



CULTIVATING FOOD SECURITY:

proposal for an urban agriculture framework in West Oakland

SARAH SKINKER

CULTIVATING FOOD SECURITY

proposal for an urban agriculture framework in West Oakland

Sarah Jessup Skinker
Spring 2014

Presented to the faculty of the Landscape Architecture Department at the University of California, Davis, in partial fulfillment of the requirements for the Degree of Bachelors of Science in Landscape Architecture.

Signed and approved by:

Emily Schlickman, Faculty Advisor

Morgan Beryl, Committee Member

Toni Toscano, Committee Member

- i signature
- ii table of contents
- iii list of figures
- v abstract
- vi acknowledgments
- vii preface

01// introduction

- 01 glossary
- 03 urban agriculture
- 05 goals & objectives

02// west oakland

- 08 site context
- 09 background
- 11 mapping
- 12 neighborhood comparison

03// precedents

- 15 south central
- 17 chicago botanic
- 19 harlem grown

04// program

- 23 intervention
- 26 assumptions
- 27 site locations
- 28 linkages
- 29 program: cooperative garden
- 31 program: educational garden
- 33 program: market garden
- 35 long term vision
- 36 conclusion

- thank you
- references

- Figure 1: title page image, motherearthliving.com
Figure 2: image, grist.org
Figure 3: image, privateproperty.com
Figure 4: image, ediblegardenprogram.com
Figure 5: image, discoverlosangeles.org
Figure 6: image, mhacbiointensive.org
Figure 7: image, cultivatinghealthyplaces.com
Figure 8: image, ecologistblog.com
Figure 9: image, carsonwiebe.wordpress.com
Figure 10: image, heartland-gardening.com
Figure 11: image, pps.com
Figure 12: image, thephotogardenbee.com
Figure 13: image, naturallearning.org
Figure 14: image, naturallearning.org
Figure 15: motherearthliving.com
Figure 16: cultivatinghealthyplaces.com
Figure 17: CA context, created by Sarah Skinker
Figure 18: context map, created by Sarah Skinker
Figure 19: image, kquote.com
Figure 20: image, berkeleyside.com
Figure 21: image, cityslickerfarms.org
Figure 22: thematic maps, created by Sarah Skinker
Figure 23: comparative infographic, created by Sarah Skinker
Figure 24: image, chicagobotanic.org
Figure 25: US context, created by Sarah Skinker
Figure 26: image, southcentralfarmers.com
Figure 27: image, southcentralfarmers.com
Figure 28: US context, created by Sarah Skinker
Figure 29: image, chicagobotanic.org
Figure 30: image, chicagobotanic.org
Figure 31: image, chicagobotanic.org
Figure 32: US context, created by Sarah Skinker
Figure 33: image, harlemgrown.org
Figure 34: image, harlemgrown.org
Figure 35: image, thefoodgardenblog.org
Figure 36: site location map, created by Sarah Skinker
Figure 37: site proximity map, created by Sarah Skinker
Figure 38: site context, created by Sarah Skinker
Figure 39: site diagram, created by Sarah Skinker
Figure 40: existing site image, google maps
Figure 41: site perspective, created by Sarah Skinker
Figure 42: site context, created by Sarah Skinker
Figure 413 site diagram, created by Sarah Skinker
Figure 44: existing site image, google maps
Figure 45: site perspective, created by Sarah Skinker
Figure 46: site context, created by Sarah Skinker
Figure 47: site diagram, created by Sarah Skinker
Figure 48: existing site image, google maps
Figure 49: site perspective, created by Sarah Skinker

ABSTRACT

Specifically in West Oakland, hunger, poverty and a general lack of connection between people and the food they eat creates a huge rift in the local food system. This forces residents to resort to high calorie, low nutrient foods and in many cases, high alcohol consumption. Designing a locally specific program that examines the needs of West Oakland residents to develop successful urban food gardens could be a powerful combatant to these predisposed issues. This program proposes a network of three different types of urban gardens that will serve as a medium for community education and food security development. Education, engagement and access are the key goals of these gardens to reduce household food expenditures, build social capital, and connect people with their food. Most importantly, establishing community involvement at the preliminary stages will be key in the success of an urban agriculture program in West Oakland. Ideally with increased participation and development, the network will grow into a larger framework that supports a food system where the community can rely on local sources to feed their families and feel educated in nutrition and environmental awareness.

ACKNOWLEDGMENTS

To my parents: thank you for your constant support and always pushing me to challenge myself.

To Lauren: thank you for providing moral support and advice through out the course of my college career and beyond.

To Emily: thank you for your tireless guidance through this year. Your help has pushed me to succeed beyond my expectations.

To Morgan: thank you for grounding me and providing multiple perspectives to further my work and progress.

To Toni: thank you for keeping me on track and providing so much more than advice and experience throughout this journey.

To my LDA classmates: you special bunch of people, thank you so much for creating this incredible environment where I have found myself.

Stay weird and stay awesome.



Figure 2

P R E F A C E

My motivation for choosing this topic comes from a passion for food, environmental justice and living a healthful lifestyle. Food systems courses thrust me into the realm of sustainable agriculture, and I became enthralled with the social and political movement to fight food insecurity throughout America. Youth education in community and school gardens specifically caught my interest. I strongly believe that the grassroots level is where change is most powerful and sustainable. Specifically, teaching children the connections between what they eat and where it comes from is one of the most fundamental and necessary forms of education we can provide. As an intern at the Kids in the Garden Program on campus, I have witnessed these connections firsthand and been a part of the influence they instill in children. I am taking this opportunity to explore the potential for addressing local food security through community engagement and design intervention. My hope is that the future of urban design will widely integrate food gardens into its fabric.

“ **Food injustice** is socially engineered. Living in a food prison means you do not choose what you put in your body. You are dependent on corporations to feed you. Today, elementary school students around the country have a greatly diminished food vocabulary. I have seen a classroom of kids draw a blank when asked to name the tomato I am presenting before them. I have had kids tell me watermelons grow on trees. ”

This is how a food prison immobilizes its inhabitants.

-Ron Finley, food justice advocate



Urban food deserts are an extremely widespread issue, affecting an estimated 23.5 million Americans. I chose West Oakland as a study site because of its rich culture and potential as well as its classification as a food desert. West Oakland experiences problems associated with obesity, lack of community engagement, decrease in local jobs, large amounts of vacant land, and an extremely decentralized food system reliant on fast food chains and liquor stores. Residents are forced to work harder to find healthy food for their families due to a lack of political intervention and financial opportunities. Many businesses and organizations have come and gone, convinced they could make a quick profit by attempting to address the food needs of the area. This has led to the repeated failure of these grocery stores and other franchises. Unfortunately, West Oakland has yet to be presented with tools to build a local food system based on community participation (Jaramillo).

GLOSSARY

The following terms will be addressed frequently throughout the text, and their definitions are provided below for more in-depth understanding of their connection to central themes.



Figure 3

FOOD DESERT

The USDA defines a food desert as “urban neighborhoods and rural towns without ready access to fresh, healthy and affordable food. They also include demographic parameters, such as race and income. The lack of access contributes to a poor diet and can lead to higher levels of obesity and other diet related diseases, such as diabetes and heart disease.” A one mile marker is used in urban areas where people typically don’t have access to a car to drive to healthy food sources, and it is estimated that 23.5 million people in America reside in food deserts (Caton).



Figure 4

VACANT LAND

While there are multiple definitions of vacant land at the local and federal level, this project will define it as currently unused land, public or private. This is based on inventories collected through research studies that categorized land as “vacant”, “underutilized,” and “abandoned” each with their own loose definition. For the goals of this project, however, I am making certain assumptions that involve land ownership, classification, and use. Definitions vary among professions and government sectors, so in order to simplify the viable solutions to this project I am blanketing the term “vacant.” (Cooper & McClintock)



Figure 5

FOOD SYSTEM

The interconnected pieces of gardens, markets, supporters, corporations, stakeholders and consumers within and outside of a community that create the system by which food is produced, bought and sold. (Caton)



Figure 6

LOCAL FOOD

Food grown and sold within a community or close by, using minimal packaging and transport. It is grown with the intention of being sold nearby, with the needs and demands of the community at the forefront of production goals. (Naimark)



Figure 7

BIOINTENSIVE

A method of agriculture that focuses on gaining maximum yield from minimum land, simultaneously improving soil fertility. Biointensive practices center around a closed system of energy, inputs and outputs and is especially successful when applied to backyard gardens or small scale commercial farms. (Naimark)

URBAN AGRICULTURE

This section identifies a few key benefits to urban agriculture that apply directly to the proposed program.



Figure 8: An example of a small urban farm plot in Detroit

Sustainable food security, mental and physical wellbeing, cultural integration, social fabric and greenspace development are some of the most notable advantages of urban agriculture programs. The following benefits are only a few of the many linked with urban agriculture programs, chosen because they directly address some of West Oakland's most pressing needs. Crime rates, lack of youth involvement and education, health problems associated with obesity, and a lack of political engagement are a few of the major components addressed in a large amount of West Oakland literature.

CRIME

Community gardens were cited as places where people built trust, encouraging neighborhood watches and a general concern for other local residents (Golden 8). In a community like West Oakland where violent crimes are most common, it is important to consider these social benefits as a catalyst for crime prevention.

YOUTH DEVELOPMENT

Children in communities like West Oakland are born into an unjust cycle starting with lack of food education and access and ending with unhealthy lifelong habits and consequences such as heart attack and obesity. Just as it is important to develop childhood skills of social awareness and academics, habits that pertain to lifelong health are equally valuable. Forming an understanding of food systems and nutrition is difficult in inner cities, but with urban garden programs children are able to cultivate these experiences and apply them throughout their lives. Studies have shown that youth garden education programs occurred organically without formal instruction, increasing their flexibility at large scales (Caton 15). Children are able to make connections between the earth and the food they eat, empowering them to value food and healthier choices in their communities. Other benefits of garden education include teaching children problem solving, patience, collaboration with others, and an exploratory approach to learning that could facilitate more creative thinking in the future (Caton 16).



Figure 9: An urban farm in New York uses re-purposed car tires as planting containers



Figure 10: A successful urban farm in Chicago



Figure 11: A bustling farmer's market in Austin, Texas

SOCIAL CAPITAL AND LOCAL ENGAGEMENT

Several authors argue that interactions and relationships built within these community gardens serve as important building blocks of social capital. They tend to involve decision making and planning processes that require consensus, making them central for fostering democratic values and citizen engagement (Caton 11). Because the issue of environmental injustice is extremely prevalent according to residents in West Oakland, establishing strong community gardens could be a viable method of increasing public involvement in the local government by giving people the tools to collaborate and act.

HEALTH

Health and food literacy is one of the major strengths of urban agriculture. Communities that engage in food garden programs are much more likely to instill stronger values of nutrition and environmental awareness in residents, leading to healthier purchasing and eating habits in the future (van Veenhuizen 16). In West Oakland where obesity rates are a direct relation to the amount of fast food joints and liquor stores, implementing a network of urban gardens could turn residents away from these institutions and toward healthy choices. If they are available and equitable, residents are much more likely to make these decisions in favor of their personal and family health.

GOALS & OBJECTIVES

It is important to develop an urban agricultural network within the community of West Oakland to begin to address issues like obesity and food access. The multi-functional nature of urban agriculture allows for a diversity of opportunity for involvement. Green jobs, ecological services, property values, safer streets, community building, civic empowerment, educational opportunities, crime moderation, open space and of course food production are some of the major functions of urban agriculture in a community. I want to address the larger needs of food deserts so that this program can be applied to similar sites across the country, but I would like to focus mainly on the specific needs of West Oakland. The overall goal of this program is to design a sustainable system that fights for food access and equality for West Oakland residents. The following are more detailed key objectives.



Figure 12



Figure 13



Figure 14



Figure 15



Figure 16

PROGRESS

Increase abundance of food gardens around West Oakland over time

ACCESS

Create linkages between gardens that facilitate public outreach and engagement in order to develop a localized food system

EDUCATION

Use urban agriculture as a medium for youth and adult education about nutrition, environmental issues and the local community

ENGAGEMENT

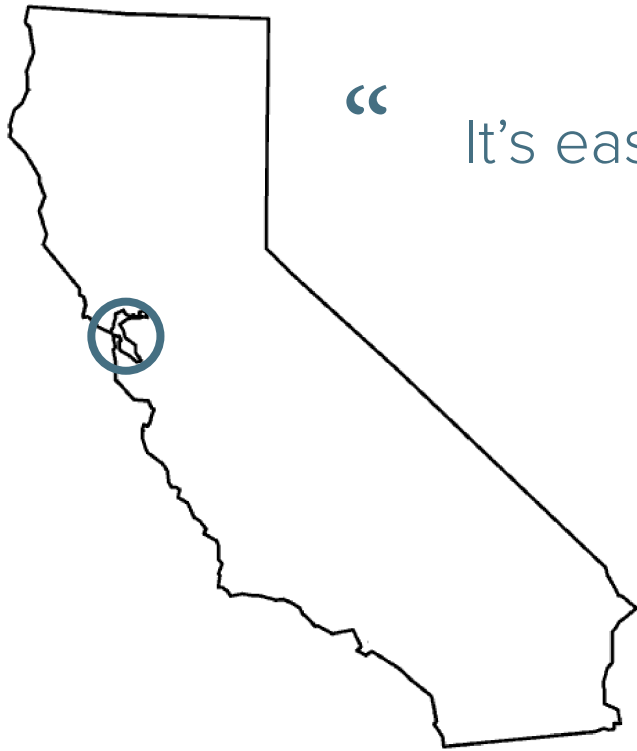
Encourage community participation as a means of active problem solving and program growth

HEALTH

Reduce obesity and health issues related to nutrition by increasing awareness and ease of local access to healthy, fresh food

STABILITY

Support the community to build a system that can sustain itself and expand in the future



“ It’s easier to stay drunk than it is to eat. ”

-Gregory Higgins, West Oakland resident

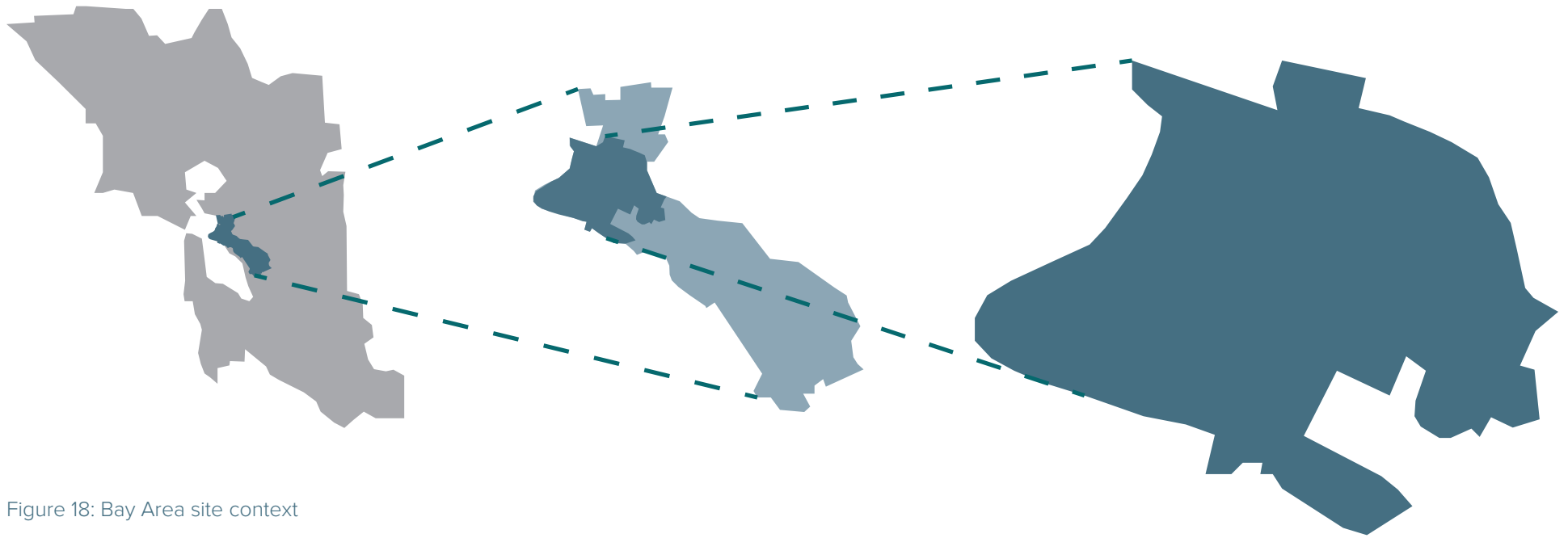


Figure 18: Bay Area site context

bay area

oakland

west oakland

FOOD FOR THOUGHT

Background information regarding relevant issues in West Oakland

The lack of food security, or having physical and economic access to sufficient and healthy food, troubles the places that are most in need — inner cities with marginalized populations. Along with many other low income African American communities around the nation, West Oakland faces numerous issues associated with lack access to nutritious food. The food that these residents typically consume is a low nutrient, high calorie, and generally unhealthy palette. Why is this such an important issue in West Oakland specifically? Alameda county ranks second highest in California for obesity-related health costs, and if this number continues to grow then these residents' debt and hardships will continue to expand (Bass).

West Oakland's food access issues are the result of complex policy decisions and economic development trends, not just the fact that some can simply afford better food than others. Starting in the 1950's and 60's, middle class white families began to move to the outskirts and suburbs of Oakland, taking with them many of the local resources that bound the community together. In the 1990's, industries and manufacturing centers abandoned the area. The combination of these factors prompted banks to red-line the city, making it near impossible to take out loans for business investments like retail shops and grocery stores (Caton). Grocery stores continually fail to stay in business, forcing residents to find food at gas stations, liquor markets and fast food joints. Thus West Oakland residents are predisposed to a disadvantaged food system and a general lack of connection to the food they eat. Past attempts to establish a sustaining, full scale grocery store have been unsuccessful due to failure to meet the city's cultural demands and placing priority on making a quick profit rather than forming strong ties with the community (Bass). Many local food



Figure 19: one of the many corner liquor stores, a very common sight in West Oakland

justice advocacy organizations argue that the solution to this huge gap is to create a network of gardens, farms, and eventually community owned co-operative grocery stores to meet the needs of resident outreach programs and farmer's markets, however these don't seem to replace the prosperity and success that a full-scale grocery store would offer.

Adjacent neighborhoods like Oakland Hills don't experience the same food desert conditions as West Oakland. Oakland Hills in particular has a large inventory of grocery stores, green spaces, farmer's markets and environmental youth education. The main difference between the two communities that caused these disparities is the demographic gap. Oakland Hills is made up of mostly white, upper class families that live in large single-family homes and commute around the bay area. This contrasts with the marginalized population of West Oakland, where most residents rely on Alameda-Contra Costa (AC) transit to get around. It is important to recognize the disproportion of resources and access allotted to West Oakland compared to that of Oakland Hills in order to grasp the intensity of the situation. Although these two communities share a border, the level of food access between them could not be more different (Bass).

Currently, the Oakland Food Policy Council is working toward initiatives that increase food access and land zoning to allow for urban agriculture and food selling. They partner with the city of Oakland to instigate change, and support several local organizations that fight for food justice rights (Cooper).



Figure 20: inside one of the several well-stocked markets in Oakland Hills, adjacent to West Oakland



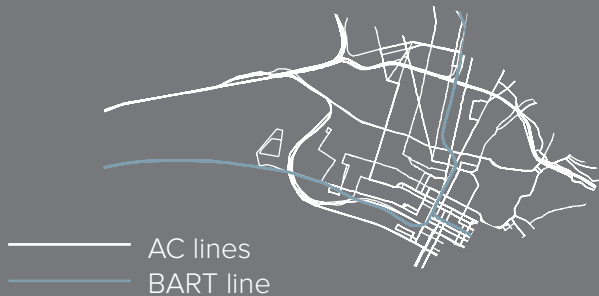
Figure 21: West Oakland residents at the recently established farmer's market started by a local food justice organization

These maps illustrate the relationship between income, transit and grocery store access. AC bus transit is the most widely used form of local transportation in West Oakland, which can be utilized to support access to program sites.



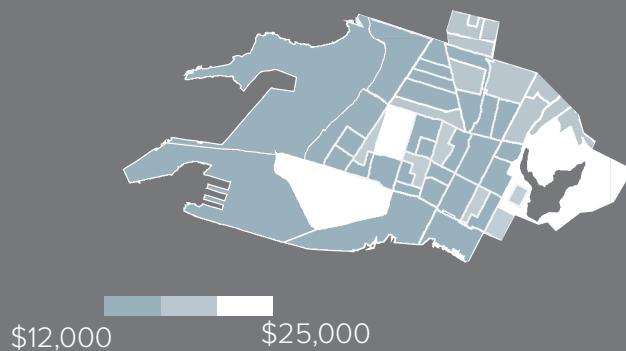
ACCESS

The single fully stocked grocery store in West Oakland only allows for the people within the blue circle to walk regularly for food. Other food must be found at one of the many local liquor stores or gas stations.



TRANSIT

This connectivity map illustrates one of the region's strengths: West Oakland's Alameda-Contra Costa transit lines. Most of the residents in the area rely on AC transit to travel locally.



INCOME

The average median household income in West Oakland generally ranges from \$12,000-\$25,000 per year, with 32% of residents living below the poverty level. Residents to the southwest are in the lowest income range.

WEST OAKLAND

OAKLAND HILLS

1 grocery store per 25,000 residents



1 grocery store per 13,000 residents

about 3 liquor stores per block



about 1 liquor store per 2 blocks



\$20,000 median income



\$75,000 median income

10% residents live within walking distance of a grocery store



80% residents live within walking distance of a grocery store

This graphic aims to represent the disconnect between two adjacent neighborhoods of focus, West Oakland and Oakland Hills. Although they share a highway border, their demographics could not be more disparate. It is clear that there is some sort of gap within the West Oakland food system.



Figure 24

Each of these precedents were chosen based on their commitment to food security through community development and involvement as well as their setting in a marginalized, ethnically diverse region comparable to West Oakland. These studies serve as inspiration and guidance in developing a locally specific urban agriculture system.

SOUTH CENTRAL URBAN FARM

South Central, Los Angeles, California

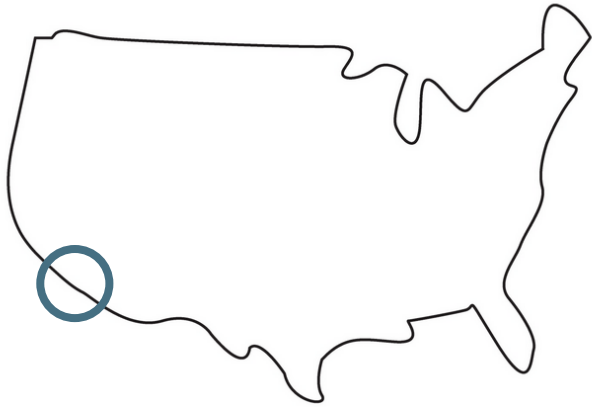


Figure 22: South Central, Los Angeles, CA

South Central Community garden was an urban farm of 14 acres, operating from 1994 to 2006 when the farmers were evicted by the property owner. During its years of cultivation the space was a booming hub for community events and a significant source of income and produce for the 350 participating families, marginalized local Latino immigrants. The farm earned noteworthy supporters over the years including Ralph Nader and Leonardo DiCaprio along with well-known environmental activists Joan Baez and Ron Kovic (Broad).

The land was given to the public as a form of mitigation for the famous Los Angeles riots in 1992. Each family had to meet low income standards to participate, and instead of living on welfare they joined the powerful movement and grew food for their families and their community (Broad). As one could imagine, 14 acres of land dedicated primarily to food production could establish a flourishing food culture. The farmers and their families experienced an abundance of produce from their plots, which they funneled into farmer's markets and cooking events year-round. Aside from meeting most of the participant's food needs, the garden was a source of community revitalization and cultural enrichment.

An estimated 150 plant species spanned the vast plot, used for many purposes such as pest control, spiritual value, medicinal remedies, fiber and fuel, and of course food crops. Many of these plants, such as pipicha (*Porophyllum tagetoides*), nopal (*Opuntia ficus-indica*) and tomatillo (*Physalis philadelphica*) functioned as connections to the many Latino user's roots and culture (Broad). Farmers identified with the space as their sanctuary and their second homes.

When the previous landowner decided to build a trash incinerator on the plot, the city evicted the farmers and instigated





Figure 24: Farmer displaying his plot

Figure 25: Massive garden meeting



an extremely long, controversial protest. Community members rallied against the court and attended mass proceedings. They worked to defend their culture and their land, and many well known supporters such as Martin Sheen, Daryl Hannah and Willie Nelson joined forces with farmers (Broad). Local activists, college students, and residents staged fasts and peaceful protests on the premises that turned into violent arrests and removals. It ended in the awarding of the land to the previous owner, reducing the battle to squatter vs. property rights. After flames from the protest died down, the city donated a small portion of land nearby to the farmers which they later began to cultivate (Broad).

The story of this self-governed community garden is an ideal representation of the struggles associated with community garden procurement and stability in the US. More importantly it paints a picture that illustrates the positive developments like social capital, community development, cultural empowerment, political activism, education and food security. The strength and fortitude with which the families and supporters defended their farm demonstrates the power and influence behind such a concept. It serves as the ultimate precedent for community mobilization and involvement around an urban farm.

Reflection

Although the urban farm in south central was about 10 times the size of the largest site in this project, there are some interesting correlations. They are both predominantly ethnic neighborhoods with much of the population living around or below the poverty line. I was inspired by South Central's community mobilization and support, and hope that this energy and culture would be present in the future of this project. This inspiration pushed me to establish a framework for a few of the sites based on that of South Central's. Many of the plots were communal, and gardeners held events to bring in the public and distribute their produce surplus. South Central's urban farm was deeply committed to community involvement and cultural empowerment, and this shone through during the intense protests that ensued during their eviction.

CHICAGO BOTANIC GARDEN

Chicago, Illinois

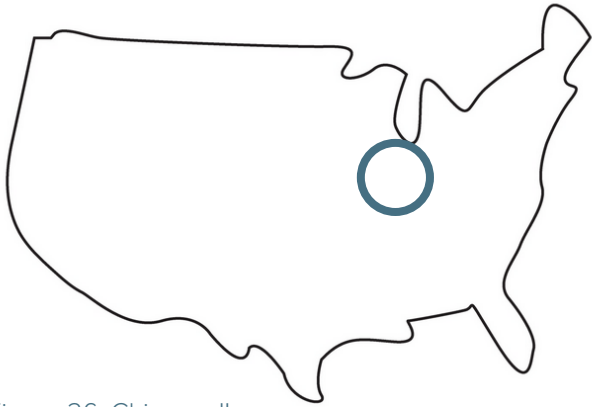


Figure 26: Chicago, IL

The mission of Chicago Botanic Garden is threefold: to support the physical and mental wellbeing of local residents, deepen the community's understanding and value of a sustainable life on earth, and nutritional and agricultural education and growth (Chicago Botanic). Meeting these three goals lies in the hands of hundreds of local volunteers who benefit from the many successful programs. Aside from the lush recreational sites at the garden, there are multiple urban farms that support local residents and provide high school students and previously incarcerated individuals means toward employment and college certification. A wellness garden welcomes people of all ages to participate in horticultural healing therapy and educational workshops focusing on the benefits of gardening and nutrition.

One of the most successful elements of the Chicago Botanic Garden is its school-based garden education. The Learning Campus and Children's Growing Garden's 10,000 square foot center provides a permanent hub for the developing agenda of youth and adult education, housing centers for native plant conservation, a teaching kitchen, pollinator exhibition patch, vegetable beds, and biomimetic gardens. For example, The Windy City Harvest Farm develops careers and

skills through a nine month certification program where prospective urban farmers are placed into an incubator course which earns them land, access to tools, and training to establish a viable economic model for their farm. The goal is to prepare them to start their own urban farm and re-localize Chicago's food system, with specialized areas including aquaponics, farmer's market development, and rooftop gardening. Programs like these allow the organization to blossom and attract many grants and funding opportunities, continually increasing growth and viability.

The Chicago Botanic Garden supports a booming network of involvement with local universities, restaurants, youth groups, cafés and restaurants, nature reserves, and schools to increase educational and financial benefits. Support from



Figure 27: Children's Growing Garden



Figure 28: Children's farmers market at the Learning Campus

Figure 29: Butterfly exhibit at the Learning Campus



local planners, government agencies and larger organizations facilitate much of the growth and development of these programs as well. Much of the participation comes from local students of all ages through class field trips or camp sessions. The variety of engaging activities challenge students to broaden their horizons across multiple subjects, ranging from meteorology and climate change to nutrition and permaculture. By integrating a diverse list of environmental issues into the curriculum, the Learning Campus and Children's Growing Garden at the Chicago Botanic Garden is able to meet their vision of "cultivating the power of plants to sustain and enrich life."

Reflection

The Chicago Botanic Garden is an amazing example of site connection and agricultural education. Most of their goals are based on the principles of youth education, career development and preparation, food accessibility, community engagement and green space expansion. The organization was able to integrate all of these pieces to design a place where local residents can participate in a variety of programs and events, and are extremely successful in doing so. Many of their events and programs attract locals of all ages and races, making it a perfect precedent study for public outreach. They are committed to community wellbeing, and this is represented through careful planning to determine the local needs. Their thriving economic model involves grants, scholarships, and many other forms of donations. It would be ideal to apply all of these principles to the West Oakland project to maximize public participation, site connectivity and outreach.

HARLEM GROWN

Harlem, New York

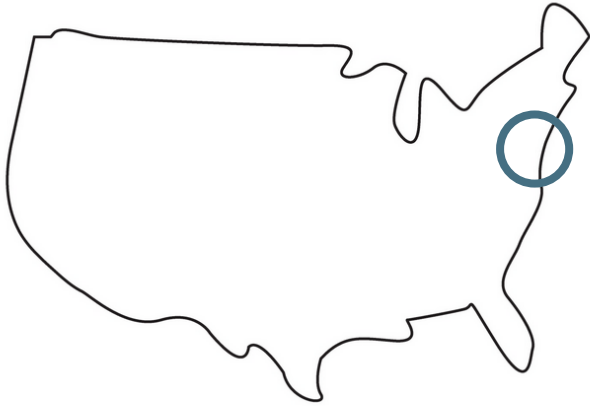


Figure 30: Harlem, NY

Figure 31: Harlem Grown's garden space



Harlem Grown is an independent, non-profit organization that works with the New York City Parks Department and Department of Education and several food advocacy and urban agriculture groups to connect local public schools to the local community through the use of common gardens and outreach activities. The organization was started in 2011 in order to combat the issues of food insecurity prevalent in the area of East Harlem, mostly targeted toward youth and low-income families of different races. Many of their programs involve job training, restaurant outreach and sales, financial stability, garden based youth development, and mentorship.

Maintenance and farm operations are conducted on a volunteer basis, with the exception of a single-mother apprenticeship program. Most volunteers are high school students that work in conjunction with Harlem Grown's job training program, teaching them leadership skills and economic principles as well as developing agricultural and horticultural knowledge. Funding comes primarily from local donors and online fundraising organizations, where the group advertises the websites over social media and other publications. They have raised close to \$60,000 to build greenhouses for the single mothers hydroponic apprenticeship program. Anonymous donors, local residents, food justice organizations and other nonprofits have contributed to the cause. Much of Harlem Grown's success comes from this economic model centered around job training and youth preparation for sustaining successful careers after high school.



Figure 32: Young student examining lettuce seedlings

Figure 33: Community work day at Harlem Grown



Reflection

Harlem Grown is probably the most similar to the West Oakland project's program in terms of goals and size. Youth enrichment, career preparation, local food systems and local garden networks are its major objectives. In applying these goals to the project program, Harlem Grown's half-acre plot does an excellent job of involving the public in site design and implementation. The greenhouse, beds, and all other site elements were constructed by program volunteers and participants who were able to use and enjoy them shortly after. The site involves local students by employing garden education programs and working with school curricula to make it an integral part of their learning experience. They receive a large amount of support from the local community, and have established close ties to restaurants and other local organizations to localize Harlem's food system and connect outside the garden. The work that Harlem Grown has done in such a small plot of land is extremely impressive, and I can learn a significant amount of vital information from the successes they have had.

“**Food justice** is about resuscitating the nature around us and relearning the art of nature. It is about collaboration, bringing people and communities together to learn how to feed ourselves and feed each other. It is about taking responsibility, building agency in individuals and communities.”

-Ron Finley, food justice advocate



My proposed resolution to this unfortunate cycle in West Oakland is a system of productive food gardens focused on educating and engaging the public to increase local food access. There are numerous benefits of this system, and in order to maximize them is critical to build a program that meets the community's needs. This intervention would propose a network of three gardens centered around community engagement to develop a more localized food system. The network would help facilitate future growth of urban agriculture in West Oakland and supplement the current efforts to increase food access in the community.

INTERVENTION

The first site, located at 7th and Campbell, would support a cooperative garden for residents to grow food for their families and the larger community and participate in educational activities and workshops. Implementing a cooperative garden would meet the goals of maximized participation and engagement as well as education and food access. Residents can invest as little or as much commitment as they would like into tending to the garden rather than allotting each plot to one gardener. Produce would be split between participants, and surplus would be donated to other community members. It is important to build interest and increase opportunity to reach as many people as possible, and an inclusive model such as this could help attain these goals.

The second site is a smaller scale educational garden located at 14th and Adeline. It will apply different areas of focus to welcome school field trips and families in order to inspire participation and create a strong foundation of engagement and fundamental education. Program elements like a seedling nursery, chicken coop, outdoor classroom and pollinator garden will help broaden the spectrum of learning and facilitate a variety of workshops and events for all different ages and demographics.

The third site located at the corner of Peralta and Hannah would propose a larger scale market garden where nearby high school students maintain the plot and build their knowledge and discipline skills to prepare them for a career. This will integrate into their curriculum in order for students to earn some type of course credit. Skills required to maintain a farm span across a multitude of disciplines, providing students with exposure to opportunities outside agriculture. Potential jobs at this site could include irrigation management, pest monitoring, construction, site planning, crop planning and volunteer management. In order for the rest of the community to benefit from this plan, the market site will employ a CSA (community supported agriculture) program where local residents subscribe to receive produce consistently at low cost. This will contribute toward meeting the goal of creating a more food secure West Oakland by spreading the bounty of produce throughout the community. It also addresses the objective regarding youth development, allowing students to broaden their spectrum of education and expose them to potential career opportunities.

Pulling inspiration from the previously examined case studies was crucial. I was able to determine key components of each system that made them successful, and apply them to the West Oakland program. For example, a diverse educational program at the Chicago Botanic Garden and the hands-on, small scale curriculum garden at Harlem Grown are the bases for the educational garden's mix of workshops, outdoor classrooms, and different themes. South Central Urban Farm's social power and management structure is the inspiration for the cooperative garden. This case study illustrated a very successful program, sharing the land and cultivating high yields while creating a community space and culture hub. It would be ideal for this system to be replicated in the cooperative garden site. Lastly, Chicago Botanic Garden encouraged the idea for the market garden run by high school students. The Garden has established a very cohesive system of urban gardens run by local youth and young adults, allowing them to gain valuable skills and job experience.

It is important that each site relate to the others for maximum involvement and benefits. The educational garden will house a nursery where younger residents start crops from seed, watch them grow into seedlings, and learn about life cycle dynamics. After establishing as seedlings, the children will help the market and cooperative gardens transplant them on their plots for future harvest. The goal of this linkage is that children connect plant life cycles to the food that they eat and observe changes in their environment. It is crucial that children understand the fragility of plant life as well as the efforts and decision making that go into producing food.

Each site has a distinct group of target users based on demographic analysis and community needs, however the user interface is also the glue that binds each site together. They depend on the programs and themes of the other sites to function and develop a local food system that integrates each piece. As mentioned in the assumptions section, there is a significant amount of community planning and visioning that must happen before the implementation phase of this project. In order to create an equitable structure so the program can sustain itself and succeed, an element of leadership must be introduced and maintained. However, to align with the program goal of widespread access and engagement, this must be a sort of non-hierarchical leadership structure to encourage a cooperative management of the different gardens and the gardens as a cohesive unit. Specific details are assumed to be decided during the community visioning phase.



Figure 35

A S S U M P T I O N S

Implementing an urban agriculture program requires many factors to be considered on multiple scales in order for the program to be viable. The following list details several assumptions I am acknowledging that are necessary to execute a system like this.

It is assumed that before implementation, the initial phases will involve planning and community visioning in order to connect local groups, residents and organizations to determine the community's needs and interests and apply them to the program.

All uncertainties and details will be address through public engagement to create a system tailored to local needs.

Vacant land will be public and able to be leased long term.

Land use and zoning amendments will be proposed to meet the program's needs.

Soils are suitable for cultivation of food crops.

Materials will be donated from local organizations, industries, junkyards, schools etc.

Seeds will be donated from Seeds of Change and local garden/home improvement stores.

SITE LOCATIONS

Market Garden

Peralta & Hannah
50,000 square feet

Educational Garden

14th & Adeline
18,000 square feet

Cooperative Garden

7th & Campbell
33,000 square feet



Each site was chosen based on certain criteria, including: proximity to public transportation (BART and AC bus lines), proximity to nearby schools and community organizations, little or no shade or topographical changes on the site, arable soil quality, and viable size for food production.

Figure 36



Figure 37

It is important to illustrate the potential for transportation between and around sites. Most residents rely on walking or public transportation to get around West Oakland, so the ease of travel between sites is crucial.

TRAVEL TIME

A Market ---- Cooperative
distance: 1.3 miles

 20 minutes

 13 minutes

B Market ---- Educational
distance: 1 mile

 18 minutes

 15 minutes

C Educational ---- Cooperative
distance: .9 miles

 18 minutes

 17 minutes

source: google maps

COOPERATIVE GARDEN:

a communal space for collaborative food gardening and social interaction

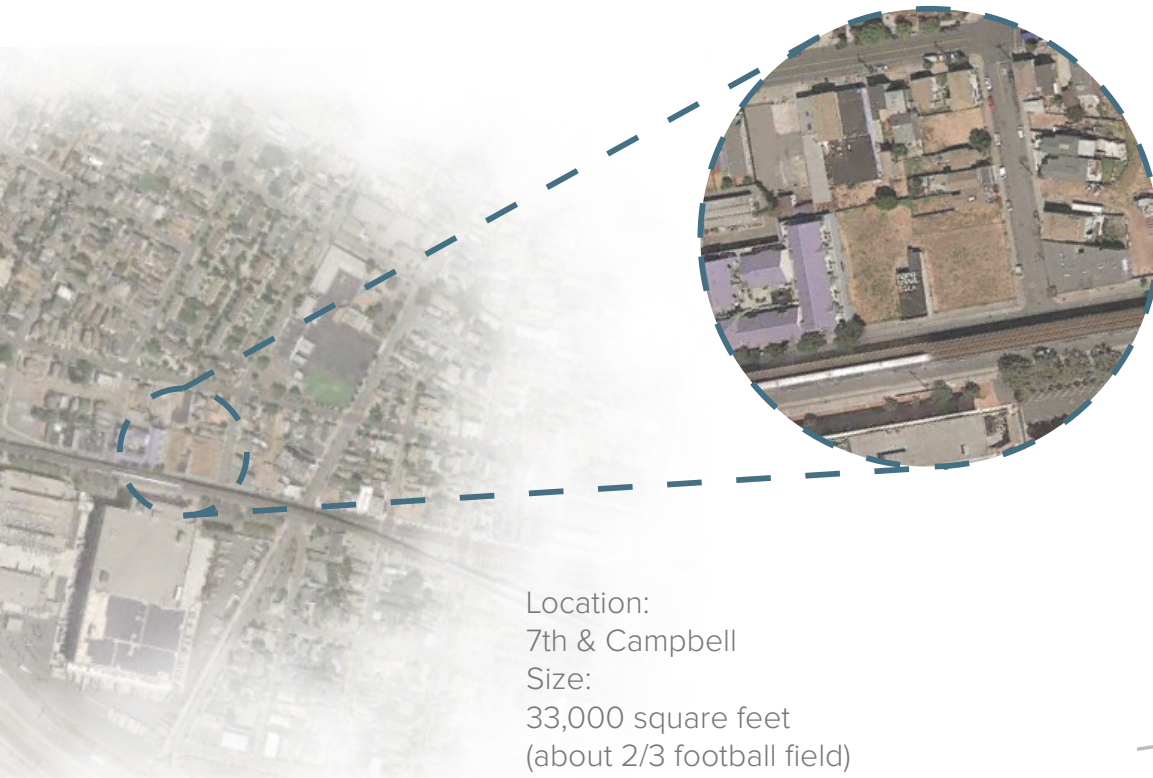


Figure 38

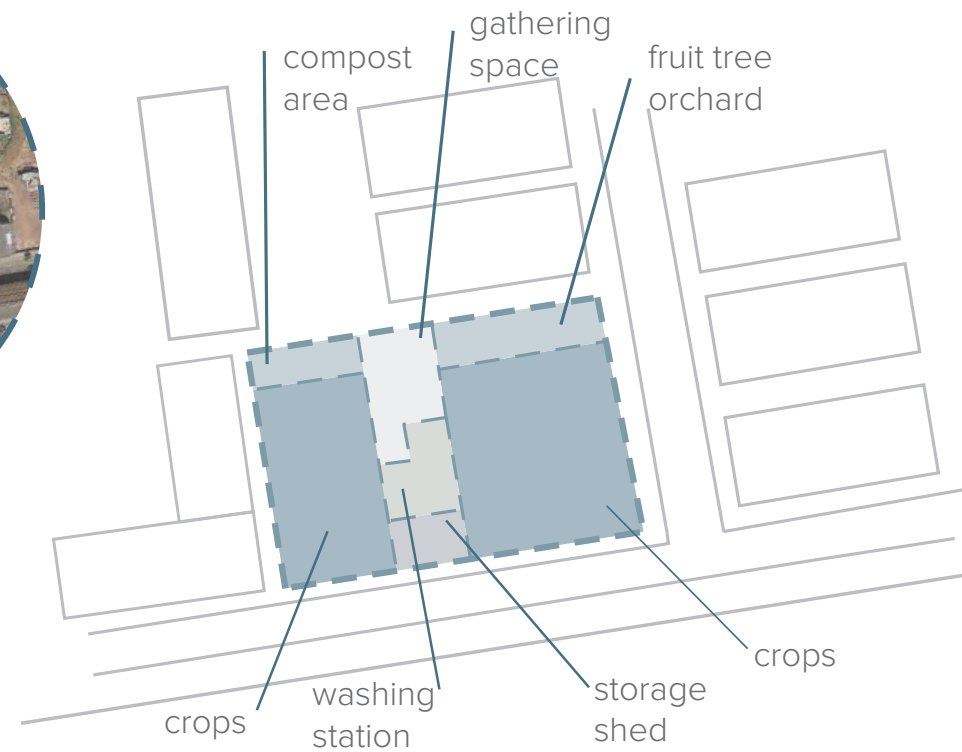


Figure 39: potential site layout

This location was chosen because it is in the heart of one of the busiest residential areas in West Oakland and directly adjacent to an AC bus stop. Local residents can easily access this site from their homes or nearby AC lines, making it an ideal location for a community style garden. The cooperative garden will engage local residents of all ages and demographics to collectively run the space. Participants will develop and maintain the garden with the help of educational events and workshops at the educational site. Produce will be distributed among participants and surplus among the community with the hopes

of increasing involvement and fresh food access. Any local community members are invited to participate in the cooperative garden. Ideally for this site to succeed, residents will interact with other sites as well, attending workshops and meeting fellow gardeners. Potential for employment on this site could entail jobs in produce management, volunteer coordination, and adjacent site liaisons. This garden would require gardening tools, irrigation materials, compost, a storage shed (in existing building), gathering space, and donated rummage for re-purposed planters and other supplies.



current site conditions

Figure 40

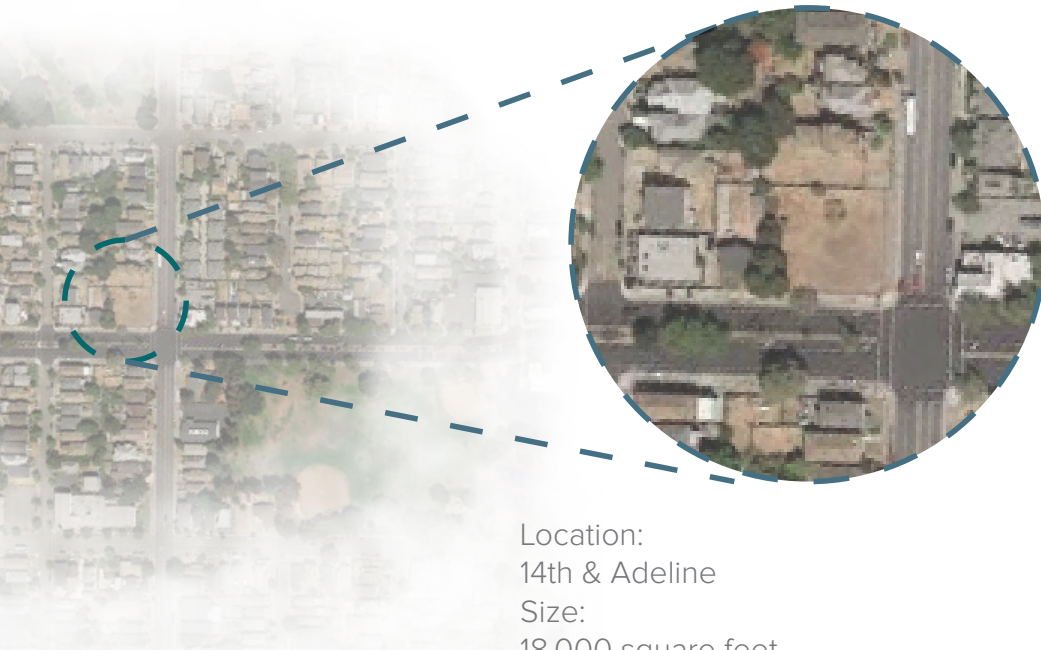


cooperative garden vision

Figure 41

EDUCATIONAL GARDEN:

an outdoor classroom for local, nature-based education and exploration



Location:
14th & Adeline
Size:
18,000 square feet
(about 1/3 football field)

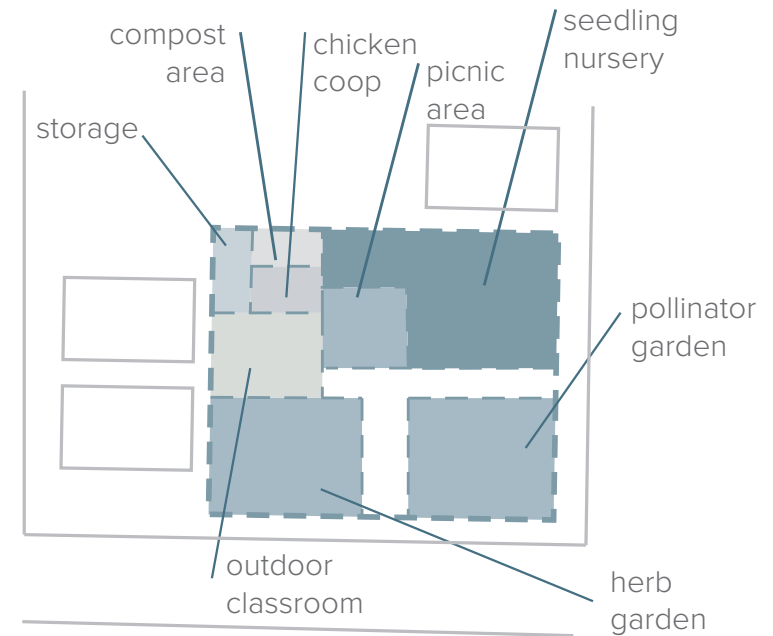


Figure 43: potential site layout

14th & Adeline is an ideal location for the educational garden because it is a short walk from multiple elementary schools, parks, and community organizations. This will allow for ease of access by classes, families, and community groups as well as local residents for maximum participation at this nature-based education site. The garden will offer workshops, cooking classes, planting events, home garden clinics and consultations to nearby schools, organizations and residents. The site will also be a resource for residents to learn how they can develop their own home gardens. Local leaders will facilitate a positive learning environment for all ages and demographics to apply these skills to their everyday lives.

Experienced community members will organize and manage the educational components by incorporating local schools and community groups (churches, volunteer organizations) into the system and extending invitations to the greater community. Job opportunities at this site would include workshop coordinator, outdoor teacher and group leader, event planner, and community outreach specialist. This site would require many items such as hoop houses, cold frames, a chicken coop, outdoor classroom, picnic area, seating, garden tools, compost area, and many repurposed items for planting containers.



current site conditions

Figure 44

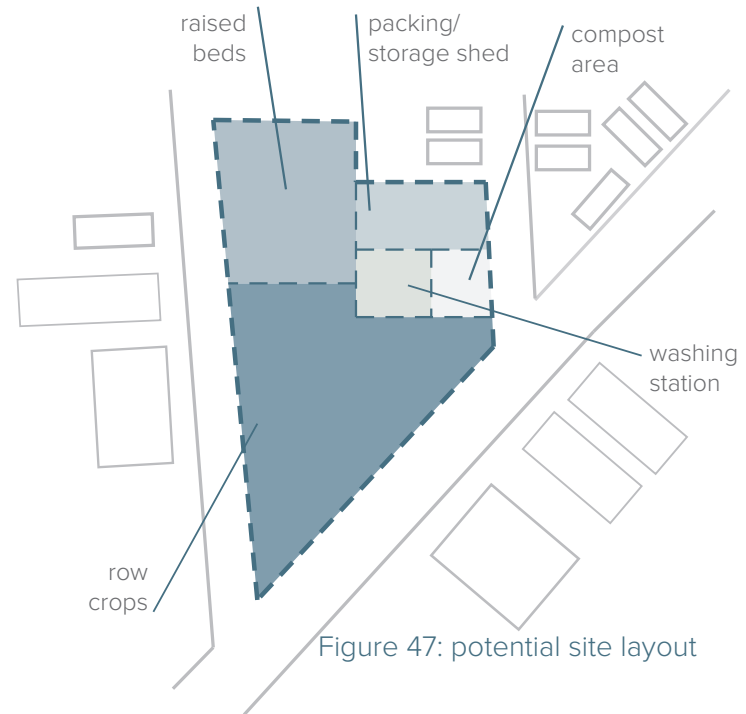


educational garden vision

Figure 45

MARKET GARDEN:

a site for students to develop practical skills and distribute food to their community



This plot was chosen for its proximity to McClymonds High School and Mandela Parkway, a major transportation corridor. Students will be able to access this site as part of their curriculum, earning credit for farming and distribution. McClymonds students will learn about food systems and urban agriculture while supplying the community with fresh food. Students will run a community supported agriculture program (CSA) to connect their food and their site to the community. Nearby high school students will manage and maintain this site in order to develop their knowledge

and skills in agricultural practices and leadership. Employment opportunities at the market garden will include student jobs as CSA program manager, crop planner, harvest coordinator, and community outreach positions. This site will rely on many tools and materials to succeed depending on the season and crops grown. It will also require participation from the educational garden to produce seedlings that will be planted as crops at the site. Other inventory items will include a compost area, raised beds, a shed, garden tools, and produce washing and packing materials.



current site conditions

Figure 48



market garden vision

Figure 49

LONG TERM VISION

Creating a lucrative network of urban gardens at different scales takes time and development. Many of the site components will expand over time, and it is important to illustrate how the future of this program will operate. Several of the major goals to be achieved after establishment and continued success include:

Connect local food justice organizations to institutions like schools, involving the community (families, schools, groups etc.) in all major decisions and planning

Alleviate health risks associated with obesity and heart problems in youth and adults to create a healthier West Oakland

Establish potential for long term, full time jobs at each site

Mobilize the community to act in promoting zoning and land use to increase potential for more urban gardens

Develop an initiative to increase acquisition of land dedicated to urban agriculture in West Oakland

It is my hope that as urban agriculture gains credibility in research and practice, West Oakland will be one of the many sites for development. Although this program is hypothetical, I believe it is crucial that an urban agriculture framework be developed in this area due to the social constraints and lack of access these people face. A system like this would allow residents to build their own food security, building social capital and a healthier, happier West Oakland in the process.

CONCLUSION

In order for West Oakland to overcome the pressing issue of food insecurity, there needs to be some sort of social intervention. A network of interconnected urban food gardens has the potential to address this issue while capitalizing on existing conditions of West Oakland to develop social capital. Local residents will become leaders and experienced gardeners, eventually managing the future edible infrastructure of West Oakland. In order to achieve this and determine more specific needs, it will be key to incorporate community visioning in the implementation stages. Long term success of this project relies heavily on the establishment of a non-hierarchical leadership structure, encouraging all community members to participate and avoid discrimination or gentrification. Food injustice in West Oakland does not entail a one-size-fits-all solution, and through the growth of this program the community will be able to develop a local food system tailored to their needs.

REFERENCES

Bass, Angela. "The Oakland Food Divide." . Oakland North, 1 May 2010. Web. 1 Feb. 2014. <<http://oaklandnorth.net/few-food-choices/>>.

Broad, Garrett. "Ritual Communication and Use Value: The South Central Farm and the Political Economy of Place." . Wiley Online Library, 1 Sept. 2013. Web. 1 Apr. 2014. <<http://onlinelibrary.wiley.com/doi/10.1111/cccr.12003/full>>.

Caton, Marcia. "Investing in Urban Agriculture." . Funders Network, 1 Mar. 2012. Web. 1 Apr. 2014. <http://www.fundersnetwork.org/files/learn/Investing_in_Urban_Agriculture_Final_110713.pdf>.

Cooper, Jenny, and Nathan McClintock. "Cultivating the Commons: Assessment of the Potential for Urban Agriculture on Oakland's Public Land ." . Department of Geography at University of California, Berkeley , 1 Oct. 2009. Web. 1 Feb. 2014. <https://d3gqux9sl0z33u.cloudfront.net/AA/AD/oaklandfood-org/downloads/27621/Cultivating_the_Commons_COMPLETE.pdf>.

"For Families." . Chicago Botanical Garden , 1 Mar. 2010. Web. 1 Feb. 2014. <<http://www.chicagobotanic.org/forfamilies/>>.

Golden, Sheila. "Urban Agriculture Impacts: Social, Health, and Economic: A Literature Review." . University of California Agriculture and Natural Resources, 1 Nov. 2013. Web. 1 Mar. 2014. <<http://asi.ucdavis.edu/resources/publications/UA%20Lit%20Review-%20Golden%20Reduced%2011-15.pdf>>.

Jaramillo, Paula. "What Place for Urban Farmers?." . Food First, 24 Apr. 2014. Web. 1 May 2014. <<http://foodfirst.org/what-place-for-urban-farmers/>>.

LaPerruque, Emily. "Kids Yield Crops: In the Garden with Harlem Grown." . Marcus Samuelsson, 1 July 2012. Web. 1 Feb. 2014. <<http://www.marcussamuelsson.com/food-stories-2/kids-yield-crops-in-the-garden-with-harlem-grown>>.

Naimark, Susan. *A Handbook of Community Gardening*. New York: Scribner, 1982. Print.

van Veenhuizen, Rene. "Cities Farming for the Future ." . International Institute of Rural Reconstruction, 1 June 2006. Web. 1 Apr. 2014. <<http://web.idrc.ca/openbooks/216-3/>>.

THANK YOU