

THE PEOPLE'S FARM: VISUALIZING THE FUTURE POTENTIAL OF UC BERKELEY'S GILL TRACT AS AN AGROECOLOGICAL LIVING LABORATORY

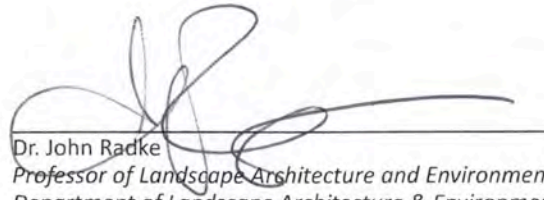


Katie McKnight | May 2016

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Department of Landscape Architecture and Environmental Planning
University of California, Berkeley

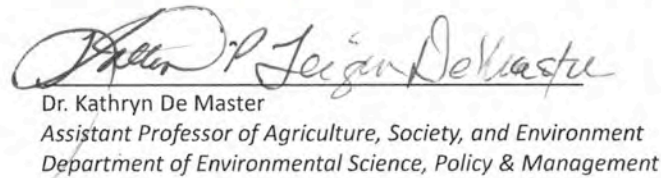
The professional report of Katie McKnight, titled *The People's Farm: Visualizing the Future Potential of UC Berkeley's Gill Tract as an Agroecological Living Laboratory*, is approved:

Chair



Dr. John Radke
Professor of Landscape Architecture and Environmental Planning
Department of Landscape Architecture & Environmental Planning

Date 5/9/16



Dr. Kathryn De Master
Assistant Professor of Agriculture, Society, and Environment
Department of Environmental Science, Policy & Management

Date 5/12/16



Jon Hoffman
Farm Manager, UC Gill Tract Community Farm

Date 5/4/16



Patricia Algara
Co-Founder, BASE Landscape Architecture
Lecturer, Department of Landscape Architecture & Environmental Planning

Date 5/3/16

University of California, Berkeley

EXECUTIVE SUMMARY

Urban agriculture is on the rise to reconnect communities with the process of growing food, address local food insecurities and inspire reform within the greater food system. In 2014 the University of California's president Janet Napolitano launched the Global Food Initiative to bring together 10 UC system schools and various other prestigious institutions to forge solutions to the world's most pressing food issues. This study investigates an urban agricultural case study that aligns with the Global Food Initiative's mission at UC Berkeley: the UC Gill Tract Community Farm ("the Farm"). The Farm was established in September 2013 as an attempt to reconcile the *Occupy the Farm* land-use conflict. One aim of the Farm is to address the lack of access to fresh and healthy food within East Bay communities. The mission of the Farm is as follows: "to conduct collaborative community-driven research, education, and extension focused on ecological farming and food justice, and to foster equitable economies, a healthy environment, and increased resilience in vulnerable communities, both urban and rural".¹

The output and overall impacts of the Farm in terms of food distribution and accessibility by the surrounding community are not well understood. Furthermore, no defined long-term vision currently exists, increasing the vulnerability of the Farm to fall victim to the development

pressures of the highly urbanized sphere in which it operates. Additionally, UC Berkeley has plans in place to develop a portion of the historic Gill Tract agricultural research reserve for private commercial developments, which is the centerfold of the land use debate regarding the Gill Tract.

This study aims to: (1) *create a research framework* to evaluate the Farm's current food distribution strategy as it relates to addressing food insecurity; (2) *synthesize a long-term master plan* to optimize production and programming to address local and regional-scale food insecurity; and (3) *deliver recommendations* to the University of California on strategic long-term planning of the site.

This study created a network analysis using ArcGIS software to visualize the spatial distribution of donated produce based on available on-farm data records. This study explored a hybridized "critical GIS" approach through combining suitability maps of food access zones with participatory observations and informal interviews from 5 of 45 current partner organizations. The resultant research framework is one approach that the Farm can use to actively track and better understand food access barriers specific to the East Bay. Incorporation of this framework can enhance the Farm's food distribution strategy to increase access to equitable and nutritious food for people in need.

Based on the food mapping analysis, approximately 23 square miles of

residential areas experience very low to the lowest food access levels throughout Contra Costa and Alameda County. This study proposes a long-term schematic site design of the Gill Tract to optimize production and programming to address the existing challenges in local and regional-scale food insecurity. Historic, current and community-envisioned site analyses were created and analyzed. Visualization tools include a schematic master plan design, perspectives, sections and programming diagrams.

Long-term visioning of the Gill Tract as an *agro-ecological living laboratory* aligns with the past 20 years of efforts by the community to preserve the site's agricultural function. The UC Gill Tract Community Farm is at a unique turning point with many opportunities to enhance the agroecological work achieved at UC Berkeley and throughout the University of California. With smart and strategic long-term planning, the Gill Tract has the potential to become UC's premier center on urban agriculture and food access issues.

¹ Gill Tract Community Farm. (n.d.). About. Retrieved from <https://gilltractfarm.wordpress.com/about/>

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1. INCREASING DEMANDS FOR EXPERIENTIAL LEARNING SPACES AT UC BERKELEY

In 2014 the University of California launched the *Global Food Initiative* (GFI), an ambitious strategy to expand and enhance current diversified research in sustainable food systems. Janet Napolitano, the president of the University of California, initiated the GFI to forge solutions to the long-term challenges posed by climate change and growing social issues.² The GFI allocates \$75,000 in funding per year to each UC system school to support a range of programs such as classes, workshops, events, on-campus farms and gardens and student fellowship opportunities focused on these issues.³ One aim of the GFI is to, “use the power of UC research and extension to help individuals and communities access safe, affordable and nutritious food while sustaining our natural resources.”⁴ This initiative arises in a time with growing

2 University of California, Division of Agriculture and Natural Resources. “Global Food Initiative.” 2016. <http://gfi.ucanr.edu/>

3 Mitchell, Dan. “A Year In, the University of California’s Global Food Initiative Sows Success and a Few Fears.” Cal Alumni Association. d. 2015. <http://alumni.berkeley.edu/california-magazine/just-in/2015-07-02/year-university-californias-global-food-initiative-sows>.

4 University of California, Office of the President. 2016. <http://www.ucop.edu/global-food-initiative/index.html>

inequities between the rich and the poor – with approximately 16% of households throughout California and 16 million children across the country experiencing food insecurities.⁵

UC Berkeley

is one of the top research institutions in the UC system with academic programming in sustainable food systems on the rise. Approximately 150 faculty and staff perform research and teach coursework on agriculture with 90 related courses offered at UC Berkeley each year.⁶ In 2013, the Berkeley Food Institute was established to act as a hub of cross-disciplinary work on equitable food systems, successfully engaging departments across campus in public policy, public health, journalism, law, natural resources, environmental design and many others.⁷ Additionally, UC Berkeley’s

5 Napolitano, Janet. “UC Global Food Initiative.” University of California, Office of the President. 2014. <http://www.ucop.edu/president/public-engagement/global-food-initiative-jul-2014.html>.

6 Berkeley Food Institute. “About Us.” University of California Berkeley. 2016. <http://food.berkeley.edu/>.

7 Berkeley Food Institute. “About Us.”



Figure 1. The Gill Tract is located approximately 2 miles from UC Berkeley’s main campus in Albany, California.

College of Natural Resources recently launched a minor option, *Sustainable Food Systems*, to meet growing student demands. These efforts, coupled with increased support by the GFI, will likely increase the need for accessible experiential learning facilities at UC Berkeley. One unique resource that could accommodate such an expansion is UC Berkeley’s Gill Tract, a moderately sized academic agricultural research reserve. In 2009, however, an effort by UC Berkeley to redevelop the Gill Tract into a mixed-use neighborhood threatened the site’s future function as an agricultural utility.^{8,9}

Very few parcels of moderately sized,

8 LSA Associates Inc. Report, Experiment Station Research and History - Gill Tract, Judith Marvin and Randy Roza and Andrew Pulcheon, compilers (Richmond: LSA Associates Inc., 2003), 14.

9 Ibid., 3.

arable land exist within the East Bay's city limits, creating a rift in public opinion about the best future use of the Gill Tract. In April 2012, 200 members of the local community demonstrated civil disobedience in an effort to protest the land under development by the University. During this three-week encampment known as "Occupy the Farm", approximately 15,000 seedlings were planted over a 1-acre area.¹⁰ The demonstrators argued, amongst other points, that the Gill Tract is an opportunity to address local food insecurity and provide important social and academic services. After many negotiations, the University entered into a verbal contract in 2013



Figure 2. The UC Gill Tract Community Farm is a 1.1-acre urban farm located in Albany, California.

to transfer 10 acres of the Gill Tract back to the College of Natural Resources to continue in agricultural research until 2022.

¹⁰ Diana Pei Wu, "Occupying the Future, Starting at the Roots."

Although these 10 acres are temporarily preserved, the remaining 12 acres continue towards commercial uses. On November 14th, 2014, students filed a petition of 2,238 signatures against the commercial development plans which were delivered to Janet Napolitano and Nicholas Dirks, the Chancellor of UC Berkeley, in a report entitled *A Food Initiative on the Gill Tract Farm* (SEAL).¹¹ Despite this opposition, current development plans remain unchanged.

As part of the 10 acre agreement, the UC Gill Tract Community Farm ("the Farm") was established in September 2013 by UC Berkeley's College of Natural Resources, UC Cooperative Extension and the community as an attempt to reconcile the *Occupy the Farm* land-use conflict. One of the Farm's aims is to address the lack of access to fresh and healthy food within East Bay communities.¹² Located approximately 2 miles from UC Berkeley's main campus, the Farm is accessible to students, faculty, staff and the surrounding urban community (Figures 1 & 2). Approximately 1.1 acres

¹¹ Students for Engaged Active Learning. *A Food Initiative on the Gill Tract Farm*. Berkeley, CA 2014. <https://sealstudents.files.wordpress.com/2014/11/final-report-for-dirks2-ed-for-website.pdf>.

¹² Gill Tract Community Farm. (n.d.). Governance. Retrieved from <https://gilltractfarm.wordpress.com/governance/>



Figure 3. The Farm currently has an agreement with the University to utilize approximately 2 acres of the Gill Tract for this participatory urban farm research project.

are currently under cultivation and an additional 0.9 acres are allocated to the Farm's use (Figure 3).

This study began by participant observation, a research method that enjoins the participant with the subject being observed as opposed to the *positivist* model (such as that of "natural science") which creates an isolated environment for study.¹³ Through the lens of participant observation, social issues that otherwise may be suppressed become a central focus which can lead to a new way of understanding the topic.¹⁴ I hoped to determine how I, as an environmental

planner and designer, could contribute

¹³ Burawoy, Michael. "Participant Observation." 1994. <http://burawoy.berkeley.edu/syllabus/272E.pdf>. [erkeley.edu/syllabus/272E.pdf](http://burawoy.berkeley.edu/syllabus/272E.pdf).

¹⁴ Ibid.

to better planning tools to progress the Farm further towards its mission. When I first started volunteering at the Farm, my goals were to better understand the organization's structure and current operations to inform the focal areas of this research. After approximately 140 hours of volunteering at the Farm over a nine month period, observations informed many parts of this study well beyond the initial aims. I pinpointed two areas of study that my environmental planning skillset would work to inform: (1) to better understand who the Farm's produce is serving; and (2) to create a vivid and engaging ecological and socially responsible participatory design to envision the Farm's future potential. When I first started this project, though, I expected this study to be about the role of the Farm in addressing local food security through calculating pounds of food harvested and analyzing socioeconomic indicators; however, it quickly became apparent that the Farm functions as more than just a foodway. People come to the Farm for a multitude of reasons— to foster community, relieve stress, spend time with their families and friends, exercise, observe wildlife, work on projects, meditate and learn. I have observed this

range of uses first-hand which largely inform my work. I have witnessed sacred Native American ceremonies along the banks of Village Creek, under the canopy of the Gill Tract's biodiverse riparian refuge. I have observed hundreds— if not thousands— of Monarch butterflies envelop the redwood trees during their migration period. I have dug alongside and connected with people of diverse backgrounds who find themselves at the Farm for a range of reasons— from patients recovering from traumatic brain injuries focused on reviving their motor functions to adolescents with learning disabilities who respond better through experiential learning. I have watched children discover the magic of earthworms and bees while planting their first vegetable starts. I have watched bees discover the magic of pollinator patches in the midst of the dense and unrelenting urban sphere. Every week, almost without fail, I have watched the wild turkeys who took up residence here long ago bustle around the Gill Tract foraging for their afternoon meal. I have spent 40+ hours at the University Archives reviewing files that reference the Gill Tract to document the site's agricultural legacy dating back to the establishment of the

Experiment Station for Biological Control in 1944. I have listened to the hopes, dreams, fears, infuriation and excitement of students, faculty and community members about the Gill Tract's potential fate and future. These observations have afforded me an opportunity to document and acknowledge the deep ecological complexities and interconnected social benefits that exist at the Gill Tract today which significantly inform this study and resultant conceptual designs. Additionally, this project has introduced me to civic activism first-hand, having attended and spoken at public meetings about the future development plans at the Gill Tract. Although this methodology does not follow the traditional distant observer, it provides a rich template to build upon local knowledge and explore an alternative future of land rooted in conflict.

2. RATIONALE

Part of the mission of the Farm is to innovate and improve models for reasonably priced and equitable dispersal of nutritious food to any person in need.¹⁵ The output and overall impacts of the Farm in terms of food production,

¹⁵ Gill Tract Community Farm. (n.d.). Vision. Retrieved from <https://gilltractfarm.wordpress.com/about/mission-and-vision/>

community building or other aspects on the surrounding community are not well understood. Efforts are currently underway to track pounds of food produced at the Farm, but the data is not being spatially connected with where the food travels and to whom it serves. No research methodology has been implemented to evaluate the Farm's food distribution strategy in relation to its mission. Although many written proposals exist outlining the potential of the Gill Tract as an agroecological resource, very few tools visualize how this land use would look or function. By creating a conceptual illustrative plan with detailed sections and perspectives the planning documents become more tangible and easily communicated. This work will culminate in tools for future planning efforts at the Farm to improve the Farm's ability to meet its mission and better articulate its long-term vision to counter the current commercial development plans.

3. OBJECTIVES

The focus of this study is on the Farm's current operations as it relates to food distribution and the future potential of the Gill Tract as an agroecological

resource. This study seeks to:

- 1 **Create a research framework** to evaluate current food distribution strategy as it relates to addressing food insecurity;
- 2 **Synthesize a long-term master plan** to optimize production and programming to address local and regional-scale food insecurity and visualize the Gill Tract's potential;
- 3 **Deliver recommendations** to the University of California on strategic long-term planning of the site.

Findings will supply feedback to the coordinators of the Farm to better understand what is or is not working well with the aim of enhancing the Farm's ability to better meet its mission and further its vision. Findings can also be used to promote more sustainable, forward-thinking land use alternatives of the Gill Tract that align with UC Berkeley's 2008 *Campus Sustainability Assessment* and the City of Albany's 2010 *Climate Action Plan*.

4. HISTORY OF THE GILL TRACT

The Gill Tract has a history that dates back thousands of years, with available documentation dating back around 500 A.D. when the native Ohlone people began to inhabit the area. The

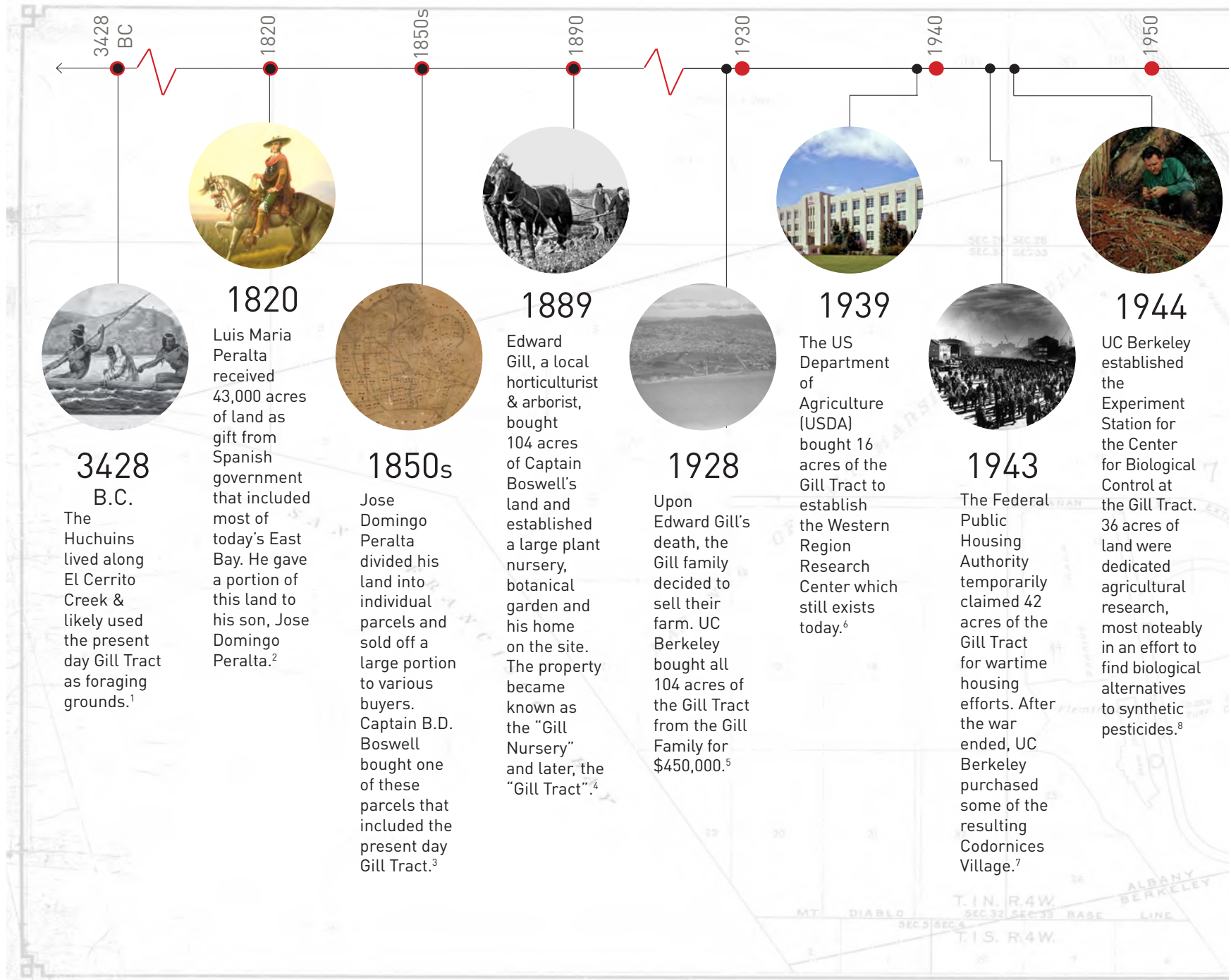
Huchuin, a subset of the Ohlone, lived on the land of what is known today as the City of Albany, California.¹⁶ The Ohlone had a deep psychological and physical connection with their surrounding environment, possessing an intimate knowledge that evolved over thousands of years about the creeks, plants, trees, and other natural aspects of the land.¹⁷ Although no explicit documentation was found of long-term settlement by Native Americans along Codornices Creek which is located adjacent to the Gill Tract, it was likely a valuable resource for fishing, hunting and gathering food.¹⁸ In the late 18th century Hispanic explorers established a series of missions and simultaneously introduced new diseases causing irreversible devastation in many indigenous communities. The explorers forced the Huchuin to relocate to the Mission of San Francisco, directly across the bay from the land upon which they once freely existed. In 1820, Luis Maria

16 LSA Associates Inc., "Report – Experiment Station Research and History," 8.

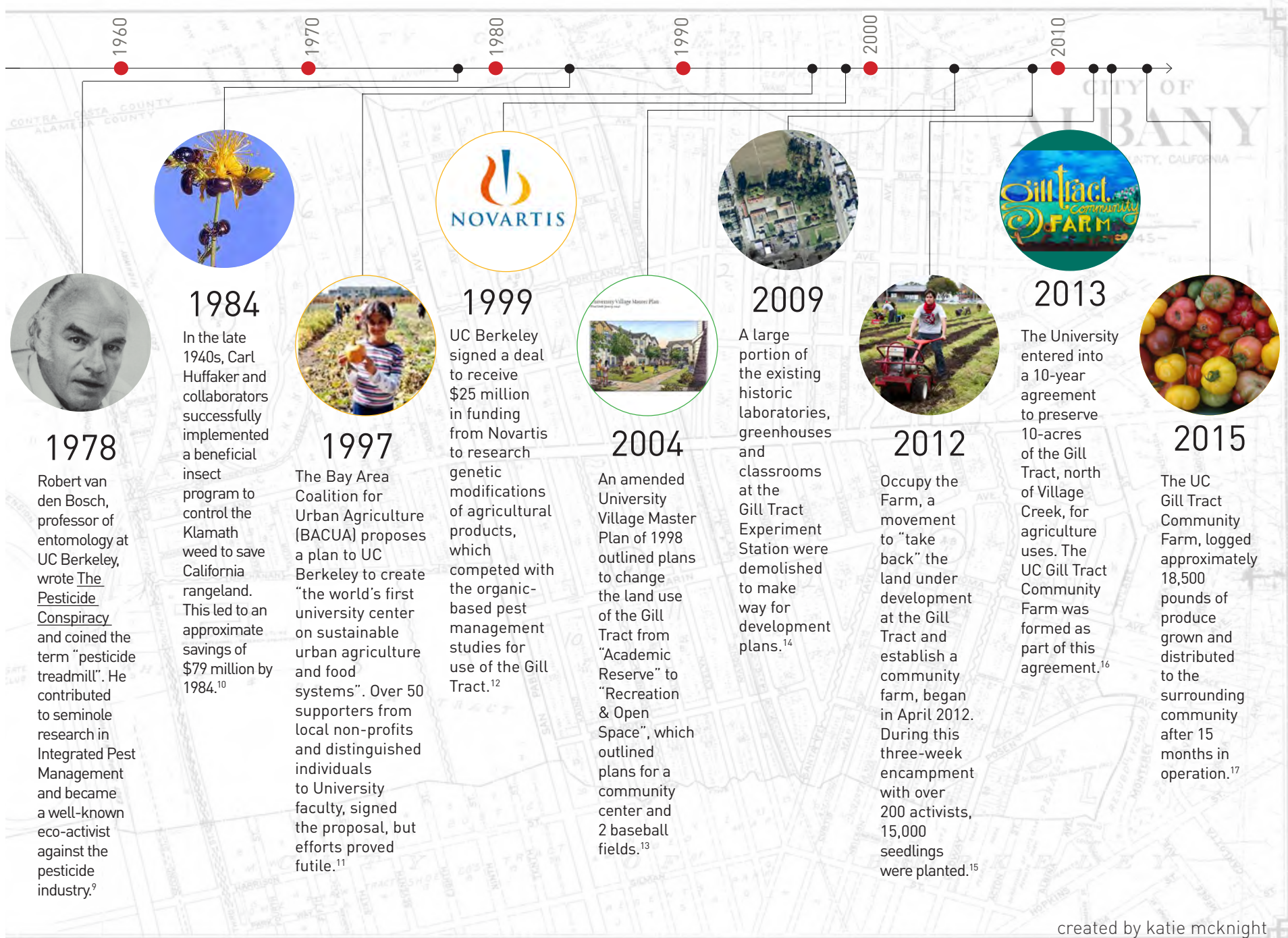
17 Robert Cartier, "An Overview of Ohlone Culture," (Santa Cruz Public Libraries, revised 1991). <http://www.santacruzpl.org/history/articles/248/> (accessed November 5, 2014).

18 Susan Schwartz. "Lower Codornices Creek," (City of Albany, revised August 31, 2010). http://www.fivecreeks.org/projects/codornices_creek/WalkLowerCodornices2011.pdf (accessed November 1, 2014).

HISTORIC TIMELINE



For a list of sources, please refer to Appendix A at the end of this report.



Peralta received approximately 43,000 acres of land as a gift from the Spanish government, which included most of the current East Bay.¹⁹ This marked the first notable change of land use within the area of today's Gill Tract, which went from being a readily available resource for shelter, food and water to private ownership and restrictive uses.

Between the middle and end of the 19th century, the Gill Tract was mostly used for cattle grazing until it was sold to Edward Gill, a local farmer and horticulturist.²⁰ Gill bought 104-acres of the land in 1889 to establish a plant nursery, leading to the start of the Gill Nursery and later, the "Gill Tract". The nursery grew exotic flowers and was well known for its antique, award-winning roses.²¹ In 1928 the Gill family sold all 104 acres to the University of California, Berkeley (Figure 4).²² A number of plants and trees remain on the property today that are part of the Gill family's horticultural legacy, including Black Walnut, Monterey Pine, Canary Island Palms, Oriental Liquidambar, Camperdown Elm,

19 LSA Associates Inc., "Report – Experiment Station Research and History," 10.

20 Ibid., 10.

21 LSA Associates Inc., "Report – Experiment Station Research and History," 26.

22 Ibid., 7.

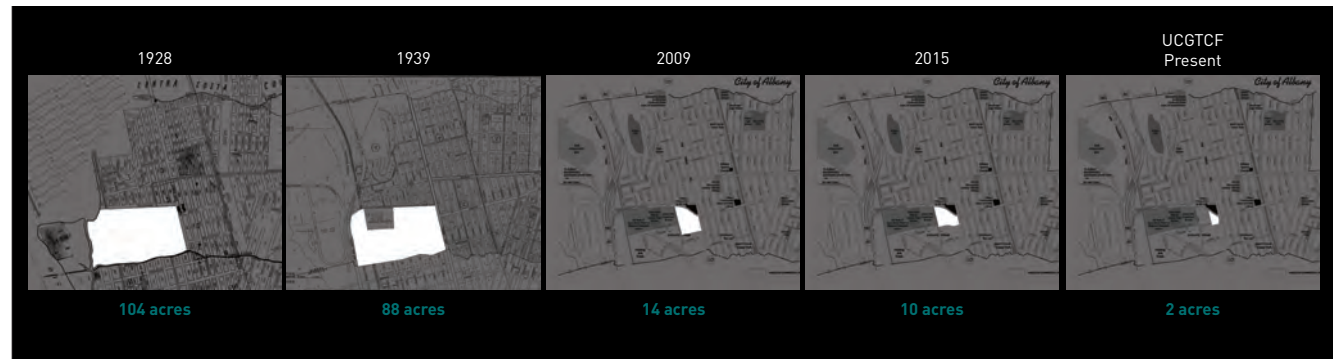


Figure 4. Between 1928 and 2015, the portion of the Gill Tract dedicated to agricultural research at UC Berkeley has decreased by over 90% with consideration to the 10 acres under CNR's control until 2022.

Cork Oak, Date Palms, Eucalyptus, Honey Locust and Podocarpus.²³

In 1943, 42 acres of the Gill Tract were absorbed by the Federal Public Housing Authority to build wartime housing to support shipyard workers.²⁴ Many housing units were demolished after the war ended, but UC Berkeley purchased 840 units to serve as student housing which became the original units of today's University Village (Figure 5).^{25,26}

The 1940s brought forth what entomologists refer to as the "dark ages of pest control" with the emergence of

23 LSA Associates Inc., "Report – Experiment Station Research and History," 12.

24 Warren F. Lee, and Catherine T. Lee, 2000, A Selective History of the Codornices-University Village, The City of Albany and Environs. Belvidere Delaware Railroad Company Enterprises. Ltd.

25 Ibid.

26 LSA Associates Inc., "Report – Experiment Station Research and History," 13.

organosynthetic insecticides.²⁷ Agricultural specialists began to recommend the use of synthetic chemicals as the main source of pest control. By the 1950s early symptoms of the devastating effects of overreliance on synthetic insecticides began to be seen through the emergence of environmental contamination, increases in secondary pests, and resistance and reestablishment of primary pests, leading to growing interest in alternative methods.^{28,29} In 1944, UC Berkeley announced plans to establish the Experiment Station for Biological Control, which was later known as the Division of Biological Control, to

27 Kogan, Markos. "Integrated Pest Management: Historical Perspectives and Contemporary Developments," Annual Review Entomology 43 (1998), 243–270, <http://www.annualreviews.org/doi/pdf/10.1146/annurev.ento.43.1.243>. (accessed November 12, 2014), 244.

28 LSA Associates Inc., "Report – Experiment Station Research and History," 22.

29 Kogan, "Integrated Pest Management," 245.

research biological alternatives to synthetic pesticides.³⁰

The research that came out of the Experiment Station in the decades to follow gained national and international recognition for forging solutions to widespread agricultural problems.³¹ Dr. Raymond Smith served as Chair of the Department of Entomology and Parasitology from 1959 to 1973 (Figure 6). One of his early notable works was on developing a concept of supervised control which he practiced on key pests of alfalfa over a 10 year period. His concepts and teachings later evolved into the idea of integrated pest management.³² Dr. Robert Van Den Bosch, who joined UC Berkeley as a researcher at the Division of Biological Control in 1963, authored a book called The Pesticide Conspiracy. This publication was significant because he spoke out against the pesticide companies based on his observations on the ecological, economic and social impacts of pesticides.³³

30 LSA Associates Inc., "Report – Experiment Station Research and History," 14.

31 "Integrated Pest Management: Historical Perspectives and Contemporary Developments", 244.

32 "Ray Fred Smith", 2001, The National Academies Press, Biological Memoirs V80. Retrieved from: <http://www.nap.edu/read/10269/chapter/17#294>

33 John T. Trumble, April 1 1979, Robert van den Bosch 1922-1978, Journal of Economic Entomology. Retrieved from: <http://dx.doi.org/10.1093/jee/72.2.308>

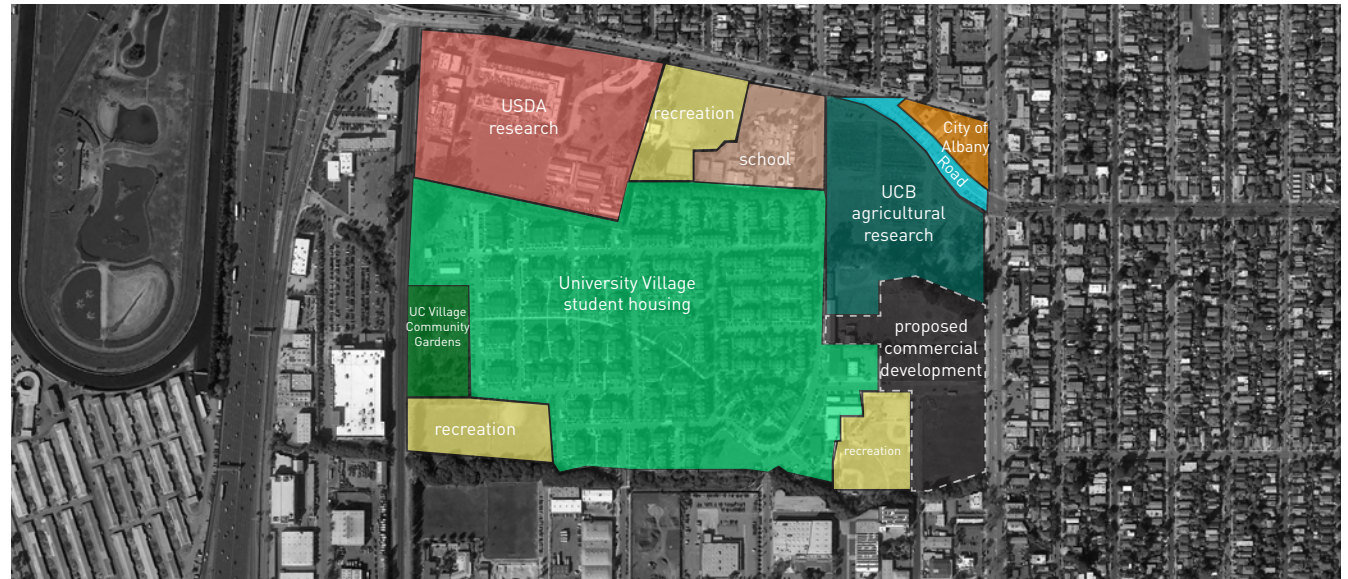


Figure 5. It is important to note that the majority of the development that has historically taken place at the Gill Tract have provided many beneficial services for UC Berkeley and the surrounding community. The Gill Tract has been broken up into:

Student Housing: 41%	UCB Agricultural Reserve: 10%	UC Village Community Gardens: 3%
Government Research: 16%	Recreation: 10%	Roads: 3%
Proposed Commercial Devel.: 10%	School: 4%	City of Albany: 2%

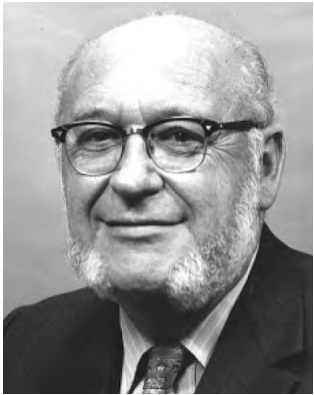
The findings of agricultural research conducted at the Gill Tract have also saved California’s agricultural sector millions of dollars through advancements in biological control techniques. One example is Dr. Carl Huffaker’s investigation of invasive Klamath weed in 1944 at the Division of Biological Insect Investigations at the University of California in collaboration with the USDA. Dr. Huffaker, Jim Holloway and collaborators identified four key insects that led to control of this weed and subsequent recovery of many overtaken

pasture lands. By 1984, this project was evaluated as affording an estimated \$79 million in savings.³⁴

The use of synthetic chemicals in agrarian culture was one large environmental issue of the 1960s and 1970s and continues to be a significant social and environmental obstacle today. The research at the Gill Tract led to innovations in integrated pest management through the use of intercropping and

34 Caltagirone, L. E., & Dahlsten, D. L. (1998). Carl Barton Huffaker 1914 - 1995. Washington, D.C.: National Academies Press. Retrieved from <http://www.nap.edu/read/9649/chapter/9#143>

Dr. Ray F. Smith
1919 - 1999



Dr. Carl Huffaker
1914 - 1995



Dr. Kenneth Hagen
1919 - 1997



Dr. Robert Van Den Bosch
1919 - 1997



Figure 6. UC Berkeley’s Experiment Station for Biological Controls at the Gill Tract hosted a range of seminal research in integrated pest management that offered safe, organic alternatives to the use of synthetic pesticides.

beneficial insects as biological controls that speak to organic, holistic approaches that have been around for the entirety of agrarian culture. But by the late 1990s the tone of agricultural research at UC Berkeley began to shift away from integrated-pest approaches to techniques more widely accepted by the agricultural industry at that time.³⁵ In 1998, UC Berkeley entered into a \$25 million partnership with the Novartis Agricultural Discovery Institute (known today as Syngenta) to research plant genomics. As plant genomics grew as a focal area of University research, the study of biological

controls diminished.^{36,37}

A similar shift away from biological controls and towards plant genetics occurred at the Gill Tract and remains present today. About 5.3 acres of the Gill Tract are used for faculty research with the majority of land historically planted with one type of crop and intermittently rotated with cover crops. Many misconceptions exist that this area is sown with genetically modified organisms, but this is not true.³⁸ Rather, the majority of the research conducted focuses on plant genomics

36 Press, Eyal, and Jennifer Washburn. “The Kept University.” *The Atlantic*. 2000. <http://www.theatlantic.com/magazine/archive/2000/03/the-kept-university/306629/>.

37 Pei Wu, “Occupying the Future, Starting at the Roots,” 40.

38 Breslauer, George. “Campus Releases Open Letter on Gill Tract.” UC Berkeley. 2012. <http://news.berkeley.edu/2012/05/18/gill-tract-update/>.

35 Jennings, Bruce H. “The Killing Fields: Science and Politics at Berkeley, California, USA.” *Agriculture and Human Values* 14, 1997: 259–71..

and follows traditional research methods in growing the same type of crop over a large area. Approximately 0.3 acres are used for a long-term orchard experiment, and another 0.3 acres have been used for intercropping experiments. The remaining area, about 1.1 acres, is cultivated by the UC Gill Tract Community Farm which uses agroecological, biodiverse methods. This type of project on the Gill Tract is unique but not entirely new. Prior to the Novartis agreement, the Gill Tract hosted an educational organic farming project for two seasons which is documented through photographs in the 2004 *Village Creek Farm and Garden* proposal.^{39,40} Nonetheless, the present day UC Gill Tract Community Farm is reminiscent of the participatory research projects that contribute to the Gill Tract’s unique agricultural legacy.

39 Roman-Alcalá, Antonio. “History of the Gill Tract and UC Research Priorities.” In *Food Sovereignty: A Critical Dialogue*, 16. International Conference Yale University 2013. http://www.academia.edu/4474127/Occupy_the_Farm_A_Study_of_Civil_Society_Tactics_to_Cultivate_Commons_and_Construct_Food_Sovereignty_in_the_United_States.

40 The Urban Roots, and Friends of the Gill Tract. *Village Creek Farm and Garden*. Albany, CA 2004.

5. ASSESSING FOOD ACCESS IN THE EAST BAY: A RESEARCH METHODOLOGY TO EVALUATE THE FARM'S FOOD DISTRIBUTION STRATEGY

5.1 Metrics Used to Analyze "Food Access"

In order to evaluate the Farm's impact in making food more accessible to communities in need, maps demonstrating food access levels can be a useful tool. Distinguishing areas with disproportionately low food access can help geographically prioritize efforts to address issues of food insecurity. However, food insecurity metrics are difficult to define and challenging to assess. A range of metrics exists to evaluate food access, which typically fall within two contexts: social and physical barriers.

Proximity to grocery outlets such as supermarkets, retail stores and farmers markets are frequently used in literature to assess geographic food access. *Bertrand et al. (2008)* mapped physical food access within a portion of Montreal based on distance to grocery stores in terms of walkability and accessibility to a vehicle.⁴¹

41 L. Bertrand, F. Therien, and M.S. Cloutier, "Measuring and Mapping Disparities in Access to Fresh

The U.S. Department of Agriculture's (U.S.D.A.) *Food Access Research Atlas (2013)* uses a similar metric by focusing on vehicle access and physical distance to grocery stores but applies different impedance factors for urban versus rural areas by ¼-mile versus 1 mile respectively.⁴² *Gordon et al. (2011)* expands on the concept of mapping accessibility to grocery outlets by incorporating convenient stores and fast food options as indicator of healthy and unhealthy food available.⁴³ Low-income areas frequently overlap with zones of low food access which is demonstrated by *McEntee and Agyeman (2010)* and adapted into the U.S.D.A.'s *Food Access Research Atlas*.^{44,45} Other studies such as *Bodor et al. (2007)*, *Jiao et al. (2012)* and *Townsend et al. (2001)* have focused on areas with high rates of chronic

Fruits and Vegetables in Montreal," *Canadian Journal of Public Health* 99, no. 1 (2008): 6–11.

42 U.S. Department of Agriculture and Economic Research Service (ERS), "Food Access Research Atlas," March 2013, <http://www.ers.usda.gov/data-products/food-access-research-atlas.aspx>.

43 Cynthia Gordon et al., "Measuring Food Deserts in New York City's Low-Income Neighborhoods," *Health & Place* 17, no. 2 (March 2011): 696–700, doi:10.1016/j.healthplace.2010.12.012.

44 Jesse McEntee and Julian Agyeman, "Towards the Development of a GIS Method for Identifying Rural Food Deserts: Geographic Access in Vermont, USA," *Applied Geography* 30, no. 1 (January 2010): 165–76, doi:10.1016/j.apgeog.2009.05.004.

45 U.S. Department of Agriculture and Economic Research Service (ERS), "Food Access Research Atlas."

diseases primarily linked to dietary intake, with a large focus on obesity rates.^{46,47,48}

Although many correlations have been explored in the literature, limitations exist when strictly using mapping methodologies. For example, when proximity to grocery stores is the primary focus, many studies fail to recognize that availability of food does not always equal accessibility. Furthermore, many studies also fail to dispel the assumption that a typical grocery store is the one and only solution. Many researchers such as *Short et al. (2007)*, *Knigge and Cope (2006)* and *Shannon (2013)* criticize mapping methods that follow a strict "god's eye" approach by arguing that such methods fall short of critiquing the structural inequities that

46 J. Nicholas Bodor et al., "The Association between Obesity and Urban Food Environments," *Journal of Urban Health* 87, no. 5 (September 2010): 771–81, doi:10.1007/s11524-010-9460-6.

47 Junfeng Jiao et al., "How to Identify Food Deserts: Measuring Physical and Economic Access to Supermarkets in King County, Washington," *American Journal of Public Health* 102, no. 10 (2012): e32–39.

48 Marilyn S. Townsend et al., "Food Insecurity Is Positively Related to Overweight in Women," *The Journal of Nutrition* 131, no. 6 (2001): 1738–45.

more directly breed food insecurity.^{49,50,51} *Shannon* also draws attention to the stigmatizing nature of certain metrics such as obesogenic indicators on certain body types.⁵² These critiques outline ways mapping methods can be improved but discourage metrics that solely rely on mapping without any supplementary on-the-ground perspective.

To avoid the common pitfalls mentioned, *Short et al.* utilizes a multi-faceted approach through resource mapping, observations, interviews and standard market basket analyses.⁵³ Additionally, *Knigge and Cope* suggests the need for “grounded theory” in food access research, which takes into account everyday experiences.⁵⁴ Examining both large and small scales allows exploration

49 A. Short, J. Guthman, and S. Raskin, “Food Deserts, Oases, or Mirages?: Small Markets and Community Food Security in the San Francisco Bay Area,” *Journal of Planning Education and Research* 26, no. 3 (March 1, 2007): 352–64, doi:10.1177/0739456X06297795.

50 LaDona Knigge and Meghan Cope, “Grounded Visualization: Integrating the Analysis of Qualitative and Quantitative Data through Grounded Theory and Visualization,” *Environment and Planning A* 38, no. 11 (2006): 2021–37, doi:10.1068/a37327.

51 J. Shannon, “Food Deserts: Governing Obesity in the Neoliberal City,” *Progress in Human Geography* 38, no. 2 (April 1, 2014): 248–66, doi:10.1177/0309132513484378.

52 Ibid.

53 Short, Guthman, and Raskin, “Food Deserts, Oases, or Mirages?”

54 Knigge and Cope, “Grounded Visualization.”

of multiple interpretations of research questions and hypotheses that can lead to new areas of study through contradictory findings.⁵⁵ Similarly, *Shannon* emphasizes the need for “critical GIS”, a communitydriven approach that incorporates community perspectives into the research process. *Shannon* outlines areas in need of exploration such as: food values for low-income individuals; structural barriers on mobility; more inclusive definitions of “healthy”; the relationship between the body and the city; family dynamics; and implications of class separations.⁵⁶ Although these approaches are more time consuming compared to strictly mapping socioeconomic factors, more insightful place-based recommendations less focused on individual behavior and more focused on larger societal barriers will typically result.

This study attempts a hybridized methodology to evaluate food access by drawing on geographic mapping techniques and participant observations in an attempt to work towards a *critical GIS* approach (Figure 7). With regard to geographic mapping, eight data layers were used to assess physical mobility (proximity to

55 Ibid.

56 Shannon, “Food Deserts.”

food outlets, public transit and personal vehicles), social mobility (assessment of earning power using low income and unemployment rates), and environmental health (asthma rates). Uninhabited zones classified by protected areas were overlaid onto final suitability maps to determine which areas are not applicable to the analysis (Table 1).

Many of the metrics adapted are supported by the literature reviewed in this study, such as proximity to food outlets, access to personal vehicles and areas of low-income. However, after performing the literature review, many food access indicators were eliminated and replaced with more appropriate alternatives with respect to the insights by *Short et al. (2007)*, *Knigge and Cope (2006)* and *Shannon (2013)*.^{57,58,59} Other indicators were adapted without explicit support found in existing literature in an attempt to explore new methods drawn on the insights of reviewed research recommendations.

Instead of using obesity rates as a food access indicator, this study utilizes asthma rates to avoid stigma and, instead, consider the impact of environmental

57 Short, Guthman, and Raskin, “Food Deserts, Oases, or Mirages?”

58 Knigge and Cope, “Grounded Visualization.”

59 Shannon, “Food Deserts.”

health factors. *Riberio-Silva et al. (2011)* demonstrated the use of asthma as an indicator of low food access in a study on food nutrition insecurity with over 1300 children in Brazil.⁶⁰ Although *Riberio-Silva et al.* does recognize that varied results exist within the literature supporting this correlation, using asthma as an indicator of food insecurity presents an interesting exploration of the intersection between environmental health and physical health.⁶¹ Environmental pollution often disproportionately affects low-income, underrepresented minority groups, so areas of significantly higher asthma rates may indicate areas of higher air pollutant exposure.⁶² Furthermore, the use of asthma rates attempts to draw on advice from *Shannon (2013)* at exploring the relationship between the body and the city.⁶³

Additionally, many commonly

60 Rita de Cássia Ribeiro-Silva et al., “Food and Nutrition Insecurity: A Marker of Vulnerability to Asthma Symptoms,” *Public Health Nutrition* 17, no. 01 (January 2014): 14–19, doi:10.1017/S1368980012005551.

61 Ibid.

62 Paul Mohai and Bunyan Bryant, “Environmental Injustice: Weighing Race and Class as Factors in the Distribution of Environmental Hazards,” *U. Colo. L. Rev.* 63 (1992): 921.

63 Shannon, “Food Deserts.”

used metrics were adapted into the mapping methodology of this study. High unemployment rates and inaccessible public transportation networks (areas greater than ¼-mile which is considered easy walking distance from bus stops) were utilized to highlight structural barriers on social and physical mobility, which are not mutually exclusive.

5.2 Methodology: A Critical GIS Approach

In order to gain perspective in current Farm operations, the author performed approximately 140 hours of on-farm volunteering between July 2015 and May 2016. The geographic extent of this study includes Alameda and Contra Costa counties. A network analysis was performed in ArcGIS to visualize the spatial extent of community organizations that have received Farm produce, with weighted circles indicating the amount of produce distributed based off of onsite harvest records between May 22, 2014 and August 11, 2015. Food access maps were also created using ArcGIS by following the McHargian suitability approach to evaluate the impact of the Farm’s food

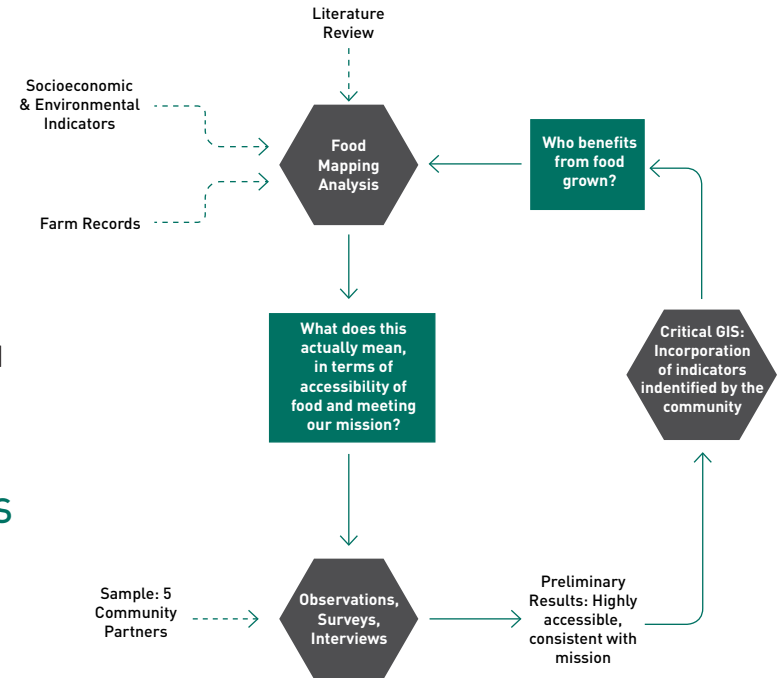
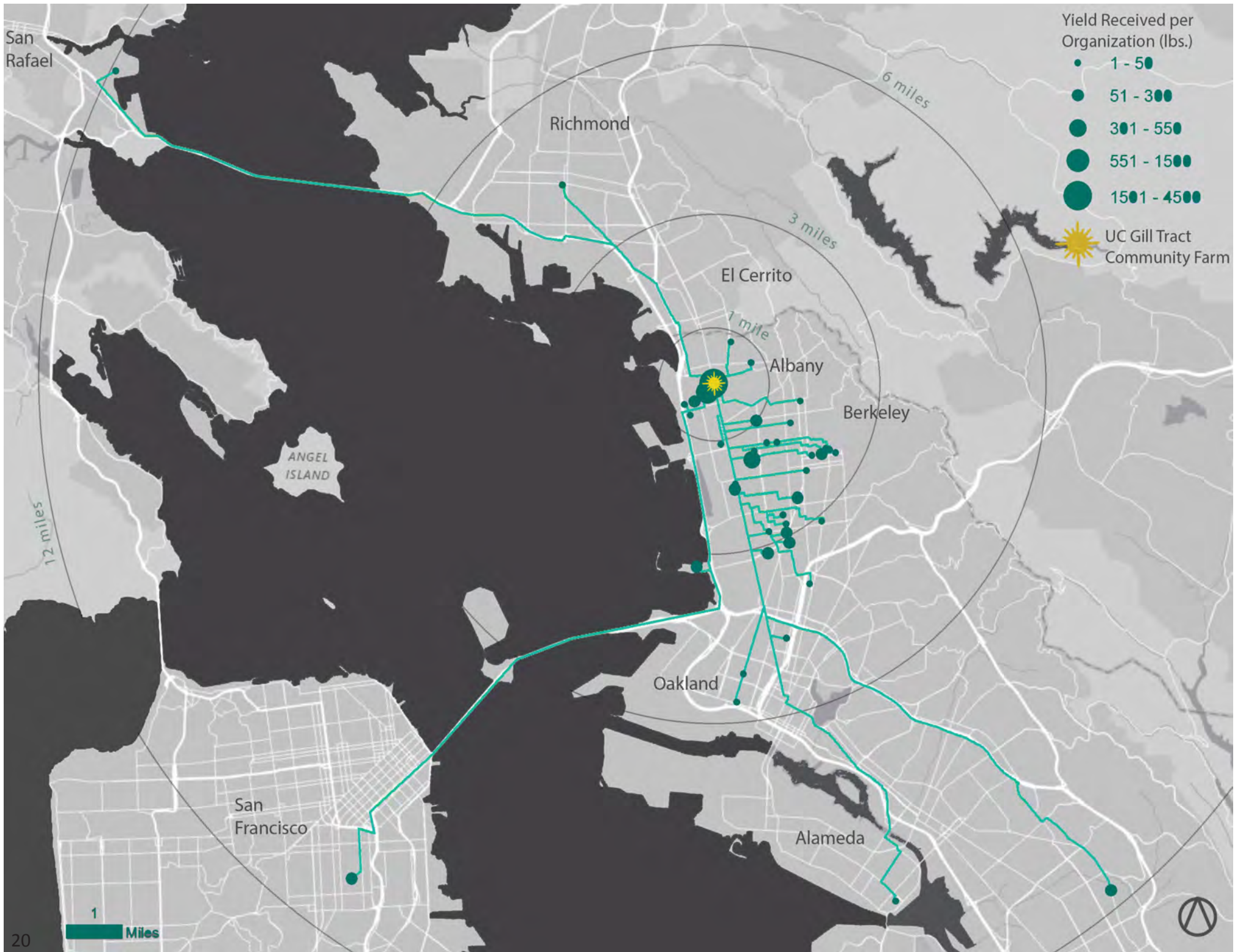


Figure 7. The food distribution methodology proposed for use at the UC Gill Tract Community Farm follows an iterative “critical GIS” approach.

donations on local food insecurity.⁶⁴

Data was obtained through Alameda County, Contra Costa County, US Census Database (TIGER), CA Department of Public Health, USDA’s *Food Environment Atlas and Food Access Research Atlas* and the Transit Authority of California. Data layers used include protected areas, roads, population densities, socioeconomic census

64 Michael Neuman, “Teaching Collaborative and Interdisciplinary Service-Based Urban Design and Planning Studios,” *Journal of Urban Design*, November 2, 2015, 1–20, doi:10.1080/13574809.2015.1100962.



YIELD (lbs.)

- 1 - 50
- 51 - 300
- 301 - 550
- 550 - 1100
- 1100 - 4500



COMMUNITY PARTNERS

- 1 Albany High School
- 2 Solano Stroll
- 3 UC Gill Tract Community Farm Produce Stand
- 4 UC Village
- 5 Harrison House
- 6 Golden Gate Fields
- 7 Pacific Steel Casting
- 8 Bay Area Explorations [Jewish Community Center]
- 9 Berkeley Food Pantry
- 10 Archway High School
- 11 Episcopal Church of the Good Shepherd
- 12 Daily Bread
- 13 YEAH! [Youth Engagement Advocacy and Housing]
- 14 Bear Pantry
- 15 Alternative Breaks for Justice
- 16 English Studies Institute
- 17 Berkeley Chinese Community Church
- 18 Wheeler Hall
- 19 UC Berkeley Food Pantry
- 20 Berkeley Student Food Collective
- 21 Women's Daytime Drop-in Center
- 22 Berkeley Food and Housing Project
- 23 Ecology Center
- 24 Urban Adamah
- 25 Harriet Tubman Terrace
- 26 Transition Berkeley
- 27 Priority Africa Network
- 28 Mother's Kitchen
- 29 South Berkeley Community Church
- 30 Over Sixty Health Center
- 31 Phillip's Temple CME Church
- 32 Sojourner Truth Housing Inc.
- 33 Phat Beets
- 34 Center for Neuro Skills
- 35 Omni Commons
- 36 Hip Hop for Change
- 37 Oakland Youth Aspire
- 38 West Oakland Health Center

NOT PICTURED

- Ecology House [San Rafael]
- Bay Area Rescue Mission [Richmond]
- Youth UpRising [Oakland]
- Language Alive [Alameda]
- SF Mime Troope [San Francisco]
- Las Hormigas Organicas [mobile]
- People's Kitchen [mobile]

information, transportation hubs, asthma rates and authorized women Infants and Children (WIC) vendor locations.

Participatory observations and informal interviews were conducted through volunteer work to “ground truth” conclusions drawn through mapping. Observations were recorded through collaboration with four colleagues for 5 partner organizations between October and December 2015, which include: (1) Women’s Daytime Drop-in Center, (2) Phat Beets, (3) Harriet Tubman Terrace, (4) Daily Bread, and (5) Bay Area Rescue Mission (Appendix B). Observational findings were used to inform focused interview and survey questions that can be adapted to develop similar tools for additional partner organizations. The findings can be used to understand local food access barriers to improve mapping efforts to implement a “critical GIS” approach. Instead of relying entirely on spatial socioeconomic data like many traditional food access mapping studies, critical GIS is more sensitive to place-based conditions by incorporating observations and interview findings into mapping analyses. The result is a more *localized* understanding of food access issues, which can be applied to determine

how the Farm can better support partner organizations relevant to its mission to foster long-term partnerships.

5.3 Assumptions & Limitations of Food Access Mapping

The methodology used in this study is one approach of many to map and evaluate food access levels. This analysis relies on interpretations of the physical and social barriers that inhibit adequate food security but such barriers are still not well understood in this constantly evolving field of science.

It is important to note that this is not meant to be a finalized study but rather an exploration of an iterative mapping framework to analyze the food distribution network of the Farm. What may reflect barriers to adequate food access in one community may look very different in another. This highlights the heart of this approach: the need for more *community-specific* assessments to identify systemic barriers to food access and progress towards innovative solutions.

This analysis was limited to the food distribution data available at the time of this study. During this time period, 33% of the Farm’s produce distributed went to individuals and approximately 20% went unrecorded, but it was not possible to geographically analyze this information due to tracking

limitations (see footnote for an explanation of tracking limitations).⁶⁵ Additionally, the data analyzed on food distributed to partner organizations serves only as a snapshot of the Farm’s impact from May 22, 2014 to August 11, 2015 and does not reflect food distributed outside of this time period.

Due to limitations of time and resources, this study only observed 5 out of 45 partner organizations which is not a large enough sample size to draw significant conclusions to inform the next iteration of food access maps. Therefore, the composite map of socioeconomic indicators shown in this study reflects a *baseline* of conditions that should be refined and informed by future findings from participatory observations at more partner organizations.

Although this study did not perform multiple mapping iterations based on the insights from the participatory observations made, it lays the groundwork for such an approach. For example, future interviews conducted at partner organizations

⁶⁵ **Note:** Harvest logs used to track food harvested currently ask for the recipient to fill out a column entitled “where”. If the food is going to an organization, an address exists associated with the organization deeming it “mappable”. However, if food goes to a named individual, such as “Mary”, no address can be associated with the entry. Entries are deemed “unrecorded” if nothing is filled in under the “where” column. Therefore, these types of scenarios result in tracking limitations.

(Appendix B) could be keyed for topics describing the physical and social barriers to food access from the viewpoint of the organization. The collective interview findings from all organizations could then be analyzed for common barriers to be used to inform appropriate mapping layers and weights for the neighborhood or region. For instance, if many of the organizations interviewed emphasize a difficulty in finding adequate employment, then unemployment could be given a higher weight as an indicator of low food access since it may reflect a larger local barrier within the study area. This type of iterative approach is a more targeted and

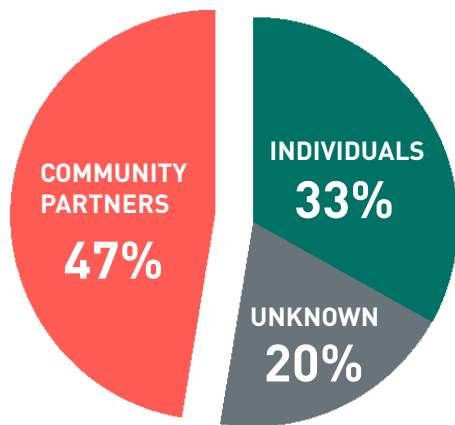


Figure 8. Approximately half of all food distributed went to community partner organizations while 30% went to individuals and 20% went unrecorded.

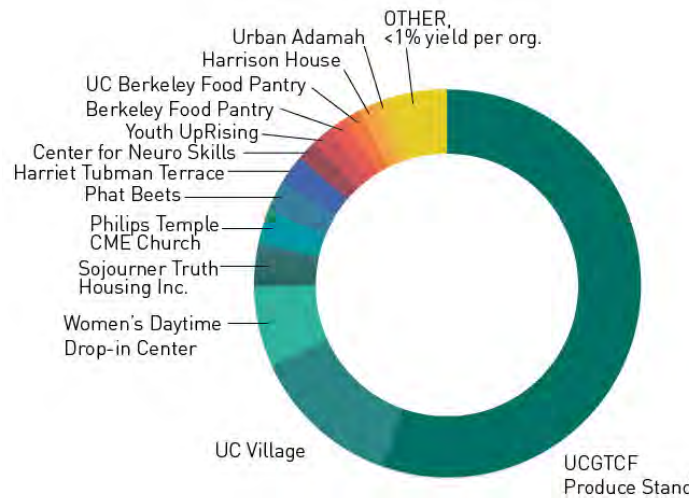


Figure 9. Ten organizations receive about 90% of the produce classified into the “partner organization” category.

informative mapping analysis aimed at uncovering systemic issues barring food access.

5.4 Findings

5.4.1 Distribution Analysis and Network Mapping

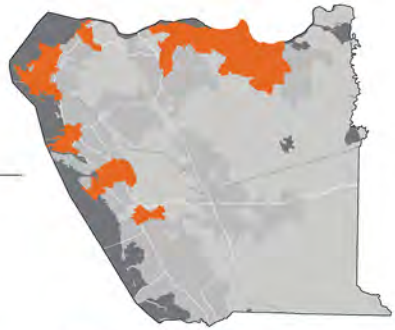
Approximately 18,710 pounds of produce were distributed during the dates analyzed in this study. Distributed produce was sorted into three categories: individuals (volunteer or community member), community partners (nonprofits, housing developments, health care clinics etc.) or unknown (recipient not recorded). Approximately 33% of produce went to individuals and 20% is unknown (Figure 8).

Almost half of all produce, 47%, went to community partners. Forty-five different community partners were identified, but only forty-three were mapped due to difficulty in assigning a definitive location for two partners. All of the community partners fell within a 13-mile radius from the Farm, but on average produce traveled 3.5 miles to get to partner organizations. When calculated using a weighted average to account for pounds received per organization, produce traveled approximately 1.1 miles. When only examining food received by community partners, about 51% was distributed through the Farm’s Produce Stand which operates on site once a week and is open to anyone in the community (Figure 9). All produce at the Produce Stand is distributed through a “donation based” policy which entails pay what you can, if anything at all. When the Produce Stand is taken out of the equation, this weighted average increases to approximately 2.2 miles traveled.

5.4.2 Food Access Mapping and Analysis

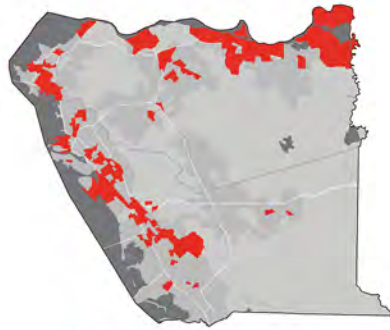
Each data layer was assigned a weight to signify low food access (with a rating of -1), neutral food access (with

LOW ACCESS: -1



asthma rates 70% above mean rates

+



low income residents living in urban areas more than 1 mile from supermarkets

+



low vehicle access

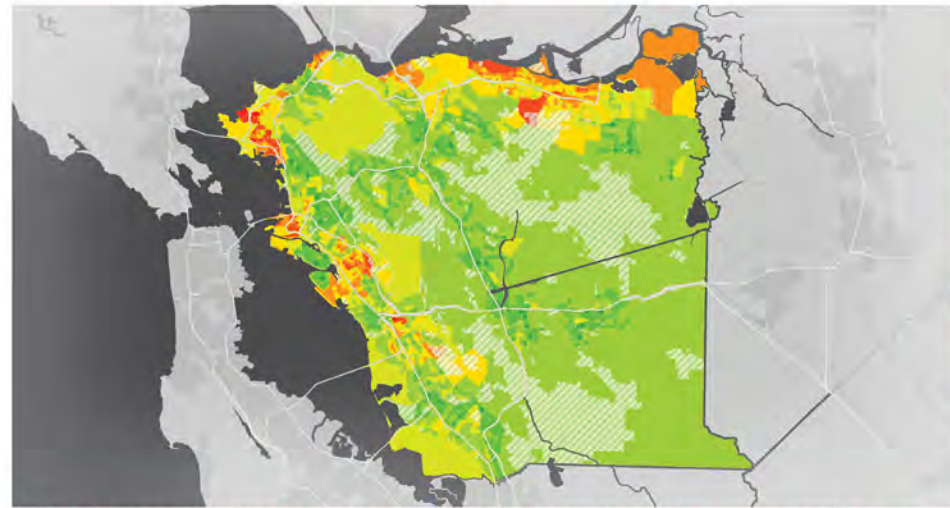
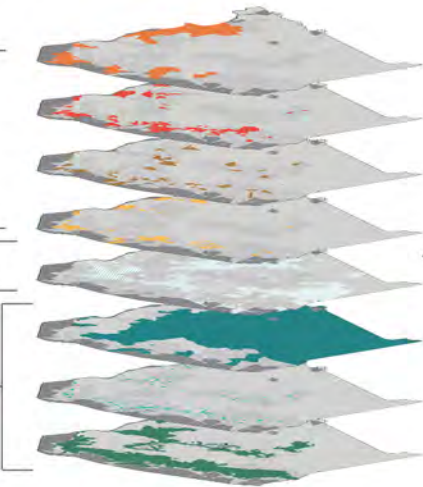
+



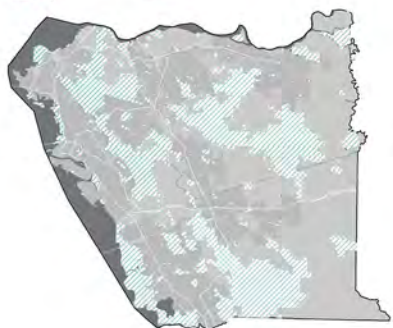
unemployment rates above 14.1%

UNINHABITED ZONES: 0

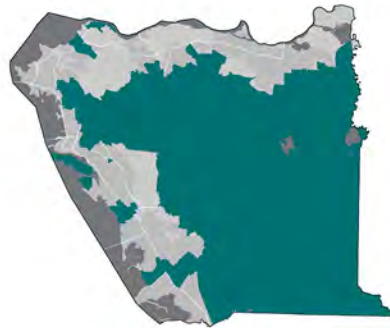
HIGH ACCESS: +1



Food access indicators were combined to generate a composite map showing degrees of access within Alameda and Contra Costa counties.

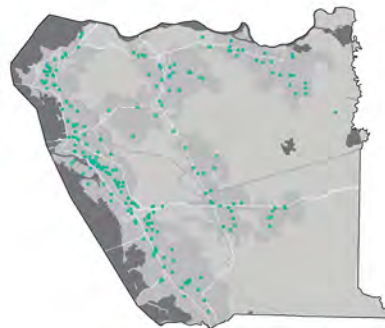


protected areas (regional parks, wildlife sanctuaries etc.)



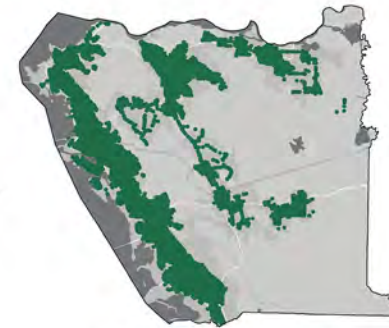
asthma rates lower than mean levels

+



areas within 1/4-mile from WIC authorized vendor locations

+



areas within 1/4-mile from bus stops and public transit hubs

a rating of 0) or high food access (with a rating of 1). The logic behind each analyzed data indicator is explained in Table 1. Each data layer was then overlaid to reflect a composite accessibility map, ranging from ratings of -4 (lowest food access) to +3 (highest food access). Partner organizations were overlaid onto the composite food access map to reflect the geographic rating of each partner organization's location (Table 2).

The portion of partner organizations that exist and operate in high, medium and low access neighborhoods is 44%, 24% and 32% respectively – roughly an even distribution (Tables 3 & 4). When assessed by yield however, the majority of produce ends up in high access neighborhoods (approximately 84%) while a much smaller portion ends up in medium and low access neighborhoods (approximately 5% and 11% respectively). According to the mapping analysis, the majority of Albany falls in a high access zone, and since a large portion of the produce is distributed at the Farm Stand, a disproportionate amount falls in this zone of “high” access.

This spatial analysis attempts to distinguish areas of high to low physical and social mobility and environmental health as

an indicator of where the Farm's efforts will have the most impact on the surrounding community. But what does this mean in an individualized context? Are the current partner organizations that exist within high access geographic zones relevant to the Farm's mission? Participatory observations of 5 partner organizations were used to compare the food access mapping findings and establish a framework to further explore these questions.

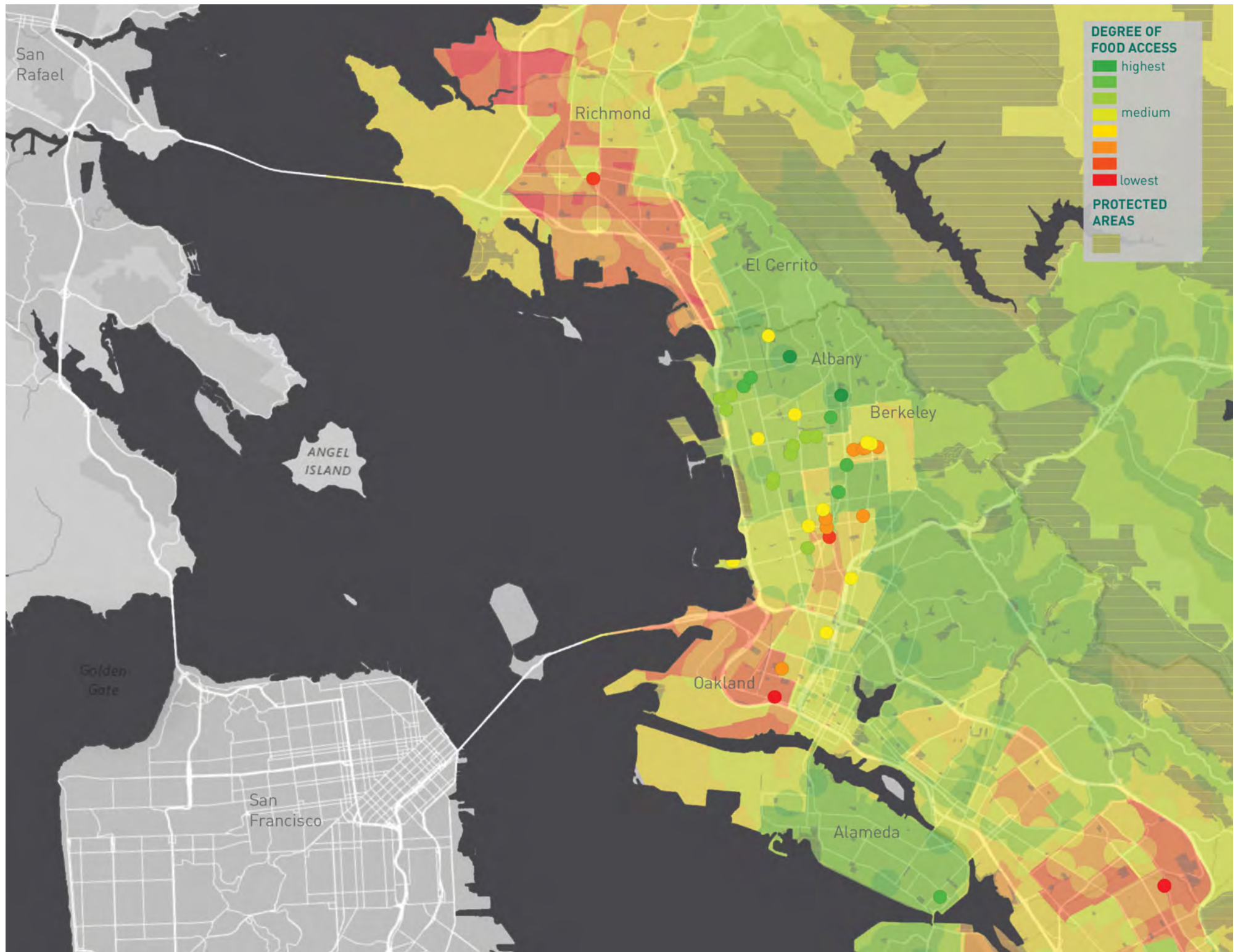
5.4.3 Participatory Observations: Which partnerships are relevant to the Farm's mission?

Out of all the produce that goes to “partner organizations”, about 90% of produce goes to just 10 organizations. These include the Farm's on-site Produce Stand (51%), UC Village (12%), Las Hormigas Organicas (8%), Women's Daytime Drop-in Center (6%), Sojourner Truth Housing Inc. (3%), Phillips Temple CME Church (3%), Phat Beets (2%), Harriet Tubman Terrace (2%), Center for Neuro Skills (2%) and Youth Uprising (2%) (Figure 9). Currently there is no formal strategy for how produce is distributed so all food donations have occurred on an informal basis. Most of the time, individual

volunteers at the farm take excess produce to various organizations and note the organization in the Farm's logbooks, which accounts for the “partner organizations” previously mentioned.

The findings of participatory observations conducted at 5 partner organizations reveal that efforts serve a range of demographic groups. Four organizations focus on addressing food insecurity by serving groups experiencing or vulnerable to low or very low food access, which include people who are homeless, low-income, seniors or experience disabilities. The remaining group observed focuses on youth education but no evidence exists to classify the type of food access of recipients (Table 5).

When these five organizations were overlaid onto the food access map, findings outline contradictory results for four out of the five partner organizations observed: although partner organizations fell in high food access zones, observations revealed that the organizations serve people in low to very low food access demographics. This demonstrates the need for surveys and interviews with partner organizations to gain a better understanding of the Farm's current impact.



More investigation is necessary to better understand the degree of food access through collaborations with each partner organization. A combination of community surveys and partner interview questions were compiled to serve as a research tool for the Farm. Future findings can be used to provide recommendations to strengthen the accessibility of Farm produce to community members in need and also aid in enhancing food access mapping methodologies.

6. POTENTIAL OF THE GILL TRACT AS AN URBAN AGROECOLOGICAL LIVING LABORATORY

Although a large focus of this study up to this point has been about food distribution, it is important to note that the intent of this report is not to prove the role of urban agriculture in feeding a significant portion of people. On the contrary, the capacity of urban agriculture to feed the world pales in comparison to rural counterparts. Since food insecurity and hunger issues are highly complex, opportunity exists within urban agriculture endeavors like the Farm to offer unique instances to address food insecurity

through teachings, participatory research projects and resource sharing.

Based on the food mapping analysis performed previously, approximately 23 square miles of residential areas experience very low to the lowest food access levels throughout Contra Costa and Alameda County. Many of the activities at the Farm that center around how to grow plants and mushrooms, save seeds, identify beneficial insects, forage for wild edibles, can and procure food and so forth are opportunities to address these low food access levels by *increasing self-reliance for food* and *working to identify food access barriers*. Although this will not alleviate local hunger in its entirety, it can have a significant impact and resonate in unquantifiable ways throughout nearby communities experiencing low food access. Furthermore, the range of activities that the Farm hosts – after-school programs, community workshops, skill sharing events, lectures and discussions, tours, celebrations, musical events, participatory research projects, art projects, multi-cultural and multi-lingual garden projects— may also act as a means to social healing and community resilience, building understanding and support between

people from diverse backgrounds in a time of rampant social problems.⁶⁶

The Farm has the potential to be an innovative renewable resource by creating a space that draws in the community, building meaningful relationships to sustain and expand it and offering a range of experiential learning programs to spread knowledge and self-reliance to the broader community. The 10 acres of land currently allocated at the Gill Tract to continue in agricultural research expires in 2022.⁶⁷ What will be the *long-term* future of the Gill Tract? Development pressures have largely won over priority of this land with consideration to the change in size of the intact farmland since 1928. Very few parcels of arable, moderately sized open land suitable for agricultural cultivation exist within the East Bay due to intensive urbanization. For this reason, the second portion of this study aims to *explore the potential in scaling up agricultural production at the Gill Tract through design of an urban agro-ecological living laboratory*.

66 Gill Tract Community Farm. (n.d.). Education and Events. Retrieved from <https://gilltractfarm.wordpress.com/education-and-events/>

67 H. Idad, H. Broder, & C. Quinn, (2014). Spring 2014, Senate Bill No. 84: A Bill in Support of Preventing Development of the Gill Tract Farm. Berkeley: Associated Students of the University of California.

6.1 The Disconnect Between UC's Global Food Initiative and the Gill Tract as an Agroecological Resource

"As the UC Global Food Initiative advances, we seek to find common ground to help communities in California and around the world find their way to a sustainable food future."

-Janet Napolitano

President, University of California

The social and environmental issues highlighted by the launch of the Global Food Initiative have been a long time in the making, with many failed attempts over the past twenty years by UC Berkeley to create an innovative agroecological learning center to address them. In 1997, the Bay Area Coalition for Urban Agriculture (BACUA) – a consortium of UC Berkeley faculty, students, community members and local NGOs— put forth a proposal for UC Berkeley to found the *world's first* urban agriculture research center at the Gill Tract.⁶⁸ The proposal surfaced around the same time that UC Berkeley accepted a \$25 million research-support contract

68 Bay Area Coalition for Urban Agriculture (BACUA). "Creating a Center for Sustainable Urban Agriculture and Food Systems at the University of California Gill Tract in Albany." University of California Berkeley, College of Natural Resources. 1997. https://nature.berkeley.edu/srr/BACUA/bacua_proposal.htm.

from Novartis Corporation in 1998.⁶⁹ The University dismissed the BACUA proposal and, during the same time period, began conducting agricultural research partially funded by Novartis.⁷⁰ The debate over the use of the land continued in 2004 when UC Berkeley announced plans to convert the Gill Tract into baseball fields. The Urban Roots and the Friends of the Gill Tract put forth an alternative proposal to protest this plan known as *the Village Creek Farm and Gardens* which was also dismissed by the University.^{71,72} On Earth Day in April 2012, the Occupy the Farm movement emerged in an effort to preserve what remains of the undeveloped land within and adjacent to the Gill Tract, roughly 22 acres, to be recognized for its future agricultural value and importance. Although the adjacent sites to the agricultural fields were previously developed (*see Section*

69 Press, Eyal, and Jennifer Washburn. "The Kept University." *The Atlantic*. 2000. <http://www.theatlantic.com/magazine/archive/2000/03/the-kept-university/306629/>.

70 The Center for Investigative Reporting. "The Biofood Battle." *The Center for Investigative Reporting*. 2000. <http://cironline.org/reports/biofood-battle-1374>.

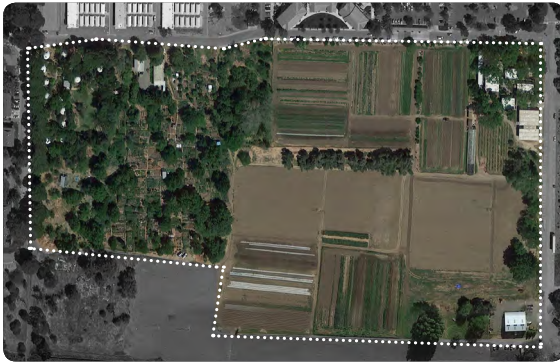
71 Barrantes, Marco R. *Feed Your City: 2004 Berkeley Field Guide to Planning for Food*. Berkeley, CA: Self-published 2004.

72 Burress, Charles. "BERKELEY / Cal in a Battle over a Tract / Chunk of Land Represents UC's Original Agricultural Mission, and Much of Its Legacy, but Planners Say Land Is Too Badly Needed." *SF Gate*. 2000. <http://cironline.org/reports/biofood-battle-1374>.

6.4.1.), these areas pose an opportunity to facilitate greenhouses, laboratory spaces, classrooms and community spaces which are critical programming aspects of an agroecological living laboratory. Additionally, the compacted and potentially contaminated spaces reminiscent of these previous developments pose an opportunity to teach and research sustainable bioremediation methods to revitalize the soils as opposed to capping the contaminants with pavement.

The mission of the Farm and previous community visioning documents on the Gill Tract align with the aim of the Global Food Initiative, but little has been done to prioritize and grow the Gill Tract into a more robust agroecological resource. The Farm, as it exists today, has experienced hardships in securing funding to cover a full-time farm manager position and basic operational costs. With the influx of funding and commitment by the UC's Global Food Initiative to spearhead sustainable agriculture research, the question arises around *why* the University of California is *not recognizing* this site as a valuable agricultural resource that has the ability to engage students, faculty and the community in addressing local food access

UC DAVIS: 30 ACRES



UC SANTA CRUZ: 25 ACRES



UC BERKELEY'S UCGTFC: 2 ACRES*



*only the portion of the Gill Tract currently under biodiverse cultivation is highlighted due to the conflicting ideals of the monocropped area currently in use on the adjacent southern farmland area.

Figure 10. UC Berkeley's existing experiential learning facilities available to students are lacking in size in comparison to other UC schools.

barriers?

As the struggle to preserve the Gill Tract from *long-term* commercial development pressure continues, the language of the Global Food Initiative highlights the disconnection between University of California rhetoric and actions. There has undoubtedly been funding and support from the College of Natural Resources that may have stemmed from the GFI and manifested into important efforts at the Farm itself, but the timeliness and robustness of that support does not match the urgent and ambitious tone of UC's Initiative. Interestingly, though, during the time that this report was written the Farm has received a pledge of \$20,000 from the GFI in addition to another *potential* \$10,000 - \$15,000 in funding from the Berkeley Food Institute. The Farm has been supported by UC since its inception in 2013, but the bigger question is how far will the UC go to support and preserve the agricultural function of the greater Gill Tract?

6.2 Growing Demands for Food Based Studies at UC Berkeley

UC Berkeley's existing experiential learning facilities available to students

are lacking in contrast with other UC schools such as UC Davis and UC Santa Cruz. UC Davis is the largest UC campus and has more than 3,000 acres set aside for agricultural research. Of this area, approximately 30 acres are readily available to students by hosting the UC Davis Student Farm, community garden plots and biodiverse agricultural experiments (Figure 10).⁷³ The Center for Agroecology and Sustainable Food Systems (CASFS) and the Alan Chadwick Garden at UC Santa Cruz host a similar acreage, approximately 30 acres, of biodiverse farmland available to students.⁷⁴

The only significantly sized on-campus or near-campus agricultural research facilities that currently exist at UC Berkeley include the Oxford Tract and the Gill Tract. These two facilities are about 2 miles apart which is a comparable distance between UC Santa Cruz's CASFS and Alan Chadwick Garden. Both of UC Berkeley's Oxford and Gill Tracts amount to 11.25 acres of combined agricultural

⁷³ Global Food Initiative. "Fact Sheet: University of California, Davis." Global Food Initiative. 2014. <http://www.ucop.edu/global-food-initiative/resources/index.html>.

⁷⁴ Global Food Initiative. "Fact Sheet: University of California, Santa Cruz." Global Food Initiative. 2014. <http://www.ucop.edu/global-food-initiative/resources/index.html>.

fields, greenhouses and laboratory facilities, as measured using Google Earth Pro. A few smaller initiatives around edible gardening exist, such as the Clark Kerr Garden and an edible patch at Blake Garden, but these were not included due to their limited size. The Oxford Tract has 1.5 acres of open agricultural fields and 1.75 acres of greenhouse and laboratory facilities. The Gill Tract has about 8 acres of open agricultural fields. Roughly 6 of these acres are currently dedicated to experiments using one type of crop in periodic rotation with cover crops while 2 acres are dedicated to cultivation by the UC Gill Tract Community Farm. The additional 2 acres at the Gill Tract, which accounts for the 10 acres often cited in current agreements, is taken up by a paved road and a forested zone around Village Creek and thus is not sufficient for agricultural cultivation. With respect to growing demands in sustainable food-based courses, it is logical to expect that the existing 11.25 acres within close commuting distance to main campus will need to continue and even expand to accommodate increases in educational programming.

Spatial extents of the largest contiguous agricultural fields under biodynamic cultivation were mapped using Google Earth Pro for each University (Figure 10). Comparisons



Figure 11. Current agreements set aside 10 acres until 2022 but plan to develop approximately 12 acres of University land for commercial uses.

illustrate the extent to which UC Berkeley's facilities lack capacity in relation to its UC-system counterparts. Interestingly, if all 16 acres were incorporated for use as an agroecological laboratory at UC Berkeley, this extent would be much more comparable to UC Davis' and UC Santa Cruz's programming capacities.

6.3 Current Development Pressures

Current commercial development plans at the Gill Tract outline a Sprout's Market grocery store, various retail outlets and Belmont Village Senior Living Center on 12 acres (Figure 11).⁷⁵ The 104 acres of the original Gill Tract were acquired for recreational purposes so the land may not have been intended to continue in long-term agricultural cultivation when it was first obtained; however, in March 1940 a separate 18-acre piece of farmland owned by UC Berkeley called the Schmidt Tract, which *was acquired* with tax dollars specifically for agricultural purposes, was absorbed into the Gill Tract to continue agricultural research.^{76,77}

75 UC Berkeley, "University Village Senior Living and Marketplace," Berkeley Real Estate, (2015), <http://realestate.berkeley.edu/cd-university-village-albany>.

76 Bancroft Library Archives, Marin-Buchanan Extension on Gill Tract, Memo to S. S. Elberg from Ray F. Smith "Proposed Connection between Buchanan Street and Marin Avenue in Albany", B.F. # 110 - 80, 1961. CU-149, Box 14, Folder 9.

77 Finacom, Steven. "Hidden Town and Gown History in North Central Berkeley." The Berkeley Daily Planet, April

This transfer is significant because it may imply legal obligations to preserve the Schmidt Tract's—and therefore the Gill Tract's— use in agricultural research. Furthermore, 37.6 acres were set-aside in 1944 to create the Experiment Station for Biological Controls. Although the entirety of this promise was never realized due to the need for wartime housing during WWII which took over 19 acres of the Experiment Station land, the University did intend to dedicate a large portion to agricultural research.^{78,79,80} The original 37.6 acres dedicated to the Experiment Station for Biological Controls in the 1940s is difficult to identify because no map exists (to the knowledge of the author) specifying this boundary. Nonetheless, a portion of the current land proposed for redevelopment— mainly the area around the proposed Sprout's grocery outlet— was definitively used by the Experiment Station as laboratory and greenhouse spaces. Dr. Raymond Smith, known as the father of integrated pest management

12010.

78 Bancroft Library Archives, Marin-Buchanan Extension on Gill Tract, Memo to S. S. Elberg from Ray F. Smith "Proposed Connection between Buchanan Street and Marin Avenue in Albany", B.F. # 110 - 80, 1961. CU-149, Box 14, Folder 9.

79 LSA Associates Inc., "Report – Experiment Station Research and History," 8.

80 Warren F. Lee, and Catherine T. Lee, 2000, A Selective History of the Codornices-Universiyy Village, The City of Albany & Environs. Belvidere Delaware Railroad Company Enterprises. Ltd.

and creator of the term "pesticide treadmill", stressed in a letter to UC Berkeley in the 1960s the importance of both open land and laboratory facilities to ensure adequate agricultural research facilities.^{81,82} The current argument that the existing agricultural research fields will not be impacted by prospective developments fails to consider the needs beyond open field cultivation. Consideration should be given to the best use of this site beyond 2022 that respects the legacy of the land grant institution by which it was acquired. The slated developments do not fall within this aim and raise ethical questions about the University's ability to lease public land to private companies over a long-term period.

6.4 Site Analysis: Historic, Current and Community-Driven

6.4.1 Historic Site Analysis: Land Uses at the Gill Tract

Satellite imagery from 1939, 1990, 2007, 2009 and 2015 were acquired from UC Berkeley's Earth Sciences and Map Library (1939 imagery) and Google Earth Pro (1990, 2007, 2009, 2015 imagery) to visually assess which areas of the Gill Tract have continually or

81 "Ray Fred Smith", 2001, The National Academies Press, Biological Memoirs V80. Retrieved from: <http://www.nap.edu/read/10269/chapter/17#294>

82 Bancroft Library Archives, Marin-Buchanan Extension on Gill Tract



1939



1990



2007



2009



2015

Figure 12. Satellite imagery was used to investigate previous land uses.

historically been used for agricultural cultivation. Misconceptions exist on which areas have been used for development versus agriculture, so the findings will help direct community feedback meetings for a master plan design.

Although the Experiment Station for Biological Control was not established until 1944, agricultural experiments were conducted early on at the Gill Tract as evidenced in this satellite image from 1939 (Figure 12).⁸³ Projects were likely in collaboration with the USDA. It is unclear what the bright white patch south of Village Creek on the image indicates, but the high reflectance likely means this patch of land was undeveloped and barren.

No satellite imagery was found between 1939 and 1990 but many new land uses are evident throughout this period (Figure 12). In the 1960s, the City of Albany acquired 3 acres of the Gill Tract to build the Marin - Buchanan Street Extension (top left / northeast corner of image).⁸⁴ Before its conversion, this area was utilized for orchard research and regarded as one of the most fertile areas of the Gill Tract.⁸⁵ Dr. Raymond F. Smith, renowned entomologist and faculty on the Subcommittee

83 Warren F. Lee, and Catherine T. Lee, 2000, A Selective History of the Codornices-University Village, The City of Albany & Environs. Belvidere Delaware Railroad Company Enterprises. Ltd.

84 Bancroft Library Archives, Marin-Buchanan Extension on Gill Tract

85 Ibid.

on Agricultural Land & Facilities at UC Berkeley, wrote in a memo to S.S. Elberg on February 25, 1960 protesting the acquisition:

“The Gill Tract is an essential part of the present teaching and research program of the College of Agriculture at Berkeley. The loss or impairment of this facility would seriously hamper the agricultural activities now centered on the Berkeley campus.” and “...To maintain a reasonable level of research activity, the number and size of the areas should not be reduced further. At present, we have less than 20 acres of open plot land as compared to over 42 acres prior to 1943.”⁸⁶

As mentioned previously, wartime housing was built on the Gill Tract during WWII and later reacquired by UC Berkeley for student housing (the portions North and East of the baseball fields in the 1990 image). Numerous greenhouses and agricultural research laboratories were constructed just south of the vegetated corridor (in the middle of the image).⁸⁷

A 1963 research study of Monterey Pines led to the creation of a densely forested

86 Bancroft Library Archives, Marin-Buchanan Extension on Gill Tract

87 Lee, A Selective History of the Codornices-University Village (2000)

portion of the northeastern portion of the Gill Tract.⁸⁸ Many Albany residents regarded this as an iconic image of Albany as seen driving down Marin Avenue.⁸⁹

By 1999, the Experiment Station for Biological Control at the Gill Tract ceased operations. In 2002, the University attempted to replace 7 acres of the Gill Tract with two little league baseball fields and a community center but strong opposition by the local community blocked the development plans.⁹⁰

By 2008, the University concluded that the Monterey Pines planted in the 1960s had to be removed due to pitch canker, a disease that infected many of the trees making them susceptible to falling down and therefore a public safety concern. The majority of the Monterey Pines were removed.⁹¹ Around the same time, efforts to demolish the old laboratory buildings and Wartime-era housing began.

Today, only two buildings that were part

88 King, J. (2008, January 23). Campus to remove diseased Monterey pines from Gill Tract in Albany. Berkeleyan. Retrieved from http://www.berkeley.edu/news/berkeleyan/2008/01/23_pines.shtml

89 Susan Moffat, Project Director of Global Urban Humanities at UC Berkeley. Personal Correspondence: November 19, 2015.

90 M. Artz, (2002, October 3). UC Berkeley wants housing on seven acres of farm land. Berkeley Daily Planet. Retrieved from www.berkeleydailyplanet.com/issue/2002-10-08/full_text

91 King, J. "Campus to remove diseased Monterey pines from Gill Tract in Albany", *ibid.*

of the original laboratories for the Division of Biological Control remain. The portion of land previously used by Monterey Pine experiments now house the UC Gill Tract Community Farm.

6.4.2 Current Site Analysis Through Four Scales

Given the unique history in pioneering integrative pest management and the consistent demand by the community over the past 20 years to preserve the Gill Tract as an agricultural community resource, this study performed a site analysis on approximately 16 acres of the currently undeveloped site. Construction of Belmont Place Senior Living Center began on the adjacent, undeveloped 2.4-acre lot during the time period in which this study was conducted, and thus this parcel was excluded from this analysis. The recent breaking of ground to construct Belmont Place emphasizes the time sensitivity of planning efforts to preserve the agricultural integrity of the adjacent 16-acre Gill Tract.

Many opportunities exist to enhance and improve the Farm and the space around it on various scales. This study outlines a strategic framework to analyze the site on four different scales: site scale, community scale, campus and city scale and regional scale (Figure 13). The findings will be used to inform a conceptual master plan design, adhering to principles of

adaptive reuse and low impact development whenever possible. This study also recognizes the realities of the space that likely will not go away anytime soon—the most prevalent example being the existing chain-link fence around the entire site. The resultant master plan strives to offer *one of many* agricultural futures of this space to challenge current development plans and offer a starting point for the community visioning process.

• Site Scale

The site is relatively flat with an approximate 2% grade change between the east and west boundaries (Figure 14). Albany receives an average of 24 inches in annual rainfall, the majority of which occurs between November to March.⁹² Village Creek, a tributary of Marin Creek, runs throughout the middle of the site, dividing the land into northern and southern sections. Because of the variation in wetness between winter and summer, the Creek often dries up and functions as ephemeral habitat. Many signs of degradation are apparent in the Creek. The most prominent instances of degradation include channel incision, invasive vegetation and minimal floodplain extent which likely result from the high degree of impervious

92 Weather DB. "Albany, California Average Rainfall." Weather DB. 2016. <https://rainfall.weatherdb.com/l/498/Albany-California>.

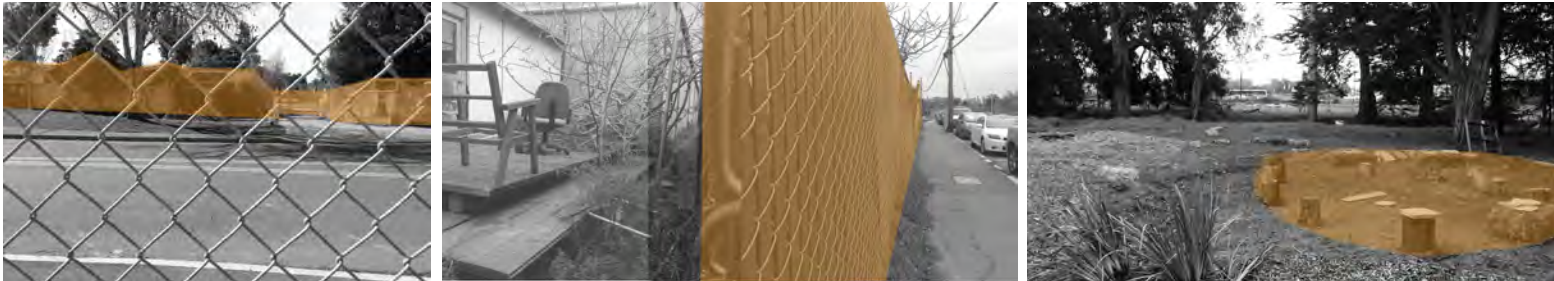
1 SITE SCALE



Establish formalized entries to create more defined spaces

Enhance circulation through connecting greenway, existing drives etc.

2 COMMUNITY SCALE



Reconnect the community through enhancing important access points

Create gathering spaces for educational programming

3 CAMPUS & CITY SCALE



Emphasize adaptive reuse with existing infrastructure

Revitalize natural resources

4 REGIONAL SCALE



Promote wildlife corridors through native plantings and pollinator spaces

Enhance biodiversity and productivity through polyculture & perennial systems

Figure 13. In order to explore the potential of the Gill Tract, the site was broken up into four scales: site, community, campus & city, and regional.

surfaces existing upstream. There does not appear to be any bank stabilization controls with the exception of a large steel bar across one section of the Creek. Approximately 2 acres of forest surrounds the Creek, which is made up of a variety of tree species some of which were likely planted by the previous owner, Edward Gill, before 1928. Some of the tree species identified on site include *Sequoia sempervirens*, *Cedrus atlantica*, *Eucalyptus globulus*, *Prunus* spp., *Morus* spp., *Pinus* spp., *Cupressus macrocarpa*, *Washingtonia filifera*, *Afrocarpus gracilior* and *Phoenix canariensis*. The majority of the site receives ample sunlight with the exception of the areas adjacent to the forested zone.

More architectural formality at the site scale has the potential to enhance the functionality of the Farm. Entryways and circulation are the main focus of the site scale. Currently there is only one semi-defined entryway that sits off of the low-traffic paved road running through the site. More defined and visible entryways will draw in passersby and be easily recognizable to visitors. These entryways will be more affective at major entry points such as at the two main gates off of San Pablo Avenue and Jackson Street. Smaller signage and transition structures at secondary entry points will be sufficient to mark other

points of entry while not competing against the main points. Five mature mulberry trees are situated at the entryway from Jackson Street. Mirroring and extending these trees into an entryway allée will create a more defined entryway that enhances the existing plantings and formulates an experience upon entry. Additionally, mulberry trees (*Morus* spp.) produce edible berries which will add to the productivity of the Farm.

Future visioning of the Farm should also prioritize site-scale circulation, both vehicular and pedestrian. The current circulation consists of the main paved road throughout the middle of the site and connects remnants of previously paved roads throughout the Division of Biological Control. Two fully functioning bridges, under which Village Creek flows, are in what appears to be good working condition, allowing these connections to be easily restored. However, the bridge nearest to Jackson Street connects directly in front of the existing classroom building, cutting off opportunities for indoor-outdoor place making. Converting this bridge and adjacent space to pedestrian pathways over vehicular drives will enhance the space around the classroom, allowing opportunities for a gathering space for more active uses and reduce the potential impact from vehicles passing over the creek.

Implementing a gravel drive between the second existing bridge (closer to the center of the site) to the existing parking lot on the southern-most portion of the site will allow for better on-site parking as compared to the current informal parking along the Farm's existing paved road. Low impact development features, such as pervious pavers, bioswales and rain gardens should be implemented around these features where possible to capture any stormwater pollutants and preserve the site's existing hydrologic integrity.

A well-defined bike and walking path along the periphery of the property encourages many pedestrians and bikers to frequent the northernmost edge of the site. A chain link gate currently blocks visitors from entering the Gill Tract directly off this path. The fence likely serves as a barrier to preserve the integrity of ongoing research on the fields but also to protect the University from potential liability issues. It is unlikely that the fence will be removed in the near future so enhancing the fence to be a dynamic tool will be the most suitable way to improve this circulatory connection. One idea is to adapt the structure of the fence to serve as an educational pathway, with signage orating the history of the Gill Tract and the current use and future vision of the space. Espalier fruit trees or edible vines

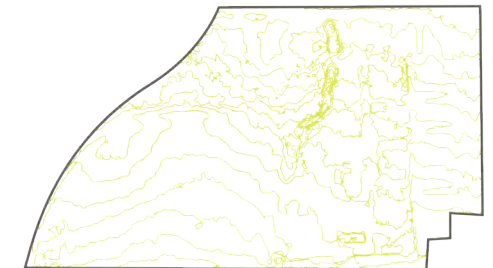
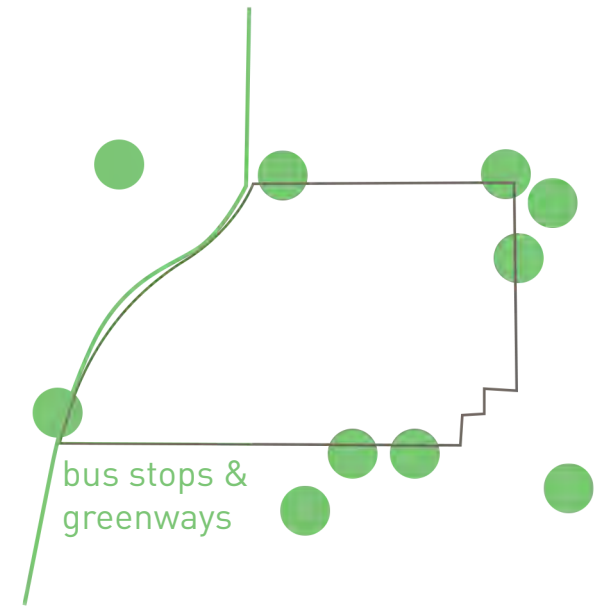
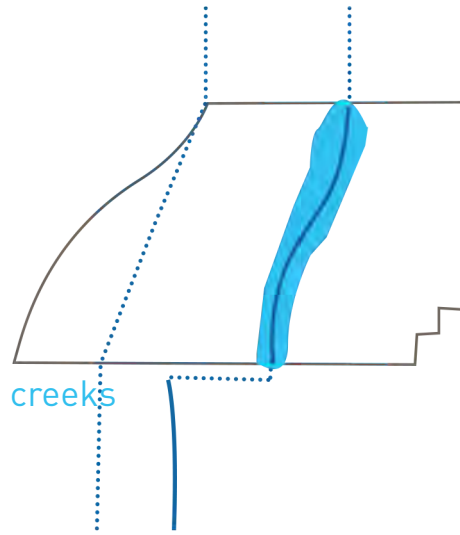
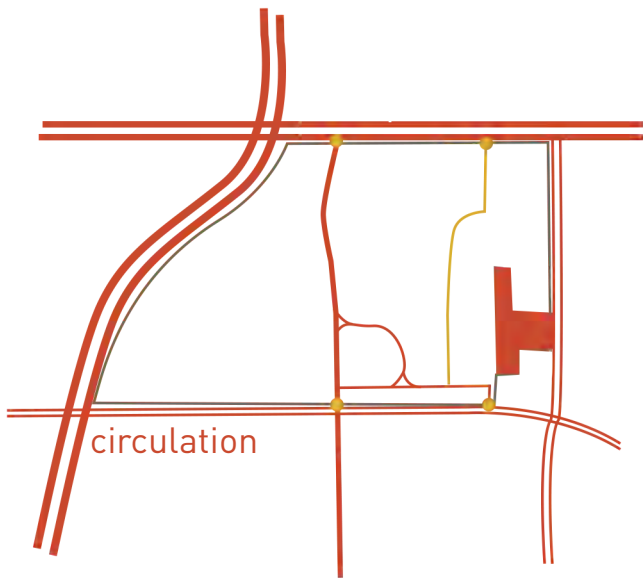


Figure 14. Investigation of the site scale revealed:

- 4 entry points
- poor road circulation
- no formal parking
- 1.1 acres of biointensive cultivation
- 5.3 acres of monoculture
- 3 buildings, 1 shipping container
- 750 feet of creek
- active & diverse wildlife
- 2 acres of trees
- 10 nearby bus stop
- greenway along Buchanan St.
- 2% grade (E - W)

could also be planted along the fence through fabrication of a reinforcement structure to support the plantings. A dynamic, planted and potentially interactive edge is an excellent opportunity to metaphorically break down this abrupt barrier and take advantage of the existence of the current structure.

- *Community Scale*

Analysis of the site on the community scale reveals many opportunities to reconnect the community to the site through enhancing important access points. Directly adjacent to the site are many diverse places within the Albany and campus community, including: Ocean View Elementary School, the UC Village student housing complex, Albany City Hall and many single family residences. These destinations are important to keep in mind when designing programming throughout the site, as physical connections will work to encourage interaction between spaces. Although Ocean View Elementary School has a small garden of its own, the opportunity to accommodate larger groups and a wider range of programming will be created by locating an educational garden on the northwestern area of the Farm.

Additionally, removal of the portion of fence along Jackson St. around the existing classroom building will activate

the undeveloped space beside the porch. Removal of this portion of the fence will not undermine the security of the site since the fence can be rerouted to attach to the sides of the educational building; thus, the only area open to the street will be the backside of the building and adjacent lawn space. Educational signage about the Farm and a small herb garden or other plantings in this area will also draw interest to passersby and work to permeate through the isolating fence barrier that currently cuts off the Farm from the community.

Since many low-income, non-traditional students, staff and faculty at UC Berkeley live in UC Village, locating a farm stand as a point of food distribution on the western edge of the Farm will work towards addressing campus food insecurity-- one of the main goals behind UC's Global Food Initiative program. The most optimal location to locate a farm stand in this area will be at the pedestrian crossing to UC Village just North of the existing classroom space.

The creation of gathering spaces for



FARM STAND: SAN PABLO AVE ENTRANCE



FARM STAND: MAIN CAMPUS



MOBILE CLASSROOM: ALBANY HIGH SCHOOL

Figure 15. Investigation of a 1-mile radius around the Farm revealed:



community forums, educational programming and workshops throughout the site will activate the space in diverse ways. Informal spaces have been developed at the site for this purpose so refining these areas, exploring appropriate materials and layouts and connecting pathways to enhance site-scale circulation efforts will strengthen these spaces.

• *Campus and City Scale*

The two miles that separate the Farm from main campus make it difficult to draw in students and enhance visibility of this resource throughout the campus community. Additionally, distance also separates the farm from areas that have the lowest food access in the East Bay: Richmond, Oakland and Pinole. Development of a mobile farm stand— a retrofitted food truck, for instance — will work to bridge this gap by locating it in many locations throughout the community and main campus. The farm stand will double as a mobile classroom, equipped with the necessary tools to teach agroecological farming practices and even swap out student lawns for edible gardens. Schools, nonprofits or governmental organizations with a desire to teach nutrition workshops, gardening classes or other educational programming but lack the facilities to do so can partner with the Farm to bring the mobile classroom to areas that could benefit.

Such a resource will also function as a research vessel to document and analyze urban food access issues. In addition, the size of arable land at the Farm poses an untapped resource that could substantially offset UC Berkeley's food sourcing carbon footprint. Establishment of a food distribution network linking the Farm to the Campus will diminish the distance felt between the two entities. Incorporating Farm produce into the dining halls is one example of establishing this connection.

An emphasis on adaptive reuse of existing infrastructure is the most efficient means to preserve the historic use of the site. Such adaptive reuse ideas will apply to remnants of the Division of Biological Control. This includes the partially utilized classroom building, the warehouse unit that currently serves as storage and the existing utility infrastructure of water and electricity running underground and around the periphery of the Farm. The existing classroom building will house offices for faculty, staff and students, and also serve as onsite classrooms for the campus and community. The warehouse unit will be revitalized into an urban agriculture hub or "makerspace", with incubator spaces for various research endeavors such as green roofs, aquaculture systems, greywater capture and vermi-composting techniques. Such a space

will also accommodate researchers from Lawrence Berkeley National Laboratory and facilitate cross-disciplinary collaborations. Degraded areas from past developments — the majority located on the southern portion as discussed previously — will inform the location of the future community center to be built on a compacted, previously developed soils. This will avoid compromising areas with intact drainage and agricultural integrity. Development of a community center equipped with the latest environmental sustainability infrastructure (composting toilets, rainwater capture, passive heating, solar power, etc.) will create opportunities for a sustainability demonstration space, an industrial community kitchen, educational programming spaces, offices for students, faculty and staff and conferences and events.

The final approach at the campus and city scale is on revitalizing natural resources — an aspect of the site that becomes critical to improving the health of a city experiencing immense population growth and urbanization.



Figure 16. Photos of existing conditions reveal underutilized space.

Any remaining areas left undeveloped should be remediated to restore ecological complexity as well as accommodate future agricultural production. Opportunity exists to collaborate with on-campus science departments and researchers at Lawrence Berkeley National Laboratory studying soil chemistry and bio-remediation to establish a research space aimed at remediating existing on-site contamination. In order to ensure sustainable and comprehensive

remediation approaches, the time frame of such remediation will likely be drawn out over a long period depending on techniques used and available funding. With extensive superfund sites throughout this country — from intermittent hazardous spills to long-term military uses— innovations in bioremediation techniques will undoubtedly be, and already are, an area of increasing concern.

Another critical resource is Village Creek, one of the last remaining open-air tributaries of Marin Creek (Figure 15). Village Creek suffers from severe incision, degraded riparian zones and invasive plantings throughout its banks. In order to restore the ecological integrity of the Creek, restoration work is necessary to reconnect the banks to the floodplain and implement features such as step pools to slow flow velocities during large storm events and prevent further incision. Implementing a floodable outdoor classroom that works dually as a creek enhancement tool and a living laboratory space will be beneficial in activating this unique resource and raising awareness about its existence. Current grasses should be removed and replaced with native plantings that foster complexity and provide needed habitat to local wildlife.

- **Regional Scale**

Over the past 20 years the San

Francisco Bay has experienced a surge in population, causing a boom in development. When examined on a regional scale, the Farm sticks out as a valuable regional resource of open space for both people and wildlife in the midst of intensive urbanization. The distance from the Farm to the Bay—a wildlife hotspot—is approximately 1 mile. The context the site exists within— with the presence of Village Creek throughout the site and Tilden Regional Park nearby and the proximity to Codornices Creek, Cerrito Creek and the Bay— makes this site an important wildlife corridor. Visitors at the Farm are familiar with many of the visible wildlife such as geese, turkeys, deer, butterflies and bees. But all wildlife using this space may not be seen or even viewable to the human eye, so it is imperative that this site be designed in way that works in harmony with the natural world. The current monoculture of crops throughout the adjacent 6 acres to the Farm and the clear-cut patches of the forest along Village Creek do little to promote food and habitat for wildlife. The Farm was founded on holistic principles, with the hope of creating a biodynamic and complex ecosystem that serves both humans and wildlife, which replenish the earth in a healing way. This future can occur through the design and development of diverse polycultural and perennial systems,

maintained by organic methods that create ample habitat for pollinators and beneficial insects. The creation of Native American food forests can also act as a cultural resource while promoting sustainable and traditional practices on the land.

This site also has potential to host many types of activities to activate the space. One example is the relocation of the monthly compost give-away from the Berkeley Marina to the Gill Tract, making it a more relevant site and drawing in diverse groups throughout the community. The Gill Tract could also serve as a unique urban agricultural hub with respect to its location in a densely urbanized setting and visibility at the intersection of two busy roads.

6.5 Community-Driven Site Analysis and Visioning

Many community-visioning documents of the Gill Tract exist in the context of using the space as an agro-ecological resource. The main documents used for this study include the 1997 Bay Area Coalition of Urban Agriculture (BACUA) proposal, the 2004 Village Creek Master Plan, the 2012 Gill Tract Dot and Survey Synthesis study, and Vanessa Raditz' permaculture design work over multiple scenarios. A matrix was made to compare the programming at each facility to better understand what the

FARM PROGRAMMING COMPARISON MATRIX

	Regenerative Ag.	Food Bank	Wildlife Corridor	Creek Restoration	Native Plants	Open Commons	Gathering Space	Seed Processing	Community Kitchen	Soil Regeneration	Urban Ag. Hub	Food Preservation	Farmer's Market	Seed Library	Sustainable Building Lab	Job Creation	Green Play Area	Forest Garden	Univ. Offices for Ag. Educators	Community Workshops
	Perennial Polyculture	Youth Education	Compost Facility	Medicinal Plants	Rainwater & Gray Water Systems	Arboretum	Pollinator Garden	Greenhouse / GH Mobile	Wildlife Area	Tool Library	Renewable Energy	Permaculture Demos	Animal Husbandry	Integrated Pest Mgmt.	Museum	Aquaponics	Dry Farming	Research	Raised Beds	Resource Yard
COMMUNITY VISION	GILL TRACT DOT AND SURVEY SYNTHESIS																			
	VILLAGE CREEK MASTER PLAN																			
	BAY AREA COALITION FOR URBAN AGRICULTURE (BACUA)																			
CASE STUDIES	CENTER OF AGROECOLOGY & SUSTAINABLE FOOD SYSTEMS (UCSC)																			
	THE STUDENT FARMS (UC DAVIS)																			
	UC GILL TRACT COMMUNITY FARM (as is)																			
NEARBY GARDENS	UC VILLAGE COMMUNITY GARDENS																			
	STUDENT ORGANIC GARDEN ASSOCIATION (SOGA)																			
	OTHER?																			

TERMS

Regenerative Agriculture: sub-sector of organic farming that builds the soil health and fertility

Perennial Polyculture: facilitating beneficial relationships between plants through planting design to grow plants over multiple years without replanting and minimal water inputs

Food Bank: a place for low-income people to receive free, locally grown produce

Urban Agricultural Hub: support center for local urban agriculture; exploration of urban-specific gardening strategies such as rooftop and vertical gardening

Tool Library: community tool-share collective

Dry Farming: the use of drought-tolerant crops, such as tomatoes or grapes, that require no water inputs beyond establishment.

Integrated Pest Management: the use of polycultural systems to attract beneficial insects to control pests and minimize damage to food crops.

Source of Terms: Bay Area Coalition for Urban Agriculture 1997

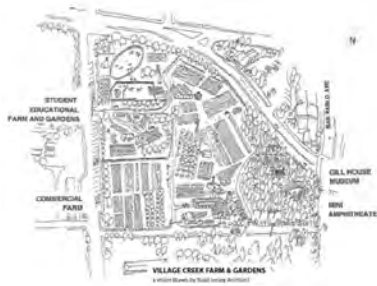
PREVIOUS COMMUNITY VISIONS: Visualizing a community farm since 1997

1 BAY AREA COALITION FOR URBAN AGRICULTURE (BACUA): 1997

Creating a Center for Sustainable Urban Agriculture and Food Systems at the University of California Gill Tract in Albany
A preliminary proposal by the
Bay Area Coalition for Urban Agriculture (BACUA)
for a partnership with
the University of California at Berkeley and
the Division of Agriculture and Natural Resources
February 1997

BACUA, a coalition of more than 30 non-profits and community organizations in the Bay Area, proposes that the University of California enter into a university/community partnership in order to create the world's first university center on sustainable urban agriculture and food systems. The purposes of the Center would be to promote research, education, extension and outreach on the various social, environmental, economic and ecological dimensions of urban farming and sustainable food systems. The expansion of urban agriculture and alternative food systems is a worldwide phenomenon that has caught the attention of policy makers, activists and funders as a new response to issues of food security, economic development, poverty alleviation, urban blight, waste recycling and environmental preservation. The proposed center would be located at the Gill Tract in Albany and would benefit the university community as well as a diverse array of constituencies in the Bay Area, California, the U.S., and internationally.

2 VILLAGE CREEK FARM AND GARDENS: 2004



3 STUDENTS FOR ENGAGED & ACTIVE LEARNING REPORT: 2013



community has consistently envisioned over the past 20 years. The matrix also compares how the desired programming at the Farm differs from the garden and farm operations in close proximity including the Student Organic Garden Association (SOGA) and the UC Village Community Gardens. Additionally, comparisons were drawn between the UC Gill Tract Community Farm as it currently operates with other UC system schools, which include the Center of Agroecology and Sustainable Food Systems at UC Santa Cruz and the Student Farms and adjacent agricultural research fields at UC Davis.

In order to gain community feedback on the proposed vision, I hosted an informational booth and presented my research findings and vision at the Farm on Sunday, April 24th, 2016 during an Earth Day weekend celebration. Approximately 25 people attended the presentation and an in-depth discussion followed for approximately one hour. Community members who attended ranged from regular Farm volunteers, first-time Farm volunteers, Farm Stewardship Council members, UC Village residents, City of Albany residents, UC Berkeley students, UC Davis students, a retired professor of Laney College and a retired staff engineer from UC Berkeley. The main feedback I received fell

into four categories: (1) the need to circulate this vision to diverse stakeholders; (2) the need to formulate a multi-faceted, cooperative economics model of the value of the Gill Tract as an environmental and social resource in addition to the need to secure funding to pursue this vision; (3) the need to expand the scope of the Farm to involve more diverse University departments; and (4) the need to connect existing research and future areas of research with graduate and undergraduate students to continue work on this topic. Insights from this community meeting help to inform future areas of research at the UC Gill Tract Community Farm.

6.6 Design Proposal

The current expanse of open areas at the Gill Tract are ideal for scaling up production of sustainably produced, nutritious foods. In this vision, the UC Gill Tract Community Farm increases from 1.1 acres to 12 acres. The wildlife zone, approximately 2.5 acres, is kept fully intact and preserved, with efforts to enhance the ecological integrity of Village Creek (Figures 17 and 18). In addition, the area around the existing buildings are excellent conditions for educational programming and native plants. This area is an extension of UC Berkeley's Urban Bee Lab that is currently



Figure 17. The conceptual design proposes increasing biodiverse farming, enhancing and preserving the existing forested region and implementing educational facilities and native gardens.

limited in geographic extent at the Oxford Tract. Incorporation of Urban Bee Lab plots at the Gill Tract will promote pollinator activity in the agricultural fields and offer educational and research opportunities. Existing circulation is enhanced by implementing a low-impact gravel road to connect the existing parking



Figure 18. By expanding the current 10 acre agreement to approximately 16, the Gill Tract will host a multitude of academic, environmental, social and cultural services on the land as an agroecological living laboratory.

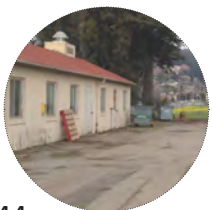


EDIBLE GREEN WALLS:

Retrofitted modules on the southern side of the classrooms create a trellis for edible kiwi fruits while also passively cooling the building in the summer.

POLLINATOR HABITAT:

Plants like butterfly bush (Buddleja davidii) attract beneficial pollinators & act as a specimen plant for the patio.



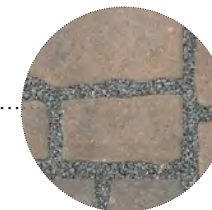
REVITALIZED CLASSROOMS:

Converting the road into a pedestrian space restores the building's connection to the landscape and encourages indoor-outdoor programming.



HERB GARDENS:

Thyme (*Thymus vulgaris*) and other aromatic herbs grow outside of the classrooms for use during cooking demonstrations.



PERVIOUS PAVEMENT:

Rainwater infiltrates through the pervious pavers to recharge the groundwater.

OPEN SPACE:

Recreation, education, environmental services, wildlife connectivity & habitat are a few of the many benefits the space offers as an agroecological living laboratory.

ADA ACCESSIBLE PLOTS:

The garden can be a beneficial social network for the elderly and a rehabilitation space for those who have experienced trauma.

FORMALIZED ENTRYWAY:

Creation of more defined entries draw in passersby while doubling as orchard and pollinator habitat.

PEDESTRIAN WAY:

Conversion of the existing road into a pedestrian way enhances the connection with the classroom space and reduces runoff into Village Creek.



EDUCATIONAL GARDENS:

A variety of workshops occur at the Farm's educational gardens, from teaching kids about where their food comes from to learning how to identify beneficial insects.

DENSE POLY CULTURES:

Densely planted polycultures increase Farm productivity using safe, organic, agroecological practices such as promotion of beneficial insects and building of soil organic matter.

FENCE REMOVAL:

Removal of the interior fence allows for a more welcoming, interactive environment but still maintains the exterior fence to maintain open hours

WILDLIFE CORRIDOR:

Positioned between Village Creek and Codornices Creek, the Farm acts as an important wildlife node. Wild turkeys and deer frequently roam the site.

NATIVE PLANTS:

Native plants promote native pollinators, encourages beneficial insects, demonstrates low-water landscape design & thrives under Blue Gums.

lot on the eastern edge of the site with the main road running through the middle of the site. The remnants of old roads that once were used for the Experiment Station are taken out and replaced with pedestrian pathways to reconnect and enhance the indoor-outdoor environments. An educational garden, which was historically at the southern entry point from UC Village, is implemented to easily connect with students at Oceanview Elementary School and residents of UC Village. ADA-accessible raised beds adjacent to the educational garden are an opportunity to foster intergenerational knowledge sharing and build connections with the future Belmont Village residents. The current research zones

of monocultured crops are converted to biologically diverse plots of food guilds and orchards. These research areas can be staked off and labeled with signage to ensure produce is only harvested by trained researchers. These plots offer an interesting exploration of citizen science, too, where the Gill Tract adopts straightforward research protocols, holds ongoing training workshops and incorporates community participation in long-term monitoring efforts of research projects. The addition of biodiverse orchards and perennial crops create an opportunity to incorporate young farmers-in-training and gain monetary support through the USDA's Beginning Farmer and Rancher Development Program. After

produce is recorded upon harvest, food will be distributed through the Food Justice Mobile, consumed by research participants or collected by volunteers. This idea presents a unique opportunity to explore sustainable, organic practices while enhancing foodways throughout the community.

7. RECOMMENDATIONS ON STRATEGIC, LONG-TERM ENVIRONMENTAL PLANNING OF THE GILL TRACT

“Poor city design divides us from others in our communities, undermines our sense of community and place, destroys natural habitats that once gave us immeasurable joy...and fails

SECTION: A - A' NORTHEAST FACING



HEDGROWS AS POLLINATOR HABITAT



STRAWBERRY TREE: edible fruit + wildlife value
- *Arbutus unedo*



MANZANITA: edible berries + wildlife value
- *Arctostaphylos* spp.

INTERCROPPED ANNUALS & PERENNIALS

HEDGEROW

CHILDREN'S GARDEN & PLAY SPACE

PLANT NURSERY

EXISTING ROAD

NATIVE AMERICAN CULTURAL

to inspire our spirits.”⁹³

- Randy Hester in *Design for Ecological Democracy*

Within landscape architecture theory, a concept exists known as *ecological democracy*— design informed by an understanding of social relationships and ecological processes within the local and global contexts.⁹⁴ Design can have powerful implications for the way people or biodiversity use space— manifesting in a spectrum of impacts. Unsustainable and consumptive

93 Hester, Randolph T. *Design for Ecological Democracy*. Cambridge, MA: The MIT Press 2006, 1.
94 Ibid.

means have fueled development practices throughout much of the 20th century, especially in this era of urban sprawl, which exacerbate negative impacts on health and wellbeing. Ecological democracy works to disrupt this unhealthy cycle by offering forms to bridge the principles of democracy and ecology: *enabling form, resilient form and impelling form*.⁹⁵ Together, these strategies work to heal social and environmental problems such as fragmented communities, lost cultural identities, degraded water quality and the loss of wildlife habitat, common

95 Ibid.

problems in modern urban settings. Drawing from the practice of ecological democracy, the Gill Tract offers a space to reconnect the East Bay community, revitalize Village Creek and provide meaningful and beautiful experiences that prioritize sacredness and connectivity.

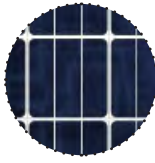
The wellbeing of the planet depends on the ability of humankind to shift towards a value system that prioritizes the integrity of resilient local landscapes.⁹⁶ Many documents exist to achieve this goal, such as UC Berkeley’s *2008 Campus Sustainability Assessment (UCB-*

96 Wu, Jianguo. “Landscape Sustainability Science: Ecosystem Services and Human Well-Being in Changing Landscapes.” *Landscape Ecology* 28 (6)2013: 999–1023.



SOLAR ENERGY & RAINWATER HARVESTING:

Photovoltaic panels in the field powers pumps to deliver recycled rainwater to the food forest for irrigation.



EDUCATIONAL SIGNAGE:

Food forests are excellent ecological teaching tools. The food forest model mimics a typical woodland system but incorporates many edible trees, shrubs and groundcovers in addition to pollinator plants and natural pest controls.

FOOD FOREST:

A biodynamic forest offers abundant food productivity while minimizing required labor in comparison to intensive annual systems.



EARTHWORMS:

Biodynamic systems are rich in earthworms, which aerate the soil and enhance microbial activity, facilitating the cycling of nutrients.

DUCKS AS IPM:

Periodic foraging by ducks reduces pests and incorporates nutrient-rich manure into the system.



PEST SUPPRESSING GROUNDCOVER

GRASS SUPPRESSING BULBS

MATURE APPLE TREE

DWARF LEMON TREE

BLUEBERRY BUSH



NITROGEN-FIXING INTER-CROPS:

Fava beans and other nitrogen-fixing plants intercropped throughout the food forest resupplies important nutrients into the soil in a sustainable way.

CSA), which outlines guidelines to reduce the University's carbon footprint.⁹⁷ The City of Albany has also voiced similar priorities in their 2010 *Climate Action Plan (CAP)*. However, a disconnect exists between the current development plans at the Gill Tract and these planning documents. Without more commitment to these climate policies, efforts to move towards a more sustainable future appear futile. Scientific findings to regulate and protect environmental and cultural resources are not always translated into policy.⁹⁸ Therefore, the University should strive to lead sustainable development by example, which is not currently the case.

An example of how the University could improve its commitment to sustainable design is by implementing a riparian buffer zone to preserve the integrity of Village Creek. At present, current development plans come within 20 feet from the stream bank.⁹⁹ This proposed plan inflicts significant pressure on the local ecological systems. Furthermore,

97 UC Berkeley. "UC Berkeley Campus Sustainability." University of California, Berkeley. 2008. http://sustainability.berkeley.edu/sites/default/files/2008_Campus_Sustainability_Assessment.pdf.

98 Von Winterfeldt, Detlof. "Bridging the Gap between Science and Decision Making." Proceedings of the National Academy of the Sciences of the United States of America 2012. http://www.pnas.org/content/110/Supplement_3/14055.full.

99 UC Berkeley, "University Village Senior Living and Marketplace," Berkeley Real Estate, (2015), <http://realestate.berkeley.edu/cd-university-village-albany>.

with population densities on the rise in the East Bay and a projected global population of 11 billion by the end of the century, open space is becoming an increasingly valued public resource. Policies to prioritize open space with multifaceted social and environmental benefits will be critical to ensure human and habitat wellbeing and long-term sustainability.

We are at a pivotal moment in time in which increased awareness of food insecurity and growing social disparities are driving actions to re-embed social, environmental and economic values within our local and global communities. The Gill Tract can work in response to these needs by acting as a nexus between the academic realm and the greater community, exploring the relationship between people and food to forge innovative solutions to local and global problems. The Gill Tract offers a rich learning tool in the natural sciences with opportunities to teach about ecological services through a working food forest, natural creek and pollinator gardens. It offers experiential learning in the social sciences as well. One example is collaborating with diverse groups such as the Indigenous Land Action Committee to better understand the relationship between Native people and land in the modern context.

The learning opportunities inherent to

the Gill Tract's natural and social resource value are strengthened by the existing connections with diverse stakeholders. Stakeholders include such local nonprofits such as Food First and the Ecology Center; government organizations such as Lawrence Berkeley National Laboratory and the California Food Policy Council; nearby schools such as Oceanview Elementary School and Albany High School; nearby medical facilities such as the Center for Neuro Skills and Berkeley Mental Health Center; and a range of departmental areas within the University that teach topics which coalesce around agroecological principles like earth science, natural resources, energy and resources, environmental chemistry, nutrition, public policy, environmental design and public health.

This piece of land is most relevant to these explorations because it is informed by the Gill Tract's rich historic legacy in alternative agriculture. UC Berkeley's distinction as one of the most forward-thinking institutions in the nation around early concepts of integrated pest management stem directly from the Division of Biological Control. Before the emergence of the modern environmental movement, researchers at the Gill Tract adamantly denounced the use of pesticides by highlighting the successes of organic, ecological approaches. This legacy

remains relevant today as a need exists for better farmworker conditions as evidenced by dangerous exposures to pesticides in the field.¹⁰⁰ Furthermore, this legacy has cemented a need for better environmental protections for low-income communities disproportionately susceptible to pesticide drift.¹⁰¹ Because of the unique placement of the Gill Tract in the urban sphere, it is accessible to people from a range of socioeconomic and cultural backgrounds. This allows the Farm to connect the academic and social community, effectively extending the knowledge of the University into *applied* applications that strengthen the University's mission as a land grant institution.

Arguably one of the most important aspects of the Farm is that it is a multifaceted, productive landscape responding to the needs of our time. It supplies the East Bay and the greater Bay Area with organic food to individuals who lack access. Over the past 15 months, the Farm has produced over 18,700 pounds of produce while simultaneously increasing educational outreach, pollinator plantings, civic activism and many other social and environmental benefits. With a

100 Estabrook, Barry. *Tomatoland: How Modern Industrial Agriculture Destroyed Our Most Alluring Fruit*. Kansas City: Andrews McMeel, 2011

101 Harrison, Jill Lindsey. "‘Accidents’ and Invisibilities: Scaled Discourse and the Naturalization of Regulatory Neglect in California's Pesticide Drift Conflict." *Political Geography*: 506-29. Page 507.

commitment to improving yields through agroecological methods and strengthening its ability to scale up production, the Gill Tract can serve as a powerful productive tool. The Farm presents a case study to bridge the ideals of strong design with community and ecological needs. This type of evolutionary aesthetic responds to ecological and social concerns by reconnecting students and neighbors with the act of growing food. This model can be replicated and scaled-up for use in other communities to forge landscape-scale solutions to regional and global challenges.¹⁰² The underlying opportunity at the Farm is to catalyze proactive actions to confront social and environmental needs where planning documents fall short.

The practice of *applied* ecological democracy has the potential to inspire a more beautiful, sustainable and socially just future at UC Berkeley's Gill Tract. This holistic design approach embodies the intersection of the social, environmental, and built environments to allow for progressive adaptability. Through concerted collective action and collaborative visioning, this project will work to instill a more resilient future for UC Berkeley and the greater East Bay community.

102 Mozingo, Louise A. "The Aesthetics of Ecological Design: Seeing Science as Culture." *Landscape Journal* 1997, 46-59.

8. TABLES

Table 1. Food access maps were created by combining eight data layers which aim to account for proximity to food outlets (WIC authorized vendors), mobility (vehicle access), income (Food Desert Atlas), environmental health (asthma rates), and race (populations of color).

Indicator	Data Analyzed	Query Used	Rating	Source	Additional Details
<i>Availability, Proximity to Food</i>	WIC Authorized Vendors	Within ¼-mile buffer	1	CA Department of Public Health	
<i>Physical Mobility, Proximity to Bus Stops</i>	High Bus Stop Access	Buffer bus stops by 0.25 miles	1	Transit Authority of California (Mtc.ca.gov)	
<i>Environmental Health</i>	Asthma Emergency Dept. Visit Rates by Zip Code	Rate < Contra Costa and Alameda County mean rate	1	CA Department of Public Health	
<i>Environmental Health</i>	Asthma Emergency Dept. Visit Rates by Zip Code	Rate > 70% above Contra Costa and Alameda County mean	-1	CA Department of Public Health	
<i>Physical Mobility, Proximity to Food</i>	Low Vehicle Access	As is	-1	USDA Food Access Research Atlas	"Tracts in which more than 100 households have no access to a vehicle and are more than 1/2 mile from the nearest supermarket" (Source: USDA Food Access Research Atlas)
<i>Social Mobility, Unemployment Rates</i>	High Unemployment Rates	Unemployment rates > 14.1%	-1	2012 Unemployment Rates by ESRI	
<i>Income, Proximity to Food</i>	Low Income, Low Food Access	As is	-1	USDA Food Access Research Atlas	"Low income census tracts where a significant number or share of residents is more than 1 mile (urban) or 20 miles (rural) from the nearest supermarket" (Source: USDA Food Access Research Atlas)
<i>Uninhabited zones</i>	CA Protected Areas (regional parks, wildlife sanctuaries, etc.)	As is	0	California Protected Areas Data Portal (www.calands.org)	

Table 2. Food access ratings assigned to each partner organization included in spatial analyses falling within Alameda County or Contra Costa County (-4 = lowest food access; +3=highest food access).

Organization	Address	Yield (lbs.)	Yield (%)	Accessibility Rating
UC Gill TractCommunity Farm Produce Stand	1050 San Pablo Ave, Albany, CA 94706	4482	24.0	2
UC Village	1125 Jackson Street, Albany CA 94706	1029	5.5	2
Women's Daytime Drop-in Center	2218 Acton St, Berkeley, CA 94702	543	2.9	1
Sojourner Truth Housing Inc.	6015 M.L.K. Jr Way, Oakland, CA 94609	291	1.6	-2
Phillip's Temple CME Church	3332 Adeline St, Berkeley, CA 94703	225	1.2	-1
Phat Beels	974 Grace Ave, Oakland, CA 94608	216	1.2	1
Harriet Tubman Terrace	2870 Adeline Street, Berkeley, CA 94703	188	1.0	2
Center for Neuro Skills	2200 Powell St, Emeryville, CA 94608	145	0.8	0
Youth UpRising	8711 MacArthur Blvd, Oakland, CA 94605	137	0.7	-3
Berkeley Food Pantry	1600 Sacramento St, Berkeley, CA 94702	122	0.7	0
UC Berkeley Food Pantry	Stiles Hall, 2400 Bancroft Way, Berkeley CA 94704	111	0.6	-1
Harrison House	711 Harrison St., Berkeley CA 94710	110	0.6	1
Urban Adamah	1050 Parker St, Berkeley, CA 94710	87	0.5	1
Golden Gate Fields	1100 Eastshore Hwy, Berkeley, CA 94710	41	0.2	1
Omni Commons	4799 Shattuck Ave, Oakland, CA 94609	40	0.2	0
Bay Area Rescue Mission	2114 Macdonald Ave, Richmond, CA 94801	36	0.2	-2
Mother's Kitchen	1802 Fairview St., Berkeley, CA 94703	34	0.2	-1
Bear Pantry	100 Cesar Chavez Student Center, Berkeley CA 94720	27	0.1	0
Pacific Steel Casting	1333 2nd St., Berkeley, CA 94710	27	0.1	1
West Oakland Health Center	700 Adeline St., Oakland, California 94607-2608	24	0.1	-3
South Berkeley Community Church	1802 Fairview St., Berkeley, CA 94703	18	0.1	-1
Daily Bread	1615 University Avenue Berkeley, CA 94703	18	0.1	1
Berkeley Chinese Community Church	2117 Acton St, Berkeley, CA 94702	17	0.1	1
Solano Stroll	1563 Solano #101 Berkeley, CA 94707	16	0.1	3
Over Sixty Health Center	3260 Sacramento St, Berkeley, CA 94702	14	0.1	0
Transition Berkeley	1731 Prince St, Berkeley, CA 94703	13	0.1	0
Priority Africa Network	6501 Telegraph Ave, Oakland, CA 94609	12	0.1	-1
Albany High School	603 Key Rte Blvd, Albany, CA 94706	11	0.1	0
Language Alive	1210 Peach St., Ste B, Alameda, CA 94501	11	0.1	2
Berkeley Student Food Collective	2440 Bancroft Way #102, Berkeley, CA 94704	10	0.1	-1
Church of the Good Shepherd	1823 9th St, Berkeley, CA 94710	10	0.1	0
Bay Area Explorations (JCC)	1414 Walnut St, Berkeley, CA 94709	10	0.1	3
English Studies Institute	2600 Bancroft Way, Berkeley CA 94704	6	0.0	-1
Berkeley Food and Housing Project	2140 Dwight Way, Berkeley, CA 94704	5	0.0	2
Oakland Youth Aspire	1651 Adeline St, Oakland, CA 94607	4	0.0	-1
Hip Hop for Change	676 31st, Oakland, CA 94609	4	0.0	0
Alternative Breaks for Justice	UC Berkeley Public Service Center, 102 Sproul Hall, Berkeley CA 94704	2	0.0	0
YEAH! (Youth Engagement, Advocacy and Housing)	1744 University Ave, Berkeley CA 94703	2	0.0	1
Archway School	1940 Virginia Street, Berkeley, CA 94709	2	0.0	2
Ecology Center	2530 San Pablo Avenue, Berkeley, CA 94702	1	0.0	1
Wheeler Hall	2222 Bancroft Way, Berkeley, CA 94720	1	0.0	-1

Table 3. Are partners located in high food access or low food access ratings, as defined by the suitability analysis in this study? The bulk of partner organizations are located within “poor”, “fair”, “medium” and “good” food access areas, but the bulk of food is distributed in “good” food access areas. Refer to Table 2 for individual organization food access ratings.

Food Access Rating	Suitability Rating	# of Organizations	Yield Distributed (lbs.)	Recipient Location (%)	Food Dispersal (%)
Lowest	-4	0	0	0%	0%
Low	-3	2	161	5%	2%
Poor	-2	2	327	5%	4%
Fair	-1	9	420	22%	5%
Medium	0	10	386	24%	5%
Good	1	10	1061	24%	13%
High	2	6	5716	15%	71%
Highest	3	2	26	5%	0%

Table 4. A relatively even distribution of partner organizations are located in low, medium and high food access neighborhoods but the majority of food donated goes to neighborhoods with high access. This is likely due to a large percent of produce distribution occurring at the UCGTCF Farm Stand. Categories were calculated using the following equations based on the previous table: “Low access” = lowest + low + poor + fair”; “Med access”= medium; “High access” = good + high + highest.

FOOD ACCESS	RECIPIENT LOCATION	FOOD DISTRIBUTION
LOW ACCESS	32%	11%
MED ACCESS	24%	5%
HIGH ACCESS	44%	84%

9. BIBLIOGRAPHY

- Artz, M. (2002, October 3). UC Berkeley wants housing on seven acres of farm land. Berkeley Daily Planet. Retrieved from www.berkeleydailyplanet.com/issue/2002-10-08/full_text
- Asher, M., & K. Atapattu. (2005). Post Project Appraisal of Village Creek Restoration, Albany, CA. eScholarship: Water Resources Collections and Archives UC Berkeley. Retrieved from <http://escholarship.org/uc/item/44q9n3wc>
- Bancroft Library Archives, Marin-Buchanan Extension on Gill Tract, Memo to S. S. Elberg from Ray F. Smith “Proposed Connection between Buchanan Street and Marin Avenue in Albany”, B.F. # 110 - 80, 1961. CU-149, Box 14, Folder 9. Barrantes, Marco R. Feed Your City: 2004 Berkeley Field Guide to Planning for Food. Berkeley, CA: Self-published 2004.
- Bay Area Coalition for Urban Agriculture (BACUA). “Creating a Center for Sustainable Urban Agriculture and Food Systems at the University of California Gill Tract in Albany.” University of California Berkeley, College of Natural Resources. 1997. https://nature.berkeley.edu/srr/BACUA/bacua_proposal.htm.
- Berkeley Food Institute. “About Us.” University of California Berkeley. 2016. <http://food.berkeley.edu/>.
- Bertrand, L., F. Therien, and M.S. Cloutier. “Measuring and Mapping Disparities in Access to Fresh Fruits and Vegetables in Montreal.” *Canadian Journal of Public Health* 99, no. 1 (2008): 6–11.
- Bodor, J. Nicholas, Janet C. Rice, Thomas A. Farley, Chris M. Swalm, and Donald Rose. “The Association between Obesity and Urban Food Environments.” *Journal of Urban Health* 87, no. 5 (September 2010): 771–81. doi:10.1007/s11524-010-9460-6.
- Burawoy, Michael. “Participant Observation.” 1994. <http://burawoy.berkeley.edu/syllabus/272E.pdf>.
- Burrell, Charles. “BERKELEY / Cal in a Battle over a Tract / Chunk of Land Represents UC’s Original Agricultural Mission, and Much of Its Legacy, but Planners Say Land Is Too Badly Needed.” *SF Gate*. 2000. <http://cironline.org/reports/biofood-battle-1374>.
- Center for Investigative Reporting, The. “The Biofood Battle.” The Center for Investigative Reporting. 2000. <http://cironline.org/reports/biofood-battle-1374>.
- City of Albany. CITY OF ALBANY CLIMATE ACTION PLAN. Albany, CA: City of Albany2010. <http://www.albanyca.org/index.aspx?page=256>.
- DeLind, Laura B. “Are Local Food and the Local Food Movement Taking Us Where We Want to Go? Or Are We Hitching Our Wagons to the Wrong Stars?” *Agriculture and Human Values* 28, no. 2 (June 2011): 273–83. doi:10.1007/s10460-010-9263-0.
- Finacom, Steven. “Hidden Town and Gown History in North Central Berkeley.” *The Berkeley Daily Planet*, April 1, 2010.
- Global Food Initiative. “Fact Sheet: University of California, Davis.” Global Food Initiative. 2014. <http://www.ucop.edu/global-food-initiative/resources/index.html>.
- Global Food Initiative. “Fact Sheet: University of California, Santa Cruz.” Global Food Initiative. 2014. <http://www.ucop.edu/global-food-initiative/resources/index.html>.

- Gordon, Cynthia, Marnie Purciel-Hill, Nirupa R. Ghai, Leslie Kaufman, Regina Graham, and Gretchen Van Wye. "Measuring Food Deserts in New York City's Low-Income Neighborhoods." *Health & Place* 17, no. 2 (March 2011): 696–700. doi:10.1016/j.healthplace.2010.12.012.
- Idad, H., Broder, H., & Quinn, C. (2014). Spring 2014, Senate Bill No. 84: A Bill in Support of Preventing Development of the Gill Tract Farm. Berkeley: Associated Students of the University of California.
- Jennings, Bruce H. "The Killing Fields: Science and Politics at Berkeley, California, USA." *Agriculture and Human Values* 14, 1997: 259–71..
- Jiao, Junfeng, Anne V. Moudon, Jared Ulmer, Philip M. Hurvitz, and Adam Drewnowski. "How to Identify Food Deserts: Measuring Physical and Economic Access to Supermarkets in King County, Washington." *American Journal of Public Health* 102, no. 10 (2012): e32–39.
- King, J. (2008, January 23). Campus to remove diseased Monterey pines from Gill Tract in Albany. Berkeleyan. Retrieved from http://www.berkeley.edu/news/berkeleyan/2008/01/23_pines.shtml
- Knigge, LaDona, and Meghan Cope. "Grounded Visualization: Integrating the Analysis of Qualitative and Quantitative Data through Grounded Theory and Visualization." *Environment and Planning A* 38, no. 11 (2006): 2021–37. doi:10.1068/a37327.
- Kogan, Markos. "Integrated Pest Management: Historical Perspectives and Contemporary Developments," *Annual Review Entomology* 43 (1998), 243–270, <http://www.annualreviews.org/doi/pdf/10.1146/annurev.ento.43.1.243>. (accessed November 12, 2014), 244.
- Lee, Warren F. and Catherine T. Lee, 2000, A Selective History of the Codornices-University Village, The City of Albany & Environs. Belvidere Delaware Railroad Company Enterprises. Ltd.
- LSA Associates Inc. Report, Experiment Station Research and History - Gill Tract, Judith Marvin and Randy Roza and Andrew Pulcheon, compilers (Richmond: LSA Associates Inc., 2003).
- McEntee, Jesse, and Julian Agyeman. "Towards the Development of a GIS Method for Identifying Rural Food Deserts: Geographic Access in Vermont, USA." *Applied Geography* 30, no. 1 (January 2010): 165–76. doi:10.1016/j.apgeog.2009.05.004.
- Mitchell, Dan. "A Year In, the University of California's Global Food Initiative Sows Success and a Few Fears." *Cal Alumni Association*, n.d. 2015. <http://alumni.berkeley.edu/california-magazine/just-in/2015-07-02/year-university-californias-global-food-initiative-sows>
- Moffat, Susan. Project Director of Global Urban Humanities at UC Berkeley. Personal Correspondence: November 19, 2015.
- Mohai, Paul, and Bunyan Bryant. "Environmental Injustice: Weighing Race and Class as Factors in the Distribution of Environmental Hazards." *U. Colo. L. Rev.* 63 (1992): 921.
- Napolitano, Janet. "UC Global Food Initiative." University of California, Office of the President. 2014. <http://www.ucop.edu/president/public-engagement/global-food-initiative-jul-2014.html>.
- Neuman, Michael. "Teaching Collaborative and Interdisciplinary Service-Based Urban Design and Planning Studios." *Journal of Urban Design*, November 2, 2015, 1–20. doi:10.1080/13574809.2015.1100962.
- Students for Engaged Active Learning. A Food Initiative on the Gill Tract Farm. Berkeley, CA 2014. <https://sealstudents.files.wordpress.com/2014/11/final-report-for-dirks2-ed-for-website.pdf>.

Pei Wu, Diana. "Occupying the Future, Starting at the Roots." *Race, Poverty & the Environment* 19 (2012), 38–41, <http://reimaginerpe.org/files/19-1.pei-wu.pdf> (accessed March 01, 2015).

Pollan, Michael. "The Food Movement, Rising." New York, 2010. <http://books.google.com/>

UC Berkeley. "UC Berkeley Campus Sustainability." University of California, Berkeley. 2008. http://sustainability.berkeley.edu/sites/default/files/2008_Campus_Sustainability_Assessment.pdf.

The Urban Roots, and Friends of the Gill Tract. Village Creek Farm and Garden. Albany, CA 2004.

10. APPENDIX A: WORKS CITED OF THE HISTORIC TIMELINE

¹ LSA Associates Inc. Report, Experiment Station Research and History - Gill Tract, Judith Marvin and Randy Roza and Andrew Pulcheon, compilers (Richmond: LSA Associates Inc., 2003), 8.

² Ibid, 10.

³ Sorensen, K., & Albany Historical Society. (2007). Images of America ALBANY. San Francisco, CA: Arcadia Publishing.

⁴ Webb, C. J. (1983). Stories of Albany. Albany, CA: Albany Historical Society.

⁵ "Agricultural Lands," Bancroft Library Archives, 364-B, Office of the President, 27 March 1950.

⁶ Warren F. Lee, and Catherine T. Lee, 2000, A Selective History of the Codornices-University Village, The City of Albany & Environs. Belvidere Delaware Railroad Company Enterprises. Ltd.

⁷ Ibid.

⁸ LSA Associates Inc., "Report - Experiment Station Research and History," 14-16.

⁹ Robert, W. (1979). Robert Van Den Bosch: Stop the Pesticide Conspiracy . Mother Earth News. Retrieved from <http://www.motherearthnews.com/nature-and-environment/robert-van-den-bosch-the-pesticide-conspiracy-integrated-pest-management-zmaz79jazraw.aspx?PagelId=2>

¹⁰ Caltagirone, L. E., & Dahlsten, D. L. (1998). Carl Barton Huffaker 1914 - 1995. Washington, D.C.: National Academies Press. Retrieved from <http://www.nap.edu/read/9649/chapter/9#143>

¹¹ Rosset, P. (1997). A preliminary proposal by the Bay Area Coalition for Urban Agriculture (BACUA) for a partnership with the University of California at Berkeley and the Division of Agriculture and Natural Resources. Oakland, CA: BACUA.

¹² Price, R. M., & Goldman, L. (2002). The Novartis Agreement: An Appraisal Administrative Review, October 4, 2002. Berkeley, CA: UC Berkeley.

¹³ UC Berkeley Facilities Services. University Village Master Plan. Berkeley, CA: UC Berkeley, 2004. Print.

¹⁴ Albany Patch. (2012, June 19). Gill Tract: Radiation Safety (Via UC Berkeley's Office of Environment, Health & Safety). Retrieved from <http://patch.com/california/albany/gill-tract-radiation-safety-via-uc-berkeley-s-office-10ba1ecccd>

¹⁵ Occupy the Farm Film, Directed by Todd Darling. Berkeley: UA Berkeley 7, 2014.

¹⁶ Bidad, H., Broder, H., & Quinn, C. (2014). Spring 2014, Senate Bill No. 84: A Bill in Support of Preventing Development of the Gill Tract Farm. Berkeley: Associated Students of the University of California.

¹⁷ McKnight, Katie M. "THE PEOPLE'S FARM: VISUALIZING THE FUTURE POTENTIAL OF UC BERKELEY'S GILL TRACT AS AN AGROECOLOGICAL LIVING LABORATORY." Professional Report. UC Berkeley, November 8 2015. Draft.

APPENDIX B: Developing a Framework for More Defined Community Partnerships at the UC Gill Tract Community Farm

This report was compiled as part of Dr. Kathy De Master's ESPM 155 course, the Sociology and Political Ecology of Agro-food Systems in December 2015. Co-authors include Hannah Clevenger, Seigi Karasaki, Katie McKnight, Maria McGuire and Catherine Van Dyke.

CLASS PROJECT ABSTRACT

Oakland, and the surrounding East Bay Area as a whole, has a longstanding and well-established relationship with food justice and insecurity (Alkon & Norgaard, 2009; McClintock, 2011). There are, however, a number of local actors actively working to mitigate the situation. The UC Gill Tract Community Farm (UCGTCF), a community-based food research and extension project, is one such example, whose mission is as follows: to conduct collaborative community-driven research, education, and extension focused on ecological farming and food justice, and to foster equitable economies, a healthy environment, and increased resilience in vulnerable communities, both urban and rural (UC Gill Tract Community Farm, 2014). According to farm records, approximately 33% of the food grown goes to individuals (mostly volunteers), 47% goes to community partners (organizations or known entities – anything that could be considered more than one individual person) and about 20% remains unrecorded. In order to maximize the impact of the UCGTCF, a need exists to identify which partner organizations align well with the Farm's mission (McKnight, 2016).

We focused on ways to improve the accessibility and communication of the UCGTCF with their partner organizations and the larger audience. Inspired by the research methodologies of Cornwall, Jewkes, and others, we focused on participatory research as each group member worked with one of the community organizations to understand how they work and the best ways to formulate interview questions for each group (Cornwall & Jewkes, 1995; Wallerstein & Duran, 2006). Our hope is that this set of interview questions and surveys can be used for future interviews to further improve the work of the UCGTCF. To increase communication with the public, we created a new website for the Farm. The website aims to be more accessible and easy to navigate, with added information such as recipes for what to cook with produce from the Farm, interactive historical information on the Farm, in-depth directions to access the Farm, and a translated version of the entire website in Spanish. Our deliverable consists of the website we created (http://bit.ly/ESPM155_gilltract) and the paper on observations and recommendations for interviewing community organizations who work with the UCGTCF.

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A. INTRODUCTION

The UC Gill Tract Community Farm (UCGTCF) is a community-based food research and extension project whose mission is as follows: to conduct collaborative community-driven research, education, and extension focused on ecological farming and food justice, and to foster equitable economies, a healthy environment, and increased resilience in vulnerable communities, both urban and rural. According to farm records, approximately 33% of the food grown goes to individuals (mostly volunteers), 47% goes to community partners (organizations or known entities – anything that could be considered more than one individual person) and about 20% remains unrecorded (McKnight, 2015). Currently there is no formal strategy for how produce is distributed so all food donations have occurred on an informal basis. Most of the time, individual volunteers at the farm take excess produce to various organizations and note the organization in the farm logs, which accounts for the “partner organizations” previously mentioned.

This report aims to offer a framework to further investigate the goals and needs of current partner organizations to better understand how produce is used, who benefits, and how to strengthen partner relationships. Participatory observations and informal interviews were conducted through volunteer work at 6 partner organizations which include: (1) the UC Gill Tract Community Farm’s produce stand, (2) Women’s Daytime Drop-in Center, (3) Phat Beets, (4) Harriet Tubman Terrace, (5) Daily Bread, and (6) Bay Area Rescue Mission. Observational findings were used to inform focused interview and survey questions that can be adapted to develop similar tools for additional partner organizations. The findings can be used to determine how the UCGTCF can better support partner organizations relevant to its mission and work towards more defined and long-term partnerships.

B. SURVEYS & INTERVIEWS: UC GILL TRACT COMMUNITY FARM

1. SURVEY: UC Gill Tract Community Farm’s produce stand

Farm Stand Coordinator: Jon Hoffman

Email: jon2223@yahoo.com

Phone: 510-314-4287

Assessing reach and benefits of UC Gill Tract Community farm stand

Introduction:

The largest community partner – approximately 51% – is the UCGTCF’s produce stand.¹ This donation-based farm stand operates from 3 to 5 pm on Sundays for anyone to receive fresh produce. At the moment, the project coordinators do not really know who the individual farm visitors are and, more importantly, if they are representative of the project’s target population. While the specific characteristics of a target population are hard to define, and though the farm stand is in fact open

¹ Ibid.

to any member of the larger community, a better understanding of who the Gill Tract is reaching would allow them to better target their outreach. The demographic results of this survey may be compared to available census data to determine which groups are not being reached.

Objective:

To better understand who is benefiting from the UCGTCF's farm stand project.

If, from this survey, the project finds it is not fulfilling its mission to reach vulnerable populations, the next step will be a revised plan to reach the missing groups in the community.

Respondents:

Adult (>=18 years) visitors to the farm stand. Respondents will be entered into a raffle by signing up on a separate list so responses remain anonymous.

Survey instrument:

These surveys will be programmed in ODK survey software and will be translated into Spanish and Mandarin. Surveys will be conducted on tablets or laptops.

NOTE: This survey instrument will need to be approved by the UCGTCF's Research Working Group and Stewardship Council, which must remain politically cautious given its contentious use of university land, and it is likely that some questions may be considered too sensitive to include in the final version.

Estimated time length for survey completion:

< 10 minutes

PROMPT: We are interested in learning more about who is benefiting from our farm stand, so we can make sure that our outreach and programs are reaching everyone. The survey should take you less than 10 minutes, and all participants are eligible for a raffle for a \$50 gift card. Your answers will be completely anonymous. We greatly appreciate your responses to help make the UC Gill Tract Community Farm Stand an even more effective and community-strengthening program.

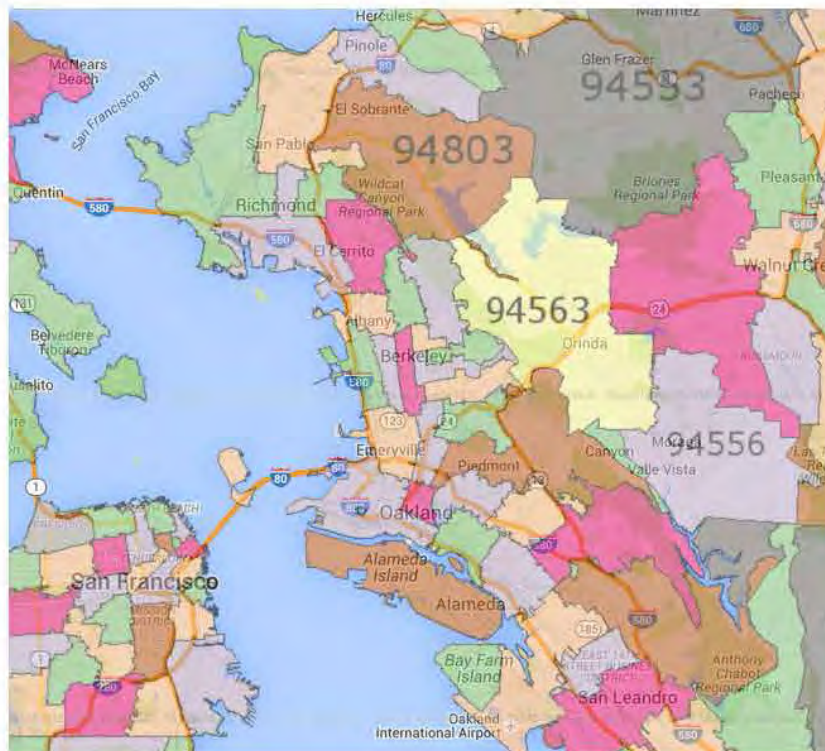
#	Question	Response Options	Purpose of question
1	Is this your first visit to the UC Gill Tract farm stand?	1 = Yes 0 = No	To serve as a filter question for Q.2 and Q.3. If "Yes" proceed to Q.2. If "No" skip to Q.4.
2	How long have you been visiting the farm stand?	1 = > 1 year 2 = 6 months - 1 year 3 = 3 months - 5 months 4 = < 3 months	To determine if respondents are regular visitors to the stand or if most are one-time visitors.
3	How often do you visit the farm stand?	1 = every week 2 = every other week	To evaluate households reliance on the farm stand as a regular source of produce.

		3 = once a month 4 = less than once a month	
4	How do you get to the farm stand?	1 = car 2 = bike 3 = public transport 4 = walk	To evaluate if the farm stand is easily accessible to visitors or if this may be a barrier to access.
5	How long does it take you to get from your home to the farm stand?	_____ minutes	To evaluate time costs of coming to the farm stand in case this may be a barrier to access.
6	Have you ever volunteered with the Gill Tract Project (at the farm, farm stand, or other program)?	1 = Yes 0 = No	To determine the type of stakeholder who visits the farmstand.
7	Have you participated in any Gill Tract activities (e.g. educational workshops, community meetings, the Harvest Festival, etc.)?	1 = Yes 0 = No	To assess respondent's engagement with the overall project in case volunteers and users are the same group.
8	What is your zip code?	Enter zip code, restrict range	To be used with GIS to determine if people are coming from food-desert census tracts.
9	If you feel comfortable responding, what is your household's total annual income?	1 = < \$20,000 2 = \$20,000 - \$39,999 3 = \$40,000 - \$59,999 4 = \$60,000 - \$80,000 5 = > \$80,000 999 = Prefer not to answer	To evaluate financial background of farm stand visitors.
10	How many people are in your household, including yourself?	Enter number (restrict range 1-20)	To be used for per capita income estimates.
11	Do you have children under 18 living in your home?	1 = Yes 0 = No	To determine if the farm stand benefits children, an important and vulnerable population to food insecurity. If "Yes" proceed to Q.12. If "No" skip to Q.14.
12	How many children (under 18) live in your home?	Enter number (restrict range 1-10)	Detail for Q.10.
13	Do your children qualify for free or reduced lunches at school?	1 = Yes 0 = No	To provide a comparable metric for evaluation of food (in)security.

		999 = Don't know/Prefer not to answer	
14	On weeks you visit the farm stand, approximately how much of your household's groceries that week come from the farm stand?	1 = More than 50% 2 = 50% 3 = 25% 4 = Less than 25%	[Skip if answer to Question 1 = Yes] To evaluate household's reliance on and utilization of the farm stand; determine farm stand value in relation to household's overall calories.
15	It is important to me that my household has fresh produce.	1 = Strongly agree 2 = Agree 3 = Neutral 4 = Disagree 5 = Strongly disagree	To determine if there motivations to visit the farm stand besides free source of calories; this may inform future marketing and outreach strategies.
16	The farm stand is an important source of fresh produce for my household.	1 = Strongly agree 2 = Agree 3 = Neutral 4 = Disagree 5 = Strongly disagree	[Skip if answer to Question 1 = Yes] To better understand how respondent values the farm stand; this may inform future marketing and outreach strategies.
17	What is the reason(s) for your visit to the farm stand? Please check all that apply.	0 = I happened to walk/drive by and decided to stop. 1 = I come for the organic produce. 2 = I want to show my support to the farm. 0 = Other: _____ _____	To better understand the functions that the farm stand fills.
18	Do you have any other comments and/or suggestions for the UC Gill Tract farm stand?	Open answer	To leave room for additional input by survey respondents.

CLOSING PROMPT: We thank you for taking the time to provide this valuable feedback. The Gill Tract Project will use this information to ensure that all members of the community have access to our farm stand, educational programs, and events. Have a wonderful week, and we hope to see you again soon!

APPENDIX:



Zip codes in the San Francisco East Bay ([Image source](#))

2. INTERVIEW: UC Gill Tract Community Farm Volunteers

Farm Volunteer Days: M, W 11a - 2pm; T, H 2p - 5p; Sunday 12p - 5p

Address: 1050 San Pablo Ave., Albany CA

Farm Manager: Jon Hoffman

#	Question	Purpose of Question
1	How long have you worked at the Gill Tract?	To understand depth of participation and involvement
2	How did you hear about the Gill Tract?	To understand information is spread about the GT and opportunities there
3	What led you to become involved?	To gauge some of the factors driving long term involvement
4	How often do you volunteer at the UCGTCF?	To gain an understanding of involvement
5	What type of work do you generally do on the farm?	To evaluate volunteer participation and effectiveness
6	How often do you harvest for personal consumption?	To evaluate reliance of volunteers on the farm as a source of produce
7	How do you get to the farm?	To evaluate access to the farm
8	Have you ever participated in any of the workshops, social events or working group meetings the farm offers?	To assess the level of involvement
9	Do you feel that the UCGTCF is currently fulfilling its mission?	To gauge perspective of volunteers on success
10	In your opinion, how could the UCGTCF improve?	To understand needs from the volunteer perspective

C. WOMEN'S DAYTIME DROP-IN CENTER

1. OBSERVATIONS: Women's Daytime Drop-in Center

Site: Women's Daytime Drop-in Center

Data Collector: Katie McKnight

Date: Friday, November 13, 2015

Start: 1:00pm

End: 4:00pm

When I arrived, Lakinia Ramsey, the volunteer coordinator for the Women's Daytime Drop-in Center (WDDC), greeted me. In order to be eligible to volunteer, a background check and negative TB skin test must be acquired. After getting my paperwork out of the way, Lakinia gave me a brief orientation on WDDC's history and current operations.

WDDC is a nonprofit that serves homeless and low-income women and children through a variety of services and programs. In 1987 there was an increased need for daytime shelter, food and support services for women and children because all local homeless shelters were closed during the day. WDDC was created through grassroots efforts from women in the community to address this need. Current hours of operation are Monday through Friday from 8am – 4pm and all services are open to any woman or child in need. The free services that WDDC offers include sexual health education, family counseling and parent support, domestic violence counseling, transitional housing, mental health services, hygiene supplies and mail storage. Additionally, WDDC offers free breakfast (8am – 10am) and lunch (12pm – 1pm) each day of operation on a first come first served basis. Each adult is required to do one chore as a way to build a sense of responsibility for the WDDC, which to my knowledge is the only requirement to receive food (aside from abiding by rules such as being drug and alcohol free and maintaining a respectful, non-threatening environment).

WDDC is nestled into a quaint Berkeley neighborhood on Acton Street and blends in as just another single-family home. The entrance is located on the side of the house beside a neighborhood playground that was being used by a few women and children upon my arrival. The waiting room has a few chairs, yellow walls, a front desk, lots of natural light and black and white photographs of volunteers and women and children who have used the Center in the past. The ambiance felt welcoming and homey, a striking difference from other emergency service centers I have visited.

I arrived after the lunch rush to find a few women cleaning dishes in the small kitchen and putting away food. Lakinia mentioned that Fridays are typically the least busy day of the week. The volunteers, staff and women and children using WDDC are ethnically diverse, appearing to be black, white, latina and asian. Volunteers, many of whom have been serving WDDC for over 20 years, prepare the meals. Target, Whole Foods, Daily Bread and Chez Panisse donate the food served on a regular basis. Members of the community make additional food donations, which has been the current means by which the UC Gill Tract Community Farm's produce has been donated.

A chore sign-up sheet is located on the front desk in the waiting room. Chore options were as follows:

1. *Water the garden.*
2. *Sweep and mop front bathroom.*
3. *Clean toilet and sink.*
4. *Wash breakfast dishes and clean up food. Unload breakfast dishes. Put away dishes.*
5. *Disinfect and clean front living room.*
6. *Wash first part of lunch dishes, load sanitizer, ask staff to run, put away dishes.*
7. *Wash second part of lunch dishes, load sanitizer, ask staff to run, and put away dishes.*
8. *Wash third part of lunch dishes, load sanitizer, ask staff to run, and put away dishes.*
9. *Wash pot.*

The intent of the Center is to offer a safe place for women and children to come during the day with access to everyday comforts like charging a phone or having a hot cup of tea. Since its establishment in 1987, 90% of WDDC's funding has been provided by the City of Berkeley. This is subject to change as the City of Berkeley's Homeless Task Force implements a new structure in addressing homelessness in January 2016.

Overall, WDDC appears to serve a group of people that fall into a very low food access category. The accessibility of food and additional services provided seems very high given the one stipulation to perform one chore of choice that likely takes around 5 – 15 minutes to complete.

2. INTERVIEW: Women's Daytime Drop-in Center

Volunteer Coordinator: Lakinia Ramsey

Email: volunteercoordinator.wddc@gmail.com

Phone: (229) 942-0701

Understanding the goals and needs of the UC Gill Tract Community Farm's partners: An Interview Framework for the Women's Daytime Drop-in Center in Berkeley, CA

Objectives:

(1) To better understand who is benefiting from the UCGTCF's food donations; (2) To determine and improve partnerships relevant to the UCGTCF's mission.

If, from this interview, the project finds it is not fulfilling its mission to reach vulnerable populations, the next step will be a revised plan to reach the missing groups in the community.

Respondents:

The Women's Daytime Drop-in Center's Volunteer Coordinator or relevant staff

Interview Method:

The interview will be conducted in a relaxed setting determined by the interviewee. The interview will be recorded for quality assurance with permission by the interviewee.

Estimated time length for interview completion:

< 45 minutes

PROMPT: I am from the UC Gill Tract Community Farm and our records show that the Women’s Daytime Drop-in Center has received produce from us in the past. I am interested in learning more about how your organization works and how the UC Gill Tract Community Farm can better support your work. I am hoping to conduct an interview at your convenience, which will likely take between 30 to 45 minutes.

#	Question	Purpose of Question
1	What types of day services does WDDC provide for women and children?	To understand how WDDC operates
2	In your opinion, what are the biggest barriers that women and children experience in regards to food access?	To explore the underlying cause(s) of emergency assistance
3	Do any of the enrichment groups offered at WDDC focus on food and nutrition?	To evaluate extent of work done around food access and nutrition
4	How often are meals provided (daily, weekly, monthly etc.)? How many people does a typical meal feed? Is there a limit per person? Do you provide food vouchers?	To understand how WDDC operates
5	How do you connect with food recipients?	To understand who WDDC reaches
6	What are the requirements, if any, that recipients have to meet to receive meals (register with WDDC? Show ID? Medical testing? Drug screening? Etc.)	To evaluate accessibility of meals
7	What portion of the meals prepared at WDDC relies on fresh produce?	To evaluate how much fresh produce donations impact operations
8	What are the current barriers, if any, in receiving food from food donors?	To better understand food needs from WDDC’s perspective
9	In your opinion, how could the UCGTCF better support the needs of the Women’s Daytime Drop-in Center?	To determine specific ways to improve support. <i>(Examples: more regular donations? large amounts of a few kinds of produce? large diversity of food? referral services?)</i>

D. PHAT BEETS

1. OBSERVATIONS: Phat Beets

Site: Healthy Hearts Youth Garden

Data Collector: Hannah Clevenger

Date: Wednesday, November 13, 2015

Start: 3:00pm

End: 6:00pm

The Healthy Hearts Youth Garden is located in Oakland on Dover Street between 57th and 58th Street. This garden is a part of Dover Park and is shared with the members of the local community, similar to the way the Gill Tract is shared with members of the surrounding community. Phat Beets uses this garden to work in alliance with the Healthy Hearts Clinic at the Children's Hospital in Oakland. It has been in progress for 3 years. Interestingly, this is the nation's first clinic based vegetable garden. I learned before the workday from their website that they have multiple programs in place to help teach youth about food, gardening, and health. Kids come to learn and then can take home some of the produce.

When I arrived at the garden, they gave us a brief introduction and orientation on the garden and their mission there. They touched on food justice, racism in the food system, and how they strive to eliminate barriers that prevent members of communities from gardening their own nutritious food. The leader of the group was very enthusiastic and excited. Their workdays are open to, "anyone interested in learning about gardening and growing your own food!"

The garden itself is about ¼ of an acre surrounding Dover Street Park. They were growing almost all edible fruits and vegetables there, such as corn. They are also currently in the process of establishing an urban orchard of fruit trees and berry brambles.

We worked on a variety of garden tasks, such as harvesting some ready winter vegetables and picking weeds and dead leaves off of plants. The whole atmosphere was very laid back, fun, and geared towards kids. As the leader assigned and explained tasks, she taught people why those tasks were important and about the plants and vegetables involved. For example, she explained it was necessary to pick off all of the leaves that look moldy or like they have some spores on them because the coming rain would knock those spores down to the other leaves and potentially infect the whole plant.

Phat Beets, the organization behind this youth garden, has multiple other programs in place such as farmers markets and CSA Beet Box produce boxes, all geared towards achieving their goals of creating a healthier, more equitable food system in North Oakland through providing affordable access to fresh produce, facilitating youth leadership in health and nutrition education, and connecting small, disenfranchised farmers to urban communities.

2. INTERVIEW: Phat Beets

Volunteer Coordinator: Max
Email: max@phatbeetsproduce.org
Phone: 510-689-3068

Understanding the goals and needs of the UC Gill Tract Community Farm’s partners: An Interview Framework for Phat Beets based in Oakland, CA

Objectives:

(1) To better understand who is benefiting from the UCGTCF’s food donations; (2) To determine and improve partnerships relevant to the UCGTCF’s mission.

If, from this interview, the project finds it is not fulfilling its mission to reach vulnerable populations, the next step will be a revised plan to reach the missing groups in the community.

Respondents:

Phat Beets leaders and coordinators

Interview Method:

The interview will be conducted in a relaxed setting determined by the interviewee. The interview will be recorded for quality assurance with permission by the interviewee.

Estimated time length for interview completion:

< 45 minutes

PROMPT: I am from the UC Gill Tract Community Farm and our records show that Phat Beets has received produce from us in the past. I am interested in learning more about how your organization works and how the UC Gill Tract Community Farm can better support your work. I am hoping to conduct an interview at your convenience, which will likely take between 30 to 45 minutes.

#	Question	Purpose of Question
1	In what ways does does Phat Beets provide accessible produce ?	To understand how Phat Beets provides produce to the local community
2	In your opinion, what are the main causes of injustice and racism in the food system?	To identify the main problems that Phat Beets is striving to address

3	Is the main focus of Phat Beets youth?	To establish who in the community Phat Beets is focused on serving
4	How many people are behind the management/ leadership team of Phat Beets?	To better understand the scale of the organization
5	How do you connect with food recipients?	To understand who Phat Beets reaches
6	Do you collect or have you collected produce from organizations similar to the Gill Tract?	To identify if there are comparable relationships that we can work from
7	If so, what was successful and what was unsuccessful?	To gather information that will be beneficial to establishing a better partnership with this organization
8	What are the current barriers to receiving/picking up food from the Gill Tract?	To better understand how this organization perceives the way the Gill Tract is operating
9	Would you be interested in creating a program at the UC Gill Tract similar to the Healthy Hearts Youth Garden in Oakland, but expanding to reach children in areas closer to North West Berkeley and Albany?	To gage interest in expanding their currently successful programs and deepening their relationship at the Gill Tract

E. Harriet Tubman Terrace

1. OBSERVATIONS: Harriet Tubman Terrace

Site: Harriet Tubman Terrace
 Data Collector: Maria McGuire
 Date: Monday, November 2nd, 16th, & 30th
 Start: 12:00pm
 End: 2:00pm

I focused on the relationship with the Harriet Tubman Terrace, which is an affordable housing resident center for seniors over 62 and individuals who have disabilities in Berkeley. As it is more of a residence and less of an organization, I reached out to the resident social worker and another Gill Tract Farm visitor in order to determine wants and needs from this group. I filled the role of harvesting and bringing produce to the common area at Harriet Tubman Terrace on every other Monday, switching off with another Gill Tract visitor. I arrived at the Gill Tract on Monday mornings to harvest fresh, this time of year harvesting mostly Collard Greens, Tree Collards, Rainbow Chard, Spinach, Lettuce and some Baby Tomatoes and Squashes.

After reading the Guthman critique of white people with the moral-high ground stance of “bringing good food to others,” I was very nervous about showing up to the Terrace with the produce. However, I tried to be very sensitive and listen to the responses of the residents, and the reaction was very very positive. I listened to what types of produce they were most interested in, and Collard Greens, Tree Collards and Lettuce had the best reactions, so I made sure to focus on getting the most of those for the next time. I also made a point of trying to be as invisible as possible, laying out the produce on the common table and then getting out of there quickly (after greeting and chatting with the residents already there) so there was no pressure/awkwardness from the residents about taking the produce. In terms of this being a permanent relationship, this would need to be a set volunteer position who was committed to harvesting and delivering every week or two weeks.

2. INTERVIEW: Harriet Tubman Terrace

Volunteer Coordinator: Amy Acosta (Social Services Coordinator)

Email: amy.acosta@bettertomorrows.org

Phone: (510) 843-1472

Understanding the goals and needs of the UC Gill Tract Community Farm’s partners: An Interview Framework for the Harriet Tubman Terrace in Berkeley, CA

Objectives:

(1) To better understand who is benefiting from the UCGTCF’s food donations; (2) To determine and improve partnerships relevant to the UCGTCF’s mission.

If, from this interview, the project finds it is not fulfilling its mission to reach vulnerable populations, the next step will be a revised plan to reach the missing groups in the community.

Respondents:

The Harriet Tubman Terrace Social Services Coordinator, Site Supervisor and any interested residents

Interview Method:

The interview will be conducted in a relaxed setting determined by the interviewee. The interview will be recorded for quality assurance with permission by the interviewee.

Estimated time length for interview completion:

< 45 minutes

PROMPT: I am from the UC Gill Tract Community Farm and our records show that Harriet Tubman Terrace has received produce from us in the past. I am interested in learning more about how your organization works and how the UC Gill Tract Community Farm can better support your work. I am hoping to conduct an interview at your convenience, which will likely take between 30 to 45 minutes.

#	Question	Purpose of Question
1	Are you a resident at Harriet Tubman Terrace? If not, what is your affiliation?	To clarify the subject group
2	In your opinion, what are the biggest barriers that Seniors and individuals with disability experience in regards to food access?	To explore the underlying cause(s) of emergency assistance
3	Do you use produce from the Gill Tract Produce drops?	To evaluate reach of produce
4	How often?	To evaluate reach of produce and regularity of usage
5	Do you feel there are any barriers to utilizing produce? If any, please describe.	To evaluate accessibility of produce to residents
6	Do you enjoy the produce delivered to the Terrace?	To understand interest level
7	Anything you'd like to see done differently in terms of the Monday produce drops?	To better understand how the process could be improved from the residents' perspective
8	Given the limitations in growing seasons, do you like the type of produce being delivered? Any preferences?	To evaluate interest in the types of produce being delivered and better direct the produce harvested toward the desires of residents
9	In your opinion, how could the UCGTCF better support the needs of the residents of the Harriet Tubman Terrace?	To determine specific ways to improve support. <i>(Examples: more regular donations? large amounts of a few kinds of produce? large diversity of food? referral services?)</i>

F. DAILY BREAD

1. OBSERVATIONS: Daily Bread

Site: Delivery from Ippuku Restaurant

Data Collector: Catherine Van Dyke

Date: Every Thursday November 12 - December 11 (excluding Nov 26), to be continued next semester starting on January 21

Start: 2pm

End: 3pm

I focused on the community partnership with Daily Bread. Daily Bread is an interesting organization, and especially unique as a community partner with the Gill Tract, because it does not have an exact location or center. Rather, Daily Bread works as a network of individuals. Their goal is to work with Berkeley restaurants, farmers markets, and catering companies that have extra food that is normally discarded. Instead of throwing it out, Daily Bread works as a connecting link to take food from restaurants to locations or centers that are in need of food. Through this network Daily Bread works to combat both hunger issues in the local community and problems of food waste. They are serving an immediate need in the community as a linkage between groups that lack the resources and ability to connect otherwise.

My role as a volunteer is to help with one of these pick ups as a connecting link. Every Thursday I go to Ippuku, the Japanese restaurant on Center Street, to pick up around 5 pounds of their excess beef tongue. I then take the tongue to another Daily Bread volunteer, Deborah Craig, who transports it to the Family Literacy Program in Richmond. The Family Literacy Program, a branch of Catholic Charities of the East Bay, expressed a direct interest in the tongue, which is why they receive it weekly (rather than being given a donation they had no immediate use for). The Family Literacy is one of their main donation centers, as they also receive chicken from Ippuku, fresh produce left over from the Kensington Farmers Market vendors, and bread from SemiFreddi's Bakery. SemiFreddi's is a main supplier of donations, as Daily Bread coordinates pickups 5 days a week at all three of their locations in Berkeley, Kensington, and Alameda. It is hard to gauge the extent of the Daily Bread network from my perspective, because there is such a wide range of restaurants, catering companies, and farmers markets who work with individual volunteers for the food pickup and delivery.

When I brought up the UC Gill Tract Community Farm with the volunteer coordinator, Patrice Ignelzi, she explained that an individual volunteer expressed direct interest in bringing food from the Gill Tract to where it was most needed. This volunteer goes weekly with her daughter to spend time at the Gill Tract and harvest what produce is in season and most needed. It appears that if this volunteer's schedule was to change, the link between Daily Bread and the Gill Tract could as well. It would require another volunteer with the time and commitment availability to continue serving as the link that the current volunteer provides. It is also clear from working with Daily Bread that they are in no way reliant on the Gill Tract, although they appreciate the donations. In my opinion it would be best to interview the direct volunteer who serves as the Gill Tract link and is the only individual directly involved with the Gill Tract.

2. INTERVIEW: Daily Bread

Volunteer Coordinator: Patrice Ignelzi

Email: patrice@pcsyas.com

Phone: 510-526-3123

Note: If one wished to interview Daily Bread, I feel it would be most successful to interview the individual volunteer at the Gill Tract rather than the coordinator, Patrice. Patrice would be able to put one in touch with the volunteer for the Gill Tract harvesting and donation.

Understanding the goals and needs of the UC Gill Tract Community Farm's Partners: An Interview Framework for Daily Bread in Berkeley, CA

Objectives:

(1) To better understand who is benefiting from the UCGTCF's food donations; (2) To determine and improve partnerships relevant to the UCGTCF's mission.

If, from this interview, the project finds it is not fulfilling its mission to reach vulnerable populations, the next step will be a revised plan to reach the missing groups in the community.

Respondents:

The specific Daily Bread volunteer for the UC Gill Tract Community Farm or Patrice Ignelzi, volunteer coordinator for Daily Bread.

Interview Method:

The interview will be conducted in a relaxed setting determined by the interviewee. The interview will be recorded for quality assurance with permission by the interviewee.

Estimated time length for interview completion: < 45 minutes

PROMPT: I am from the UC Gill Tract Community Farm and our records show that Daily Bread has received produce from us in the past. I am interested in learning more about how your organization works and how the UC Gill Tract Community Farm can better support your work. I am hoping to conduct an interview at your convenience, which will likely take between 30 to 45 minutes.

#	Question	Purpose of Question
1	How long have you worked at the Gill Tract as a site for Daily Bread?	To understand depth of participation and involvement
2	How did you hear about the Gill Tract?	To understand information is spread about the GT and opportunities there
3	How do you connect with food recipients?	To understand who Daily Bread reaches
4	How often do you harvest at the UCGTCF?	To gain an understanding of involvement
5	Is there anything we can do to make harvesting easier or more accessible for you?	To evaluate effectiveness or current harvest system
6	What are the requirements, if any, that recipients have to meet to receive meals (Show ID? Medical testing? Drug screening? Etc.)	To evaluate accessibility of food from Daily Bread
7	How do you get to the farm?	To evaluate access to the farm
9	What are the current barriers, if any, in receiving food from food donors?	To gauge accessibility of food donations
10	In your opinion, how could the UCGTCF improve to better serve the needs of Daily Bread?	To understand specific needs from Daily Bread's perspective

G. Bay Area Rescue Mission

1. OBSERVATIONS: Bay Area Rescue Mission

Site: Bay Area Rescue Mission

Data Collector: Seigi Karasaki

Date: Wednesday, November 18th, 2015

Start: 9:00 am

End: 11:00 am

The Bay Area Rescue Mission (hereon BARM) is a 510(c)3 non-profit corporation located in inner Richmond, California. It was established fifty years ago and has since established itself as a landmark organization in the East Bay dedicated to support the homeless and marginalized populations in the area. As a faith-based (Christian) organization, BARM initially started out as a sleeping and food shelter for the homeless, but has since expanded its services to food and clothing distribution, jobs skills training, and youth outreach programs. It is impressively well organized, and (in its immediate vicinity) services a homeless community in Contra Costa County that is estimated to range from 7,500 to 15,000 on any given night.

We felt that BARM is an important relationship to explore for the Gill Tract because of its unique placement in inner Richmond. Although one of the more impoverished and food-insecure cities in the area, it is currently unclear just how much of a reach the Gill Tract has within Richmond city limits. Establishing relationships in areas with the most homeless and food-insecure is an effective strategy for maximizing the impact of the UC Gill Tract Community Farm's commitment to food accessibility.

I spent two hours on a Wednesday morning helping out with the kitchen prep for lunch. While the work (dicing carrots) itself was cathartic, the energy and vitality of the volunteer (?) force left a considerable impression on me: a labor force of ~ten to thirteen adults in their thirties to fifties, many of whom seemed to be there for work, and not for volunteering (to put it one way: they did not seem like UC Berkeley graduate students who had the leisure to volunteer on a weekday morning). I mention them here because I suspect that working with these individuals, all of whom have a deep understanding of food insecurity and hunger, can prove to be powerful allies for UCGTCF in the future.

Towards the end of my two-hour shift at BARM, a number of trucks showed up at the back entrance, and proceeded to unload milk crates upon milk crates of donated produce and food. According to the kitchen lead, BARM rarely experiences any shortage of food donations, including that of fresh produce. When I pushed for a few examples of donors, Trader Joe's and other supermarkets topped the list. "Some farm," very likely the UCGTCF, was also mentioned, but the relative contribution of UCGTCF seemed to pale in comparison to its peers. This, I think, brings up an important question for UCGTCF to consider: what, exactly, is the end goal for the farm's produce? Where do we want the vegetables to end up? Who do we want it to feed? And, importantly: how do we want it to be served? If the end-goal is to tackle food insecurity first and foremost and to land our produce in the mouths of those most in need, BARM is a great place to donate food. It is a reliable partner with a

consistent demand for food. Whatever excess BARM receives can just be stored in its warehouse. However, if UCGTCF is to prioritize the distribution of *organic* food, BARM is less than stellar - all the food it receives is mixed. Like you would expect, sticking to organic labels and “standards” is not high on the list of priorities for a food shelter.

In sum: instead of funnelling food straight into BARM, UCGTCF may find a potentially better donor/donee fit with the *volunteers* and *workers* at BARM. These are individuals who know the value of food and fresh produce, and (very importantly!) are comfortable with its cooking and preparation, but are not allowed to take food home from BARM itself.

2. INTERVIEW: Bay Area Rescue Mission

Volunteer Coordinator: Marshelle Wilburn

Email: MarshelleW@BayAreaRescue.org

Phone: (510) 215 - 4865

Understanding the goals and needs of the UC Gill Tract Community Farm’s partners: An Interview Framework for the Bay Area Rescue Mission based in Richmond, CA

Objectives:

(1) To better understand who is benefiting from the UCGTCF’s food donations; (2) To determine and improve partnerships relevant to the UCGTCF’s mission.

If, from this interview, the project finds it is not fulfilling its mission to reach vulnerable populations, the next step will be a revised plan to reach the missing groups in the community.

Respondents:

Bay Area Rescue Mission managers and volunteers

Interview Method:

The interview will be conducted in a relaxed setting determined by the interviewee. The interview will be recorded for quality assurance with permission by the interviewee.

Estimated time length for interview completion:

< 45 minutes (closer to 30)

PROMPT: I am from the UC Gill Tract Community Farm and our records show that the Bay Area Rescue Mission has received produce from us in the past. I am interested in learning more about how your organization works, and how the UC Gill Tract Community Farm can better support your work. I am hoping to conduct an interview at your convenience, which will likely take between 30 to 45 minutes.

[i] = interviewee

BARM = Bay Area Rescue Mission

#	Question	Purpose of Question
1	How did you find yourself at the BARM?	To provide a confidence-building intro question that can definitely be answered; also an important question to establish [i]'s relationship with BARM
2	Is food injustice, racism, and insecurity something you witness in your day-to-day life? In your opinion, what are the main causes of injustice and racism in the food system?	To build a bridge between [i]'s personal experience and BARM's mission
3	In your mind, what does BARM contribute to Richmond? To the East Bay?	To understand [i]'s perception of BARM's value
4	Where does most of BARM's food come from?	To map out BARM's donor network; but also to gauge internal information transparency
5	Do donors usually seek out BARM, or is it the other way around?	To understand BARM's outreach scheme
6	Do BARM's relationships with food donors change over time, or remain relatively static (i.e., a relationship characterized primarily by giving and receiving food?)	To identify BARM-donor relationship pathways we can learn off of
7	If so, what was successful and what was unsuccessful?	To gather information that will be beneficial to establishing a better partnership with BARM
8	What are the current barriers to receiving/picking up food from the Gill Tract?	To better understand how BARM perceives the Gill Tract's value

Bibliography

- Alkon, A. H., & Norgaard, K. M. (2009, August). Breaking the Food Chains: An Investigation of Food Justice Activism. *Sociological Inquiry*, 79(3), 289-305.
- Cornwall, A., & Jewkes, R. (1995, December). What is participatory research? *Social Science & Medicine*, 41(12), 1667-1676.
- McClintock, N. (2011). From Industrial Garden to Food Desert: Demarcated Devaluation in the Flatlands of Oakland, California. In A. H. Alkon, & J. Agyeman, *Cultivating Food Justice: Race, Class, and Sustainability* (pp. 89-120). MIT Press.
- McKnight, Katie M. (2015, November 8). "ANALYZING CURRENT OPERATIONS AND FUTURE POTENTIAL OF THE UC GILL TRACT COMMUNITY FARM." Professional Report. UC Berkeley. Draft.
- UC Gill Tract Community Farm. (2014). *UC Gill Tract Community Farm*. Retrieved from About: <https://gilltractfarm.wordpress.com/about/>
- Wallerstein, N. B., & Duran, B. (2006, July). Using Community-Based Participatory Research to Address Health Disparities. *Health Promotion Practice*, 7(3), 312-323.