that of Frank Young in Austin, who shares a goal of getting his naturally grown produce into the hands of folks he thinks would benefit from it. Neither are concerned with profits.

Making a living as a farmer

Johanna Gilligan of GrowDat Youth Farm disagrees with those who say that land access is the primary barrier to urban farming in New Orleans. Instead, it's "the skills, the fortitude to grow in a semi-tropical environment where pest-pressure and weed-pressure is constant, and the business sense to actually get that product to market and the infrastructure required to stabilize the highest value for those crops." In particular, Hollygrove's buyer, Alyssa Denny, notes that she spends the majority of her time working with the smallest urban farmers, from whom she buys far less than from the larger rural farms. The urban farmers "don't seem to know how to forecast how much they are going to have available" from week to week and require more of her time to be able to estimate how much product she can expect from them. While her rural farm sellers can sell her 300 bunches of beets or thousands of pounds of sweet potatoes, her urban farmers supply as little as 50 pounds of arugula or 10 bunches of beets in a given week. It is a labor of love to work with these producers, and Alyssa notes that the quality of their products is excellent, which makes this extra work worth her effort. Start-up farmers like Tony Lee, who is just beginning to market some of his products and making no more than \$50/week is "learning that I need to plant multiple beds of the same crop and plant different beds different weeks so I can keep harvesting week after week." His project started as a community garden, but anyone who wants to grow food in his raised

beds is free to sell those products for their own profit.

Dan Etheridge agrees that there are “a lot of people who are enthusiastic and might succeed at launching [a project], and then the dream wears off pretty fast.” This may be particularly true for Thaddeus Prosper’s “carpetbaggers,” for whom he has little patience, quipping:

As sexy as it sounds, growing food is hard fucking work. You grew up in Woodbridge, VA in your big home and mom and dad paid for you to go to Georgetown and now you’ve seen the light and you’re going to come down here and change the world, but the hardest job you ever had was washing cars for the church on the weekend...people are in for a big surprise.

Thaddeus notes that the carpetbaggers are also more likely to be recipients of the grants and investment opportunities that the city and other entities have been giving out in recent year, such as PitchNOLA: Lots of Progress.

One of the reasons that the dream of being an urban farmer wears off quickly is undoubtedly because of the challenges of making a livable income growing vegetables on a small plot of land. Thaddeus is the only urban farmer interviewed for this study who is making his sole income from farming and he has cornered the market on growing micro-greens for restaurants. While he says that his business is sustainable the way he is running it currently, it certainly doesn’t support his whole family; his wife brings in a second income. He also questions whether the city could sustain more micro-green farmers, even though the crop has been relatively profitable for him.²⁷⁸ Sanjay Kahrod notes that while there are 1,500 restaurants in New Orleans, only 100 or so source locally, which he believes is a potentially under-tapped market. Macon Fry also makes a supplemental

²⁷⁸ Good Food NOLA is another micro-green farm, run by a young urban farmer named Corey Ashby. Interviewees asserted that he was making a living, but I was unable to schedule an interview to confirm.

income through growing arugula – a crop he chose because “that’s where the dough is” – primarily for restaurants. Macon is a retired teacher with a pension who owns his own home, however, and does not depend on his farming income. Tony Lee is also retired and sells a few products to support his gardening hobby. Emilie Taylor reflects that, “if there was some demonstrable way for people to make money at it, more people would do it but at the moment its more of a hobby thing that people do just because they either want to or they want to be healthier. It’s something you have to be privileged in some way to be able to do it. Whether you’re retired and can just do it or are wealthy enough to be able to just do it.” Thaddeus is the exception to her rule.

For people trying to make a living, Alyssa Denny of Hollygrove finds herself trying to advise farmers on what products might be most profitable for them. Finding a balance between products that have a fast turnover, like greens, and those with longer shelf-lives, like artichokes can be difficult, and there are relatively few whole sale market outlets for small-scale growers. Hollygrove is one, and the Crescent City Farmers Market has made an effort in the past to have a table available for small-scale growers, but this has been challenging. The farmers market expects its vendors to be able to keep a table stocked with products for the entire length of the market, which small growers often can’t achieve because of their small volume and scale.

Johanna notes that being able to make a full-time salary from urban farming may be wishful thinking. The greatest economic benefit for urban farmers may be no more than a “small secondary income. Everyone has backyard space here, so people could just grow a little bit and sell it and make a little extra money on the side. And that really fits

into the cultural...the entrepreneurial spirit of New Orleans where people have their little side hustle where they make extra money.” Marketplaces like Hollygrove are an important component of this because they provide a place for small-scale growers to sell products without the farmers having to figure out how to do their own direct-to-consumer sales. Interviewees also noted that online retailers like Good Eggs, which give small producers a platform to market products directly to consumers, have been important outlets for small growers as well. The farmers of VEGGI Farmers Co-op sell products through Good Eggs, for example, in addition to selling at restaurants and Hollygrove. Khai Nuygen estimates that a good week can bring in \$500 for a vegetable farmer, and up to \$1000 for their tofu producer. Farmer Kweku Nyaawie also does not rely on farming as his sole income, but uses it to supplement his other jobs.

The scale of production is the primary limiting factor for farmers looking to increase their economic base. Thaddeus, for example, who currently grows on one single-family lot, would like to scale up to at least an acre, which he estimates could bring in a few hundred thousand dollars of sales per year. He has found it challenging to be able to achieve this, however, as previously noted. Putting together multiple parcels using the current inventory of NORA land has not proved fruitful and NORA itself has found it challenging to consolidate given the “gap-tooth”-ness of its inventory.

Environmental challenges

Interestingly, urban agriculture in New Orleans seems to be far less constrained by water issues than it is by soil issues. No one interviewed for this study discussed the need for farms to protect themselves from future flooding, and indeed, the draft CZO has

nothing to say on keeping agriculture out of low-lying areas. The CZO does, however, create a slew of new standards for stormwater management and the City views urban agriculture as a mechanism for managing excess water through filtration.²⁷⁹ The general sentiment on flood mitigation seemed to be “If there’s another flood that destroys my farm, everything in my life is destroyed...my farm is the least of my problems.”²⁸⁰

Far more pressing than flooding is the constraint brought on by New Orleans’ massive soil contamination problem. “Soil is a big problem in New Orleans; almost all the soil is contaminated with lead and very likely other heavy metals.”²⁸¹ Every interviewee mentioned lead in particular as a contaminant affecting the ability of New Orleans farmers to grow food out of the existing soil. The lead contamination increased in the wake of Katrina, though much of the city’s soil has been contaminated for many years. The need to clean up existing soil or to bring in sufficient top soil to cover contaminated soils present significant economic hardships on small farms, and instead, many rely on raised-bed farming, eliminating the concerns about soil quality altogether. As previously discussed, the draft CZO now includes strict standards for farms that want to grow food in the existing soil, enumerating an extensive list of contaminants and heavy metals that must be tested before crops can be grown. The burden of getting the soil testing falls on the farmer.

Interestingly, Macon Fry and Thaddeus Prosper, while both agree that soil contamination is a problem, are somewhat less concerned than some other interviewees. Macon, for example, subscribes to the research that shows that many edible plants don’t actually take up very much lead and therefore are not hazardous to human health. Thaddeus, on the other hand, wonders to what extent the health concerns about these

²⁷⁹ Interview: anonymous City Planning Commission staff member

²⁸⁰ Interview: Johanna Gilligan, Emilie Taylor, Alyssa Denny, Sanjay Kharod

²⁸¹ Interview: anonymous City Planning Commission staff member

contaminants might be overblown in general and unnecessarily contributing to the perceived value of “organic food.”

When I was a child and there were gardens littering the neighborhoods, none of us had any concerns about what was in the dirt. And I know some old men who used to farm all the time and used to eat a lot of fresh food who don’t show any ill effects. At one point, I want to say it’s important to know what’s in your food, in another breath, it has been a trend of our government and our media into scaring people into spending more money.

Other environmental constraints mentioned by growers in New Orleans include concerns about water quality in some of the canals, particularly in New Orleans East. The canals have very high levels of fecal coliform levels, upwards of 30 times higher than EPA standards, a particular concern for the Vietnamese farmers in New Orleans East.²⁸² In addition, the climate of New Orleans is challenging; growing food in a sub-tropic environment is particularly tough for growers who don’t realize that New Orleans’ climate is much different than that of other cities even within Louisiana.²⁸³ Climate change is exacerbating these challenges as well.²⁸⁴

THE FUTURE OF NEW ORLEANS’ URBAN FARMING

Macon Fry touts the benefits of non-profit growing projects like community gardens as being an important way to “allow people to begin to learn what’s involved [with farming] and to just get something in the ground somewhere.” These projects act as incubator farms for growers who may later want to graduate to a more long-term commercial operation. Johanna Gilligan adds, however, that because of New Orleans’ history and the fact that food access is such a significant issue for many areas of the city, the most successful urban farms may be those that are able to balance both social justice

²⁸² Interview: Khai Nguyen

²⁸³ Interview: Thaddeus Prosper

²⁸⁴ Interview: Macon Fry

and financial self-sufficiency. “I think that a lot of these farms have come at farming from a social justice, leadership, community building, development angle...primarily as nonprofits rather than for-profit entities trying to establish a business. But I think that the ones that survive are going to be the ones that are using a for-profit model for the most part.” Thaddeus Prosper has concerns about what the longevity of many of the new urban farm projects will be and whether the entrepreneurial farmers are actually making the impact they say they are.

We definitely need fresh food sources. We need people to come in and fund urban agriculture here. But what happens is, one of these guys will come in, their funding will come through, they’ll do light work and then they give up and go to another city with other operations. Or they come in and sell the store with talk of the food deserts, and then the next thing you know they are selling all of their food to high end grocery stores, or food is only available to people who are in the know or who have the dollars to spend...it’s like they become the local Whole Foods. And you know, to me, that’s what got us in this situation in the first place. There’s nothing wrong with carpetbaggers; they were necessary in the time that that term was coined because they brought energy and resources to areas where that was needed. The problem is that in this case they are coming with the resources, but none of them are trying to do anything with the people here. They aren’t improving the situation, they are making it worse.

Thaddeus worries that unless the resources and access to land patterns change to benefit more of the local growers, the urban farm movement in New Orleans will not be able to sustain itself.

Of course, there are others who see the future of urban farming a “food revolution” involving rooftop gardening, aquaponics, hydroponics, and other high-tech farming techniques. These solutions are particularly plugged by architects, city planners and funders who “can put a bunch of money into infrastructure to ‘solve the problems.’” What I think that they miss is that in a city with 40,000 vacant lots, you don’t need a hydroponic system. There are plenty of places for people to be safely growing in the

ground, but it's more like the coordination, the training, and the ongoing support that limits this stuff than the missing infrastructure. I think that people do capitalize on the idea of [urban ag]...people will play to the idea of funders dreams of how infrastructure is going to solve the problem. And then after 10 years and a bunch of money they realize, 'oh, that didn't work, actually.'"²⁸⁵ PitchNOLA is a perfect example of how funders in New Orleans are promoting these high-tech "solutions" to urban revitalization, but the results are as yet untested.

Finally, interviewers noted that the race and class issues inherent in the food system – questions of affordability and access, and about who is starting projects with whom and for whom – will continue to be a significant part of conversation. One question that looms large is who will be the drivers of new urban farming projects. As has been previously illuminated, the current trend is that many of the entrepreneurial efforts are coming from young, white newcomers to New Orleans. This could be a harbinger of "agricultural gentrification," as Sanjay Kharod dubs it. Urban agriculture projects could eventually have an effect similar to what is happening in Austin, where mature urban farms actually begin to contribute to the increase in property values. It seems that New Orleans has further to go before this could become a significant issue for current residents, but the skepticism about white farmer "do-gooders" in mostly African American neighborhoods seems likely to continue. This skepticism is born directly out of the mistrust that was generated from the post-Katrina planning efforts, when it appeared that planners and others were seeking ways to make the city "less black." The key issue

²⁸⁵ Interview: Johanna Gilligan

here is really about who is involved in the planning and development of urban farm projects – those that are generated by long-term community members are less likely to speed up the gentrification process.²⁸⁶

Tony Lee described a poignant example of how his neighbors have demonstrated skepticism about his own urban farm project. He described one particular female neighbor who he had tried to get engaged in his garden project for months. When students from Tulane University arrived one day to help with the TCC-led rebuilding efforts on his farm, “all of a sudden she saw all these white kids in here building, hacking, sawing...and then she wanted to know what they were building in her community! She was outraged because she thought the white people were coming in and taking over. And I said, no this is for me and for us. You know? But, when I come and ask you, you’re too busy. But when I put out a call, who do you see coming? The white kids.” The future of urban farming in New Orleans undoubtedly depends on a wide variety of farmers, communities, and interested parties, not just the white kids.

CONCLUSION

This chapter has highlighted a number of ways in which New Orleans and Austin are both similar and different. The historical roots of the current urban agriculture movement are certainly different, with New Orleans’ land use regime being completely redefined by the Hurricane Katrina disaster. Any efforts to reorganize the city’s land use patterns are likely to be met with skepticism unless those efforts involve significant input from existing community members. New Orleans’ vast inventory of vacant parcels puts the city in a unique position to re-use some of that land in creative ways, including for

²⁸⁶ Interview: Sanjay Kharod

urban agriculture, but the local redevelopment authority is balancing a huge number of interests when determining how to dispose of its vacant land inventory. Advocates in New Orleans see urban farming as a mechanism for bring the city “back” in some ways, but also see that there are constraints to doing this.

Like Austin, New Orleans’ urban farmers face barriers to being able to make a steady and sustainable income as an urban farmer. New Orleans certainly has fewer mature urban farms than Austin, in part due to the fact that the “movement” seems to be newer, and there are many examples of urban farm projects that seem to have a lot of start-up momentum, but never fully come to fruition. The environmental barriers in New Orleans seem to center primarily around soil quality, which is not a significant issue for farmers in Austin. The social challenges around neighborhood compatibility are much less pervasive than in Austin, and there is a general sense that regulations around urban farms, while important, fall very far down the long list of issues facing the City. The economic challenges of growing food that is affordable for residents who live in neighborhoods with the poorest food access is also a challenge for New Orleans.

Chapter 6: Analysis and Conclusions

This study has attempted to contextualize the constraints facing commercial urban farmers by looking at Austin, Texas and New Orleans, Louisiana. Recall that these case studies were chosen for both their similarities and key differences. Both cities are revising their land development regulations generally and the regulations around urban farms as a commercial and/or residential land-use specifically. Both have experienced growth in urban agriculture operations in the past ten years with a corresponding increase in the number of stakeholders interested in various aspects of the urban farming movement. Both are warm-climate cities with year-round growing seasons facing unique questions about long-term water quality and quantity and about how water resources will be allocated among municipal and agricultural users. Both are well known tourist-destinations with nationally recognized food scenes. Each is also facing tensions about development, including issues of residential displacement and neighborhood gentrification, making land use complex.

New Orleans has less land available for agriculture, though an abundance of prime soils suitable for growing food. Faced with the physical constraints of being surrounded by water, New Orleans' urban farming advocates see the inventory of 35,700 blighted homes and empty lots as a potential source of cheap and abundant land suitable for growing food. Austin, on the other hand, has a miniscule inventory of vacant land, with a population that has been one of the fastest growing in the country for two decades. I expected that Austin's greatest barrier to urban farming would be the scarcity of available affordable land within the city limits, and that New Orleans' farmers would be blessed with an abundance of land. I was surprised to learn that neither of the city's public entities and agencies view urban agriculture as a permanent land use, particularly in areas that are under high demand for residential and commercial development. In

Austin, it is viewed as inevitable that urban farms will eventually be priced out of the city limits as land prices and property taxes increase exponentially. In New Orleans, agencies like the New Orleans Redevelopment Authority (NORA) see urban agriculture as one of a long list of possible land uses appropriate for reusing vacant land, but are wary about giving vacant parcels to idealistic growers whose enthusiasm fades and are eventually unable to maintain the property in the long-run. In New Orleans, which has far fewer mature, commercial urban farms than Austin, this conclusion is certainly not unreasonable. The number of idealists who have started urban farming projects that eventually fizzled seems to be quite large, but this adds to the frustration of serious, long-time growers like Thaddeus Prosper who see resources and land being made available for these kinds of growers, rather than for his experienced farming colleagues.

In many ways, the mature commercial urban farms in Austin have much more at stake than their New Orleans counterparts because they own the land on which they farm, and rely on their farms for the majority of their incomes. These farms have become fully-realized commercial operations, growing to include other non-growing activities to supplement the revenue derived from selling agricultural products. Across the board, growers in both cities note that in order to make an income as an urban farmer, you have to have a diverse set of customers, including individuals, retailers, and restaurants. On the other hand, there are growers in both cities, notably Frank Young and Tony Lee, who see the work of growing and raising local food to be mostly about providing an affordable service for neighbors, purposefully selling their produce at or below cost.

I encountered three commercial urban farm typologies during this research:

1. **Fully-commercial urban farms** tend to have one or more owners who rely on the farm for the majority (or all) of their income and often find ways of using the farm to create supplemental income. These farms sell

products for the maximum margins, focusing on discerning customers who value local food, farm-to-table restaurants, and online local food retailers.

Examples: Austin's Boggy Creek Farm, HausBar Farms, Springdale Farm, Rain Lily Farm, Agua Dulce Aquaponics Farm, New Orleans' Sheaux Fresh Sustainable Foods (Thaddeus Prosper).

2. **Semi-commercial urban farms** tend to be run by growers who are interested in bringing in a small amount of supplemental income, but do not rely on the farm entirely. Many of these farms are very small scale and some growers may intentionally sell products at cost or at lower margins in order to maximize affordability. *Examples: Austin's Frank Young Farm, Ten Acre Organics;²⁸⁷ New Orleans' Magellan Street Garden (Tony Lee); VEGGI Farmer's Co-op; Hollygrove Farm; Gathering Tree Growers Cooperative (Macon Fry).*
3. **Mission-driven commercial urban farms** are likely to be non-profit organizations that use profits from selling urban farm produce for the organization's mission. *Examples: Austin's Urban Roots; New Orleans' GrowDat Youth Farm.*

Clearly, Austin has a larger number of fully-commercial urban farms, a fact that Johanna Gilligan of New Orleans' GrowDat Urban Farm attributes to Austin's mature local food economy.

I think that there is a stronger local, market-based farming community in Austin than there is here. I don't think the urban farms that exist here are making as much money as the farms in Austin – like Boggy Creek, for example. I think there's a stronger farmer's market community in Austin. New Orleans is becoming wealthier, but Austin for a long time has exceeded educational and

²⁸⁷ Ten Acre Organics' business plan is to turn their current semi-commercial pilot project into a fully-realized 10-acre version, which support two full-time farmers, putting it in the fully-commercial urban farm classification.

wealth standards [over New Orleans], so I guess I'm pointing to the idea that the local food movement came to Austin sooner than it came to New Orleans in terms of viable market farms in the city limits.²⁸⁸

In general, as interviewees discussed constraints on urban farms, they mostly seemed to have the fully-commercial urban farm typology in mind because while environmental, social, regulatory, economic, and land use constraints affect all types of urban farms, the financial repercussions are mostly deeply felt for fully-commercial farms that rely on the farm's income entirely. It will be helpful here to summarize the various constraints that were discussed for urban farms in Austin and New Orleans.

Constraints for Urban Farms		
	Austin	New Orleans
<i>Environmental</i>	Access to sufficient and affordable water; city water is expensive, and wells cost-prohibitive. Finding property with good soil, which is almost entirely located on the east side of Austin, is also a challenge.	Soil contamination is the single most pressing concern, and many compensate by purchasing topsoil and growing in raised beds. Water quality and future flooding are minor concerns.
<i>Social</i>	Some farm neighbors express concerns about the impacts urban farms can have in neighborhoods, especially those that raise animals, compost, and host events. There are concerns about commercial farms selling products too expensive for residents of the neighborhoods in which they operate. There are conflicts regarding race as many of the large urban farms are owned by white farmers, but located in gentrifying Latino neighborhoods.	Resources for urban farm entrepreneurs seem to be disproportionately available for non-native New Orleanians with projects intending to "save" the city from its vacant land problem. Long-time, mostly African American growers, see this as a deep injustice, but not without historical precedent.
<i>Regulatory</i>	Recent revisions to the land development code brought heightened scrutiny on urban farms and placed new restrictions on farms interested in boundary-pushing activities like animal processing and using farms as event spaces. The City's administrative process for becoming a legal urban farm has been difficult to navigate for urban farms.	The city suffers from planning fatigue, which may have contributed few people engaging in the process to revise the CZO's section on urban farms. The city is chronically understaffed and land use violations tend to go unnoticed unless a neighbor complains. There is less attention being paid to farm regulations.

²⁸⁸ Interview: Johanna Gilligan

Table 6.1 cont.

<i>Economic</i>	The cost of food sold by urban farms is a product of high labor costs and small scale of production. Margins remain thin for urban farmers and some struggle to make a comfortable living solely with farm income. Many of the large, mature farms look to other activities, including hosting events, to supplement farm income.	Urban farmers lack the technical and business planning expertise to start and maintain urban farms in the long-run. Few farmers are making a sufficient living as a farmer, even as questions of affordability are persistent. Farmers in low-income areas have struggled to find a solid customer base, often resorting to selling their food to high-end restaurants.
<i>Land Use</i>	Neighborhood compatibility, particularly around animals raising and processing, is the key land use issue in Austin. Urban farms in residential neighborhoods operate as both a homestead and a commercial business, creating conflicts with neighbors and confusion for the City's Code Compliance and permitting departments. Austin's rapid growth means that there are few large parcels with good soils for urban farmers; new growers may increasingly rely on very small-scale farms or high-tech solutions that generate a lot of products out of less raw land.	There is a surprising lack of available land for farming; many see this as the fault of the Redevelopment Authority, which has 3,500 vacant parcels that some believe should be made more available for urban farmers. NORA faces a large number of competing interests when disposing of vacant land and is hesitant to grant land to urban farm projects that may or may not be sustainable in the long-term. Long-term land tenure is also challenging as few farmers own the land on which they grow and NORA offers only one-year leases for their properties.

Table 6.1: Summary of constraints for urban farms in Austin & NOLA

CENTRAL RESEARCH QUESTIONS

By way of a conclusion to this analysis, allow me to return to my central research questions for this study, proving summary answers to each:

Where is urban agriculture developing in cities and why?

The development patterns of urban farms in Austin and New Orleans seem to be primarily related to the availability of inexpensive land. The abundance of farms in East Austin is certainly explained by the pattern of high quality agricultural soil located there, but it is also undeniably the case that land in East Austin is less expensive and the parcels are larger and more – though decreasingly so – abundant. Jack Waite's struggle to find a

parcel large enough for his aquaponics farm is a key example of this trend. In New Orleans, the urban agriculture operations are popping up all over the city, but are concentrated in areas where vacant land is abundant, such as the Lower Ninth Ward. Again, the cost of land is undoubtedly a factor in this pattern, and because support organizations like NOFFN are encouraging new farmers to use NORA as a tool to get access to vacant land, the location of those vacant lots may drive the location of future urban farming operations.

What are the primary constraints affecting the development of long-term commercial urban farm operations within the boundaries of large metropolitan cities?

Table 6.1 above and Figure 6.1 below are presented as high-level summaries of the constraints facing commercial urban farms in the two case study cities. In New Orleans, the primary constraints seem to be environmental, economic, and land use related. In terms of land use, both access to the vast amount of vacant land and uncertainty about long-term land tenure are real and perceived constraints to the development of urban farms. Notably, some experts noted that the real constraints are actually related to the fact that few of the idealistic urban growers actually know how to make a living running a farm. Indeed, more research should be done in order to tease out what the real causes for urban farm failure in New Orleans – I predict that land access is a bit of a smoke screen for the fact that enthusiasm is often trumping expertise when it comes to new urban farmers. All of these constraints are rooted in the history of New Orleans, and in the way that the city has recovered post-Katrina. Urban farming is part of the redevelopment ethos, and many talked about urban farms being a realistic

replacement for the missing grocery stores that never returned after the hurricane. The fact that few commercial or semi-commercial farms are successfully supplying affordable produce to residents may be an indicator that the rhetoric outstrips reality. Indeed, few farmers are making a living in New Orleans, but there seem to be many entrepreneurial urban farm operations pitched to the city and NORA that may or may not ever turn into long-term businesses.

In Austin, the primary constraints are seen to be regulatory and social, both of which can be directly tied to the recent fight over revising the city's land development code. Urban farming is likely to be thought of in light of this very public fight and it has undeniably shaped the way that farmers see themselves in the city, even dividing local food advocates along the lines of being either pro-farm or pro-food justice. Urban farms in Austin exist in a political arena in which the proverbial squeaky wheel gets a lot of attention. Planning Commissioner, Steve Oliver, describes this phenomenon succinctly. "Austin is beautiful in its ability to try and be as inclusionary and open and transparent as possible in the development of its regulations, but the [reality] is that some of the best rules are not created by compromise. There are some best practices out there that might be in conflict with what [a few] people in the neighborhood or the city what think" but those people have political experience and therefore get a lot of attention. Because of one neighbor-dispute, urban farms found themselves having to defend their very right to exist against accusations of being exclusionary and bringing potentially unwanted land uses into residential neighborhoods. The long-term implications of this conflict have yet to be revealed, but should also be the starting point for another phase of analysis.

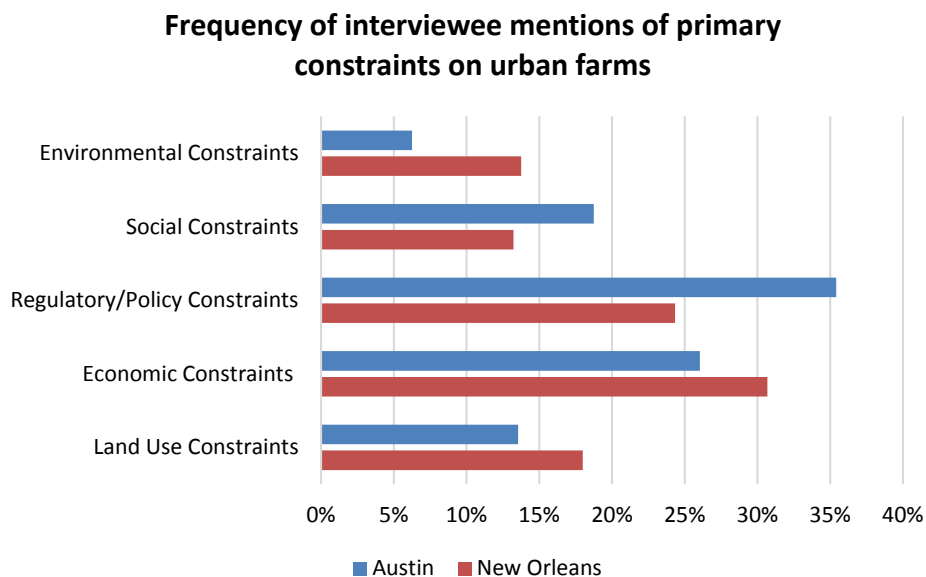


Figure 6.1: Austin and New Orleans views on urban farm constraints

The way that individuals in both cities think about overcoming these constraints are tied to which “camp” of urban agriculture they fall into: the technologists or the purists. For purists, farmers who are trying to make a living growing crops out of the soil (people like Thaddeus Prosper, Macon Fry, and Dorsey Barger) the way to combat constraints is to make more land available for agriculture. For the technologists (including Marianne Cufone, Jack Waite, and Michael Hanan) the future of urban farming is about getting more creative. They advocate for farmers to be ambitious in the way they use small spaces and the best new technologies to create new kinds of agriculture systems that use less water and less land to produce more food. Whether these kinds of farms are sustainable in the long run or whether the initial capital investment to get them started is available equitably remains to be seen.

How are cities planning and creating policies for commercial urban agriculture under different environmental, economic, and land-use constraints?

There are several key differences in the regulatory regimes of Austin and New Orleans that bear revisiting. First, Austin farmers take for granted that they are able to sell their produce from an on-site farm stand, while New Orleans bans the sales of produce from sites in most districts, and certainly residential districts. This results in farmers selling from trucks, driving from neighborhood to neighborhood. Second, New Orleans takes for granted that animals raised on urban farms will be processed somewhere off site and bans even private animal slaughtering. Austin's urban farmers see the on-site processing of animals as a way to increase sustainability and shorten the food chain, making this issue the central question in the long land development code revision process. Third, farmers in New Orleans seem to be using their land for exclusively farming operations – there has been no discussion to date of expanding the definition of “farm use” to include special events or other activities from which a farmer could potentially derive income. Some of Austin's most mature commercial urban farms rely on these kinds of activities to generate income and see their farms as important community gathering spaces. Fourth, New Orleans' farms in residential districts do not have to have a dwelling on site, which is perhaps attributable to the abundance of empty lots. The priority is to make sure there is someone taking responsibility for the lots that might otherwise fall into disrepair or blight. Whether there is a house on-site is a secondary concern given the inventory of vacant residential lots under the control of the New Orleans Redevelopment Authority. It is undeniable, however, that getting homes back on those residential lots would be economically beneficial for the city because they

would generate property tax income. In Austin, however, urban farms in residential areas must explicitly have a dwelling so as not to lose any residential housing to other uses. What stands out about all of these regulatory regimes is that few of the regulations are based on sound research or best practices – limitations on what urban farms can do from a land use perspective tend to be based on the opinions of a small group of stakeholders.

The way that the cities themselves see urban agriculture is different for each case study. Austin's urban farms are businesses as well as third-spaces. In New Orleans, urban agriculture is seen as a land use appropriate for filling up the vast swaths of vacant land in the city. What experts in both cities share, however, is a sense of fatalism about the longevity of the urban farming operations. In Austin, the process of creating rules for urban farms may limit their ability to survive as businesses as their own cost of doing business inevitably goes up in rapidly-growing Austin. In New Orleans, the primary owner of vacant land (NORA) has not made a commitment to transferring title to urban farm operations, which may discourage some potential urban farmers.

FUTURE AVENUES OF INQUIRY

I do not wish to leave the reader with the sense that urban farming is doomed in Austin and New Orleans. Indeed, there are many growers and advocates who are growing and supporting the growth of an abundance of fresh, healthy food on urban properties in both cities. The purpose of this study has been to hone in on what makes urban farming complicated in the context of two very different cities. Future scholars should take these preliminary conclusions and findings to the next level by conducting more robust qualitative analysis on the constraints that experts discussed. In particular, it would be useful to do an analysis of how property and tax valuations are changing in and around

urban farms – are urban farms contributing to gentrification? To what extent are urban farms under threat of being priced out hot housing markets like Austin?

In Austin, researchers should continue to monitor the impacts of the urban farm ordinance to see if the process has lasting impacts on the urban farming community. It may be that once the dust settles, urban farming will go back to quietly operating under the radar of the city’s regulatory regime – recall that all but one urban farm had been operating without the “proper” permits for years before the HausBar Farms conflict began. It would also be beneficial to do more research on how animal raising and processing is being integrated into other cities and to what effects. In New Orleans, a good next step would be to dig more deeply into what factors contribute to the success or failure of an urban farming project. Identifying whether the constraints on long-term success are related to failures in human ingenuity or a lack of access to land would help advocates hone in on what interventions might be most effective.

Appendix A: Interview Guide

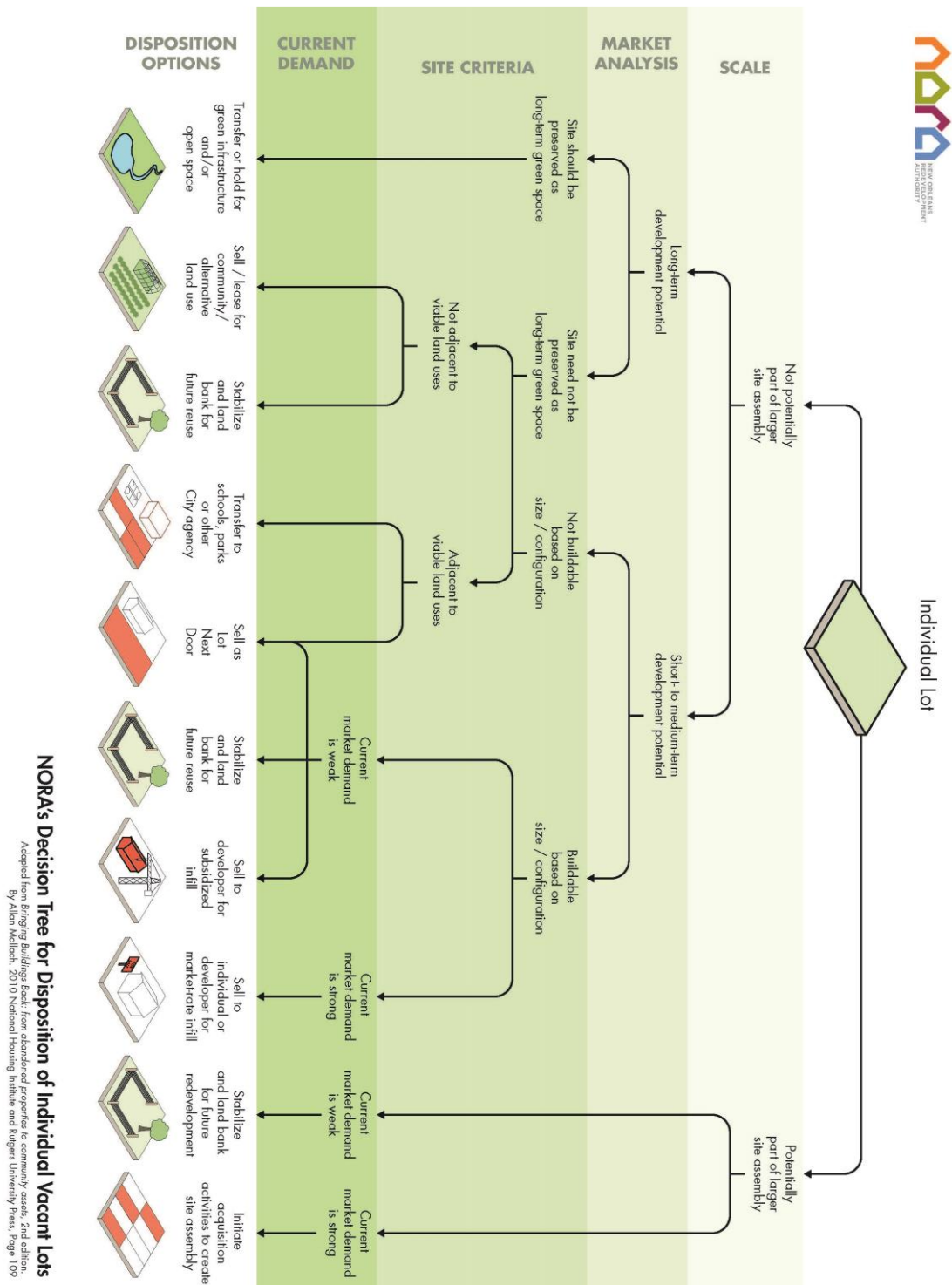
For urban farmers/growers

1. How/when did you become an urban farmer? Why Austin/NOLA?
2. What makes your urban farm unique or special?
3. What service do you provide? What do you do with your produce/farm products? If you have customers, who are they?
4. How would you define an urban farm in your city?
5. What do you think has caused the growth of urban agriculture in your city?
6. Where are the best places to put urban farms in Austin/NOLA? Why?
7. What constraints (environmental, economic, etc.) does your farm face? How do you work within these constraints?
8. Discuss the process of finding land suitable for farming in your city...what was challenging and what were your key considerations? Why did you choose your current location? Are you near other urban farms?
9. What city policies are you aware of that you are supposed to comply with? Are these rules sufficient/burdensome? Where you part of the process of establishing these rules? If you could change any of these rules, what would they be?
10. **For Austin:** How does Austin's population growth affect your operation? How do you see this growth affecting your operation in the future?
11. **For NOLA:** How does population decline and land vacancy affect your operation now and in the future? How did Hurricane Katrina change the landscape of urban agriculture?

For government officials/non-profits/university researchers

1. What is an urban farm in your city?
2. Who are urban farmers in your city?
3. What was the process by which urban farms got defined? Who was involved in the process?
4. Where are the appropriate places for urban farms to be located in Austin/NOLA?
5. Are urban farm land-use designations and location decisions based on any empirical research?
6. Walk me through the process of getting a farm up and running in Austin/NOLA. What policies or procedures should urban farmers be aware of, including permits?
7. Who supports urban farming in the political/non-profit realm?
8. What concerns does the city/your organization have about urban farming?
9. **For Austin:** How does Austin's population growth affect urban agriculture now and in the future? Does urban agriculture have a place in a rapidly growing city?
10. **For NOLA:** How does population decline and land vacancy affect urban agriculture now and in the future? How did Hurricane Katrina change the landscape of urban agriculture?

Appendix B: NORA's Vacant Land Disposition Decision Tree



Acronyms Used in Report

General

CSA – community supported agriculture

CAFO – confined animal feeding operations

SNAP – Supplemental Nutrition Assistance Program (formerly Food Stamps)

UA – urban agriculture

USDA – United States Department of Agriculture

WIC – Special Supplemental Nutrition Program for Women, Infants, and Children

Austin Specific

LDC – Land Development Code

PDRD – City of Austin Planning and Development Review Department

PODER – People Organized in Defense of Earth and her Resources

SFC – Sustainable Food Center

SFPB – Austin/Travis County Sustainable Food Policy Board

UFO – 2014 Urban Farm Ordinance

New Orleans Specific

ALU – Alternative Land Use Program (NOR)

BNOB – Bring Back New Orleans

CZO – Comprehensive Zoning Ordinance

HMF – Hollygrove Market and Farm

MQVN CDC – Mary Queen of Vietnam Church Community Development Corporation

NOFFN – New Orleans Food and Farm Network

NOLA – New Orleans, Louisiana

NORA – New Orleans Redevelopment Authority

TCC – Tulane City Center

Works Cited

- Alkon, A.H. (2012). *Black, white, and green: Farmers markets, race, and the green economy*. Athens, GA: University of Georgia Press.
- Alkon, A.H. and Agyeman, J. (Eds.). (2011). *Cultivating food justice: Race, class, and sustainability*. Cambridge, MA: The MIT Press.
- American Planning Association. (2007). Policy guide on community and regional food planning. Available: <http://www.planning.org/policy/guides/adopted/food.htm>
- American Planning Association Texas Chapter. Planning history 1785-2000. Available: http://www.txplanning.org/media/files/page/Planning_History_1785_to_2000.pdf
- Austin City Code § 25-2-863. Retrieved: <http://austintexas.gov/resident/city-code>
- Austin City Code § 25-2-900. Retrieved: <http://austintexas.gov/resident/city-code>
- Austin Urban Farms. Accessed March 31, 2014. Available: <http://www.austinurbanfarms.org/>
- Bartling, H. (2012). A chicken ain't nothin' but a bird: local food production and the politics of land-use change. *Local Environment*, 17(1): 23-34.
- Bates, L.K. and R. Green (2009). "Housing recovery in the Ninth Ward: Disparities in policy, process, and prospects." in *Race, place, and environmental justice after Hurricane Katrina: Struggles to reclaim, rebuild and revitalize New Orleans and the Gulf Coast*, eds. Robert D. Bullard and Beverly Wright, Westview Press.
- Boggy Creek Farm. Accessed April 1, 2013. Available: <http://www.boggycreekfarm.com/>
- Born, B. and Purcell, M. (2006). Avoiding the local trap: Scale and food systems in planning research. *Journal of Planning Education and Research*, 26: 195-207.
- Bring New Orleans Back Commission and Wallace Roberts & Todd, LLC. (2006, Jan. 11). Action plan for New Orleans: The new American city. Available: <http://www.npr.org/documents/2006/jan/CityPlanningFinalReport.pdf>
- Brinkley, C. (2012). Evaluating the benefits of peri-urban agriculture. *Journal of Planning Literature*, 27(3): 259-269.
- Brinkley, D. (2007). *The great deluge: Hurricane Katrina, New Orleans, and the Mississippi gulf coast*. New York, NY: HarperCollins Publishers, Inc.
- Brookings Institution. (2005, October). New Orleans after the storm: Lessons from the past, a plan for the future. Special Report. Available: http://www.brookings.edu/~media/research/files/reports/2005/10/metropolitanpolicy/20051012_neworleans.pdf
- Brown, K. et al. (2002). Urban agriculture and community food security in the United States: Farming from the city center to the urban fringe. Available:

- http://www.recoverypark.org/wp-content/uploads/11-11/Urban_Agriculture/Urban%20Ag%20Studies/urbanagpaper.pdf
- Burby, R. (2006). Hurricane Katrina and the paradoxes of government disaster policy: Bringing about wise governmental decisions for hazardous areas. *The Annals of the American Academy*.
- Caton-Campbell, M. (2003). Building a common table: The role for planning in community food systems. *Journal of Planning Education and Research*, 23: 341–55.
- Cabannes, Y. (2012). Financing urban agriculture. *Environment and Urbanization*, 24(2): 665-683.
- Chiang, S.L. (Producer and Director). (2010). *A Village Called Versailles* [Motion picture]. United States: Walking Iris Films.
- City of Austin. (2000, April 6). Ordinance No. 000404-86. Available: <http://www.cityofaustin.org/edims/document.cfm?id=59006>
- City of Austin. (2012). Imagine Austin Comprehensive Plan. Austin, TX. Available: <http://www.austintexas.gov/imaagineaustin>
- City of Austin. (2013, Nov. 21). Ordinance No. 20131121-105. Available: <http://www.ci.austin.tx.us/edims/document.cfm?id=205937>
- City of Austin Human Rights Commission. (2013, June 24). Meeting video.
- City of Austin Planning Commission. (2013, February 26). Regular Meeting Minutes (revised). Available: <http://www.austintexas.gov/edims/document.cfm?id=185889>, pp. 8.
- City of New Orleans. City Code § 26-156(c). Retrieved: <http://library.municode.com/index.aspx?clientID=10040&stateID=18&statename=Louisiana>
- City of New Orleans. Current Comprehensive Zoning Ordinance. Accessed February 2013. Available: <http://www.nola.gov/city-planning/current-comprehensive-zoning-ordinance/>
- City of New Orleans. Draft Comprehensive Zoning Ordinance and Maps. Available: [http://www.nola.gov/city-planning/draft-comprehensive-zoning-ordinances-\(czo\)/full-czo-text/](http://www.nola.gov/city-planning/draft-comprehensive-zoning-ordinances-(czo)/full-czo-text/).
- City of New Orleans. Master Plan. Accessed April 11, 2014. Available: <http://www.nola.gov/city-planning/master-plan/>
- City of New Orleans. Public Comments on Draft CZO. Available: [http://www.nola.gov/city-planning/draft-comprehensive-zoning-ordinances-\(czo\)/draft-czo-comments/](http://www.nola.gov/city-planning/draft-comprehensive-zoning-ordinances-(czo)/draft-czo-comments/)

- City of New Orleans. (2010). Master Plan Executive Summary. Available: <http://www.nola.gov/getattachment/4dcf72fd-b189-4937-bd69-dba2958a483e/Vol-1-Executive-Summary>
- City of New Orleans. (2013). New Orleans blight reduction report. Available: http://nola.gov/getattachment/Performance-and-Accountability/Initiatives-and-Reports/BlightSTAT/Blight-Report_web.pdf/
- Civic Economics. (2002). Economic impact analysis: a case study: local merchants vs. chain retailers. Prepared for Livable City and Austin Independent Business Alliance. Available for download: <http://s401691232.initial-website.com/library/>
- Community Food Security Coalition and Winne, M. (2012, May). CFSC List of Food Policy Councils in North America. Available: <http://www.markwinne.com/resource-materials/>
- Community Research Partners and Rebuild Ohio. (2008, February). \$60 Million and Counting: The cost of vacant and abandoned properties to eight Ohio cities. Columbus, OH. Available: <http://www.greaterohio.org/files/policy-research/execsummary.pdf>
- Cooper, C. (2005, Sept. 8). Old-Line Families Escape Worst of Flood and Plot the Future. *The Wall Street Journal*. Available: http://www.tulanelink.com/tulanelink/oldlinefamilies_box.htm
- Dale, A., Dushenko, W., and Robinson, P. (Eds.) (2012). *Urban Sustainability: Reconnecting space and place*. Toronto: University of Toronto Press
- Dixon et al. (2009). Functional foods and urban agriculture: two responses to climate change-related food security. *NSW Public Health Bulletin* 20(1-2): 14-18
- Donovan, J., Madore, A., Randall, M., and Vickery, K. (2013). Farmers market incentive programs: Vehicles for increasing local food access among nutrition assistance beneficiaries. Available: http://www.sustainablefoodcenter.org/_files/reports/Farmers_Market_Incentive_Programs_report_LBJ_2013.pdf
- Dziedzic, N., and Zott, L. (Eds.) (2012). *Urban Agriculture*. Opposing Viewpoints in Context Collection. Detroit: Greenhaven Press. Available: <http://ic.galegroup.com.ezproxy.lib.utexas.edu/ic/ovic/topic1/actionWin?resetBreadcrumb=&query=&prodId=OVIC&>windowstate=normal&contentModules=&display-query=&mode=view&limiter=&showDisambiguation=true&u=txshracd2598&displayGroups=&p=OVIC&action=e&catId=GALE%7CVKQRFD883347034&scanId=#reference>
- Eggler, B. (2010, Jan. 26). New Orleans master plan wins approval of city planning commission. *The Times-Picayune*. Accessed April 11, 2014. Available: http://www.nola.com/politics/index.ssf/2010/01/new_orleans_planning_commission.html

- Euclid v. Ambler. 272 U.S. 365. (1926). Retrieved from <http://www.law.cornell.edu/supremecourt/text/272/365>
- Evans, A., et al. (2012a). Exposure to multiple components of garden-based intervention for middle school students increases fruit and vegetable consumption. *Health Promotion Practice*, 13(5): 608-616.
- Evans, A. et al. (2012b). Introduction of farm stands in low-income communities increases fruit and vegetable consumption among community residents. *Heath & Place*, 18(2012): 1137-1143.
- Facts about CAFOs. Michigan Sierra Club. Accessed March 9, 2014. Available: <http://michigan.sierraclub.org/issues/greatlakes/articles/cafofacts.html>
- Federal Emergency Management Agency. (2006, April). Summary report on building performance: Hurricane Katrina 2005. FEMA 548. Available: http://www.fema.gov/media-library-data/20130726-1446-20490-0294/548_SumRprt0329fml.pdf
- Flyvbjerg, B. (2011). Case Study. In N.K. Denzin and Y.S. Lincoln (Eds.), *The SAGE handbook of qualitative research* (4th ed., pp. 301-317). Los Angeles, CA: SAGE Publications Inc.
- Food and Water Watch. (2012). The economic cost of food monopolies. Washington DC: Food and Water Watch. Available: <https://www.foodandwaterwatch.org/reports/the-economic-cost-of-food-monopolies/>
- Food Waste Basics. Environmental Protection Agency. Accessed March 9, 2014. Available: <http://www.epa.gov/foodrecovery/>
- Ford, K. (2010). *The trouble with city planning: What New Orleans can teach us*. New Haven: Yale University Press.
- Goodman, D. (2003). The quality “turn” and alternative food practices: Reflections and agenda. *Journal of Rural Studies* 19 (1): 1–7.
- Guthman, J. (2011). *Weighing in: Obesity, food justice, and the limits of capitalism*. Berkeley, CA: University of California Press.
- Gandara, R. (2012, Dec. 6). Urban farm, neighbor collide in East Austin. *Austin American Statesman*. Available: <http://www.statesman.com/news/news/local/urban-farm-neighbor-collide-in-east-austin/nTYBb/>
- Hanson, D. and Marty, E. (2012). *Breaking through concrete: Building an urban farm revival*. Berkeley: University of California Press.
- Heimlich, R. and Barnard, C. (1992). Agricultural adaptation to urbanization: Farm types in northeast metropolitan areas. *Journal of Agricultural and Resource Economics* (April 1992): 50-60.

- Hodgson, K. (2011). *Investing in healthy, sustainable places through urban agriculture*. Funders' Network for Smart Growth and Livable Communities, Coral Gables, FL. Available: http://www.fundersnetwork.org/files/learn/Investing_in_Urban_Agriculture_Final_110713.pdf
- Hodgson, K. (2012). Planning for food access and community-based food systems: A national scan and evaluation of local comprehensive and sustainability plans. Washington, DC: American Planning Association, Planning and Regional Health Planning Center.
- Hodgson, K., Caton-Campbell, M., and Bailkey, M. (2011). *Urban agriculture: Growing healthy, sustainable places*. Chicago, IL: American Planning Association.
- Jaros, L. (2008). The city in the country: Growing alternative food networks in metropolitan areas. *Journal of Rural Studies* 24(2008): 231-244.
- Kato, Y. (2013). Not just the price of food: challenges of an urban agriculture organization in engaging local residents. *Sociological Inquiry* 83(3): 369-391.
- Kato, Y., Passidomo, C., and Harvey, D. (2013). Political gardening in a post-disaster city: lessons from New Orleans. *Urban Studies*: 1-17.
- Kaufman, J. and Bailkey, M. (2000). Farming inside cities: Entrepreneurial urban agriculture in the United States. Working Paper of the Lincoln Institute of Land Policy. Available: <http://www.urbantilth.org/wp-content/uploads/2008/10/farminginsidecities.pdf>
- Kim, B. et al. (2014). Urban community gardeners' knowledge and perceptions of soil contaminant risks. *PLoS ONE* 9(2).
- Kimbrell, A. (Ed.). (2002). *The fatal harvest reader: The tragedy of industrial agriculture*. California: Foundation for Deep Ecology with Island Press.
- King, N. and Horrocks, C. (2010). *Interviews in qualitative research*. London: SAGE Publications Ltd.
- Kloppenborg, J., Hendrickson, J., and Stevenson, G.W. (1996). Coming in to the foodshed. *Agriculture and Human Values*, 14 (3), 33-42.
- Kulak, M. (2013). Reducing greenhouse gas emissions with urban agriculture: A life cycle assessment perspective. *Landscape and Urban Planning*, 111(2013): 68-78.
- LaCroix, C. (2010). Urban agriculture and other green uses: remaking the shrinking city. *The Urban Lawyer* 42(2).
- Ladner, P. (2011). *The urban food revolution: changing the way we feed cities*. British Columbia: New Society Publishers.

- Lazarus, C. (2000). Urban agriculture: Join the revolution. New Village: Building Sustainable Cultures, Issue 2. Accessed March 15, 2014. Available: <http://www.newvillage.net/Journal/Issue2/2urbanagriculture.html>
- Learn more about the East Austin land grab. Will East Austin retain its single family zoning? (2013, September 20). Available: <http://www.youtube.com/watch?v=EXlznZiQtrM>
- Lepeska, D. (2013). Betting the farm: Is there an urban agriculture bubble? *Forefront* 2(40). Retrieved from: <https://www.nextcity.org/>
- Litt et al. (2011). "The influence of social involvement, neighborhood aesthetics, and community garden participation on fruit and vegetable consumption." *American Journal of Public Health*, 101(8): 1466-1473
- Llanes, D. (2013, June 27). Remarks at La Raza Roundtable [video].
- Logan, J. (n.d.). The impact of Katrina: race and class in storm-damaged neighborhoods. Accessed April 14, 2014. Available: <http://www.s4.brown.edu/katrina/report.pdf>
- Maloney, S. A. (2013). Putting paradise in the parking lot: Using zoning to promote urban agriculture. *Notre Dame Law Review*, 88(5): 2551-2596. Available: <http://scholarship.law.nd.edu/cgi/viewcontent.cgi?article=1683&context=ndlr>
- Many chicken farms in Chicago slums. (1909, May 9). *Chicago Daily Tribune*.
- Martinez, S., et al. (2010). Local food systems: Concepts, impacts, and issues. United States Department of Agriculture: Economic Research Report No. 97. Retrieved from <http://www.ers.usda.gov>.
- McClintock, N., Cooper, J. Khandeshi, S. (2013). Assessing the potential contribution of vacant land to urban vegetable production and consumption in Oakland, California. *Landscape and Urban Planning* 111(2013): 46-58.
- McClintock, N., Pallana, E., Wooten, H. (2014). Urban livestock ownership, management, and regulation in the United States: An exploratory survey and research agenda. *Land Use Policy* 38(2014): 426-440.
- McCulley, R. (2007, Aug. 27). Healing Katrina's racial wounds. *Time*. Available: <http://content.time.com/time/nation/article/0,8599,1656660,00.html>
- Mougeot, L.J.A. (2000). Urban agriculture: definition, presence, potentials and risks, and policy challenges. Cities Feeding People Series: Report 31. International Development Research Center (IDRC). Available: <http://idl-bnc.idrc.ca/dspace/bitstream/10625/26429/12/117785.pdf>
- Mougeot, L.J.A. (2005). *Agropolis: the social, political, and environmental dimensions of urban agriculture*. London: Earthscan.
- Mukherji, N. and Morales, A. (2010). Zoning for Urban Agriculture. Zoning Practice No. 3. American Planning Association.

- National Policy and Legal Analysis Network to Prevent Childhood Obesity (NPLAN). (2011). "Seeding the City: Land Use Policies to Promote Urban Agriculture." Public Health & Law Policy. Available: [http://changelabsolutions.org/sites/default/files/Urban_Ag_SeedingTheCity_FIN_AL_\(CLS_20120530\)_20111021_0.pdf](http://changelabsolutions.org/sites/default/files/Urban_Ag_SeedingTheCity_FIN_AL_(CLS_20120530)_20111021_0.pdf)
- Nestle, M. (2013). *Food politics*. Berkeley, CA: University of California Press.
- New Orleans Redevelopment Authority. History. Accessed April 12, 2014. Available: <http://www.noraworks.org/about/history>
- Office of Mayor Mitch Landrieu. (2014, Jan. 9). Press release: City surpasses blight reduction milestone of 10,000 units by 2014. Accessed April 15, 2014. Available: <http://www.nola.gov/mayor/press-releases/2014/20140109-blight/>
- Olshansky, B. and Johnson, L. (2010). *Clear as mud: Planning for the rebuilding of New Orleans*. Chicago, IL: American Planning Association.
- Page, S. and Puente, M. (2005, Sept. 13). Views of whites, blacks differ starkly on disaster: Divide could affect debate on rebuilding. *USA Today*. Available: <http://usatoday30.usatoday.com/educate/college/firstyear/articles/20050918.htm>;
- Patel, R. (2012). *Stuffed and starved: The hidden battle for the world food system*. Brooklyn, NY: Melville House Publishing.
- Plyer, A. (2013, August 14). Facts for features: Katrina impact. The Data Center (formerly Greater New Orleans Community Data Center). Accessed April 14, 2014. Available: <http://www.datacenterresearch.org/data-resources/katrina/facts-for-impact/>
- Plyer, A. and Ortiz, E. (2012, August 21). *Benchmarks for blight: How much blight does New Orleans have?* The Data Center (formerly Greater New Orleans Community Data Center). Accessed March 3, 2014. Available: http://www.datacenterresearch.org/reports_analysis/benchmarks-for-blight/
- Pollan, M. (2006). *The omnivore's dilemma: a natural history of four meals*. New York: Penguin Press,
- Pothukuchi, K. (2004). Community food assessment: A first step in planning for community food security. *Journal of the American Planning Association*, 23(4): 365-377.
- Pothukuchi, K. and Kaufman, J. (2000). The Food System. *Journal of the American Planning Association*, 66(2): 113-124.
- Pourjavid, S. et al. (2013). Analysis of constraints facing urban agriculture development in Tehran, Iran. *International Journal of Agricultural Management and Development* 3(1): 43-51
- PwC and the Urban Land Institute. (2012). *Emerging trends in Real Estate® 2013*. Washington, D.C.: PwC and the Urban Land Institute. Available:

- <http://www.uli.org/wp-content/uploads/ULI-Documents/Emerging-Trends-in-Real-Estate-US-2013.pdf>
- Raja, S., Born, B., and Kozlowski Russell, J. (2008). A planners guide to community and regional food planning: Transforming food environments, facilitating healthy eating. PAS Report, Issue 554. Washington, DC: American Planning Association, Planning Advisory Service.
- Saldana, P. (2013, October 9). The taking of East Austin single family zoned land by the proposed City of Austin urban farm ordinance. Habla Austin News/Blog. Accessed April 26, 2014. Available: <http://hablaaustin.squarespace.com/news/2013/10/9/proposed-city-of-austin-urban-farm-ordinance-the-taking-of-east-austin-single-family-zoned-land>
- Schilling, J., and Logan, J. (2008). Greening the rust belt: A green infrastructure model for right sizing America's shrinking cities. *Journal of the American Planning Association*, 74(4), 451-466. DOI: 10.1080/01944360802354956
- Schleifstein, M. (2013, Aug. 16). Upgraded metro New Orleans levees will greatly reduce flooding, even in 500-year storms. *The Times-Picayune*. Available: http://www.nola.com/hurricane/index.ssf/2013/08/upgraded_metro_new_orleans_1ev.html
- Smit, J. et al. (2001). *Urban agriculture: Food, jobs, and sustainable cities*. The Urban Agriculture Network, Inc. Available: <http://jacsmiit.com/book.html>.
- Steinhauer, J. (2014, March 8). Farm bill reflects shifting American menu and a senator's persistent tilling. *The New York Times*. Retrieved from <http://www.nytimes.com>
- Stockman, D. (2012). *The new food agenda: municipal food policy and planning for the 21st century*. (Doctoral dissertation). Retrieved from ProQuest. (UMI 3519704).
- Stephanie Scherzer on behalf of urban farms. (2013, Nov. 4). Available: <https://www.youtube.com/watch?v=16Q2yBxnRF0>
- Sustainable Food Center. Accessed April 1, 2014. Available: <http://www.sustainablefoodcenter.org/>
- Sustainable Food Policy Board. Accessed April 1, 2014. Available: <http://www.austintexas.gov/sustainability/food>
- Sustainable Food Policy Board. (2013, January 28). Resolution for Urban Farm Definition Update. Available: <http://www.austintexas.gov/sites/default/files/files/Health/SustainableFood/Urban%20Farm%20Definition%20Update.pdf>
- Sustainable Urban Agriculture and Community Garden Program. Accessed April 2, 2014. Available: <http://www.austintexas.gov/departments/sustainable-urban-agriculture>
- Toon, A. (2013, April 12). Communication breakdown. *Austin Chronicle*. Available: <http://www.austinchronicle.com/food/2013-04-12/communication-breakdown/>

- Tropp, D. (2013, October 26). Why local food matters: The importance of locally-grown food in the U.S. food system. USDA Agricultural Marketing Service. Presentation to 4th Annual Virginia Women's Conference. Available: <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRDC5105706>
- Truitt, A. (2012). The Viet Village urban farm and the politics of neighborhood viability in Post-Katrina New Orleans. *City & Society* 24(3): 321-338.
- Tucker, S. and Starr, S. F. (2009). *New Orleans cuisine: Fourteen signature dishes and their histories*. Jackson, MS: University Press of Mississippi.
- TXP, Inc. (2013). The economic impact of Austin's food sector. Available: http://www.austintexas.gov/sites/default/files/files/Redevelopment/Economic_Development/TXP_Austin_Food_Sector_Report_03282013_FINALv1.pdf
- United States Department of Agriculture. Census of Agriculture, Available: <http://www.agcensus.usda.gov/index.php>
- United States Department of Agriculture. Glossary. Accessed March 6, 2014. Available: <http://www.ers.usda.gov/topics/farm-economy/farm-household-well-being/glossary.aspx>
- United States Census Bureau. Population of the 100 Largest Urban Places: 1960. Accessed April 14, 2014. Available: <http://www.census.gov/population/www/documentation/twps0027/tab19.txt>
- Urban Agriculture State Legislation. National Conference of State Legislatures. Accessed March 14, 2014. Available: <http://www.ncsl.org/research/agriculture-and-rural-development/urban-agriculture-state-legislation.aspx>
- Urban Patchwork. Accessed April 1, 2014. Available: <http://www.urbanpatchwork.org/>
- Urban Roots. Accessed April 1, 2014. Available: <http://www.urbanrootsatx.org/about/>
- van Veenhuizen, R. (2006). Cities farming for the future – urban agriculture for green and productive cities. Resource Centres on Urban Agriculture & Food Security. Available: <http://www.ruaf.org/node/961>
- Vitiello, D. and Wolf-Powers, L. (2014). Growing food to grow cities? The potential of agriculture for economic and community development in the urban United States. *Community Development Journal* and Oxford University Press.
- Wachter, S. et al. (2010). Redevelopment Authority of the City of Philadelphia: Land use and policy study. Final Report by Penn Institute for Urban Research and Econsult Corporation. Available: http://penniuir.upenn.edu/uploads/media_items/urban-agriculture-final-report.original.pdf
- Webb, N. (1998). Urban agriculture: environment, ecology, and the urban poor. *Urban Forum* 9(1): 95-107
- Winter, M. (2010, Sept. 7). "In Detroit, Jesse Jackson calls urban farming 'cute but foolish.'" *USA Today*. Available:

- <http://content.usatoday.com/communities/ondeadline/post/2010/09/in-detroit-jesse-jackson-calls-urban-farming-cute-but-foolish/1#.UyX-H-ddVL4>
- Witt, H. (2006, May 8). Suspicions fire racial tensions. *Chicago Tribune*. Available: http://articles.chicagotribune.com/2013-05-08/news/chi-suspicions-fire-racial-tensions-20130508_1_cynthia-willard-lewis-gentilly-new-orleans
- Wolch, J. and Emel, J. (Eds.). (2012). *Animal Geographies: place, politics, and identity in the nature-culture borderlands*. London: Verso.
- Wratten, S. et al. (Eds.). (2013). *Ecosystem services in agricultural and urban landscapes*. West Sussex: John Wiley & Sons, Ltd.