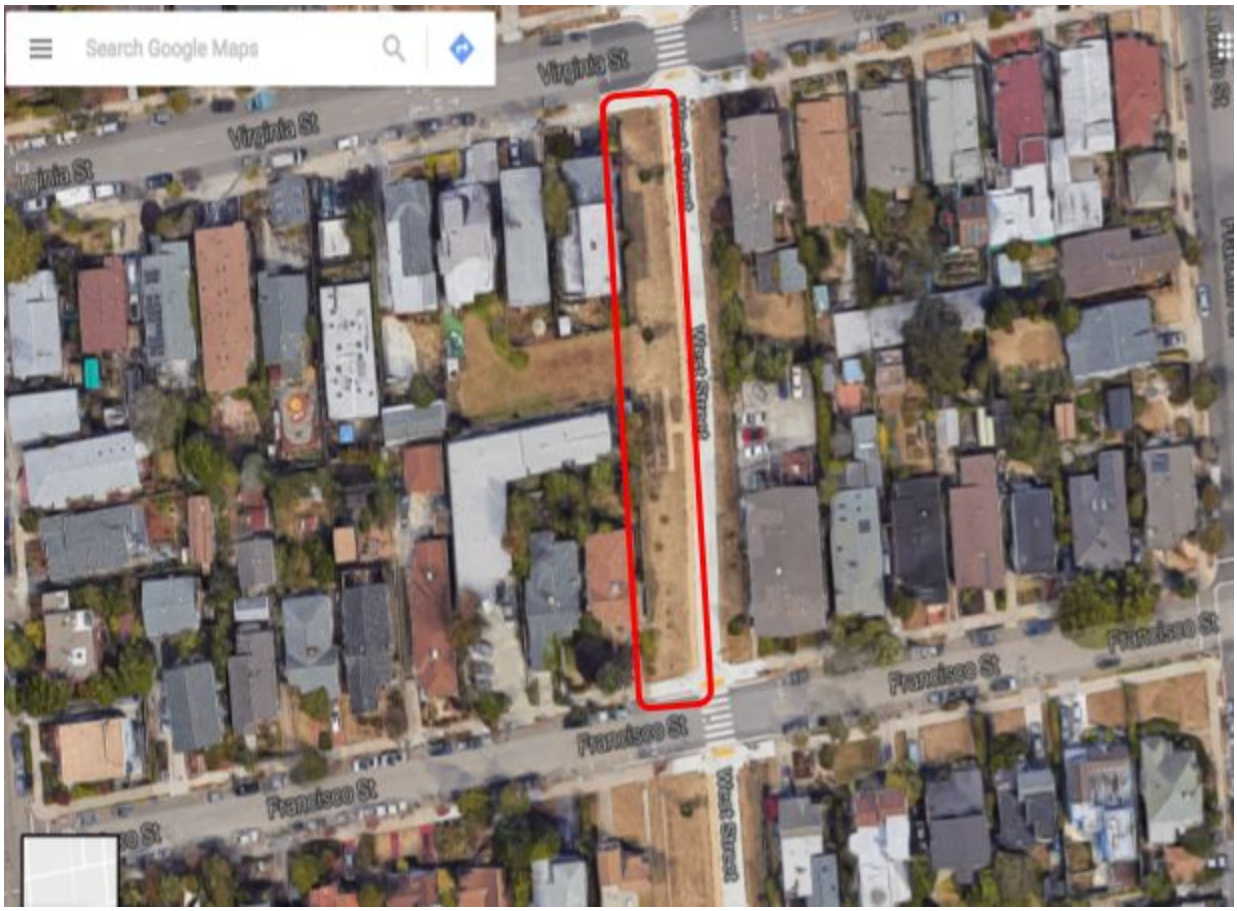
Proposal for a Demonstration Urban Garden in North Berkeley

What is a Demonstration Urban Garden?

A demonstration urban garden is a community garden in an urban setting offering gardening classes to the community. The proposed garden would be a unique collaboration between UC Berkeley, the city, and the community. The proposed management is that UC Berkeley volunteers would teach classes and train community members to run the garden until the garden can be fully self-sustained by the community members.

Location: on the walkway of West Street, between Francisco and Virginia

Size: 80 x 8 m



What will this garden do for the community?

Positives

- This garden will teach the community how to garden without chemical inputs, using techniques to reduce water usage and increase productivity.
    - It will be a great opportunity for members of the community to interact with nature and each other while also learning valuable skills and sharing knowledge.

- Children and retirement communities are most likely to benefit from the healthy and enriching outlet the garden would provide.

➢ The unique collaboration between the school, the city, and the community would be mutually beneficial.

- Volunteers from the school would be able to share knowledge they've learned from their studies, while also incorporating knowledge from the community into their research and studies. Thus, bridging an interaction gap between UC Berkeley Students and the Berkeley community.
- It would provide management of the land by students and the community, saving money and efforts on the city's end.
- It would put use to lands already dedicated to a public garden.

➢ The garden would provide an outlet to unify the community.

- Pockets of both poverty and wealth exist within a few blocks of each other. According to surveys and interviews, these communities have some division between them. The garden could bridge this division.
- Nobody we surveyed was involved with a community garden but many had experience gardening and 41% try gardening at home.

➢ The garden could provide free organic produce to an area with few affordable organic options for community members who need it most.

- How exactly produce will be distributed will be determined later by future management of the garden. However, because of income disparities in the community, it might be beneficial to give produce to low-income community members. 63% of respondents want the produce to be donated to community members in need, followed by giving it to volunteers or donating to an organization.
- It would provide free organics to an area without many affordable organic options within 1 mile radius. Organic produce costs about 40% more than regular produce at the surrounding stores offering organics. This is most likely due to the disparity of costs between fruits and vegetables in the organics section.
- Nearly 100% of people we surveyed spend over $200 on groceries each month while EBT only provides a maximum of $194 per month.

➢ The garden would provide communal land access, meaning land access that many renters and low-income households don't have now.

- Although 29% of homeowners making over $110,000 per year living in the area said they would not like a garden, part of their reasoning was that most of those living in the area are homeowners with land. All the respondents making $50,000 or less supported the garden - despite some concerns - because most of them do not have private land or communal land access.

- ➢ Provide structured management and community engagement of lands already dedicated to public gardening, unlike the raised beds currently there.
    - A majority of the residents mentioned the poor management of the raised beds already implemented in the land. None of the residence know who manages these beds or if they are even still managed. This new garden would provide structured management for this space and expand the space for gardening.
    - Some commented that the raised beds were implemented without surveying and contacting the whole community to get input. Before the garden is implemented, it is recommended to hold an open forum for the community to attend to voice their opinions.
- ➢ In the long term, this garden would act as a platform for other demonstration urban gardens and city-school collaborations throughout the bay, providing the same or even more beneficial services to areas that lack access to fresh produce or private lands.

Negatives

- ➢ Price of housing could increase due to a strong correlation between the increasing quantity of community gardens and increasing house costs in the same neighborhood.
- ➢ It will not completely replace food sources for those getting produce from the land; rather, it will supplement food sources.
    - Comparing the size of the community to the size of the land, the garden wouldn't be large enough to act as the sole food source for anyone in the community.
    - However, it would offset some of the costs of purchasing organic produce, which costs over 50% more than conventional at both Monterey Market and Trader Joe's, the two organic food sources (and major conventional food sources) in the area.
- ➢ Families are very busy.
    - Many reported that they are very busy and aren't sure when they'd find time to garden, but these same people also reported that implementing a garden would be beneficial to the community. This is why children and retirement age groups might find most benefit from the garden since they have more time to dedicate to the garden.

Addressing Some Issues with Implementing the Garden

- ➢ Funding: Potential EPA Brownfield Funding
    - Both federal and state-based funds are available from the EPA with the goals of remediating contaminated plots of land to avoid endangering the health of citizens, and to facilitate economic improvement through converting unused lands to revenue-generators. A well organized application with community engagement and academic support could make these funds available.
- ➢ Water Access
    - Putting in water access would cost the city over $10,000
    - Classes on dry farming and low-water-input farming can avoid the city spending money on water access all together

- ➢ Arsenic Contamination
    - According to the City of Berkeley, arsenic contamination remains mostly in the soil and not in plants. This is especially true when picking fruits from plants, which would contain little to no arsenic in comparison with leaves and roots.[1]
    - Affordable methods for avoiding arsenic contamination:
        - The garden management would educate the community on how to avoid exposure to the arsenic in the soil.
        - The garden would use management techniques avoid community members from having direct contact with contaminated soils, such as mulch and compost covers over the soil to act as a barrier.
        - Fruit bearing plants, especially fruit trees, would contain little to no arsenic in their fruits.
    - Other more costly or time consuming methods:
        - Increase the amount of raised beds in the lot, putting in uncontaminated soils. This method has varying costs depending on the materials used and labor costs.
        - Phytoremediation: using plants that decontaminate soils, such as chinese brake fern for absorbing arsenic. This method takes a few years to be effective and the plants would need to be disposed of since they would contaminate compost.
- ➢ Location is farther from the community members that need it most
    - Sect 8 housing and low income apartments are a couple blocks away; high income housing is less than 1 block away.

Management Issues

- ➢ What to do with produce?
    - 63.6% majority wants to give it to community members in need, followed by 54.5% give to the volunteers and 45.5% donate to an organization or a food bank
    - Our research suggests that giving the produce to community members in need would be most beneficial to the community given the income disparities and Section 8 housing.
- ➢ Fencing?
    - 60% want a fence. 80% of those who make $50,000 or less wanted the fence. Only 29% of those making $110,000 or more wanted the fence.
    - The fence needs to be further discussed in order to ensure the garden is accessible in a manner that is appropriate to community members.

Next Steps

- ➢ There needs to be a community meeting with city and campus representatives for further discussion and democratic vote.

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[1] *Best Practices for Urban Gardening: Lead and Arsenic in Berkeley Soil (Draft)* (Rep.). (2012). City of Berkeley. Retrieved on December 9, 2016 from http://www.ci.berkeley.ca.us/uploadedFiles/Planning_and_Development/Level_3_-_Commissions/Commission_for_Community_Environmental_Advisory/Urban%20Gardening%20(2).pdf

If not a garden here, then what? Policies to improve the community

- ➢ Vagrancy/Homelessness
    - Although there is already an increase in transition and supportive housing for homeless, community members worry about camps forming in the area since they are near public transportation. I do not want to support pushing out homeless until they have nowhere to go, but rather stronger outreach to the homeless population to find transition and supportive housing.
- ➢ Implementing Gardens at Retirement Homes and Schools
    - The most positive responses were from retirement communities and from parents with kids. Both elderly and children can benefit most from the creative yet scientific outlet that demonstration community gardens provide.
- ➢ Phytoremediating soils to prevent exposure
    - The soil contamination does remain in the soil, but the soils are not protected, especially during the dry season when the grasses dry up. According to the City of Berkeley, Children are most likely to play in the dirt and are at highest risk of negative effects from exposure. Phytoremediation from easy-to-grow chinese brake ferns on the soil can drastically reduce this exposure.

Survey Results:

Neighborhood

https://docs.google.com/a/berkeley.edu/forms/d/1PKcqwV9BmcHa5SFHxixRRZpgZvLdsaBK57avZwUvhx8/edit#responses *(all data)*

https://docs.google.com/spreadsheets/d/18GBytP8v7c1pWV4aOsuTtPr7xgDzHc2wSagn5Bnx2XA/edit#gid=753650805 *(split by income)*

Full spreadsheet of grocery store pricing data can be viewed here:

https://docs.google.com/spreadsheets/d/1ADf_o4pk77raSI-YCU-451yB57VnKtKx9i0EIJg8a0w/edit