

Freeways and Farms: Veggielution & Taylor Street Urban Farms Study

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REPORT 20-24

FREEWAYS AND FARMS: VEGGIELUTION & TAYLOR STREET URBAN FARMS STUDY

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July 2020

A publication of

Mineta Transportation Institute

Created by Congress in 1991

College of Business
San José State University
San José, CA 95192-0219

TECHNICAL REPORT DOCUMENTATION PAGE

1. Report No. 20-24	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle Freeways and Farms: Veggielution & Taylor Street Urban Farms Study		5. Report Date July 2020	
		6. Performing Organization Code	
7. Authors Joshua Baur, PhD, https://orcid.org/0000-0003-4047-8458 Ashley Estrada, https://orcid.org/0000-0002-3597-4687		8. Performing Organization Report CA-MTI-1890	
9. Performing Organization Name and Address Mineta Transportation Institute College of Business San José State University San José, CA 95192-0219		10. Work Unit No.	
		11. Contract or Grant No. 69A3551747127	
12. Sponsoring Agency Name and Address U.S. Department of Transportation Office of the Assistant Secretary for Research and Technology University Transportation Centers Program 1200 New Jersey Avenue, SE Washington, DC 20590		13. Type of Report and Period Covered Final Report	
		14. Sponsoring Agency Code	
15. Supplemental Notes DOI: 10.31979/mti.2020.1890			
16. Abstract <p>This report presents the results of a project conducted by researchers at San Jose State University in partnership with Veggielution and Taylor Street Farm staff, funded by the Mineta Transportation Institute in San Jose, CA. The research team interviewed staff and volunteer farm workers to explore how nearby roadways impact experiences at farm sites. Research on outdoor nature-based recreation consistently identifies peaceful, natural site characteristics as important to a positive outdoor experience. This project sought to identify whether farm user attitudes and experiences would be consistent with these research findings resulting in farm users reporting that nearby roadways negatively impacted their experience. Without exception, nearby roadways did not interfere with interview participant experiences. To better understand these results, the authors asked farm staff and volunteers about their motivations and expectations for working at their farm.</p> <p>Respondents reported motivations related to doing something meaningful and having a sense of connection to others and to the Earth. Respondent expectations focused on learning and social interaction. In this report, the authors argue that analysis of respondent interviews identifies agreement between expectations and motivations and respondents' experiences at the farm sites as the explanation for the lack of apparent impact from nearby roadways. Farm users' participation was not motivated by seeking a quiet nature experience and they reported no expectation for a quiet nature experience. Therefore, nearby roadways were not regarded as a negative impact among our sample.</p> <p>The authors suggest that these findings hold implications for management and policy considerations. Urban farms are sources of healthy foods and provide opportunities for social interaction and physical activity, all identified as social determinants of health. Urban farms can also be developed as components of San Jose's urban green infrastructure, which will contribute to mitigating the effects of a heating global climate. All of these impacts of urban farms have been linked to quantifiable socioeconomic benefits that can contribute to the quality of life for San Jose's residents.</p>			
17. Key Words Planning and design, environment, economic and social factors, persons and personal characteristics, management and organization	18. Distribution Statement No restrictions. This document is available to the public through The National Technical Information Service, Springfield, VA 22161		
19. Security Classif. (of this report) Unclassified	20. Security Classif. (of this page) Unclassified	21. No. of Pages 68	22. Price

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DOI: 10.31979/mti.2020.1890

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ACKNOWLEDGMENTS

The authors wish to thank the staff and volunteers at Veggielution and Taylor Street Farm for generously agreeing to partner with us on this project. It was a great pleasure working with all of them.

We wish to thank Dr. Jan English-Lueck, Professor in the Anthropology department at San Jose State University. Dr. English-Lueck is Co-PI Estrada's faculty advisor and graciously assisted the research project team.

We want to express our gratitude to the Mineta Transportation Institute (MTI) for funding and Dr. Hilary Nixon, MTI Deputy Executive Director, in particular, for her help and guidance. The authors thank Editing Press, for editorial services, as well as MTI staff, including Executive Director Karen Philbrick, PhD; Graphic Designer Alverina Eka Weinardy; and Executive Administrative Assistant Jill Carter.

Finally, the research team would like to acknowledge the support we receive from university administrative staff. Our work does not occur without their work.

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EXECUTIVE SUMMARY

INTRODUCTION

According to UN predictions, over 89% of the U.S. population will be urban residents by 2050. Freeways, highways, surface streets and other public thoroughways represent vital arteries for commerce and travel in and around cities. Farming is not routinely associated with cities and busy freeways, yet urban farming has been, and continues to be, a contributor to city resident's health and well-being. As such, city planners will benefit from considering creative space-allocation solutions in cities facing the development pressure of growing city populations. This document reports on a case study that explored the relationship between urban roadways and two urban farms in the San Jose Metropolitan area, specifically focusing on how nearby roadways impact the experiences of urban farm users.

THEORETICAL BACKGROUND

The field of positive psychology emerged in which the theory of self-determination demonstrated empirically supported explanatory power. Self-determination theory has been applied to behavior and participation in a host of activities. According to self-determination theory, motivation to engage in a behavior is driven by a psychological need for autonomy, competence, and relatedness. Autonomy relates to an individual's sense of volition or self-direction to engage in an activity. Competence refers to a psychological need to feel able to navigate within the environment. Finally, relatedness refers to a need to feel socially connected to others.

Motivations to engage in an activity lead to expectations about participation. Expectations are impacted by experience and knowledge about an activity and are typically updated as a person engages, and thus learns more about, an activity. When a person engages in an activity or behavior, their expectations for that behavior are supported or disconfirmed. If alignment occurs between motivation, expectations and activity, a person will be satisfied with the experience. In the case of urban farm users at our study sites, the authors inquired how nearby roadways impact farm users' experiences and how their motivations and expectations are involved.

METHODS

Following a comprehensive review of relevant literature, the researchers completed interviews between mid-July 2019 and early September 2019. The authors used convenience sampling to recruit participants until saturation had occurred ($n=14$). Interviews were conducted using a semi-structured approach in which a script was used to guide the interview process. A principal focus of the interviews was interviewees' motivations and expectations for working at their respective farm sites.

The study sites for this project were Veggielution (located in Emma Prusch Farm Park) and Taylor Street Farm, both located in San Jose, CA. The authors carried out data analysis by iteratively reading and analyzing interview transcripts using an open-axial-selective coding method to complete data analysis.

RESULTS

With no exceptions, our respondents expressed a lack of concern for nearby roadway noise or odors, which do not appear to negatively impact farm user experiences in urban settings. One respondent said, “Never bothered me too much because I’m born and raised in San Jose.” Another said “[road noise is] just part of being in the Bay Area.” Respondents in this case study reported that traffic sounds are just part of being in the city and do not even register while they are working. No respondent replied that odors coming from the roadways were bothersome either.

One of the most pervasive themes in responses to the question of motivation was the notion of doing something that feels meaningful. Respondents talked about living a more conscious lifestyle, a lifestyle that emphasizes engagement with others and with natural systems. For our respondents, doing something meaningful was exemplified by making a contribution that benefits others, in ways that included education about growing food and providing healthy food options for distribution to those in need. Meaningfully contributing to the welfare of others and the planet relates to interviewees’ powerful interest in feeling connected to others and the planet. They talked about getting to know each other and members of the communities in which the farms are located. Study participants also referred regularly to feeling connection to nature. Respondents discussed their desire for their kids to learn about nature and feel connected to it. They wanted for themselves and their children to feel the dirt on their hands and to experience the growth of life. These motivational themes are evident in interviewee comments give rise to their expectations for working at the farm.

Several categories of expectations were identified in the interview transcripts. First, farm staff and volunteers reported that they expected the experience to be educational. One respondent said, “I’m learning things here and I can do better gardening, whether in my backyard or on my kitchen window.” One farm staff respondent said that he enjoyed applying agricultural theory to actual farm work. Social interaction was another expectation salient in responses. This is exemplified by one participant who said, “I love the fact that like, we all have this special bond.” Others reported that they were happy that farm events created social opportunities for children and families. Another example of the expectation for social interaction was evident in comments about interacting with diverse others. Respondents talked about how experiences at the farm allowed them to get to know people that they might not otherwise have met.

DISCUSSION

Analysis of the interviews with farm workers (ranging from first time volunteers to experienced farm staff) clearly shows that nearby roadways have little to no impact on the study participants’ experiences. However, it is important to note that there may be bias in the study’s sample. There may have been volunteers for whom nearby roads did interfere with their farm experience, causing them to leave the sites prior to our interviews. But for those present at the research sites, traffic noise and odors were not a barrier to a positive experience at the site.

The authors suggest that the apparent lack of impact that roads have on study participants

is attributable to the agreement between farm users' motivations, expectations and experiences. Farm staff and volunteers' motivations involved doing something meaningful and feeling connected to others and to natural systems. Interviewees commented often on learning about farming practices and doing something that was personally meaningful. Interviewees were motivated to participate and contribute to the farms that they believed are doing something important for the community. Study participants expressed a motivation to learn how to grow healthy food, help others learn how to grow their own healthy food, and to help youth learn about and appreciate farming and food production. By working together, farm users learn how to provide food for themselves and become engaged with each other, the community, and the natural systems on which we depend. Many commented that being around growth and life was deeply meaningful to them. Farm staff and volunteers valued the opportunity to put their hands in the dirt and feel connected to plants and animals. Farm staff and volunteers never mentioned feeling motivated to be at the farm because of a need for peace and serenity in nature.

Their expectations, consequently, centered on being at the farm to do work (which they find personally meaningful), education about farming and gardening (again, meaningful engagement and conscious participation in the food system), and enjoying opportunities for social interaction. The authors suggest that nearby roadways have little or no negative impact on the sample because our interview participants reported being motivated to be at the farms for reasons other than experiencing a peaceful and quiet nature-based experience. In fact, many respondents indicated that they were glad that the farms were located so close to roadways because it meant that they were easy to access. Study respondents' expectations that resulted from their motivations to work at the farms were equally unrelated to being in a quiet natural area.

MANAGEMENT AND POLICY IMPLICATIONS

This paper posits four dimensions of the research that pertain to the management of urban open spaces for non-industrial agriculture.

1. The authors' review of the literature reveals that scholarship on the social impacts of urban farms is currently scant. Few studies have directly explored how urban farms impact the individuals who work at them and the neighboring communities. The authors encourage public agencies to invest in additional research on this subject to contribute to inclusive and intentional sustainable urban planning. The results of this study are not intended to be generalizable. Study results represent another piece of a large and complex picture of urban sustainable planning.
2. Urban open spaces, especially those that are not ideally suited to other commercial or residential uses (e.g., small patches of land abutting a freeway) could be developed for agricultural uses to produce healthy foods, especially in communities where healthy food options may be limited. Urban farms create economic benefits for those who work at the farms by virtue of savings in food costs. They also create economic opportunities for small scale farming operations that can sell produce at farmer's markets.

3. City residents will benefit from urban planning that intentionally includes ecosystem services. Trends in data suggest that human settlement will grow increasingly urban throughout the 21st century and that cities will likely face complex, interwoven impacts of the global climate chaos. Plans that explicitly include ecosystem services can result in improved community health and economic resiliency.

4. Providing outdoor urban green spaces will contribute to the overall wellness of the publics city planners serve. Engagement in physical activity outdoors provides a host of benefits for participants including better health, more positive emotional states/better mood, increased cognitive function, improved spiritual wellness, and (of particular significance for sustainable management of urban natural resources) a stronger sense of connection to nature. Urban residents with strong pro-environmental attitudes, resulting from feeling connected to nature, are more likely to be supportive of sustainable urban natural resource management and policies. City planners and decision-makers can thus expect readier support for and understanding of sustainable natural resource management in cities when the communities with whom they will partner have developed an understanding and appreciation of how ecosystems function and of their own relationship with ecosystems. The decision to invest in green infrastructure continues to be debated among planners, so additional investigation into the costs and benefits is necessary. This case study provides an additional data point to this continuing discussion.

I. INTRODUCTION

According to the United Nations (UN), in 1950 only about 30% of the planet could be characterized as urban.¹ This figure rose to 55% by 2018, nearly doubling in less than 75 years. North America represents the most urbanized region globally, with 82% of the population residing in urban areas. In the United States, 80.7% of the population lived within urban boundaries in 2018.² The UN predicts that over 89% of the U.S. population will be urban residents by 2050. This degree of urbanization places intense pressure on open space in and around cities and creates powerful incentives for city decision-makers to develop urban open spaces for commercial and residential uses that crowd out other uses including open spaces for recreation and non-industrial farming.

The Association of Bay Area Governments projects that the Bay Area population will reach over 9 million people by 2040. The same report estimates an increase of over 822,000 new housing units built in the region by 2040.³ The already considerable population growth in Santa Clara County over the last 30 years resulted in the loss of 21,171 acres of farm- and rangeland to development. An additional 28,391 acres of the County's farm- and rangeland are currently under intense development pressure.⁴ Other regions in California are experiencing similar landscape changes as well. In Los Angeles County, for example, 41,000 acres of land were covered by orange groves in 1950. In 2019, that figure dropped to just 76 acres.⁵ In Santa Clara County, open spaces are extremely vulnerable to development and rising land prices as evidenced by nearly 22,000 acres of farmland being converted for developed uses over the past 30 years (more farmland than any other Bay Area county).⁶ As urban centers in the Bay Area continue to experience population growth, development pressure on open spaces will surely become increasingly intense. More and more, cities are seeking to maximize use of available space for housing and economic development.⁷ Bay Area challenges associated with housing availability and home prices have created a critical need for efficient use of available city space.⁸

While many factors contribute to the intense urbanization in the Bay Area, generally speaking, personal automobiles and abundant roadways are among the biggest contributors to urban expansion.⁹ Freeways, highways, surface streets, and other public thoroughways represent vital arteries for commerce and travel in and around cities. An inventory of public roadways in the city of San Jose reveals that in 2018, there were 3,915 miles of roadway in the city.¹⁰ Nationally, in 2017, transit infrastructure served 326 million Americans and connected 7.6 million commercial entities to each other, suppliers, and customers, resulting in considerable contributions to the economic activity.¹¹ In 2016, freight trucks accounted for the transportation of the largest percentage of goods moved in the U.S., with an estimated value of \$11.2 trillion.

Cities and surrounding regions in Santa Clara would struggle without the network of public roadways that facilitate the movement of goods and people daily. Cities are densely populated landscapes, honey-combed with public roadways and dominated by concrete, asphalt, steel, and semi-permeable or completely non-porous surfaces. These are not environments one readily associates with farming, and yet, urban farming has been and continues to be a contributor to city resident's health and well-being. Urban development means that space for food production and other ecosystem services is limited and creative

allocations of space for uses other than development are becoming increasingly important to consider.

To contribute to this consideration, this document reports on a case study project exploring the relationship between urban roadways and two urban farms in the San Jose, CA metropolitan area: Taylor Street Farm and Veggielution farm. The researchers employed qualitative research methods, interviewing staff and volunteers at the two farms to inquire about how nearby roadways impacted their experiences while working at the farm. Though the authors do not propose any explicit a priori hypotheses, scholarship on outdoor nature-based recreation finds that people who engage in outdoor, nature-based activities commonly identify features related to peaceful natural settings as key contributors to a positive experience.^{12 13} The authors explored whether urban farm users would identify a peaceful nature experience as an unmet expectation in their activities at the farms. In other words, the authors sought to answer the question of how nearby roadways impact the experiences of urban farm users. Interview questions were developed from a comprehensive review of literature to develop a theoretical foundation for the work.

II. THEORETICAL FOUNDATION

URBAN FARMS AND GARDENS

Urban farming (defined as the production of crop and livestock goods within city and town limits)¹⁴ has been a part of American cities ever since the 1800s, and recent decades have witnessed a notable rise in urban agricultural sites across the U.S.^{15 16} Much of the current movement towards local, urban agriculture can trace its roots to the intense post-WWII urbanization of American cities, followed quickly by the hollowing out of city centers in favor of suburban development during the 1960s and 70s.¹⁷ With the migration of people out of city centers in places like New York, Chicago, and Philadelphia, tracts of vacant space emerged as part of a trend of urban decay and blight. The remaining residents in city centers, typically low-income families and people of color, commonly faced significant challenges accessing healthy food options as markets closed and were replaced with fast food restaurants.¹³ In response to economic difficulties and food insecurity, low-income urban communities began developing vacant lots as small-scale garden and farm operations in which community members worked collaboratively to grow and harvest fresh food products in urban agriculture collaboratives.¹⁸

This trend of using abandoned city spaces for community agriculture is currently continuing nationwide as open spaces in cities, whether by design or by circumstance, are being converted to agriculture uses.¹⁹ A 2013 national study of urban non-industrial farm operations revealed that over one third of the farms included in the study had multiple production spaces (mean = 3.1), 78% of production occurred within city boundaries, and mean farm size was nine acres.²⁰

In the past decade, many urban and suburban communities developed urban agricultural sites as part of a growing lifestyle movement in the U.S. centered around making consumer choices that support sustainable practices.^{21 22 23} Many communities in the U.S. and internationally identify the values of community gardens and farms in terms of not only healthy food options²⁴ but also in terms of community social cohesion²⁵ and public health.²⁶

27 28

FARMS AS NATURE-BASED RECREATION

Nationwide, urban agricultural sites provide a host of ecosystem services including food production, energy savings, and nitrogen sequestration with an estimated contribution to the national economy of \$33 billion annually.²⁹ Urban open green spaces provide another valuable ecosystem service in the form of recreation and leisure activities.^{30 31} Urban farms and gardens offer outdoor recreation experiences that promote multiple health benefits through physical activity.^{32 33 34} Motivations for urban gardeners vary, but scholarship on the subject reveals several consistent factors including food provision, opportunities for social interaction, civic engagement, and learning about biological systems.³⁵ Studies also indicate that urban gardens are sources of quiet and restorative recreation, in which participants can maintain or improve their cognitive, emotional, and physical wellness.^{36 37}

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Research has found that positive experiences during nature-based recreation contribute to feeling connected to nature,^{34 39 40} and that naturalness (i.e., the absence of human presence) has been identified as a key contributor to a positive nature-based experience.^{41 42 43} Participant satisfaction with a nature-based recreation experiences is, therefore, routinely linked to the ability of the participant to feel a sense of connection to nature through direct experience of natural features. Natural features associated with a positive experience include hearing nature sounds such as birdsong, the experience of solitude, pleasant fragrances such as blooming flowers, and expansive views.^{44 45 46} When people recreate in an area with features inconsistent with the recreationists' expectations of, for example, naturalness or natural features, dissatisfaction with the experience is likely.⁴⁷ To better understand how presence of human activity might impact urban nature experiences among urban farmers, therefore, it is useful to explore how expectations, motivations, and satisfaction with an outdoor, nature-based experience are linked.

EXPECTATION AND MOTIVATION

In order to understand how nearby roadways impact farm user experiences, we will look at the relationship between expectations, motivation, and experience satisfaction (Figure 1). Satisfaction with an experience results from the agreement between expectations and actual experience.⁴⁸ In cases where expectations disagree with actual experience, one can expect that the activity participant will be dissatisfied to a greater or lesser degree depending upon the level of disagreement.⁴⁹

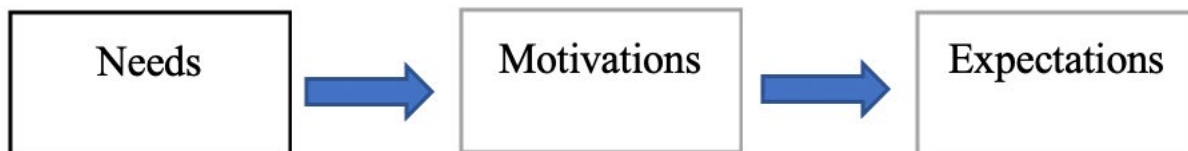


Figure 1. Motivations and Expectations for Experience

Scholars have explored the roots and impacts of motivation to develop an understanding of human behavior.⁵⁰ Early research on human behavior identified basic biological needs as drivers of behavior.^{51 52} Theories of human behavior continued to develop with the work of scholars such as Allport⁵³, Murray⁵⁴, and Maslow⁵⁵ who advanced understanding of behavior from biological needs to specific psychological needs. Development of the scholarship on motivation and behavior continued with a shift occurring in response to the humanistic revolution of the mid 20th century.⁴⁸ The field of positive psychology emerged in which the theory of self-determination demonstrated empirically supported explanatory capacity.

Self-determination theory⁵⁶ has been applied to behavior and participation in a host of activities including education⁵⁷ and exercise.⁵⁸ According to Deci and Ryan⁵⁴, self-determination theory helps explain how “innate psychological needs for competence, relatedness, and autonomy concern the deep structure of the human psyche, for they refer to innate and life-span tendencies toward achieving effectiveness, connectedness, and coherence” (229). Self-determination theory argues that an individual’s motivation to engage in a behavior is driven by need for autonomy, competence, and relatedness. With respect to autonomy, people need to feel that the origin of the impulse to engage in an activity resides within them, rather than originating in some external force. In other

words, people have a psychological need to be in control of their action, to be volitional agents. Competence is the psychological need to effectively navigate and negotiate surrounding environmental influences. Individuals possess a powerful psychological need to feel capable in relation to the external environment. Finally, relatedness results from a psychological need for connection and relatedness to others in a social context.

As people develop motivation to engage in an activity or behavior, they develop expectations for the outcomes of the behavior.⁵⁹ Expectations are impacted by experience and knowledge about an activity and are typically updated and altered by an individual based upon first-hand experience with an activity.⁶⁰ Expectations have both a cognitive and an affective dimension.⁶¹ As individuals learn more about an activity or behavior (either directly or indirectly), their expectations are inevitably amended as new information supports or refutes pre-learning expectations. Similarly, an affective dimension exists in which a person's hopes or fears for an activity may be more or less activated by experience (or lack of experience). When a person engages in an activity or behavior, their expectations for that behavior are either supported or disconfirmed. If alignment occurs between motivation, expectations and experience with an activity, a person will be satisfied with the experience.⁶²

III. METHODS

PARTICIPANTS

Volunteers and staff members from both research site locations who took part in field interviews were assigned pseudonyms (Table 1).

Table 1. Study Participants (with Pseudonyms)

Farm	Pseudonym, Sex, Age	Status (Staff/Volunteer) & Duration
Taylor Street	Brett, Male, 58	Volunteer (1 year)
Taylor Street	Kristin, Female, 24	Staff (4 months)
Taylor Street	Vanessa, Female, 50	Staff (6 months)
Taylor Street	Frank, Male, 36	Staff (3 years)
Taylor Street	Tamara, Female, 44	Staff (1.5 years)
Taylor Street	Natsumi, Female, 41	Volunteer (1 week)
Taylor Street	Priya, Female, 41	Volunteer (3 months)
Veggielution	Kevin, Male, 64	Staff (3 months)
Veggielution	Jasmine, Female, 23	Volunteer (4 years)
Veggielution	Melanie, Female, 29	Volunteer (1 day)
Veggielution	Cathy, Female, 31	Volunteer (2 weeks)
Veggielution	David, Male, 25	Volunteer (1 day)
Veggielution	Ben, Male, 30	Volunteer (5 years)
Veggielution	Emily, Female, 38	Volunteer (1 month)

RESEARCH PROCESS

The idea for this project originated in conversations between the principal investigator (PI) and a San Jose State University (SJSU) administrator with contacts at Taylor Street Farm. The SJSU administrator also suggested Veggielution as another urban farm partner for the study. The PI contacted representatives from Taylor Street Farm and Veggielution initially by email to propose a discussion about the project. Subsequent emails and phone calls helped the PI develop the project in partnership with collaborators from both farm sites.

PI and a graduate student co-principal investigator (Co-PI) conducted a review of pertinent literature while engaging with research project partners at both sites. Study and interview protocols were developed by PI, Co-PI, and Co-PI's graduate advisor (Dr. Jan English-Lueck) using extant literature and study goals. Development of study protocols and the literature review continued until summer 2019, when fieldwork commenced.

Prior to interviews, Co-PI and an undergraduate research assistant (Cynthia Franco, hereafter "RA") recruited by Co-PI and Dr. English-Lueck conducted observations at each site in order to understand formal and informal activities that occur there. During June 2019, prior to the commencement of interviews, Co-PI spent several days volunteering at both research sites and observed and recorded volunteer activities in field notes. Co-

PI's observation process helped her develop relationships with farm staff and volunteers, which facilitated subsequent interview data collection. Also, during June 2019, prior to interviews taking place, PI emailed bilingual announcements (Spanish and English) concerning the project to farm staff partners to distribute to their volunteers and post at the farm sites (Appendix A). All bilingual materials were reviewed by the SJSU Institutional Review Board (IRB) for accuracy of translations. In the event authors interviewed a Spanish-only speaker, RA (a fluent Spanish speaker) would act as a translator.

Interviews began in mid-July 2019 and continued until early September 2019. The interview process was slowed somewhat due to Co-PI working in another job that required her to be out of town regularly throughout the summer weekends. Interviews were conducted at Veggielution on July 27, August 10, and September 7, 2019. Interviews were conducted at Taylor Street farm on August 5, 10, and 24, 2019. Interviews were conducted until saturation occurred, at which point interviews were not revealing new information concerning impacts of nearby roadways.⁶³ Interviews occurred during normal farm operating hours (generally between 10am and 2pm on Saturday), during times when volunteers were working at the sites. Interviews were conducted using a semi-structured approach in which a script (Appendix B) was used to guide the interview process, but flexibility was designed into the interview protocol to allow exploration of any new and informative topics that interview participants might introduce.⁶⁴

All members of the research team (PI, Co-PI, RA) were present for all interviews. PI conducted the interviews and Co-PI assisted (Co-PI asked follow-up questions in addition to asking questions when interview participants introduced a new topic). RA observed interviews, took notes, and was welcome to ask questions. Convenience sampling was used to select interviews participants. At both sites, farm staff approached volunteers during regular volunteer hours and invited them to be interviewed. All volunteers who were invited to be interviewed agreed. All interview participants were English speakers. Farm staff interviewees had previously agreed during project development to be interviewed. We sampled a mixture of staff and volunteers across the two study sites. We wanted to capture the attitudes and perceptions of all users of the urban farms, paid and volunteer, since all users are exposed to nearby roadways.

Interviewees were asked to read an informed consent document prior to commencing any interview activities. After an interviewee read the informed consent document, PI asked the interviewee if they had any questions. PI informed the interviewee that the interview would be recorded using a digital recorder and asked if the interviewee agreed to be recorded. All interviewees agreed to be recorded. Interviews lasted approximately an hour each. At Veggielution, interviews were conducted under a shaded arbor, using a folding table and chairs the research team furnished. At Taylor Street farm, interviews were conducted in a shaded area using picnic tables that were already present at the site. The research team offered a bottle of water to each participant.

All research activities were reviewed and approved by the SJSU IRB, Protocol #S19102.

LOCATION

Veggielution and Taylor Street Farms are located in San Jose, in the Santa Clara Valley of central California. A metropolitan statistical area,⁶⁵ San Jose's 2018 population estimate is slightly above 1 million people with about 35% of the population reported as Asian, 32% Hispanic/Latino, 26% White non-Hispanic, 3% Black/African American.⁶⁶ With an unemployment rate lower than the national average, San Jose is home to industries including professional and business services, manufacturing, education, and health services.⁶⁷ The city experiences an average annual high temperature of 71 F, low of 50 F and average annual rainfall of about fifteen inches.⁶⁸

Veggielution at Emma Prusch Farm Park

Founded in 2008 by SJSU graduate students, Veggielution Community Farm occupies two acres within the Emma Prusch Farm Park (Figures 2 and 3). The farm is located in San Jose's Mayfair neighborhood, home to historically low-income and minority families. The farm seeks to create civic and social engagement through farming and education. In 2013, 2,600 volunteers donated approximately 21,000 hours and harvested over 56,000 pounds of fresh produce.⁶⁹

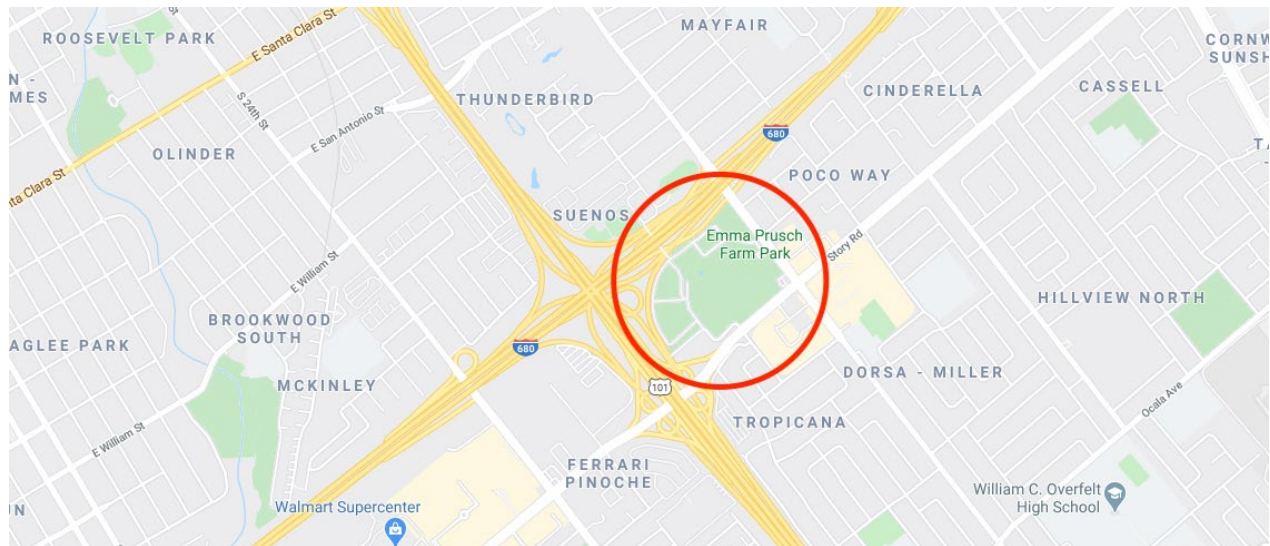


Figure 2. Emma Prusch Farm Park, San Jose, CA



Figure 3. Veggielution Farm, within Emma Prusch Farm Park

Taylor Street Farm

The PI obtained a brief history of Taylor Street Farm through an email exchange with one of the farm's leadership team members.

Taylor Street Farm was founded in 2013 when the organization Garden to Table (<https://gardentotable.org/>) installed 2,500 square feet of raised beds on a previously vacant lot. Taylor Street Farm is a one-acre urban educational farm located in downtown San Jose (Figure 4). The staff at Taylor Street like to think of it as an oasis in the heart of Silicon Valley. Farm staff believe in the power of growing your own food and having access to healthy food. Taylor Street Farm educates youth, families, and the community on where food comes from and how it is grown. Every week, almost 100 volunteers of all ages come to the farm to participate in their programs.⁷⁰

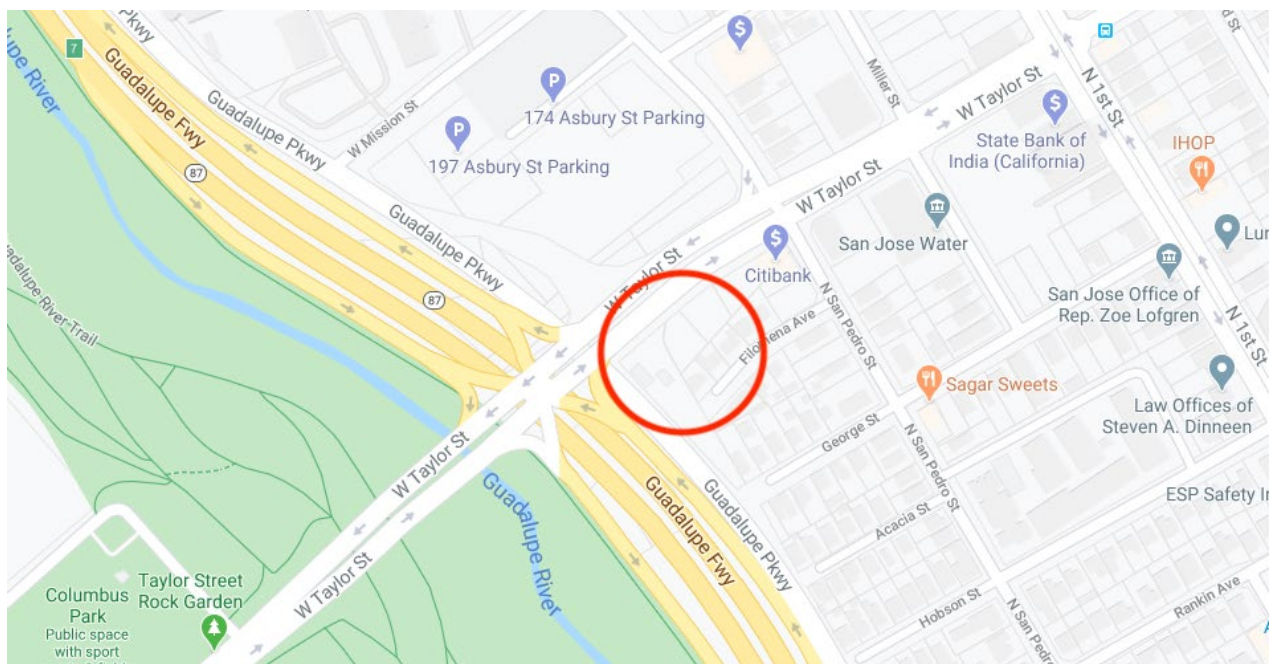


Figure 4. Taylor Street Farm, San Jose, CA

DATA ANALYSIS

Following field work and data collection, transcripts were analyzed using customary qualitative data analysis procedures.⁶²⁻⁷¹ Co-PI used a transcription app called Temi (temi.com) to assist with transcription of recordings. Co-PI transcribed interviews starting in July and ending in September 2019, cross-referencing transcripts with Co-PI's interview notes. Following completion of all transcriptions, PI and Co-PI began coding and data analysis. The qualitative data analysis software NVivo contributed to data analysis.

The researchers employed a combined deductive and inductive approach in data analysis. While no a priori hypotheses were proposed, the authors used the results of the literature review as a framework to guide data analysis. Data analysis also involved identifying new topics that emerged in the interviews which were not components of the original literature review-derived analysis framework. PI and Co-PI iteratively read and analyzed interview transcripts using an open-axial-selective coding method to complete data analysis.⁷ During open coding, the researchers attempted to identify categories of prevalent responses in the participants' statements. For example, if a respondent said "I like working here because I can get my hands dirty," the researchers might apply an open code such as "enjoyment from physical labor in nature."

Following the open coding process, the researchers conducted axial coding. During axial coding, the researchers analyzed open codes looking for links, relationships, and patterns in the open codes. For example, the researchers might examine numerous open codes that relate to working in the dirt and argue that the open codes share a common element having to do with personal engagement with the earth and natural processes.

The final stage of the coding process involved creating selective codes. At the selective coding

stage, the researchers sought one or two core, foundational themes from the axial codes as a representation of the core thematic elements in the participant responses. For example, if a researcher developed the axial codes that indicate engagement with the earth and natural processes as a prevalent motivation, then the resulting selective code (i.e., pattern evident in the axial codes) could arguably be characterized as “connection to the Earth.”

IV. RESULTS

IMPACTS OF NEARBY ROADWAYS

Without exception, our respondents expressed little or no concern or dissatisfaction resulting from a disparity between actual and expected experiences at the farm sites. In particular, nearby roadway noise and odors were found to have little to no impact on farm users (Table 2). This section presents the results of the interviews, including responses to inquiries about the most common road sounds respondents heard, whether some sounds were more disturbing than others, whether they used any techniques to help ignore road sounds, and whether respondents noticed any odors from nearby roadways that impacted them.

Table 2. Sample of Study Participant Responses about Roadway Impacts

Nearby roads do not interfere with user experience	<p>[describing traffic noise] Never bothered me too much because I'm born and raised in San Jose. I mean, I'm used to traffic sounds and so it's nice it [referring to making a conscious effort to ignore traffic sounds] wasn't something I had to try to do. —Frank, Taylor Street Farm staff</p> <p>[describing traffic noise] “Just part of being in the Bay Area—white noise.” —Melanie, Veggielution volunteer</p> <p>[describing traffic noise] “Just a constant hum and you can kind of tune it out after a little bit, but you have to, like, get a little closer to people and talk a little bit louder and you can deal with that.” —Cathy, Veggielution volunteer</p>
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Brett (Taylor Street Farm volunteer) did not identify any particular sounds that were impacting him in any special way. He described the sounds as just traffic noise, admitting “Of course, it would be nicer if there was no traffic noise or... no airplane noise or whatever. Um, that would be great.” Though Brett indicated no traffic noise would be ideal, he said that he was glad to have the farm located where it was because its location was accessible. Brett further indicated that the road noise registered to him as a constant hum and it did not bother him. Frank (Taylor Street Farm staff) described the traffic noise as Brett did: essentially as white noise. Frank commented that what was more bothersome than the traffic noise was the sound of airplanes passing overhead. Taylor Street Farm lies in the flight path of Mineta San Jose International Airport, so planes fly overhead regularly. Frank indicated that, occasionally, horns honking, or tires screeching was somewhat bothersome, but he went on to say that traffic noise “never bothered me too much because I'm born and raised in San Jose. I mean, I'm used to traffic sounds and so it [referring to making a conscious effort to ignore traffic sounds] wasn't something I had to try to do.” Clearly Frank is relating that the nearby roadways do not appreciably impact his experience while working at the farm.

Melanie (Veggielution volunteer) reported a response to traffic noise similar to Frank's and Brett's. She said that the sound is “just part of being in the Bay—white noise.”

Given that our interview occurred on Melanie's first day volunteering, she was not able to comment on any strategies that she uses to ignore sounds, but she did say that she thought she might need to develop strategies to ignore honking. Melanie did not identify any odors coming from the roadways that impacted her. Cathy (Veggielution volunteer) reported that the sound from the roadways was just a constant loud hum, and that no sounds were especially impactful. She explained, "you can kind of tune it out after a little bit, but you do have to like get a little closer to people and talk a little bit louder and you can deal with that." In fact, Cathy commented that the sounds of the peacocks that call Veggielution home were more persistent and irritating than the roads: "The peacocks and even the roosters, they just—apropos of nothing—would start screaming." Though respondents did not report that traffic noises substantially impacted their experiences at the farms, some did comment on trying to manage the sounds by imagining they are something else.

Emily (Veggielution volunteer) commented that the traffic sounds are a constant white noise, so she tries to "convince [herself] it's the ocean." David (Veggielution volunteer), who was at the farm for the first time, reported that he simply tries to focus on his work, rather than the road noise. David said, "in doing work, there's like shovel noises and, like, you're trying to focus on doing your task. So that does sort of tune it out a little bit as well." Neither David nor Emily reported that there were any odors from the roads that impacted them while working at the farm. Generally, interview respondents' comments were similar to Vanessa's (Taylor Street Farm staff), when she replied, "I don't even pay attention to it [referring to road noise]. I didn't even hear it. Um, cause it's just this sort of constant hum ... I don't have any techniques ... because I'm thinking about something else. So ... it doesn't cause concern." Deliberate psychological techniques to process road impacts were not commonly reported but did represent a discernable relationship in the data that otherwise reflects little relationship between roadways and farm user experiences.

Interestingly, several interviewees reported gratitude for their farm's proximity to roadways. For example, Kevin (Veggielution staff) said that the "freeway access is ... convenient." Emily (Veggielution volunteer) reported that her drive to the site was only 10 minutes. Brett (Taylor Street Farm volunteer) said, "It's very convenient cause ... it's very close [to his neighborhood in San Jose]. That's my community." Kristin (Taylor Street Farm volunteer) also said, "because the freeway is accessible for me and it's right off the freeway in one regard, that's actually really helpful cause it is easier to get here." And Vanessa (Taylor Street Farm staff) said, "I love that it's right off the freeway.... When I tell people about it, I say, 'just take 87 and you're right here.' So, the fact that we're directly off this exit is really convenient." Interviewees, rather than identifying nearby roadways as negatives, describe satisfaction that roadways are close by.

This report argues that the lack of an apparent relationship between the experience of working on these farms and the presence of nearby roadways can be largely attributed to study participants' motivations and expectations for working at their respective study sites. First, the authors will discuss participant motivations.

MOTIVATIONS

Interview participants were asked to think about their primary motivations for coming to the farm site on the day we conducted interviews. Respondents were asked the following question: “We would like to learn more about why you are here. What is the main reason you are here at the garden today?” Several examples of reasons were included in the scripted follow-up questions in the event that an interviewee was having difficulty answering the question. These examples included growing food, spending time with friends, and spending time in a natural space. Analysis of interview transcripts suggests two foundational themes in respondents’ motivation statements.

Doing Something Meaningful

One of the most pervasive themes in responses to the question of motivation was the notion of doing something that feels meaningful (Table 3).

Table 3. Sample of Comments about Doing Something Meaningful as Motivation

Meaningfulness	In a lot of ways, it [farming] saved me ... from a mediocre life. —Frank, Taylor Street Farm staff
	Working with people, growing the food, getting it out into the hands of community, teaching people how to do it themselves. —Vanessa, Taylor Street Farm staff
	We want to get outside and learn something and do something.... We want to engage.... If you notice people out here, they’re not looking at their phones, they’re talking to each other, they’re doing <i>something</i> . —Vanessa, Taylor Street Farm staff
	People [are] missing this in their life; being connected to land and plants. And so, the expectation is still, hopefully, to get the message out and have more people come and enjoy it [the farm] and build their own passion for it. —Kristin, Taylor Street Farm volunteer

Vanessa (Taylor Street Farm staff) expresses this well when she replied to the question by saying that her main reason for being at the farm was “working with people, growing the food, getting it out into the hands of community, teaching people how to do it themselves.” For Vanessa, the effort and experience of growing food, helping others to grow food, and distributing food is part of living a more conscious lifestyle—a lifestyle that emphasizes engagement with others and the natural systems on which humans depend. Melanie (Veggielution volunteer) echoes Vanessa’s sentiments, explaining that her reason for being at the farm involved feeling more connected and “not ... just, you know, kind of ... binge eat, eat mindlessly, you know. It’s the same as, like,... farmers who slaughter their own chickens are more ... appreciative and respectful.” Kristin (Taylor Street Farm volunteer) shared a similar sentiment. When asked her about why she was volunteering, she replied that she thinks

People [are] missing this in their life; being connected to land and plants. And so, the expectation is still, hopefully, to get the message out and have more people come and enjoy it [the farm] and build their own passion for it.

She went on to say that she was impressed and surprised at how much volunteers and staff deeply cared about what they are doing at Taylor Street Farm, saying, “I think people genuinely care. And I think that that’s different. I’m not quite used to that.”

Interview participants also related ideas about a particular type of meaningfulness: making a contribution. Frank (Taylor Street Farm staff) said that he wants to “show people how to grow their own food.” He elaborates on this feeling of making a contribution by relating a story to the interviewers about a conversation he had with a volunteer:

I have a lot of experience in education, so I always like to show people that [referring to methods of growing food] and when we were walking back to the farm house, his name was [Alan], he said, ‘[Frank], I made a mistake.’ I was like, ‘Oh, what’d you leave the water on, or something?’ But he said, ‘no, for the last 30 years ... I’ve been growing food for people and I should have been showing people how to grow their own food. Cause that’s where it was more powerful because once they know how to do it, they teach five other people.’ And so I saw the power in that and I just didn’t want to be out alone, you know, on a farm by myself.... My heart was actually going towards actually showing this to people.

For Frank, the act of learning about agriculture with the intent of teaching others how to grow their own food—to help others to be able to care for themselves and enjoy the benefits of healthy food options—fulfills his desire to use his energy and efforts for the benefit of others. In other words, the farm allows him to contribute to the welfare of others, thereby living a meaningful life. Frank said, “In a lot of ways, it [farming] *saved me ... from a mediocre life.*¹” Tamara (Taylor Street Farm staff) expresses a similarly strong interest in contributing when she said, “You want to go to a place where you can make a difference. ... And this place needed people, it needed assistance, it needed infrastructure, and so it was a really good fit.” Tamara, like Frank, does not just express an interest in contributing to the health and wellness of the farm staff and volunteers, she takes action.

Priya, a volunteer at Taylor Street Farm, echoes the sense of making a contribution when she says, “It’s all interconnected, right? Like I give you something, you give me [something] in return. That’s such a nice feeling to go home with.” Priya’s comment suggests that she possesses an underlying belief in the value of mutually reinforcing contributions between people and the planet. Emily (Veggielution volunteer) puts it very succinctly when she says, “[Working at the farm] really appeals to me cause ... I can kind of give back.” Vanessa (Taylor Street Farm staff) said:

We want to get outside and learn something and do something. We don’t want to sit inside and look at the wall. We want to engage. We, if you notice people out here, they’re not looking at their phones, they’re talking to each other, they’re doing something.

In addition to being motivated by living with a sense of meaning, the researchers identified a second primary motivation category they titled sense of connection.

¹Emphasis added by authors

Sense of Connection

Connection to Other People

Table 4. Sample of Comments about Connecting to Other People

Connection to other people	<p>I'm here and I'm giving, sharing that with my daughter—and she loves the chickens. She's connected with them and, you know, I think this is the best kind of experience—like, teaching experience—I can give her while also enriching her life. And that means a lot to me. —Priya, Taylor Street Farm volunteer</p> <p>Getting more connected. It's just a sense of community connection through food. —Emily, Veggielution volunteer</p> <p>[My] grandfather had farm. He had blueberry bushes, bees, [a] persimmon tree orchard.... So, I'd say nostalgia. Nostalgic. —Ben, Veggielution volunteer</p>
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Scholarly literature identifies the sense of connection generated by urban gardening and farming as powerful and desirable.⁷ Interviewees in our study reported a similarly strong interest in feeling connected to others and the planet (Table 4). Priya (Taylor Street Farm volunteer) said “I feel very relaxed. I feel very happy when I’m here and I’m giving, sharing that with my daughter—and she loves the chickens. She’s connected with them and, you know, I think this is the best kind of experience—like, teaching experience—I can give her while also enriching her life. And that means a lot to me.” Priya values the connection her daughter is developing with nature (the chickens), and additionally identifies that her mood is positive (“relaxed,” and “happy”) in the same sentiment. She sees her daughter making connections to the natural world while simultaneously sharing experiences with her daughter that strengthen their connection. Emily (Veggielution volunteer) also said that she liked “getting more connected. It’s just a sense of community connection through food.” Similarly, when the interviewers asked Kevin (Veggielution staff) a question about the social environment at the farm (“Do you feel like you are part of a community here at the farm?”), he replied by describing Veggielution as “a community around food, which I think is, like, a really ... good way to get to know people.... I appreciate that.... I think food, like, connects us to stories a lot, and so it’s a good way to connect with each other.” These comments clearly highlight a desire for engaged connection among the respondents.

Vanessa (Taylor Street Farm staff), like Kevin, identified connectivity to others as a strong motivator for people who work at the farm. Vanessa said, “I guess we’re just driven to engage—engage with the world, engage with each other.” Jasmine (Taylor Street farm volunteer) said simply that one of her motivations for volunteering was “meeting people.” When Jasmine talks about “volunteers that have been here for a long time or people who’ve just, like, somehow connected to the farm through different people,” she refers to being surprised at the social connections that exist at Taylor Street Farm. It can be inferred from Jasmine’s comment that she is pleasantly surprised by the sense of connection farm staff and volunteers feel. This suggests to the researchers that Jasmine’s experiences of developing connections with others through other social activities did not feel sufficiently successful to her. Jasmine’s comment suggests that she is, as a result, happy with the prospect of creating connections

with others through the farm, as was Melanie (Veggielution volunteer), who reported that one of the main reasons she was at the farm was to “meet a lot of fun people.” Interviewees consistently identified how highly valued feeling connected through social interaction is.

This sense of connection also has an interesting generational component, though this was mentioned only by some respondents. Typically expressed in reference to ancestors who had a farm or engaged in farming activities in the past, these respondents reported feeling connected to a prior generation. For several of our interview participants, working on the farm today makes them feel more aware of connected to their history and family. For Frank (Taylor Street Farm staff), engaging in farm activities made him feel connected to a grandfather he never met (“No, no. He died a long time ago before I was born”). Frank said, “My mother’s father grew up during the Great Depression and they had a depression garden. They survived ... from their garden and, you know, hunting. And I kind of wanted to plant some of those varieties he used to grow. It was kind of like a way to speak to him. He’s long gone now.... So, it was a way to have that kind of relationship.” Ben (Veggielution volunteer) related to us that his “grandfather had farm. He had blueberry bushes, bees, [a] persimmon tree orchard. My grandfather had his own farm. So, I’d say nostalgia. Nostalgic.” Ben’s reference to “nostalgia” can be interpreted as a connection to a loved one through the activity of farming. For Jasmine, her connection to another generation was to her childhood self. Jasmine said that “I think, like, as a kid too,... we would have, like, field trips to a farm sometimes.... I was like, ‘farming and gardening is fun.’” Here, Jasmine expresses a sense of connection to her childhood self by consciously connecting her adult experience at the farm to a pleasing memory of her childhood experience on a farm. Melanie (Veggielution volunteer) expresses intergenerational connection to her still-living parents when she envisions learning more about gardening and plants to help her connect with her parents. Melanie said that “my parents, uh, they have a backyard that is full of trees and, you know, vegetables and ... I really have no idea what they’re doing back there.... Every time they asked me to help, I just feel a little lost. And ... they’re also very ... particular about, you know, how to do things.” We can reasonably conclude, therefore that Melanie sees her volunteer work at Veggielution as a way to engage and connect with her parents in an activity that is strongly meaningful to them (“they’re also very ... particular about, you know, how to do things”). Feeling motivated by desire for connection went beyond the human social realm.

Connection to Nature

Feeling connected to nature was another dimension of connection that respondents identified as motivating their work at the farm (Table 5).

Table 5. Sample of Comments about Connecting to Nature

Connection to nature	I like being outside ... and putting my hands in the dirt and connecting with natural cycles. —Cathy, Veggielution volunteer
	I kind of like to come out here and just ... get some outside. Get my hands in the dirt. —Ben, Veggielution volunteer
	[It’s] a great way to also be active outdoors. —Melanie, Veggielution Farm volunteer

Emily (Veggielution volunteer) talked about getting “back to the land,” and Kristin (Taylor Street Farm volunteer) said that it was “fun just to plant something and watch it grow.” Kristin would later say that she felt “people [are] missing this in their life; being connected to animals and plants.” We can reasonably conclude, therefore, that for Kristin and Emily, connection to the Earth is a strong motivator for their farm volunteering. Similarly, Cathy (Veggielution volunteer) said:

I like being outside ... and putting my hands in the dirt and connecting with natural cycles. And in my day to day life, I don't really have an opportunity to do that. So, I feel like ... I can take this time and really just sort of reconnect with the earth and how we live.

Cathy, being an urban dweller (as all the farm workers participating were), cannot spend as much time in contact with nature as she desires so she values the opportunity the farm provides. David (Veggielution volunteer) echoes this sentiment by saying, “I like gardening at home, but I'm in an apartment now so it's really hard to do that. So ... this seems like a neat opportunity to have the space to do, like, farming and gardening.” Natsumi (Taylor Street Farm volunteer) also expressed to the researchers that she was motivated to get her children outside when she said that she wanted to have her kids get outside and be exposed to nature and natural systems “instead of keeping them cooped in the house.”

Likewise, Priya (Taylor Street Farm volunteer) was motivated to be at the farm to “[get her] hands dirty, working with the earth.” Ben (Veggielution farm volunteer) said, “I have an office job Monday through Friday, so I kind of like to come out here and just ... get some outside [time]. Get my hands in the dirt.” Vanessa (Taylor Street Farm staff) expressed a similar motivation when she reported to the interviewers that she “just [loves] being around growing things.” Melanie (Veggielution volunteer) said that she believed that volunteering at the farm was “a great way to also be active outdoors” and that working on the farm helped her feel more “appreciative and respectful” of plants and animals that people consume. Jasmine (Veggielution farm volunteer) commented that working outdoors and being physical on the farm “makes [her] a lot happier of a person” because the work is “calming and, like, satisfying.” The authors argue that the motivations identified in interviewee comments give rise to their expectations for working at a farm (Figure 1). To learn more about interviewee expectations, the researchers asked respondents the following question: Can you tell me a bit more about what your expectations for this location were before you started volunteering here? Responses concerning their expectations fell into two categories, discussed further below.

EXPECTATIONS

Education

Table 6. Sample of Comments about Education

Learning	<p>No, I thought learning too. Cause I figured whoever was doing the guiding would be experienced and know what they're doing. —Natsumi, Taylor Street Farm volunteer</p> <p>I'm learning things here and I can do better gardening, whether in my backyard or on my kitchen window. So I'm getting all the knowledge. I think, you know, that's why I like it here. —Priya, Taylor Street Farm volunteer</p> <p>I knew it was a place where ... you could learn a lot. —Tamara, Taylor Street Farm staff</p> <p>[We learn] how theoretical ideas or academic ideas actually are put into practice. —Kevin, Veggielution Farm staff</p> <p>[I expected] at least one person who had been here for a while to, like, help us guide and show us what to do. —Jasmine, Veggielution Farm volunteer</p>
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Respondents consistently identified education as a primary expectation (Table 6). For example, responding to the question, “Did you think that you’d be learning while you were here or that you’d be just helping to basically do physical labor,” Natsumi (Taylor Street Farm volunteer) said: “No, I thought learning too. Cause I figured whoever was doing the guiding would be experienced and know what they’re doing.” Natsumi also said “I thought we would be given instruction and we would be given assignments.” In her reply, Natsumi makes no mention of an expectation of a quiet, peaceful nature experience. Like other respondents, she did not come to the farm expecting her experience to be quiet and peaceful.

Many of the respondents indicated reviewing online information and seeing that education was a part of the farm’s mission. Tamara (Taylor Street Farm staff) said “from the Facebook page, I knew that the focus of this farm was really on education.” She went on to add “So, I knew it was a place where ... you could learn a lot, but I don’t think I had a lot of expectations given that there wasn’t, um, a lot out there about the farm.” Kevin (Veggielution staff) also identified learning about other cultures and the ways in which other cultures grow and prepare food. Kevin also said that working at the farm presents the opportunity to learn “how theoretical ideas or academic ideas actually are put into practice.” Practice/practical skills and learning were similarly emphasized by participants, describing expectations that were task oriented. Jasmine (Veggielution volunteer) said that she came “prepared to, like, be directed to a specific task and then, within that, like, I knew I would ... have, like, choice of, like, oh, take breaks whenever you need it.” David (Veggielution volunteer) offered a similar expectation when he said, “I can dig, I can use a shovel,” elaborating further that though he could physically accomplish the task assigned, he needed farm staff to help him “[know] what to do with the shovel, what ... tasks need to be done, when they need to be done.” David, therefore, came to the farm ready to complete tasks and expected supervision so he could direct his efforts profitably. Similarly, Jasmine (Veggielution volunteer) reported that she expected “at least one person who had been here for a while to, like, help guide us and show us what to do” as a way for volunteers to know what tasks they need to accomplish and to help them learn.

Learning and task accomplishment can occur individually or in a group dynamic. Kevin pointed out that “field crew[s] would work together and they would work as a group, working on one process or another process or one activity.” Priya (Taylor Street Farm volunteer) expresses this dimension of education nicely when she said:

Here we are learning, like, ... the first time I was here I learned about how to choose a fertilizer depending on what plant you’re growing. And they have a great lesson. If you haven’t heard it, you should take that lesson ... they have the whole concept there for how to choose a fertilizer. So I’m learning things here and I can do better gardening, whether in my backyard or on my kitchen window. So I’m getting all the knowledge. I think, you know, that’s why I like it here.

Priya and Kevin’s comments are representative of the responses to this question in that they identify a powerful valuation of learning by doing. Volunteers and staff alike at our partner sites expressed a strong expectation of education and learning from one another.

Social Interaction

Table 7. Sample of Responses about Social Interaction

Social Interaction	<p>I thought maybe they [referring to her children] could come and run around and just look at all the vegetation and plants and participate in whatever the staff would let them participate in. —Natsumi, Taylor Street Farm volunteer</p> <p>They were involving kids a lot. Again, as a parent, ... I’m very grateful for how much they involve the kids. —Priya, Taylor Street Farm volunteer</p> <p>[Referring to work expectations] [working] with groups in a social setting. —Ben, Veggielution volunteer</p> <p>I love the fact that, like, we all have this special bond. —Tamara, Taylor Street Farm staff</p>
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Respondents at both Veggielution and Taylor Street Farm consistently mentioned family activities and being in a social setting as some of their primary expectations (Table 7). Both sites actively encourage kids and family to volunteer. Veggielution, for example, has a Youth Garden program, which seeks volunteers to help “families in our Youth Garden explore the garden, learning about healthy lifestyle choices, and discovering the exciting processes of the natural world.” (<http://veggielution.org/youth-garden-volunteering>) Taylor Street Farm hosts family-centric events in which “hands-on garden education help[s] young children (ages 4–10) nourish their curiosity, improve cooperative learning and listening skills, enhance their senses, become stewards of the environment, eat more fruits and vegetables, and increase physical activity” (<http://www.taylorstfarm.org/events.html>). Natsumi (Taylor Street Farm volunteer) said,

I thought maybe they [referring to her children] could come and run around and just look at all the vegetation and plants and participate in whatever the staff would let them participate in. I wasn’t too sure how they ... worked everything and ... if the regular volunteer hours were kid-friendly. But it seems like they are.

Thus, working alongside their children and helping their children learn about farming and

food was important to respondents.

Priya (Taylor Street Farm volunteer) reported that “when I came and, you know, I saw how grateful they (referring to farm staff) were and, you know, they were involving kids a lot. Again, as a parent, ... I’m very grateful for how much they involve the kids.” She went on to say “they (Taylor Street Farm staff) had activities that they (the kids) could do.” Natsumi (Taylor Street Farm volunteer) was very happy to see that so many children were involved in farm activities because she wants her kids to learn about farming and food production. She said “I first came to the family day, ... when we brought the kids and we saw all the other kids. That was fun.” Natsumi went on to say “I didn’t expect to see so many families here. I didn’t know that they would have different stations for the kids to participate in like salsa making, planting lettuce, and whatever else they were doing.” In these responses, the researchers see parents expressing appreciation for the activities that staff developed for their children so that kids were actively involved in the farming activities alongside their parents.

Socializing and social interaction is another major theme in the interviews; respondents worked at the farm with the expectation of working in groups and meeting other volunteers and staff. Ben (Veggielution volunteer) remarked that he anticipated meeting people and working “with groups in a social setting.” Tamara (Taylor Street Farm staff) said that “now we have a really strong group of volunteers and a lot of folks come out from the community,” suggesting that social interaction is a priority for the farm staff. The researchers also asked Tamara to talk about the sense of community at Taylor Street Farm, and her reply clearly highlights the value farm staff place on social interaction and bonding: “We ... really attract a diverse ... group of folks and it’s probably people that we wouldn’t otherwise meet or become friends with or get to know. And I love the fact that like, we all have this special bond.” Respondents express a clear expectation for building bonds with other volunteers and with staff.

Interest in socializing and social connection is also evident in Cathy and David’s comments, volunteers at Veggielution Farm. David, with whom we spoke on his first day at Veggielution, commented, “maybe I will make some friends and there’ll be a larger community, but ... I have to see ... what happens with that.” Though David does not express an emphatic interest in making friends here (“*maybe* I will make some friends...”), he clearly anticipates that socializing and relationships will be part of the environment at the farm. Similarly, Cathy, who had volunteered at Veggielution for some time but left the area for several years and was reconnecting with Veggielution following her return to San Jose, remarked that “You know [with] repeated exposure, you get to know people. So, there was certainly some of that last time.... I just haven’t been back long enough to really build those relationships again.” Clearly, Cathy enjoyed social connections with other volunteers and staff at Veggielution and was interested in making new connections.

V. DISCUSSION

This study examines how nearby roadways impact farmers (staff and volunteers) at two San Jose, CA urban farms. The researchers were interested in how the outcomes from this study compare to prior research into the elements contributing to satisfying nature-based outdoor experiences. According to prior research, participants in outdoor recreation activities routinely seek peaceful nature locations. A peaceful natural setting, therefore, would seem to be central to a positive outdoor experience.³⁸ Other desirable elements commonly identified with a satisfying outdoor experience include absence of human activity,⁷ peace and quiet,⁷⁵ presence of wildlife⁷⁶ and water features.⁷⁷ Based on the body of research reviewed for this study, the researchers anticipated that interview participants might identify nearby roadways as negatively impacting their farm experiences. However, our respondents did not report any substantial impact from nearby roadways.

NEARBY ROADWAYS HAVE NEGLIGIBLE IMPACTS ON URBAN FARMING EXPERIENCES

For many outdoor recreationists, being away from traffic and other city noises are among their primary expectations when engaged in outdoor recreation.⁷² For the recreational volunteer farmers and farm staff in this study, however, this was not the case. Priya (Taylor Street Farm volunteer) perfectly exemplifies the absence of this expectation when she said,

I wasn't coming in expecting it to be quieter or anything. You know, occasionally when we are talking here, we have to talk a little louder to dominate [over] the noises around us. But ... there wasn't a point where I felt it's too noisy."

Our analysis of the interviews with farm workers and volunteers makes clear that nearby roadways have little to no impact on the participants. We asked interview participants about what sounds they heard from the nearby roadways, whether any sounds were more disturbing than others, and whether interviewees employed any techniques to help ignore the sounds. Without exception, interviewees reported that nearby road sounds did not negatively impact their experiences at either site. Mostly, respondents described the sounds of roads as a constant hum—just white noise. They expressed no concerns or frustration with the road noise, with the exception of having to occasionally talk a little louder.

Though it appears that nearby roadways do not impact urban farmers, it is important to consider that our data collection may have missed a group of volunteers who could provide a differing perspective on the question of roadway impacts. It is possible that some volunteers and staff at the farm *were* bothered by the road noise, causing them to leave the site prior to research activities commencing at each site. This response is called a coping mechanism.⁷⁸ Coping mechanisms have been identified as a response (cognitive or behavioral) to some negative or unpleasant stimulus that detracts from a user's experience. For example, cross-country skiers may experience conflict with snowmobilers.⁷⁹ Cross-country skiers commonly prefer experiences that are based in nature, with quiet surroundings and natural scenery. Snowmobilers, on the other hand, typically seek out a more adrenaline-fueled experience. Consequently, snowmobilers intense and "aggressive" experiences that include vehicles that are noisy and emit malodorous exhaust, are likely to negatively impact the experiences

sought out by the cross-country skiers.

In response, skiers can use different types of coping behaviors including leaving the site in favor of one that meets their expectations (spatial displacement); using the site at a different time in hopes of avoiding other conflict-inducing users (temporal displacement); or engaging in accommodation. Accommodation is a cognitive strategy in which the recreation user reappraises their expectations for their recreational experience such that the impact of the conflict-inducing behavior is sufficiently reduced.⁸⁰ In the current study, one cognitive coping mechanism was reported by a small number of interview participants. These informants reported that they thought about traffic noise as something other than traffic, such as Emily from Veggielution re-imagining the sound as waves at the beach.

However, there may also have been volunteers at one or both of our research sites who left the sites (a spatial displacement coping mechanism) prior to our interviews in response to nearby roadways. As such, the reporting in this study may feature a biased sample since the researchers did not contact those who may have left the sites. For those at the site with whom the researchers could speak, however, traffic noise and odors were not a barrier to a positive experience at the site. The researchers thus suggest that the lack of impact that roads seem to have on study participants is attributable to the nature of farm users' motivations and expectations for being at the farm. The essential motivations evident in interviewee comments relate to engaging in personally meaningful activities, not a quiet experience in nature. For farm users, it is clearly meaningful to participate in the food system in ways that feel more conscious and intentional. Interviewees commented often about how farming activities contribute to doing something more than just "sitting around" and living lives that would feel unfulfilling for them. The meaningfulness of participating more consciously in the food system was also reflected in comments about helping the community.

Interviewees expressed a motivation to learn about growing healthy food, helping others learn how to grow their own healthy food, and helping youth to learn about and appreciate farming and food production. Both farm staff and recreational volunteer farmers described how the mission of the farms (especially regarding education) resonated with them. Many commented that being around growth and life was deeply meaningful to them. Clearly, farm staff and volunteers were motivated by service and education, both of which contribute to living a meaningful life for them. A meaningful life for the volunteers and staff also centered around empowerment through engagement. By working with each other, they could learn to provide food for themselves and become engaged with each other, the community, and the natural systems on which we depend. Farm staff and volunteers also consistently identified building connections and a sense of community (among farm staff and volunteers, and with the neighbors in the community surrounding the farm) as strong motivators. These basic motivational traits are consistent with the expectations interview participants discussed.

The researchers suggest that farm user motivation for doing something that feels meaningful and feeling a sense of connection lead to respondent's reported expectations centered on contributing to the farms with their labor, learning about farming and gardening, and having opportunities for social interaction. Interestingly, though interviewees did not identify having a quiet nature experience as an expectation, they nevertheless voiced interest in feeling more connected to the Earth. This sense of connection to others, including nature, is a

recurrent theme throughout the interviews. A sense of connection to nature is frequently sought during more peaceful remote area recreation.^{81 82} Despite being in the middle of a major urban area surrounded by busy roadways, farm staff and volunteers expectations indicate that they valued the opportunity to connect with nature by putting their hands in the dirt and encountering and experiencing the plants and animals at the farm.

The researchers suggest that this consistency between interviewee motivations, expectations, and experiences at the study sites is the primary reason that interview analysis failed to reflect a discernable negative impact from nearby roadways. Nearby roadways have little or no negative impact on our sample because they were motivated to be at the farms for reasons other than a peaceful and quiet nature-based experience. Further, their expectations, derived from their motivations, were met because they did not depend on a serene nature setting. Given that their expectations did not include quiet or peace, there was no sense of conflict between experience, motivations, and expectations for volunteering or working at the farm sites. In fact, many respondents indicated that they were glad that the farms were located so close to roadways because it meant that they were easy to access. Study results present several implications for management of urban green spaces, especially those located nearby a busy roadway.

MANAGEMENT AND POLICY IMPLICATIONS

The researchers suggest that there are four dimensions of urban farming our analyses revealed that are directly relevant to urban planning and management. These dimensions are: Need for additional research, urban farms can serve as resources for healthy food options, urban farms contribute to local ecosystem services with direct benefits for city dwellers and, space for salubrious outdoor leisure activities is needed in heavily urbanized locations.

Additional Research on Urban Farms is Needed

This report presents the outcome of a case study. While case studies are immensely useful, they are by design and necessity, not generalizable. The results of our analyses represent another piece of a picture that remains incompletely understood but with additional study, will grow clearer. Currently, the body of research that has considered the impacts (social and economic) of urban farms remains incomplete and the authors would like to encourage decision makers and planners to support scholarship that focuses on the still developing understanding of urban farms and their impacts. One of the difficulties urban planners and decision-makers have identified in relation to urban farms is a lack of understanding and access to technical information.⁸³ Consequently, there is reason to dedicate public and private funds to support scholarship focusing on urban farming impacts. Results from collaborative research projects involving urban farms, civic and business leadership, and universities will contribute to continued data-driven management decisions.

Access to Healthy Foods

Urban open spaces, especially those that may not be ideally suited to other commercial or residential uses (e.g., small patches of land abutting a freeway), could be developed

for agricultural uses. In many low-income communities around the U.S., urban farms and gardens directly contribute to social, environmental, and health justice as sources of healthy foods.^{84 85} Provision of food through urban farms has demonstrated economic impacts that include savings for individual families and communities⁸⁶ as well as commercial benefits through farmer's markets.^{87 88} Open space in neighborhoods has also been linked to higher property values.^{89 90} Public planners and decision-makers can contribute to direct economic impacts for city residents through urban farm spaces using local laws that extend urban farming economic benefits to landowners.

In some locations, city and state governments have already begun to recognize the practical economic implications of non-industrial agricultural for urban property owners and developers. In California, Assembly Bill 551 (the Urban Agriculture Incentive Zones Act (UAIZ), which was signed into law on Sept. 28, 2013) allows cities and counties to create incentive zones in urban areas for local food production. Under UAIZ, landowners who agree to designate their land for small urban farming operations, greenhouses, community gardens, or the like for five years or more are entitled to adjust assessed property value for tax purposes. Property taxes for such plots will be assessed based on the average per-acre value of irrigated cropland in California, which is generally a much lower rate than urban property tax rates. To qualify for the lower property tax, urban agriculture parcels must be at least 0.10 acres and no larger than 3 acres.⁹¹ According to the California State Board of Equalization, the assessed value for lands falling under UAIZ in 2020 is \$15,100 per acre.⁹² These tax incentives should be very appealing to commercial property owners who possess undeveloped property not readily converted to more conventional uses because of its location next to a busy roadway. By taking advantage of the UAIZ designation, property owners not only benefit financially but also contribute to neighborhood stability, sustainability, and environmental justice with direct and measurable benefits to public health. These benefits would not only accrue for community residents either; reserving open space for community agriculture also creates very positive visibility for property owners and real estate developers.

Ecosystem Services

Ecosystem services are services that arise out of natural processes and yield benefits for people.^{93 94} Urban ecosystems, that include urban farms and gardens, are identified as providers of direct services to people,^{95 96} including provision of food,⁹⁷ biodiversity,⁹⁸ pollination and seed dispersal,⁹⁹ water regulation and quality,^{100 101} and climate change resiliency.¹⁰² Consequently, city planners and decision makers who wish to implement intentional, proactive strategies for sustainable city planning rather than arguably less efficient, reactive strategies can meet their goals partially by including urban small-scale farms in their planning. The significance of sustainability in city planning is apparent when one considers accelerating urbanization of humanity.

Trends in data suggest that human settlement will grow increasingly urban in the unfolding 21st century,¹⁰³ and that cities will likely face complex and interwoven impacts of global climate chaos.^{104 105} Inclusion of urban green infrastructure can help mitigate many of the impacts of climate change in cities.^{106 107} Among the unique consequences cities face in a heating global climate is the urban heat island effect (UHI) in which cities are warmer

than surrounding rural areas as a result of heat trapping and reflecting materials used to build cities.¹⁰⁸ Predictions for economic impacts of UHI reach as high as 3.9% of city GDP by the end of the century.¹⁰⁹ Mitigation of UHI is one of the ecosystem services that urban green spaces like farms provide for city residents.^{110 111} City planners and decision makers will serve their constituents well by considering in current and future city planning decisions how urban farm spaces contribute to UHI mitigation and other ecosystem services. Planning in harmony with nature (by including abundant green infrastructure) results in improved community health (as indicated by such things as physical activity and healthy food) and economic resilience (ability to adapt to and manage economic expansion and contraction).¹¹² Another ecosystem service, access to outdoor recreation and physical activity, are both social determinants of health and contributors to sustainable urban planning.^{113 114} Urban farms, according to our sample, provide valued opportunities for physical activity. Therefore, the researchers suggest that the salubrious physical activity associated with urban farming will also positively impact public health.

Provision of Outdoor Recreation

Respondents in our sample indicated that one prominent motivation for volunteering on urban farms is the opportunity to engage in physical activity that is also meaningful (e.g., growing and teaching others to grow food). Personally meaningful physical activity is routinely provided through outdoor recreation, identified as an ecosystem service—but one which receives less attention relative to the more well-known services such as climate change mitigation and water regulation.^{115 116} Engagement in physical activity outdoors provides a host of benefits for participants including better health,^{117 118 119} positive emotional states/better mood,^{120 121} improved cognitive function,¹²² and spiritual wellness.^{123 124 125} These benefits are linked directly to economic impacts such as worker productivity and reduced strain on public healthcare systems.^{126 127} In addition to such benefits, outdoor recreation is directly related to sustainable management of urban natural resources by virtue of creating a stronger sense of connection to nature.^{128 129}

Conscious awareness of a connection to nature is regularly identified among remote-area nature visitors as a desirable outcome of their experiences.^{130 131} Similarly, respondents in the current study reported that feeling more connected to the Earth and its natural systems was a strong motivator for working at both farm sites. Through urban, non-industrial farming, participants engage in physical activity that connects them to the local ecosystem. From the point of view of sustainability, children's sense of connection to nature is particularly important to consider. Research identifies pleasant, nature-based childhood experiences as one indicator of future pro-environmental behavior in adult life.^{132 133 134} Urban residents with strong pro-environmental attitudes are more likely to be supportive of sustainable urban natural resource management and policies.^{120 135} Therefore, city planners and decision makers can expect readier support for sustainable natural-resource management in cities where the communities with whom they will partner have a well-developed understanding and appreciation of how ecosystems function through their sense of connection to nature.

Community planning and development are collaborative processes in which a well-informed, actively engaged community will drive development and planning towards

consensus decisions. Given the likelihood that urban planning will face increasingly complex challenges in a new climate-altered reality, decision makers and the publics they serve will need to consider and understand various planning alternatives. Among the climate change mitigation strategies that have demonstrated effectiveness for a relatively low cost,¹³⁶ abundant urban green infrastructure will be more likely to be supported by city residents who have first-hand knowledge and experience with urban green spaces. Nevertheless, investment by cities in urban green infrastructure remains under debate, making additional investigation into its costs and benefits necessary.¹³⁷ This case study provides an additional data point in the continuing discussion.

VI. CONCLUSION

In this case study, the research team sought to better understand how nearby roadways impact volunteers and staff at two San Jose, CA urban farms. The researchers explored study participants' attitudes and perceptions of nearby roadways to facilitate understanding of the relationship. Based on existing scholarship focusing on desirable features associated with positive outdoor experiences, the researchers suspected that farm volunteers and staff would be likely to identify road noise as a barrier to positive experiences. The sample reported on in this paper, however, reported that nearby roadways did not negatively impact their farm experience. In fact, not one single respondent indicated that nearby roadways were a problem either by virtue of noise or unpleasant odors. This lack of impact by nearby roadways on farm users is understandable given study participants' motivations and expectations (Figure 1). The respondents in this study were not motivated by working in a peaceful natural location and, consequently, had no expectation for a quiet nature experience. In fact, respondents expected to hear traffic noise given the location of the farms in downtown San Jose. It is significant to note that many respondents even identified the proximity of roadways as a positive feature; locating farms right off the freeway makes them easy to reach. Based on these findings, the researchers propose several management considerations with direct implications on public health and wellness as well as sustainable urban planning and management.

The researchers caution the reader to take note of several study limitations. First, this study is a small-sample case study and is, therefore, not generalizable to the population of San Jose, nor to any other population of urban farmers. Second, sample selection bias may create upward pressure on study error. The researchers contacted only those working at the farms at the time of study and, therefore, were unable to interview any people who may have left the study sites in response to negative impacts of nearby roads. Finally, all studies contain inherent error resulting from numerous methodological sources. The researchers attempted to reduce error by rigorously adhering to tested social science research methods, but error cannot be removed entirely from any study. As Kaplan and Kaplan explained, "Every study is incomplete and provides only a partial view. Multiple studies across different groups of people and different settings will be necessary no matter how elaborate each individual study."¹³⁸ Thus, future studies could expand and improve upon this work by examining the relationship of nearby roadways and urban farmers' experiences in different locations across the state and nationally.

The researchers on this project present these results with the hope that they will be a useful contribution to urban natural resource managers, city planners, and the general body of knowledge concerning our relationships to urban green spaces and sustainable planning. The results demonstrate how highly valued urban farms are by their paid staff and volunteer. Moreover, there is a growing body of empirical evidence that supports the conclusion that urban farms and gardens generate abundant benefits with low accompanying costs. Nevertheless, efficient and intentional strategies for sustainable city management will depend increasingly on understanding the costs and benefits of space usage to urban residents. Busy urban roadways are here to stay for the foreseeable future; cities rely on them to transport goods and people daily. Unused small parcels of land that abut a busy roadway need not remain unused. City planners and managers can capitalize on the presence of undeveloped

land near these roadways. Such sites can be a resource for individual and public health, ecosystem services and sustainability, environmental justice, and better quality of life for city residents in the Bay Area.

APPENDIX A: BILINGUAL OUTREACH MATERIALS

SPANISH VERSION—VEGGIELUTION INTRODUCTION LETTER

Queridos amigos en Veggielution,

Thank you for taking the time to read this. Gracias por tomar el tiempo de leer esto. My name is Joshua Baur. Mi nombre es Joshua Baur. I am an assistant professor at San Jose State University, in the department of Health Science and Recreation. Soy profesor asistente en la Universidad Estatal de San José, en el departamento de Ciencias de la Salud y Recreación.

I am reaching out to inform you about a study I am conducting. Me dirijo a ustedes para informarles sobre un estudio que estoy realizando. The Mineta Transportation Institute (<https://transweb.sjsu.edu/>) is funding this project. El Instituto de Transporte de Mineta (<https://transweb.sjsu.edu/>) está financiando este proyecto. Along with Graduate Research Assistant Ashley Estrada, and Undergraduate Research Assistant Cynthia Franco, I am looking at the impacts of nearby roadways on users of urban farms, such as yourself. Junto con la Asistente de Investigación de Posgrado Ashley Estrada y la Asistente de Investigación Cynthia Franco, estoy analizando los impactos de las carreteras cercanas en los usuarios de las granjas urbanas, tal como la de Veggielution. We are looking for volunteers to participate in our study. Estamos buscando voluntarios para participar en nuestro estudio.

Esperamos que, con la ayuda de los voluntarios, los resultados de este estudio ayuden a los gerentes de su granja y los planificadores locales y tomadores de decisiones a tomar en cuenta las necesidades de los residentes de San José. Study results will also contribute to a scholarly body of research. Los resultados del estudio también contribuirán al cuerpo académico de investigación.

We will be coordinating with your farm's staff to set up times to carry out interviews withEstaremos coordinando con el personal de su granja para establecer horarios para llevar a cabo entrevistas con study volunteers.voluntarios para la investigación. I hope that you will consider participating with our study. Espero que consideren participar en nuestro estudio. Your experiences and thoughts are important to us. Sus experiencias y pensamientos son importantes para nosotros. If you have any questions, please feel free to contact me at Joshua.baur@sjsu.edu.

Si tienen alguna pregunta, no duden en contactarme por email en Joshua.baur@sjsu.edu.

Thank you for your kind attention. Gracias por su amable atención.



Joshua Baur

ENGLISH VERSION—VEGGIELUTION INTRODUCTION LETTER

Dear Friends at Veggielution Farm,

Thank you for taking the time to read this. My name is Joshua Baur. I am an assistant professor at San Jose State University, in the department of Health Science and Recreation.

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We expect that, with the help of study volunteers, results from this study will help managers at your farm and local planners and decision-makers reach decisions that are inclusive of the needs of San Jose's residents. Study results will also contribute to a scholarly body of research.

We will be coordinating with your farm's staff to set up times to carry out interviews with study volunteers. I hope that you will consider participating with our study. Your experiences and thoughts are important to us.

If you have any questions, please feel free to contact me at Joshua.baur@sjsu.edu.

Thank you for your kind attention.



Joshua Baur

SPANISH VERSION—TAYLOR STREET FARM INTRODUCTION LETTER

Queridos amigos en Taylor Street,

Thank you for taking the time to read this. Gracias por tomar el tiempo de leer esto. My name is Joshua Baur. Mi nombre es Joshua Baur. I am an assistant professor at San Jose State University, in the department of Health Science and Recreation. Soy profesor asistente en la Universidad Estatal de San José, en el departamento de Ciencias de la Salud y Recreación.

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Esperamos que, con la ayuda de los voluntarios, los resultados de este estudio ayuden a los gerentes de su granja y los planificadores locales y tomadores de decisiones a tomar en cuenta las necesidades de los residentes de San José. Study results will also contribute to a scholarly body of research. Los resultados del estudio también contribuirán al cuerpo académico de investigación.

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Thank you for your kind attention. Gracias por su amable atención.



Joshua Baur

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We expect that, with the help of study volunteers, results from this study will help managers at your farm and local planners and decision-makers reach decisions that are inclusive of the needs of San Jose's residents. Study results will also contribute to a scholarly body of research.

We will be coordinating with your farm's staff to set up times to carry out interviews with study volunteers. I hope that you will consider participating with our study. Your experiences and thoughts are important to us.

If you have any questions, please feel free to contact me at Joshua.baur@sjsu.edu.

Thank you for your kind attention.



Joshua Baur

APPENDIX B: INTERVIEW SCRIPT/QUESTIONS

Introductory Comments

First, thank you for taking time out of your day to speak with us. My name is _____(Josh or Ashley). I am a _____(faculty member or graduate student) at San Jose State University. This is my project partner _____(Josh or Ashley). (SPANISH LANGUAGE VERSION ONLY) - Cynthia Franco, an undergraduate research assistant, is also with us today acting as our translator. As you may be aware, we are conducting this study in partnership with farm leadership to learn more about how nearby roadways affect your experiences here at _____(farm name).

We are here today to learn from you. We will be asking you some questions because your stories and experiences are important to us. We anticipate that with information we develop through this work, leaders at the farm and in the city will be better able to serve you. We also expect that our study results will contribute to education and scholarship.

Before we get started, I want to make sure you had a chance to read the consent notice we provided for you. Did you read it? (Yes/No). Do you have any questions about it or our project?

OK, let's get started with the interview.

Starter Question

We would like to start by learning more about your understanding of urban farms. Can you tell me a little bit about what you know about urban farms?

Motivation Questions

Thank you, that's great. Now, we would like to learn more about why you are here.

What is the main reason you are here at the garden today?

- Grow food
- Meet up with friends
- Spend time in a natural space
- Because I have to be/Community service

(can ask clarifying question - "Are you here because you want to be or have to be?")

- What made you choose this particular location?
- How did you learn about Veggielution/Taylor Street?

- How did you learn about urban farms and gardens?

Expectation Questions

Can you tell me a bit about what your expectations were, before you started volunteering here?

- What did you think was going to happen here?
- Did you think you would be working by yourself, or in groups?
- Did you expect there would be people in charge? Or did you anticipate being in charge of yourself?

Now that you have been volunteering, in what ways have your expectations meet met?

Is anything different than you thought it would be?

Social Environment

Thank you for your thoughtful answers. Now, I would like to ask you a little about the social environment here and the people that you volunteer with.

Do you feel like you are part of a community here at the farm?

- What words come to mind when you think of the other people working with you here?
- How do you think about the other volunteers?
- Are they friends?
- Who do you usually come to the farm with?
- Friends? Family?

Think about the last time you were allocated space in this garden. Tell me about the process by which you get space.

- What was the process?
- What kind of input did you have on the decision?
- How did you decide what to put in the space?

Traffic Impacts

Thank you. Your answers are really helpful. Now, I would like to ask you some questions about how the cars and roadways nearby affect you while you are working at the farm.

What are the most common sounds you hear from nearby roads?

- Horns?
- Tires/screeching?
- Accidents?
- Constant hum?

Are there some sounds that are more disturbing to you than others?

- How so? Elaborate
- How do you help yourself ignore the sound(s)?
- Do you hear the sound(s) all the time while you are here? Do you stop hearing it after you have been on site for some time?
- What techniques do you use to help ignore the traffic noise?
- Would you say you are able to tune out?

Are there smells from the nearby roads that impact your time here?

- What are they (Exhaust, burning rubber, other car odors)?
- In what ways do you notice them affecting you?
- What techniques do you use to ignore the smell(s)?

Thank you. Your stories are very helpful. Now, we would like to learn about how you get to the farm.

Will you please talk a little bit about how you ordinarily get to the site?

- Public transport
- If you wanted to get to this site using public transportation, how easy or hard would it be?
- Personal vehicle

- How is parking at the site?
- Carpool
- Other?

Are there traffic conditions around the site that sometimes cause you to change your plans?

- Come only at certain times of day or week?
- Not come at all?

This is all really helpful. We are nearly done. To conclude, we would like to ask a few basic questions about you. I want to assure you that all information is protected and remains confidential. Basic background information will be reported for the group, not individuals.

Demographics

1. How long have you been volunteering at _____?
2. In a typical week, how many days per week? How many hours per day on average?
3. Preferred time of day/day(s) of the week you like to volunteer
4. How long have you been actively involved in urban farming (gardening?)
5. For how long have you lived in San Jose?
6. Where do you live, if not SJ? How long?
7. How do you identify your cultural heritage?
8. European? Latin American? Asian?
9. How old are you?

Concluding Remarks

Great! That's all the questions we have.

In the few minutes we have left, is there anything you want to mention about your experiences here that we did not ask about? (THIS QUESTION MAY BE SKIPPED IF THERE IS TOO LITTLE TIME REMAINING).

Thank you once again for your help. Results from this project will be provided to farm leadership, in case you are interested.

We hope you enjoy the rest of your day.

ABBREVIATIONS AND ACRONYMS

Co-PI	Co-Principal Investigator
IRB	Institutional Review Board
MTI	Mineta Transportation Institute
PI	Principal Investigator
RA	Undergraduate Research Assistant
SJSU	San Jose State University
UAIZ	Urban Area Incentive Zone

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