

# A Green New Deal Approach:

Imagining Community Gardens for  
the Historic East End  
Neighborhood

A Planning & Design Studio  
Project for PLN 403 & 505

Sustainability

Community

Diversity



**Fall 2020**

West Chester University of Pennsylvania

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## Overview

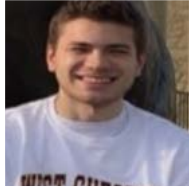
West Chester University students in both sections 403 and 505 of the Fall Planning Studio attempted to prepare plans and design community gardens at perspective locations throughout the East End neighborhood of the West Chester Borough. Incorporating the theoretical framework of the Green New Deal, students worked to address the issues of justice (equity), jobs (economy), and decarbonization (environment) through their proposed plans. The first step in this process was to form a greater understanding of the neighborhood through observing its physical structures, culture, and history. Students also watched a video of one of the neighborhood's long-time residents explaining what the neighborhood meant to the people who live there and its importance to the fabric of West Chester. Students learned about the neighborhood and its residents, their income levels, health, property values, and the quality of the infrastructure in the neighborhood using census data, ESRI community analyst, and other sources, such as the borough's data. Long-term plans from the borough of West Chester, Chester County, and the Delaware Valley Regional Planning Commission were reviewed to see how they could impact the neighborhood. Four locations were identified as potential spots for a community garden within the East End. Students created initial plans based on the four locations. The next step was to research community gardens with a proven record of success to see how they were established and how they operate. From there, the four locations were analyzed to see who owns them, what assets and limitations they hold, and how much sun they receive during the day. Funding plans were researched and created using an EPA worksheet. Students investigated possible grants, crowd funding, and options for selling crop yields to fund the gardens. After research and funding were finished, the students designed their ideal community gardens for their respective locations in the East End.

## Preface

PLN 403 & 505: Planning and Design A is a studio course, and a studio course, especially a planning studio, is a unique professional experience. It is common in both academic programs and professional practice in planning, urban design, architecture, and landscape architecture among others. In a typical studio, students are grouped into several teams in a classroom to work on specific planning and design tasks from "the project." Each team then assigns responsibility to individual members, and these teams pursue the project with the instructor's "presence" and guidance (but in a largely self-directed manner). The COVID-19 pandemic, however, forced us to make a lot of adjustments. At the beginning of fall 2020, I was not so sure about how to run a studio course 100% online. From my own studio experience as a student, I could not imagine a studio course without face-to-face interactions between, most of all, students themselves. I could not imagine one without physically being in a classroom, all together, to finish writing chapters and to practice final/client presentations. Furthermore, building a strong client relationship with the community was not ideally executed late in the summer because of the "lockdown" order from the pandemic and the fact that I was new to the West Chester area. All in all, this was a new, challenging, and valuable learning experience for all of us. Thanks to Zoom (and its Breakout Rooms function) and ArcGIS Online working 100% online turned out to be quite effective for many of us, yet some students did miss our GIS Lab facilities and face-to-face meetings between team members. Throughout the 15 "learning and practice" modules in this course, which were designed to produce smaller project outcomes (eventually compiled into this project report), I witnessed students gradually improved proficiencies in site planning and urban design techniques along with organizational, analytical, and communications skills. One of the overall purposes of this studio was to challenge them to integrate their prior academic work and their own life experience and understanding of urban and suburban life in response to our project, which I can attest our students did a wonderful job in these difficult times.

Dr. Jongwoong Kim

November 20, 2020



**Rich C. Alimonti** is pursuing a Bachelor's in Urban and Environmental Planning at West Chester University in his senior year. He is looking forward to graduating in the spring and hopes to one day become a GIS analyst.

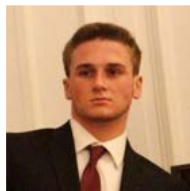


**Michael P. Staropoli** is a junior at West Chester University PA studying computer science and minoring in Business Geographic Information Systems. He is hoping to one day be a data analyst in the environmental engineering field.

**Jonathan S. Brouse** is a senior graduating with a Bachelors degree in Urban and Environmental Planning and a minor in Business GIS from West Chester University. Jonathan hopes to pursue a career as a GIS Analyst.



**Hadjer Ahner** is a senior at West Chester University. She is in the accelerated master's program, earning a bachelor's degree in Urban and Environmental Planning, and a Masters in Geography, with a GIS concentration. Hadjer plans on pursuing a career in GIS and Spatial Data Analysis.



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**Maeve F. Dowd** is Junior Urban and Environmental Planning student. Maeve also has a minor in Geographic Information Systems.



**Wesley J. Hicks** is a student At West Chester University in the accelerated program pursuing a Master of Urban and Regional Planning.



**Jordan R. Engel** pursuing a Bachelors in Urban and Environmental Planning at West Chester University in his senior year. He has a deep passion for sustainability and helping to preserve and rebuild the environment.



**Caitlin E. Pedersen** is a graduate student pursuing a Master of Urban and Regional Planning Degree and holds a Bachelors in Urban and Environmental Planning from West Chester University.

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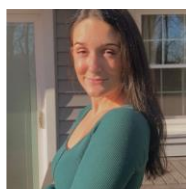


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# Chapter 1: Introduction

## 1. Introduction of East End and the Studio

The site chosen for our project is the East End neighborhood in the Borough of West Chester. The East End is culturally unique and has been home to African Americans for over 180 years. South of Market Street on the eastern edge of West Chester's booming downtown business district, the approximately 400-household East End has both an industrial and cultural heritage. Notably, civil rights activist Bayard Rustin was born and raised in the East End.

The area of the Borough where the East End is located has seen dramatic changes in recent years, as the area around it has been redeveloped with new housing and investment in sidewalks, street trees, and other urban infrastructure. More change is expected over the next 5-10 years as approved redevelopment projects begin to appear. However, despite these current and anticipated changes (possibly both positive and negative), the neighborhood lags the rest of the Borough in terms of economic, social, health, and safety conditions of the residents. Compared to the rest of the Borough, the East End residents live with lower income levels, higher poverty rates, higher unemployment rates, and lower education levels, while the neighborhood lacks green public space and is considered more vulnerable to extreme weather events such as flash floods.

"West Chester's East End neighborhood has a rich African American heritage. Churches, social clubs, charitable organizations, and community centers were formed out of a desire in the black community to help each other prosper in a world that did not view them as equals. Contributions from former black residents can be seen everywhere to this day. There are oyster shells embedded in the concrete- a reminder of black entrepreneurs selling oysters in the borough. Architectural gems like the Star Social club were once a place for black men to congregate and socialize, and some jazz greats like Duke Ellington even performed there. Mud Row is a section of the East End with two-story houses which were lived in by brick makers in West Chester, and the character of the historic homes are as much a part of the heritage as the people who inhabited them. Everywhere you look in the East End, there are clues leading to a rich history of a supportive and thriving community." – Patricia Quinn, PLN 505

Adopting the spirit and theoretical framework of the "Green New Deal" --- of which core goals are justice (equity), jobs (economy), and decarbonization (environment) --- this project intends to prepare a plan and design community gardens in the neighborhood.

On February 7th, 2019, Representative Alexandria Ocasio-Cortez (NY-14) and Senator Ed Markey (MA) introduced H.R. 109, a non-binding resolution 'Recognizing the duty of the Federal Government to create a Green New Deal.' In it, they provide a framework for a '10-year national mobilization' that calls on Congress to pass legislation that:

- Builds resiliency against climate change-related disasters
- Repairs and upgrades the infrastructure of the United States (including universal access to clean water)

- Upgrades every existing building to and requires that all new construction in the U.S. achieve maximum energy and water efficiency (among other standards)
- Reinvigorates federal industrial policy to guide the growth of a 'clean manufacturing' sector
- Works collaboratively with farmers and ranchers to lower agriculture driven GHG emissions
- Invests in conservation lands and other 'low-tech' carbon sequestration solutions that also enhance biodiversity
- Remediate or repurposes hazardous waste and abandoned sites
- Focuses on several other technology-driven emissions-reducing investments

(The Landscape Architecture Foundation, 2020).

“West Chester Borough's East End neighborhood contains many historical landmarks that have significant cultural importance to the black community. Many of these landmarks were constructed in response to Jim Crow laws that prevented black residents from using facilities designated for white residents. The existence of these facilities is a reminder of the black community's resilience, self-reliance, and strong will to create their own spaces during an era of de jure segregation. In the past decade, West Chester Borough has become a highly desirable area with a growing population and increased development. Unfortunately, a portion of this development is replacing predominantly black neighborhood blocks with luxury townhomes and apartments.”  
 – Abbey Cadden, PLN 505

While community gardens and urban farms cannot be a silver bullet for all the socioeconomic and environmental challenges faced by the neighborhood, they have great potential to positively impact all three goals (equity, economy, and environment) the Green New Deal policy movement pursues, helping address the neighborhood's complex and interconnected issues.

This studio project was approached during a 15 week/module-period in fall 2020 with the following schedule.

*Table 1 – The 15-Week Studio Course Schedule*

START DATE	MODULE	TOPIC
Monday, Aug. 24	1	Course Introduction
Monday, Aug. 31	2	East End (Baseline Research 1 of 3)
Monday, Sep. 7	3	East End (Baseline Research 2 of 3)
Monday, Sep. 14	4	East End (Baseline Research 3 of 3)
Monday, Sep. 21	5	Review of Existing Plans
Monday, Sep. 28	6	Green New Deal
Monday, Oct. 5	7	Urban Farms & Community Gardens 1



START DATE	MODULE	TOPIC
Monday, Oct. 12	8	Urban Farms & Community Gardens 2
Monday, Oct. 19	9	Methods and Analysis
Monday, Oct. 26	10	Potential Funding Sources
Monday, Nov. 2	11	Work Session 1
Monday, Nov. 9	12	Work Session 2
Monday, Nov. 16	13	Work Session 3
Monday, Nov. 30	14	Putting Together and Rehearsal
Monday, Dec. 7	15	Presentation and Report

The first step that needed to be taken before the baseline research about this neighborhood can begin was to define the neighborhood's boundary. Initially, we set a boundary (see Figure 1) surrounding the neighborhood's representative historical buildings (marked by stars) and identified potential lots (yellow rectangles) to build community gardens. (This boundary later changed to include more blocks in the northeast.)

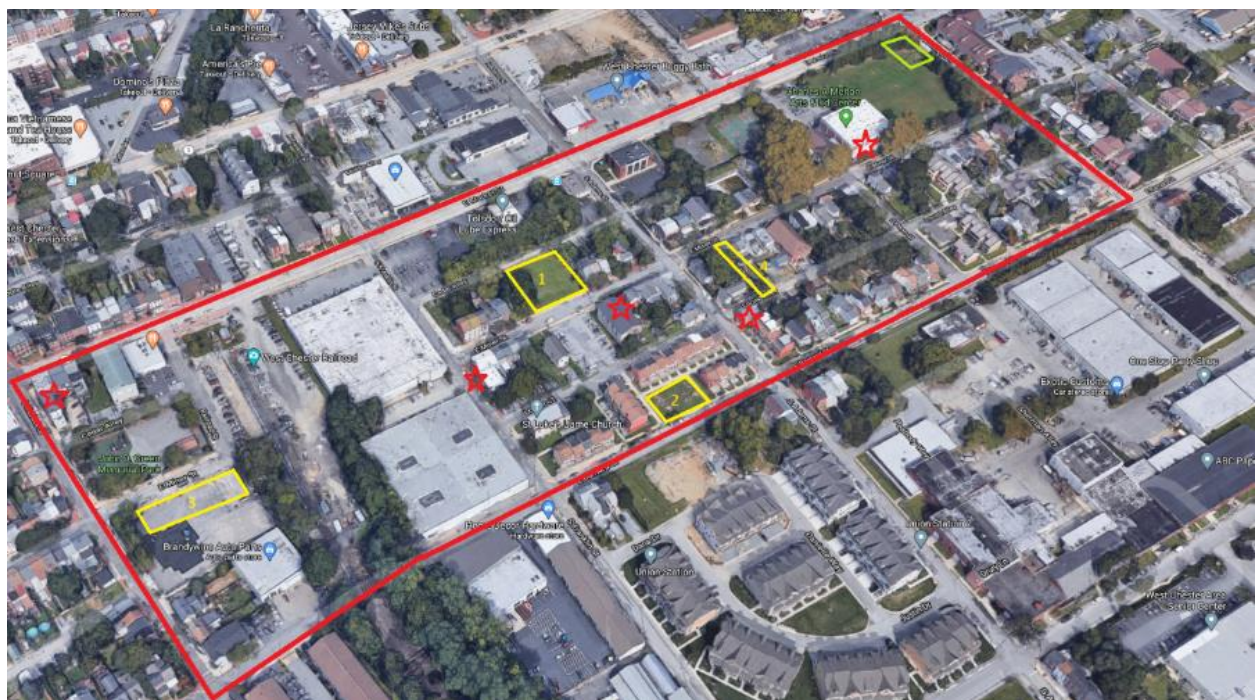


Figure 1 – The Initial/Tentative East End Neighborhood Boundary

1. privately owned, across the Bethel AME Church
2. an empty yard in a HACC public housing complex
3. a concrete floor in a WCB park
4. a narrow plot nearby the Tent Sister's Hall, privately owned

The green rectangle (far right and above) is a community farm the Melton Center is currently trying to relocate (the lot will be used to construct a public housing complex). The farm was established in 2015 by a partnership between the Center and the owner of the Roots Cafe (a local/organic food restaurant) and initially crowdfunded. The project goals may include finding a suitable site for this community farm to relocate to.

“West Chester's East End is full of generations of African American heritage. It is populated with people of all ages, from children to senior citizens. The groundwork that the older generations have laid for years is now being taken on and expanded by younger generations. It consists of many historical landmarks, such as the Magnolia House Hotel, which once housed much of the black community, including Frederick Douglass, when options were slim. It also includes the Tent Sister's Hall, which was a stop on the underground railroad during the Civil Rights Movement. Gentrification of West Chester's East End is changing the shape of the community but with the efforts of Miss Penny (tour guide), and many others, the community is focused on keeping its historical landmarks.”  
– Ryan Cavanaugh, PLN 403

After creating the “working” neighborhood boundary, the studio teams created various maps, charts, and graphs (see Chapters 2, 3, and 4) in the following criteria as the baseline research:

- Team 1: *Cultural and Physical Characteristics* (focusing on the "inside" of the neighborhood and the neighborhood itself)
  - Map 1-1. Location of Historic Buildings and Community Assets
  - Map 1-2. Zoning Map of the Neighborhood
  - Map 1-3. Parcel Map of the Neighborhood (by Land Use Code)
  - Charts/Graphs/Infographics about Housing Conditions (e.g., Median Home Value compared to the County's/Borough's)
  - Other Maps and Charts/Graphs/Infographics that might be important and/or relevant
- Team 2: *Social and Economic Characteristics* (focusing on comparing the neighborhoods to the County's/Borough's)
  - Map 2-1. Black Population (or Minority Population) (%) by Block Groups
  - Charts/Graphs/Infographics about Income (e.g., Median Household Income)
  - Charts/Graphs/Infographics about Poverty (e.g., Poverty Rate)
  - Charts/Graphs/Infographics about Unemployment (e.g., Unemployment Rate)
  - Charts/Graphs/Infographics about Education (e.g., Educational Attainment)
  - Charts/Graphs/Infographics about Health (e.g., Health Insurance and COVID-19 Preparedness)
  - Other Maps and Charts/Graphs/Infographics that might be important and/or relevant
- Team 3: *Environmental/Natural Characteristics* (focusing on the neighborhood and a little bit of its nearby areas)
  - Map 3-1. Floodplain Map (e.g., 100 Year Floodplain)
  - Map 3-2. Impervious Surface Map

- Map 3-3. Location of Green/Open Space
- Other Maps and Charts/Graphs/Infographics that might be important and/or relevant

“This particular neighborhood to newcomers may come as mere photogenic sites, however, what these people will fail to understand is just how many historic and personal landmarks lie here. Each and every building has a story along with the people who thrived there. Unfortunately, when these buildings came to be, the African American community that lived here dealt with many obstacles. One being gentrification. The Melton Center, one of many vital landmarks, served as an art and education center. It is said that the creation of this building took sheer will and grit. Another landmark such as the Star Social Club became a town hall for black men in town.” – Jordan Engel, PLN 403

After creating the maps and the figures, each team wrote a brief description and/or explanation about each map and each figure and emphasized any significant or meaningful findings/insights from them (see Chapters 2, 3, and 4).

## 2. Neighborhood Field Observations

### Observation #1 (by Mahmoud Sheikh, PLN 505)

My first stop at the East End was the Charles A. Melton Art and Education Center. The Melton Center is an older building, with a couple of basketball courts and picnic areas. It is a large block shaped building with a few small trees lined in front of it as well as a mural depicting various figures related to Melton Center's history. Though it doesn't appear to be in great condition, with some parts of it even littered with trash It still remains a major fixture of the community. There were even a few kids playing on one of the basketball courts when I arrived. I then went behind the Melton Center and walked through some of the neighborhood, traveling along East Miner Street, East Market Street, and South Adams Street. These streets were comprised of churches, townhouses and apartments as well as public housing, with a mixture of brick sidewalks and cement pavements lining the sides of the streets. Many of the townhouses and apartments in the East End are older buildings made out of brick and concrete and were most likely built in the early to mid-twentieth century. The

conditions of these buildings vary, with some being kept in better condition than others. Some would look like nice little bungalows that you could find in more suburban areas, while others looked more like the drab apartment buildings that you'd typically find in a city neighborhood. A lot of these housing units also had small little yards with chain-linked fences surrounding them. I did notice some newer homes cropping up in the area, most likely as result of the gentrification that has been happening in the neighborhood in recent years. There were two churches on East Miner street: St. Paul's Baptist Church and Bethel AME Church. Much like the rest of the neighborhood, these churches were older buildings mostly made from brick and concrete. St. Paul's Baptist was a smaller building with a triangular-shaped front and a large, colorful stained-glass window running down the middle. Bethel AME is larger and older, with an arched front, 3 large stained-glass windows, and a small red door in front. These churches were both built as places of worship for the East End's African American community and are symbols of the neighborhood's cultural heritage. I then went over to South Adams Street to see the public housing units. On my way, there I passed by the Tent Sister's Hall. Built in 1847, the Hall served as an Antebellum African American mutual aid society. The building was kept in pretty good condition, and it looked kind of similar to an old church, with an arched brick front and multiple arched windows. When I got to the public housing units, I could see that though they didn't look as nice as the newer townhouses, they were still in fairly good condition. I also noticed that, unlike a lot of other forms of public housing, these



Photo 2 – The Magnolia House hotel

Photo 1 – The Charles A. Melton Center's mural



units looked similar to some more modern looking townhouses. I decided to go back onto East Miner for one more stop: The Magnolia Hotel. The hotel was pretty much a couple of apartment buildings that looked no different from all the older, brick apartments in the area. The only thing distinguishing it was its plaque. It's outward appearance, however, masks its history as the first piece of borough land to be owned by an African American businessman in Moses G. Hepburn. The buildings served as lodging for the African Americans living in the neighborhood, and Frederick Douglass even stayed there during his visit to West Chester.

## **Observation #2** (by Aidan Henken, PLN 403)

When I arrived at the East End Neighborhood driving down Market Street, The Charles A. Melton Arts and Education Center was the first sight I saw. I decided to park close by and begin my field observation. When looking at the Melton Arts and Education Center, you can sense the strong bond within the community and pride the center boasts. The mural painted on the front of the building includes influential figures from the area as well as children learning and doing activities. Also, outside of the Arts and Education Center are two full court basketball courts as well as a nice sized lawn. Right across the street from the Melton Community Center on Miner St. is the Highway Gospel Community Temple and then right down the road is the Bethel A.M.E. Church. Both churches seem run down on the outside as well as the housing and buildings surrounding these historical buildings are deteriorating. Housing in the East End Neighborhood seemed to be all over the place in relation to livability condition as well as cost. There were a few seemingly brand-new houses mixed in with some of the older homes. The housing designs within the neighborhood also differ drastically from apartment, to stand alone houses, as well as rowhomes. There are also some Housing Authority of Chester County apartments mixed in throughout the community in which the design seemed very tight in relation to space. However, right across the street from these complexes are brand new high-end townhomes. Because of this, I felt like I was entering a whole other zip code because of the dramatic change in conditions of sidewalks, sanitation as well as the obvious in housing options.



*Photo 3 – Bethel A.M.E. Church*

**Observation #3** (by John Newman, PLN 403)



*Photo 4 – A scrap yard in the neighborhood*

When traveling through the East end neighborhood of West Chester, PA there was quite a variation of building types and conditions. Within blocks of each other you could find cheaper more affordable housing next to higher end upper class housing. My first stop was the Charles a Melton Arts and Education Center, here I found a nicely painted mural of a few individuals directly on the front of the center. Overall, the building was fairly large and was on a decently sized piece of property. Although the property unfortunately had a decent amount of trash and litter, appearing to not be taken care of frequently. The Arts Center had two 2 basketball courts, blacktop area and a section with picnic tables on the property which I thought to be very nice. My next stop in the east end behind the center, Good Will fire company. This fire house was very nice and located on E union St. There were various other churches in the region also. Such as, Mount Carmel and Milestone events. Both churches were in good shape and appeared to be flourishing and doing well. From here I worked my way through the neighborhood

coming up to what I appeared to be a scrap yard of some sort. Although this was located on the far side of the community it did not appear to be the nicest visually speaking. Within no more than 2 blocks I was greeted with a very nice few block span of higher dollar newly built townhouses. After grabbing a few pictures, I headed down South Adams St. where I was quickly greeted with older homes. Unfortunately, some of these homes needed some obvious work on the outside of the homes, overall though the homes were not too bad. This area was between the Melton Arts Center and these newly developed homes. I enjoyed my time walking the east end community, I found it to be eye opening how quickly these newer nicer houses are closing in on their tight community.

### Additional Pictures of the Neighborhood





**Observation #4** (by Dan Rafalovitch, PLN 505 and Rich Alimonti, PLN 403)



*Photo 5 – The Star Social Club*

There is also some beautiful artwork surrounding the area that the West Chester Community takes pride in. While walking, we noticed some interesting contrasts within the neighborhood itself. Walking away from Market Street and into the neighborhood, there are many signs of gentrification. New townhouses are in abundance, with nicely manicured lawns and gardens. Immediately next door to these developments are many industrial buildings, with a variety of uses. These have no doubt been repurposed as the years have passed. It shows the differing perspectives, with residences and workplaces side by side. Gentrification can be something of a double-edged sword, as the character and composition of a neighborhood can change drastically, which is especially important for this historically black neighborhood with a great history.

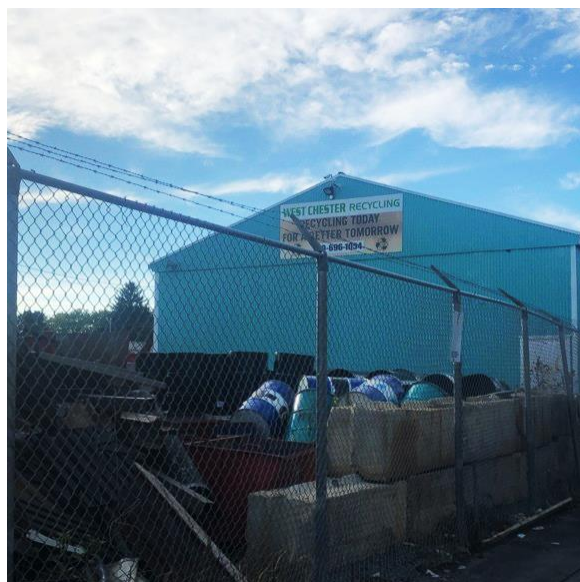
Our team observed the neighborhood taking pictures of social gathering hot-spots and any economic hubs. No doubt, the city of West Chester has a lot of offer when it comes to these areas. Starting off with the former Star Social Club, located at 212 East Market Street, was once the longest-running club of its kind in all of Pennsylvania. Founded in 1896, it is rumored that many famous musicians have played at the Star. Founded a few decades earlier in 1863, the Magnolia House is a great guest house for all of those that come to visit downtown West Chester and places like the Bethel African Methodist Episcopal Church. Founded in 1818, this sacred building has been a gathering place for the African American Community for over 200 years! This church was declared a National Historic Landmark in 1972. In the next picture, you can see the old-fashioned outdoor basketball courts at the Melton Center. The Melton Center offers some great open, green space for any park activity or exercise.



*Photo 6 – A mural at the Melton Center*



**Observation #5** (by Abbey Cadden, PLN 505)



*Photo 7 – West Chester Recycling*

Throughout the observation, I noticed that a stream runs through a portion of this neighborhood. Afterwards, I researched this stream and found that is Chester Creek. In 2017, the Pennsylvania Department of Environmental Protection listed Chester Creek as impaired for siltation, water and flow variability, and habitat alterations. The first two sources causing this impairment is “urban runoff/ storm sewers”. Chester Creek runs through the East End neighborhood. Given the urban environment and saturation of impervious coverage in the neighborhood, one can better understand the connection between impervious coverage, lack of greenspace, urban runoff, storm water sewers, and water quality in nearby waterways. While stormwater runoff is a concern, there are greenspaces within the neighborhood that reduce runoff pollutants and mitigate the associated negative

impacts. For example, the Charles A. Melton Center has greenspace, playfields, and community gardens that stretch across three-fourths of a city block. There are certain areas with newly constructed townhouses that have treelined street and lush green grass. There are also a number of public housing structures with grass running along the corner unit, but they do not contain treelined sidewalks. There are a handful of industrial businesses in the neighborhood that may impact the local environment (e.g., large storefronts driving impervious surface space; air, water, and soil pollution through heavy metal, VOC, and chemical deposition; and more). There is a recycling center, paper and chemical company, concrete and machinery business, a race engine shop, and a firefighting foam testing facility.

**Observation #6** (by Julia Bonomo, PLN 505)

The East End of West Chester has some notable changes compared to the rest of the West Chester Area. Upon observation, most of the stormwater drains are located on busier roads, such as PA-3 (East Market Street). The East End lacks a nice representation of green spaces, however there are a few scattered around the area. According to West Chester Borough’s website, the stormwater drains work on protecting water quality and preventing high volumes of runoff from causing flooding in developed areas. The areas in the East End could use a “clean-up,” therefore I would not consider them to be developed. Within the side streets, the stormwater drains are located on the corners of street intersections. There are not many, if not at all, within the streets themselves. In the pictures provided, along East Miner Street and South Franklin Street, there are multiple stormwater drains on the corners of the intersections. The same applies for street intersections along South Adams Street. Along PA-3, there are also stormwater drains located in parking lots. There are not many green spaces in the East End. Throughout East Market Street, there are multiple trees and shrubbery. In front of the Charles A. Melton Center, there is a sign with shrubbery and plants located in front of the parking lot, in the middle

of the entrance and exit. On the side of the center, there are green spaces with tall shrubs and small plants. Around TD Bank, similar green spaces exist as well. However, in the side streets of the East End, there are not many green spaces. Most of the “green” seen is from trees scattered around the area and within the homes. Some of the green spaces look nice, while others look messy. Along the construction strip of East Barnard Street, there are trees planted along the fence. Some areas of the fence have shrubbery coming out of and scaling the fence. Overall, the stormwater drains are in good locations. Within the parking lots, the drains are located in areas where cars will not be parking. This, along with drains in the street intersections, is good placement regarding the lesser amount of water pollution. Compared to the stormwater drains on PA-3, these drains have cars frequently driving over or near them, which can increase the amount of water pollution. Therefore, certain processes will be conducted to reduce the water pollution.



*Photo 8 – A large impervious surface/parking lot*

## Chapter 2: Cultural and Physical Characteristics

### 1. Overview of the Chapter

By Ryan Cavanaugh, PLN 403

This chapter contains maps and infographics to show the many different features of West Chester's East End. The first map, "East End Neighborhood Land Use," shows the various types of zoning parcels within the East End. The map includes designated space for residential living, restaurants and retail stores, entertainment and recreation, and many more zoning uses. The second map, titled "East End Neighborhood Zoning Districts," highlights the three zoning districts of East End, including the block that is under HARB supervision. These districts consist of the Transportation Corridor Overlay District, the Neighborhood Conservation District 2, and the Town Center District, all of which have their own particular uses within the community.

The third map, "East End Historic Sites," displays the 9 historic sites located in West Chester's East End. These sites consist of churches within the community, along with an art and education center, a hotel, a Sister's Hall, and a social club, which all have historical ties to the community. The fourth map, "East End Street Trees, Impervious Surfaces, and Water," shows the location of trees, waterways, and impervious surfaces within the east end neighborhood. The fifth map, "East End Property Values 2017," displays the property value for each parcel of land and property throughout West Chester's east end. The sixth and final map, "Vacant Buildings," shows the vacant housing units by block group within West Chester's East End Neighborhood.

The first infographic represents a demographic summary of West Chester's East End community. It includes statistics on income, education, and employment rates. The second infographic displays housing statistics within the East End. It provides information such as owner-occupied units vs renter-occupied units, along with the percentage of vacant housing units within the neighborhood. The third infographic is a housing profile of West Chester's East End neighborhood, which provides information on housing units and their status throughout time, and it also provides a look five years into the future. The fourth infographic provides a commuter profile of West Chester's East End, with information such as the percentages of people that walk, bike, drive, and take public transit to work. The fifth infographic displays the percentage of houses in the East End community that were built in each separate decade, from 1939 to 2020. The sixth and final infographic is a tapestry segmentation of West Chester's East End neighborhood with information on key facts, education levels, and age profiles within the community.

### 2. Maps, Charts, and Infographics

#### 1. Land Use Characteristics (by Hadjer Ahner, PLN 505)

The East End Neighborhood consists of a mix of land uses. Most of the neighborhood is zoned residential single family. Other residential lots are zoned multifamily, apartment buildings. While most residential lot are developed, over a dozen lots are currently vacant. Other lots in east End are exclusive to the

operation of the county or the Borough of West Chester and the railroads. East End has eight lots for the use of churches, and one large lot for nonprofit organization use. The neighborhood has a few parcels zoned for miscellaneous use, commercial and retail, as well as shopping centers.

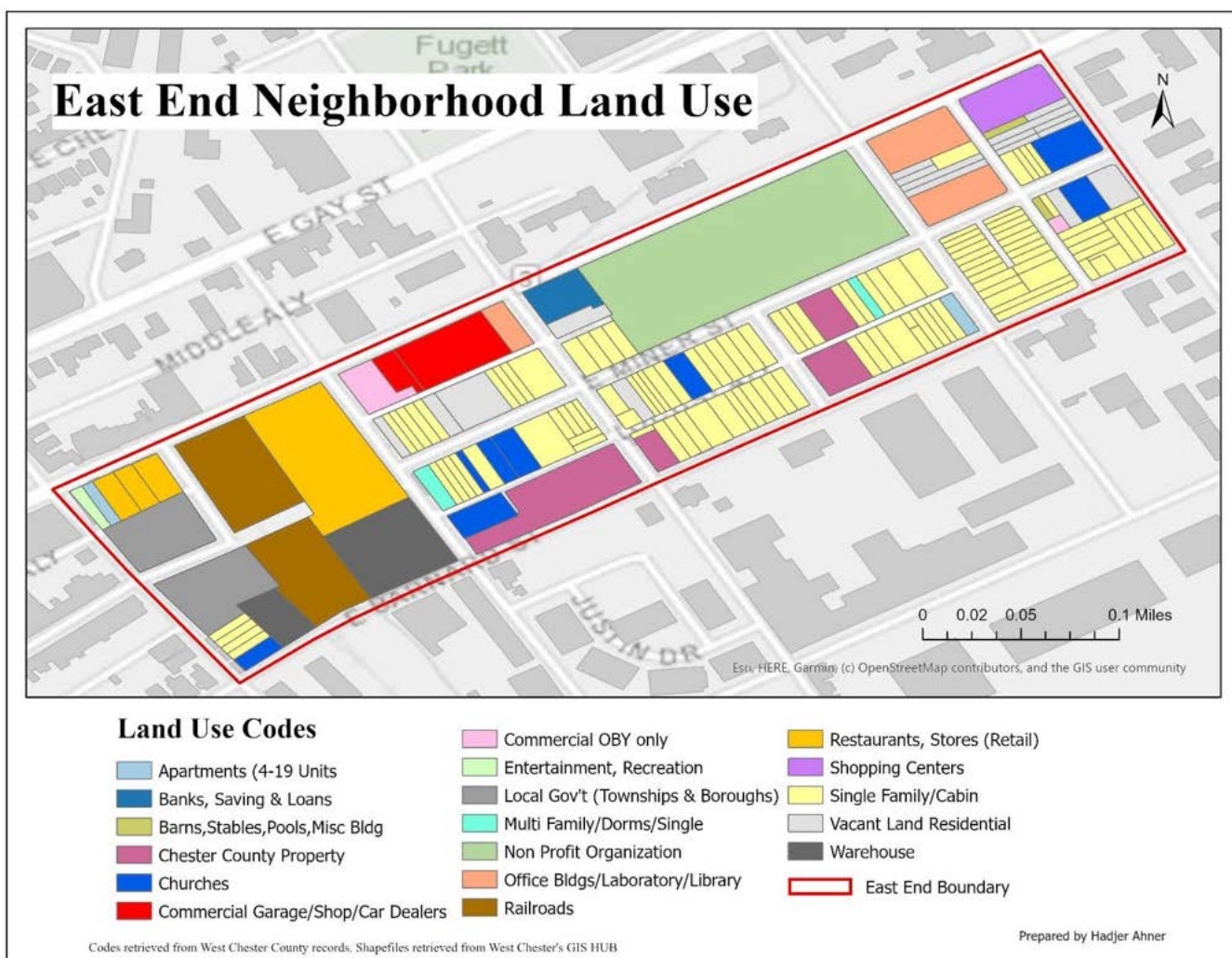


Figure 2 – East End Neighborhood Land Use

There are four zoning districts that regulate all developments in East End. The HARB zone is supervised by the Board of Historical and Architectural Review. The board oversees the applications of all constructions and modifications that take place in the historic district. HARB ensures the continuation of the preservation of historic sites and maintains the integrity and character of the borough. The Transportation Corridor Overlay District promotes the use of SEPTA and prolongs the company's right-of-way for mass transportation, particularly rail. The Neighborhood Conservation District 2 (NC-2) includes moderate- to high-density neighborhoods. NC-2 includes a mixed type of residences and allows for professional use in designated areas. The Town Center District (TC) accommodates appropriate uses in the Central Business District, along with the Retail Overlay District. The regulations in TC preserve the character of the historic retail and commercial composition of the downtown, as well as the adjacent residential zoning districts. In addition, the regulations of the TC District promote the provision of



pedestrian amenities and limits commercial uses that attract high volume traffic and require large parking and outdoor areas. (Zoning, West Chester Borough, n.d)

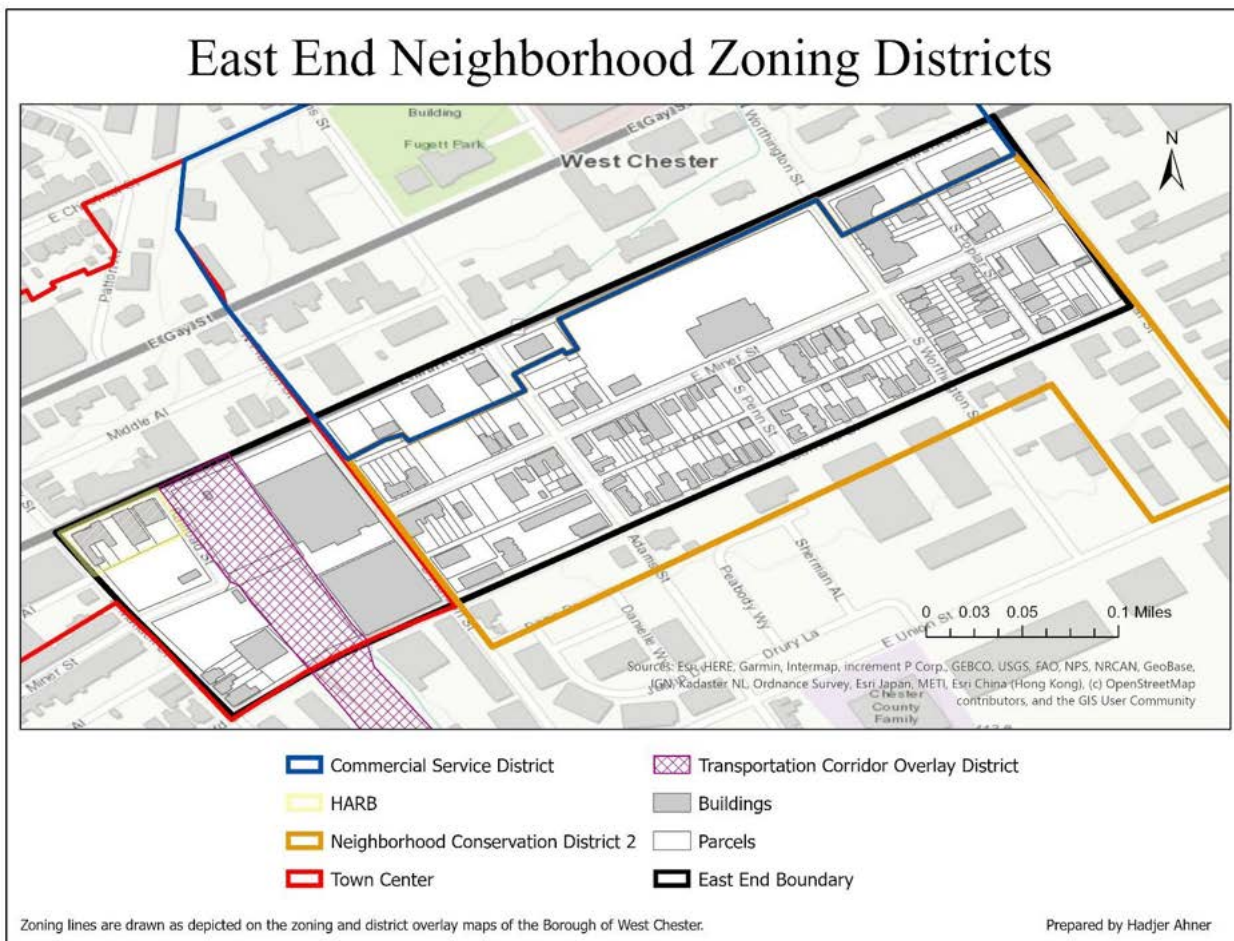


Figure 3 – East End Neighborhood Zoning Districts

## 2. East End Historic Sites (by Mahmoud Sheikh, PLN 505)

Figure 4 (below) displays the various historic sites located all throughout the East End. There were 9 sites in total. Included among these sites are 3 churches (St. Paul's Baptist, Bethel AME, and St. Luke's UAME), the Charles A. Melton Arts and Education Center, the Magnolia Hotel, the Tent Sister's Hall, the Star Social Club and the neighborhood of Mud Row. Most of these sites are concentrated within the neighborhoods by East Miner Street, South Adams Street, South Franklin Street, and South Bolmar Street. These neighborhoods are predominantly African American and the sites located within them were made by and for the African Americans living there. The sites stand as symbols of the history and culture of the East End's African American community. The 3 churches in those neighborhoods are all black churches. The Magnolia Hotel was owned by the first African American to sit on the West Chester borough council and was established to serve the lodging needs of the African Americans community there. The Tent Sister's Hall served as the home for an antebellum African American female mutual aid society. The Melton Center has served the educational, recreational, and social needs of the East End's

African American community for over one hundred years and it is still seen as an important institution for strengthening community ties in the East End.

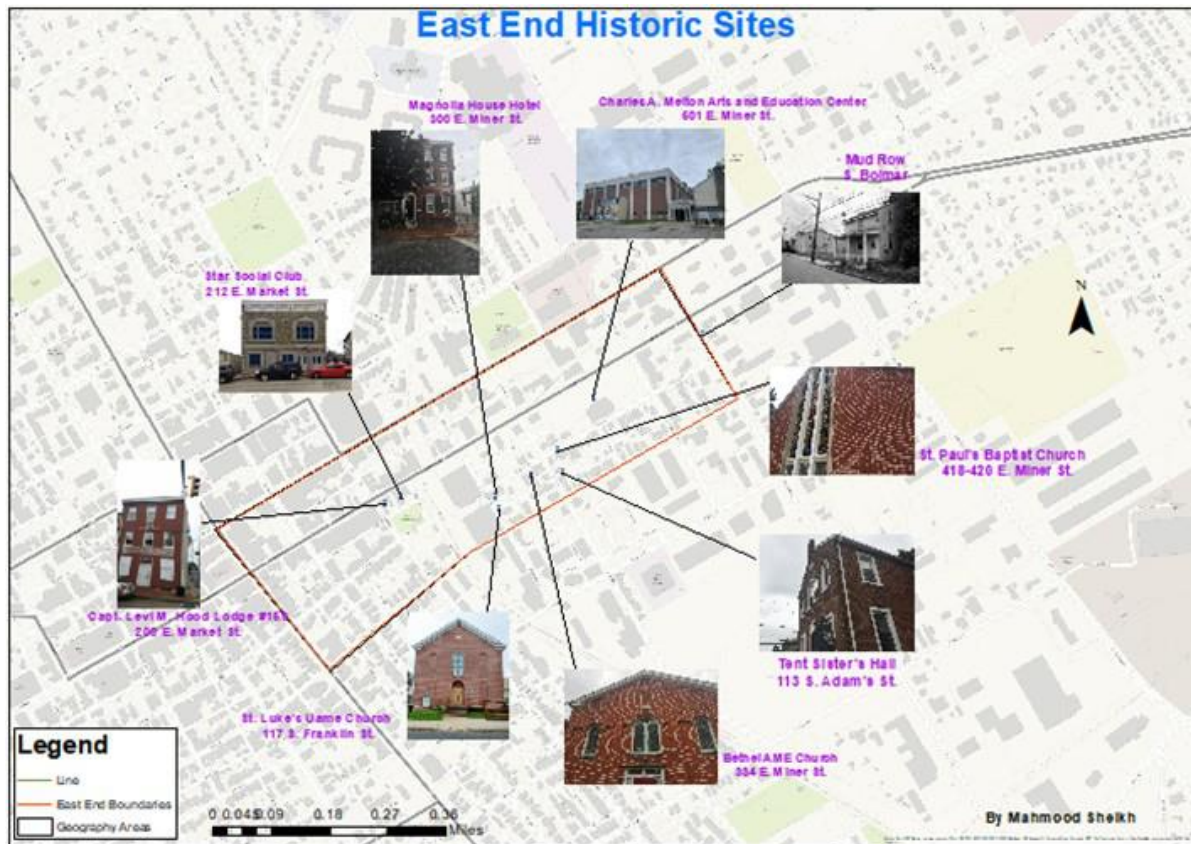


Figure 4 – East End Historic Sites and Assets



### 3. East End Property Values (by Patricia Quinn, PLN 505)

The East End has an almost even mix of inexpensive and expensive properties. One thing to note is that the expensive properties are larger parcels, so they may not be single-family homes. With most of the neighborhood listed as renting (55%), this map gives the impression that many people either rent or own a lower-priced single-family home on a small plot of land, or they rent an apartment in one of the larger and higher-valued apartment complexes or multi-family dwellings within the East End.

#### East End Property Values 2017

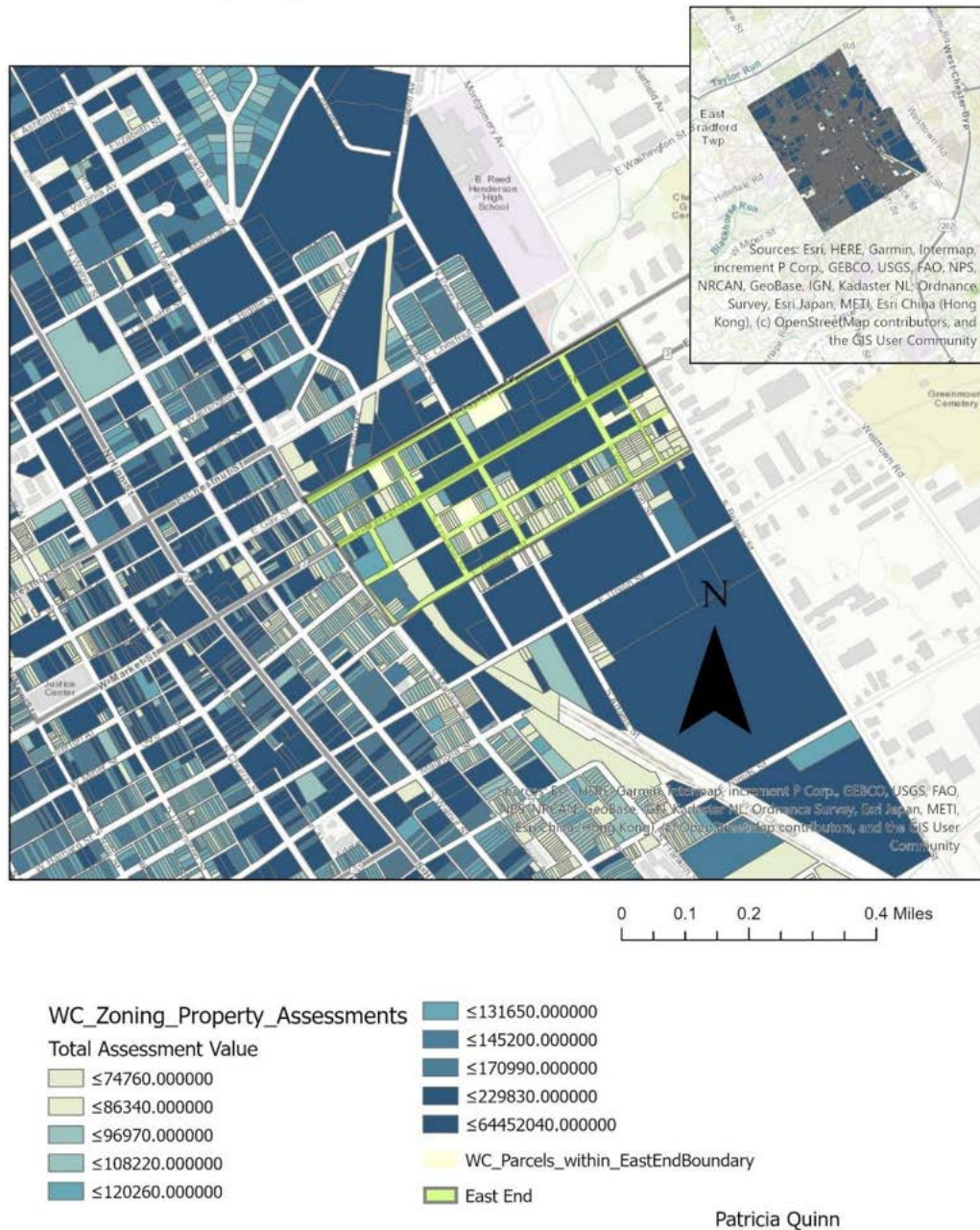


Figure 5 – East End Property Values 2017

#### 4. Housing Characteristics (by Aidan Henken and John Newman, PLN 403)

This infographic (Figure 6) is showing basic housing statistics within the East End Neighborhood. Out of the 226 housing units, 28 of them remain vacant. The vacancy percentage within our neighborhood boundary comes to 12% which is slightly high compared to the remaining parts of West Chester which hover around 6-8%. The remaining occupied houses account for 89 housing units that are owned and 108 units that are rented. The last statistic shows households in relation to the poverty level.



September 16, 2020

Figure 6 – Housing Stats

By Looking at the housing affordability index, we are able to conclude that our study area is well below the average, or desired mark, of 100. Compared to the more residential areas of the borough, its affordability index hovers at 94, which is much closer to the 100 average that we want to see. Since our study areas number is so low, we can conclude that housing in the East End Neighborhood must not be



very affordable. Especially when you see that the citizens are spending about a third of their income on their mortgage.

This report (Figure 7) serves as another visual that shows several time series. One of the time series shows housing units and their status from 2020 - 2025. As we can see from this time series, housing will continue to increase in units throughout the next five years. We can also see that over the next five years, The East End Neighborhood housing units are expected to grow in median and average value, thus making it less affordable. Over 20% of the housing in the east end was built pre-1939. Making these houses to be considered quite old.

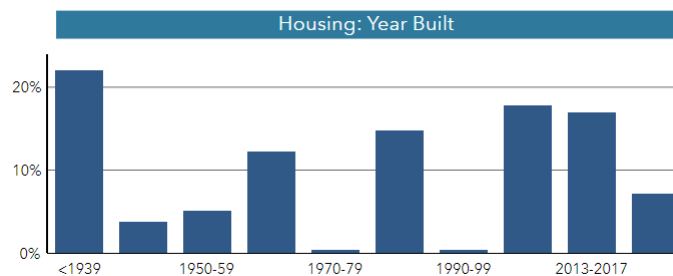
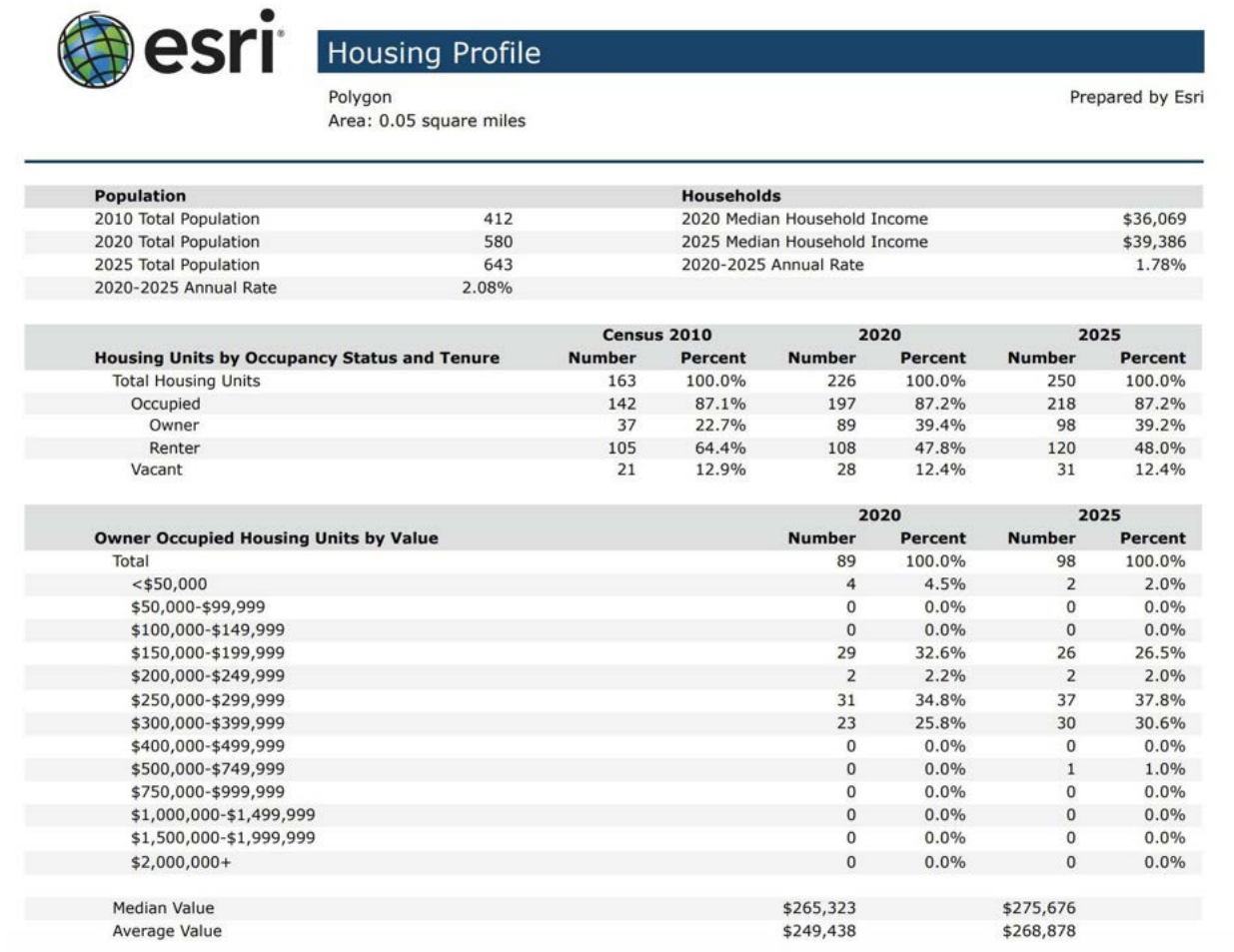


Figure 7 – Housing Profile

## 5. Sidewalk Conditions (by Emily Reilly, PLN 403)

This map displays the sidewalk coverage in the east end as well as the surrounding West Chester area. Sidewalk coverage is important to notice in a region because it is a part of the environment and affects how people get around. As you can see the sidewalk coverage in the East End is very broken up in a few places. This could be unsafe for children and people that need to walk to various places such as work. In addition to the broken up local street sidewalks, there is also a state road on the edge of the East End. This road moves very fast and can be dangerous for walkers, it is important that this environment has adequate sidewalks and safety measures.

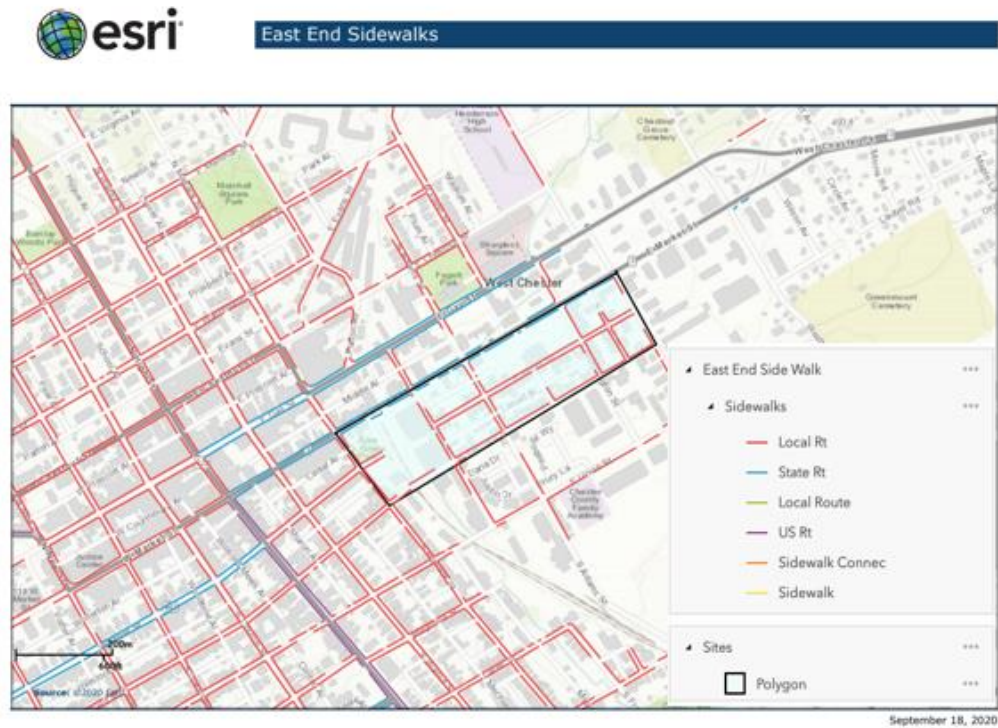


Figure 8 – East End and West Chester Sidewalks

## Chapter 3: Social and Economic Characteristics

### 1. Overview of the Chapter

The historic East End neighborhood is in West Chester borough in Chester County, stretching from E. Barnard St and E. Market St., between N. Matlack and S. Bolmar St. The East End is West Chester's historically black neighborhood and has a long cultural history. Generations of residents have felt a sense of place provided by the East End neighborhood. In recent years, gentrification and changing demographics have led to changes for the neighborhood and its residents. This report looks at the East End neighborhood, as well as the Borough of West Chester, to provide a more complete picture of the surrounding neighborhoods. Additionally, data for Chester County is provided for context within a larger area. The report focuses on income, education, employment, health, and poverty. Special consideration is given to the impacts of the ongoing COVID-19 pandemic and its local effects.

The median household income of the East End neighborhood is much lower than that of West Chester Borough, as is the per capita income. Predictably, the net worth is also much lower for the East End. It is worth noting that Chester County's median household income is significantly higher than that of the West Chester Borough as well. The poverty rate is higher in the East End than in the borough or Chester County. When considering unemployment, commuter rate, and the high percentage of white-collar occupations in the East End neighborhood compared to the borough itself you start to see an obvious trend of gentrification. Local opportunities for residents born and raised in the East End neighborhoods are limited to retail, construction, and auto manufacturing. Whereas residents of the same neighborhood who can afford to commute to work can access better paying opportunities.

Overall, the Historic East End lacks significantly in educational attainment compared to West Chester Borough and Chester County for many reasons. The highest average educational attainment in the East End is a High School Diploma. The Melton Center plays a big part in increasing the education levels of its residents due to its ability to provide convenient after school programs that allow residents to continue learning even after they leave the classroom. Once COVID-19 is no longer a huge problem, I do believe we will start to see a shift toward a higher percentage of white-collar employment in the Historic East End, similar if not slightly less than West Chester Borough and Chester Counties increased percentages.

### 2. Maps, Charts, and Infographics

#### 1. Black Population (by Jonathan Brouse, PLN 403)

This map (Figure 9) presents population percentages by Census tracts for Chester County. It shows the percent of the population that identifies as Black. Chester county, outlined in purple, shows that it has a lower percentage of Black population as compared to the surrounding counties and census tracts. This map allows us to compare the average percentage for census tracts to the average percentage shown on the West Chester Borough map.

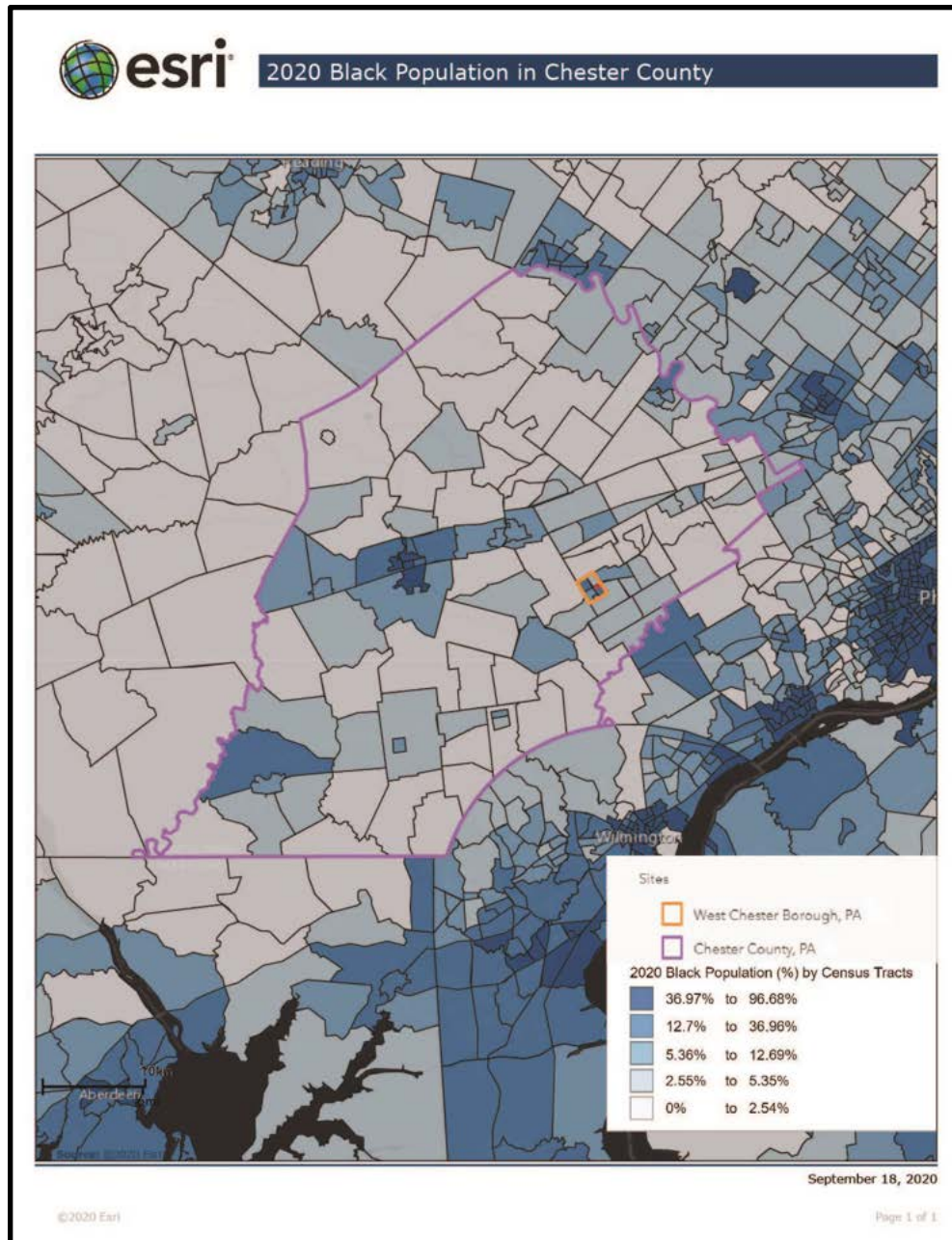


Figure 9 – Black Population in Chester County

This map (Figure 10) presents population percentages by Census tracts for Chester County. It shows the percent of the population that identifies as Black. Chester county, outlined in purple, shows that it has a lower percentage of Black population as compared to the surrounding counties and census tracts. This map allows us to compare the average percentage for census tracts to the average percentage shown on the West Chester Borough map.





*Figure 10 – Black Population in West Chester Borough*

## **2. Demographic Profiles** (by Aidan Henken, Alex Sankaran, Evan Gardi, and Wesley Hicks, PLN 403 and Dan Rafalovitch, PLN 505)

This infographic (Figure 11) shows a demographic summary of our study area. As you can see from the median household income, this is not a very wealthy area. Also, when looking at the education section, we can see that less than 50% of the population has a college degree of some sort and only 39% of this population graduated from high school. To compare (Figure 11), the borough of West Chester is at about 60% of the population and has a college degree of some sort. Also, the unemployment rate is way above the state average of 13%. This could be attributed however to the lack of schooling. In the East End neighborhood, 26% of households were below the poverty level, which is much higher than the Borough's 20% rate. The Borough has a median household income of \$57,429, and a per capita income of \$28,943. The profile for Chester County as a whole paints a different picture. The median household income is \$101,310, with a per capita income of \$50,411. The median net worth is \$302,876. This leaves only 6% of households below the poverty level. The education level is highest when looking at the

county as a whole, while the East End neighborhood is the lowest. This can help explain the disparities in median and per capita income, as there is an association between income and education.

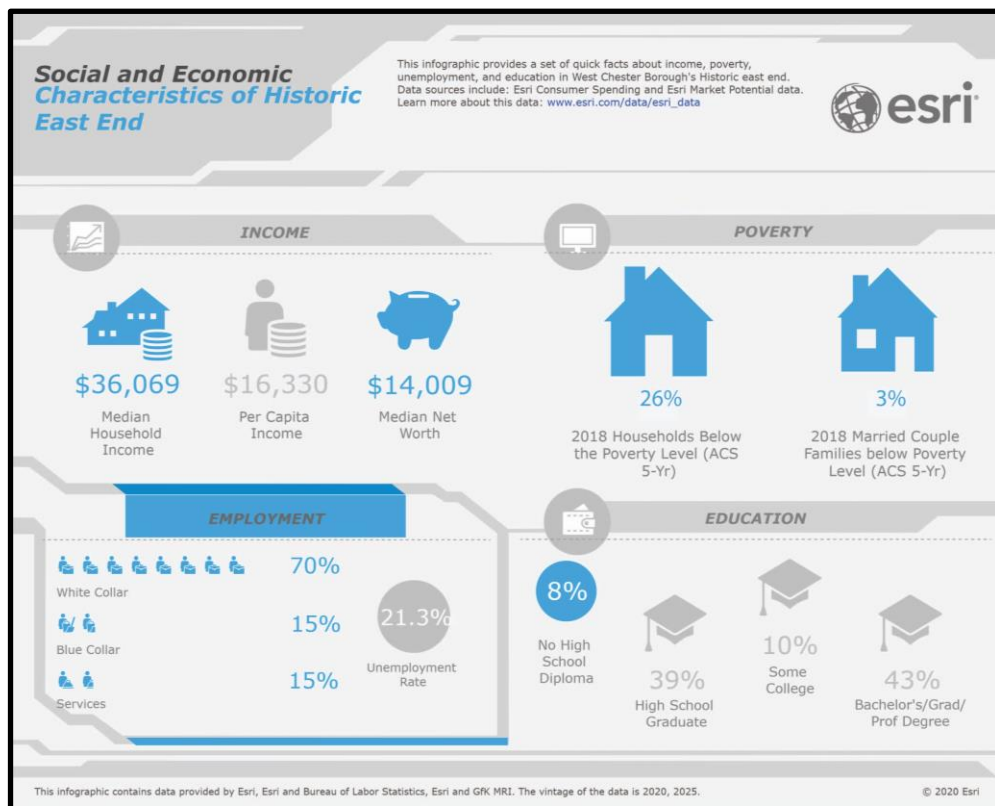


Figure 11 – Socioeconomic Characteristics of East End

In terms of education, 92% of the historic East End neighborhood's residents graduate from high school. 39% of those students decide to end their education there and pass up attending a college or university. 10% of its residents go on to achieve some college education but never earn a Bachelor's, Grad, or Prof Degree, which leaves the Historic East End with a 43% Bachelor's/Grad/Prof Degree rate. In comparison, West Chester Borough and Chester County have a 7 and 6 percent rate of residents who never achieve a high school diploma. Where the Historic East End lacks compared to West Chester Borough and Chester County is the percentage of students who chose not to further their education past high school. Compared to the 39% of East End residents who end their education after high school, only 17% of West Chester Borough and 20% of Chester County residents decide not to further their education past high school. Finally, the historic East End's total of 53% for residents who achieved some college education or earned a bachelor's, Grad, or Prof Degree is substantially lower than West Chester Borough and Chester County's totals of 76% and 74%.

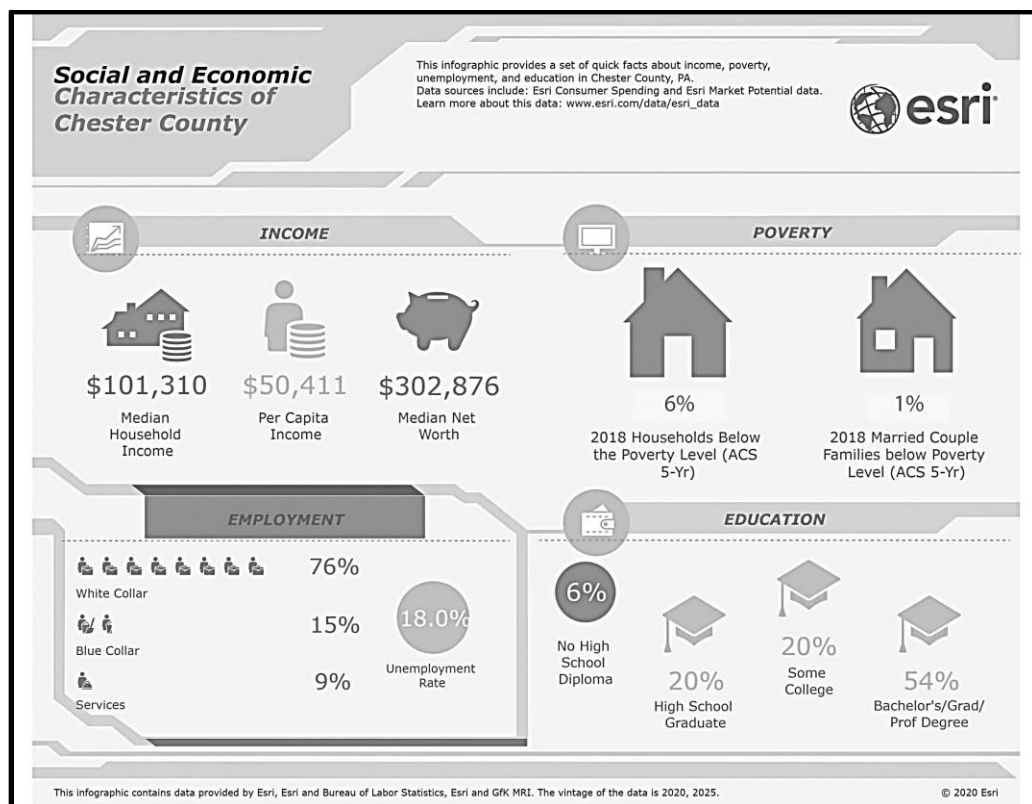
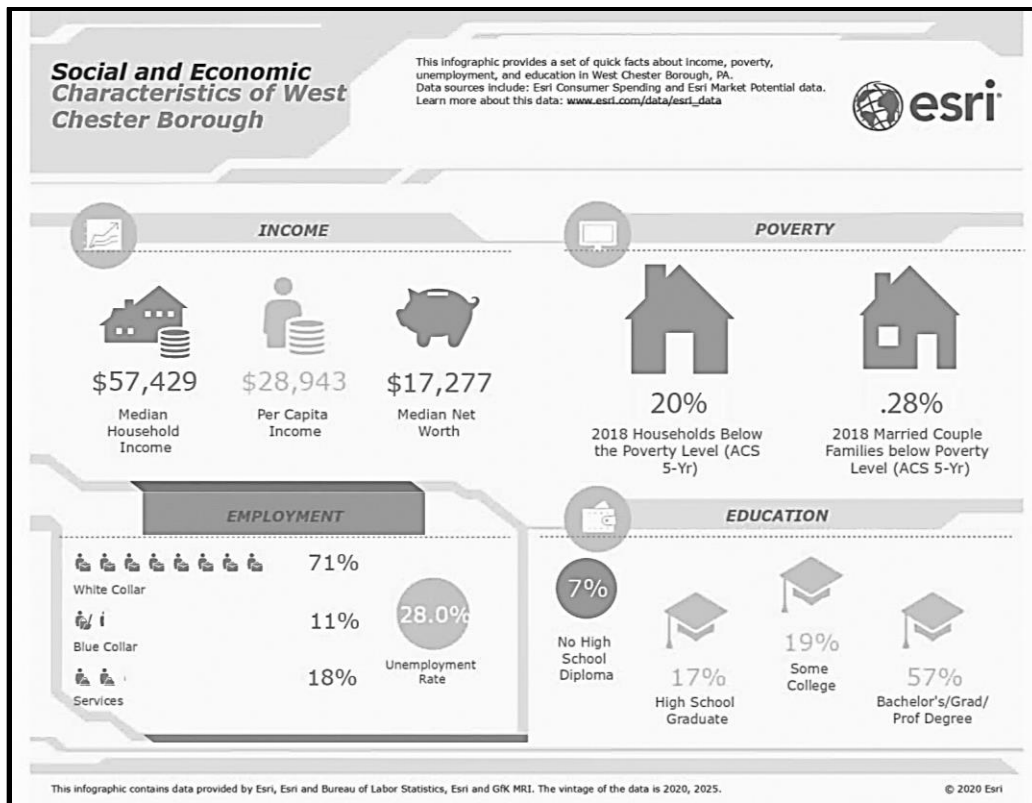


Figure 12 – Socioeconomic Characteristics of West Chester and Chester County

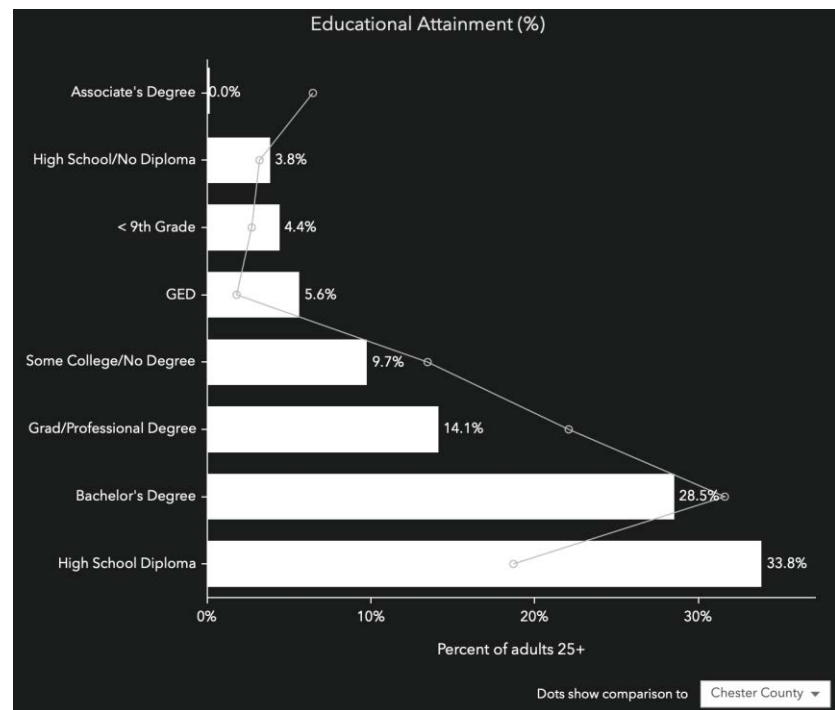
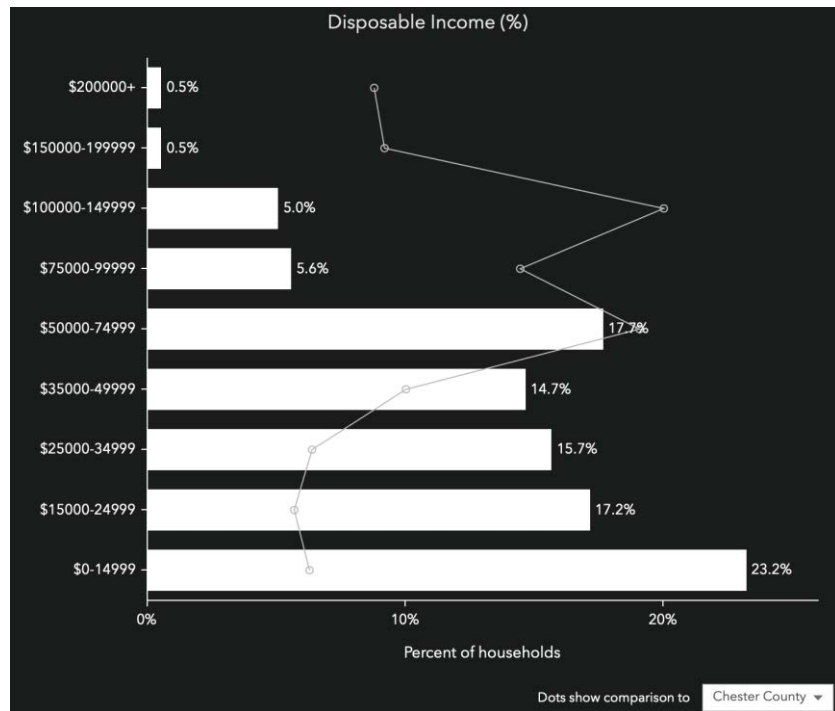


Figure 13 – East End compared to Chester County: Disposable Income and Educational Attainment

The last map (Figure 14) compares the highest average educational attainment in each block group. The educational attainment in the borough is predominantly bachelor's degree. The exception to this is the southeastern corner of the borough with High School Diploma. The East end lies in between block



groups 420293026.001 and 420293026.005. The neighborhood is primarily high school diploma. The Block group with the highest educational attainment was 420293023.001 located in the northwestern corner of the borough.



Figure 14 – Educational Disparities in West Chester Borough

### 3. Health and COVID-19 Impact (by Rich Alimonti and Michael Staropoli, PLN 403)

The East End neighborhood of West Chester, PA has a high poverty rate compared to the borough and the rest of Chester County based on population. Of the 525 residents of the East End neighborhood, 168 are at risk, that is over 30% of the population. And although a majority of the population has health insurance, 79.1%, this still leaves 21% of the residents of East End without health insurance. If one of those residents who are at risk and do not have health insurance, were to get Covid-19, they would be highly likely to not be able to pay hospital bills or possibly die due to the unavailability of healthcare. Compared to Chester County, the East End neighborhood's 30% at risk population is a significant amount more than the 25% at risk in the entirety of Chester County. One significant comparison to be made is the Median Household income, East End Neighborhood's being \$36,069 while Chester County's is \$101,310. This really shows the difference in poverty in the neighborhood to the county. One positive side of the East End is that there's not a large elderly population which is the main risk population for Covid-19. Chester County however in whole has a fairly large elderly population. The main reason the East End neighborhood is at risk for Covid-19 is due to lack of healthcare and poverty, leading to less medical attention or residents not being able to get the help they need or being in fear that the medical bills would be too high.

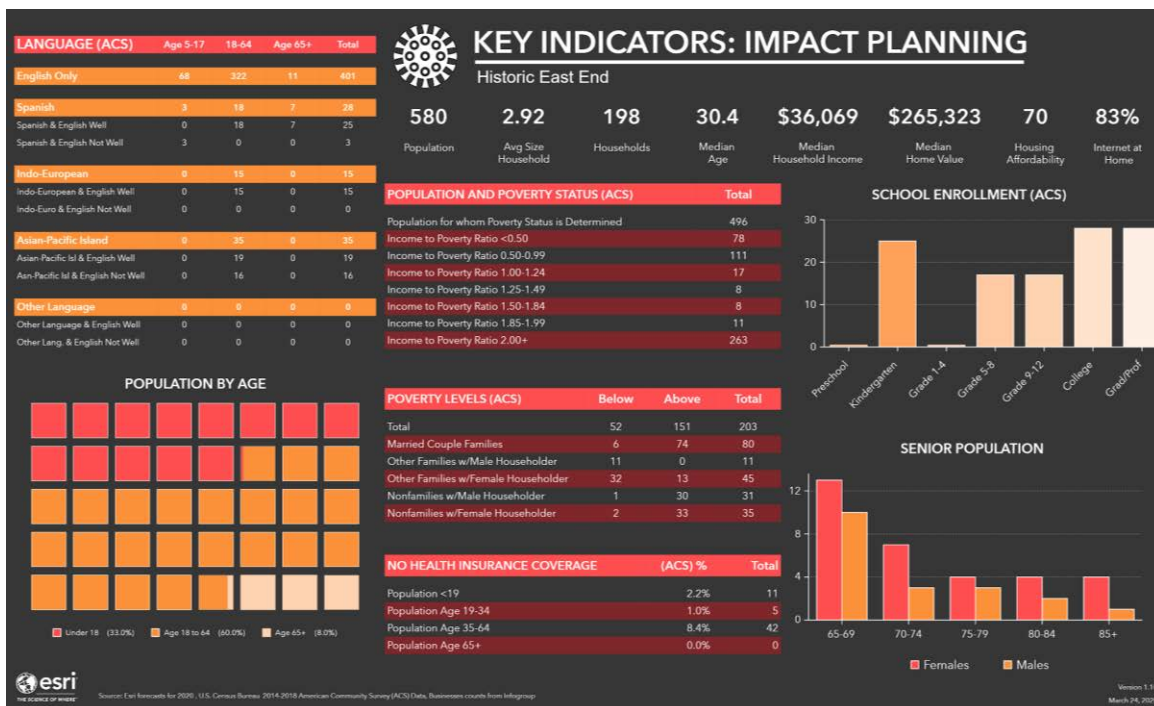
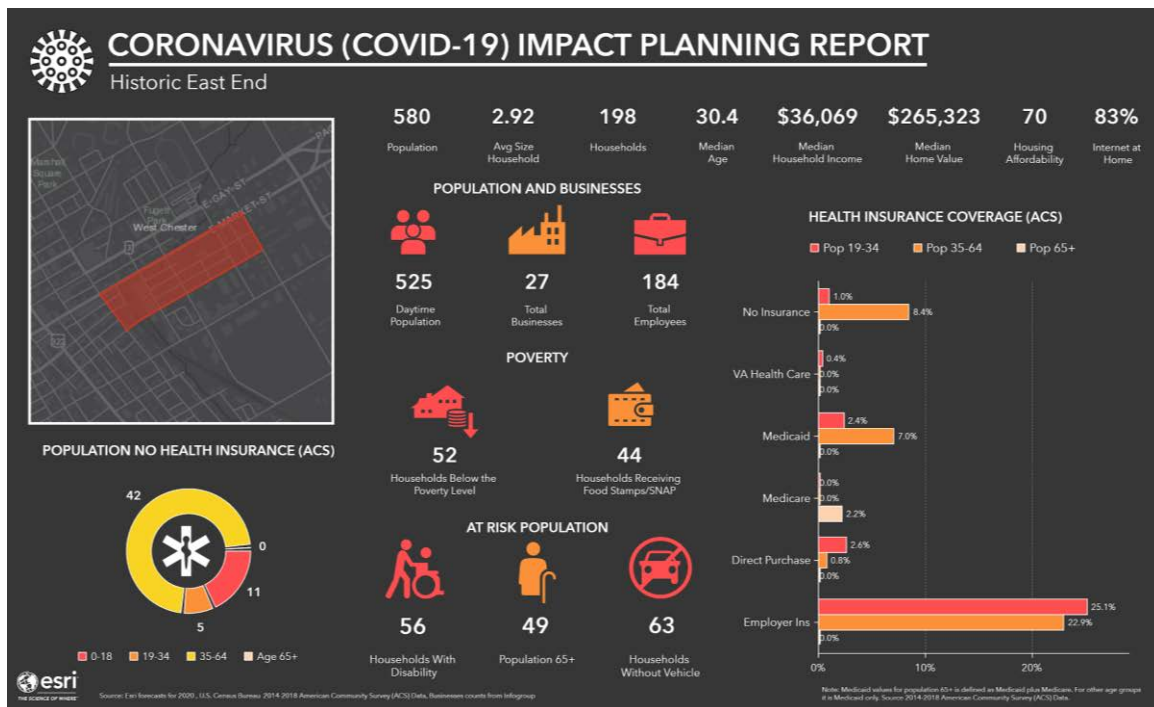


Figure 15 – COVID-19 Impact Planning: East End Neighborhood

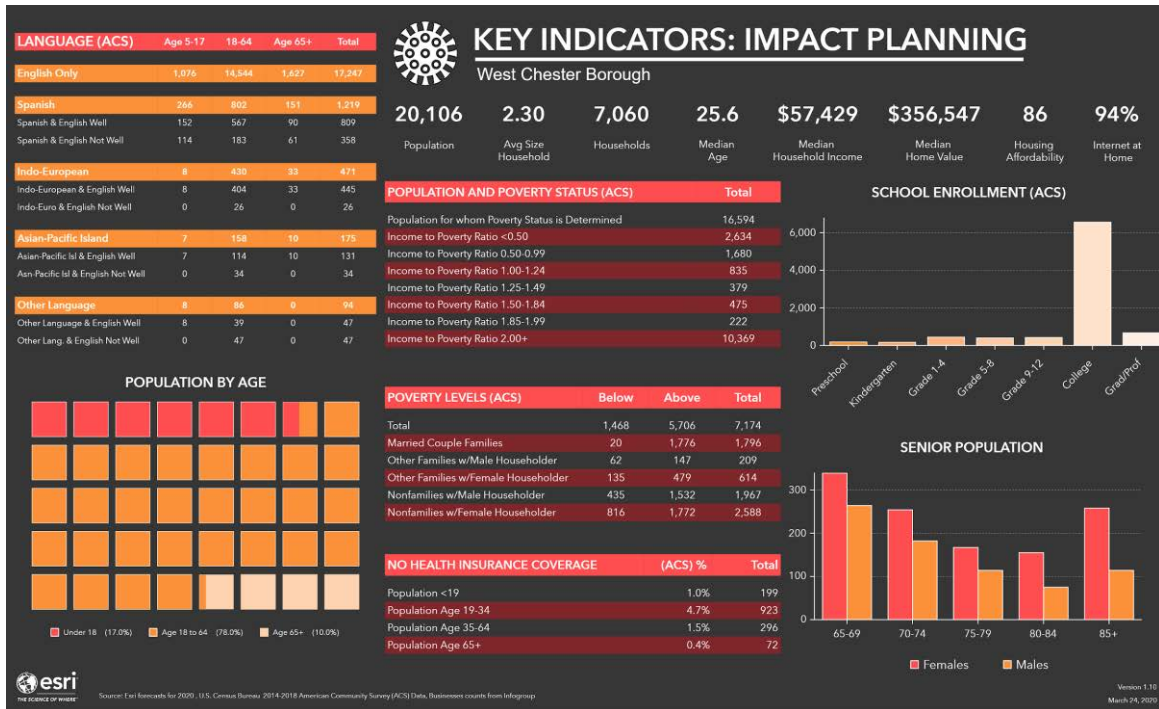
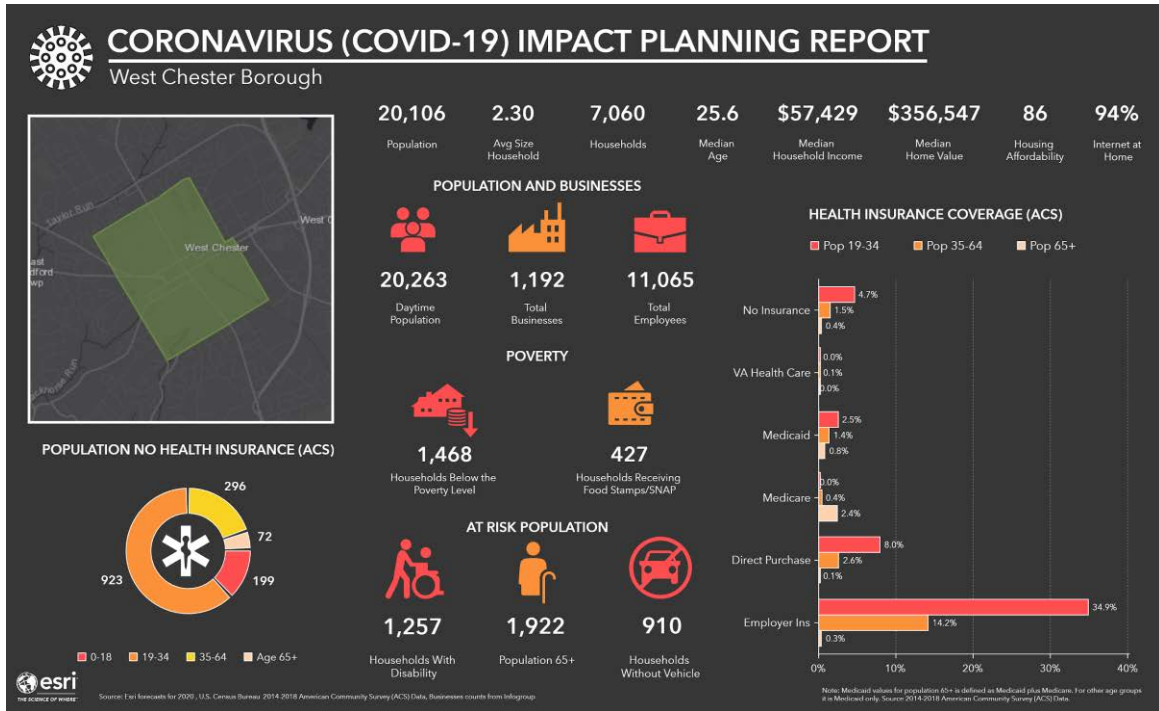


Figure 16 – COVID-19 Impact Planning: West Chester Borough

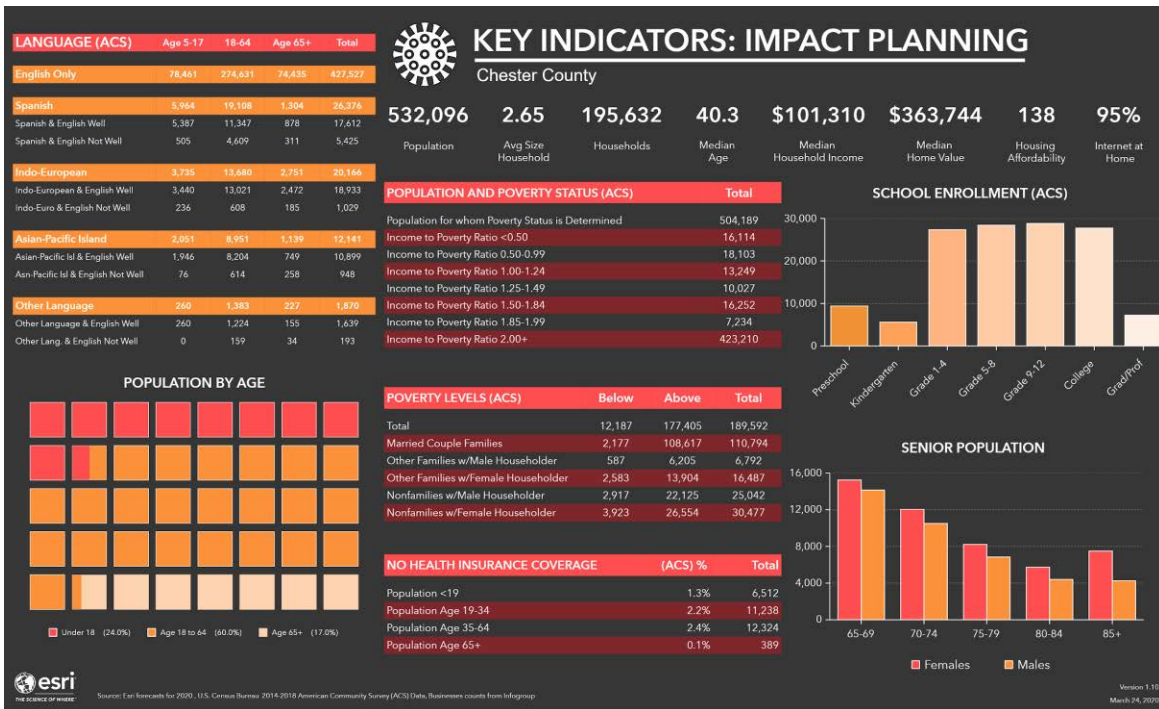
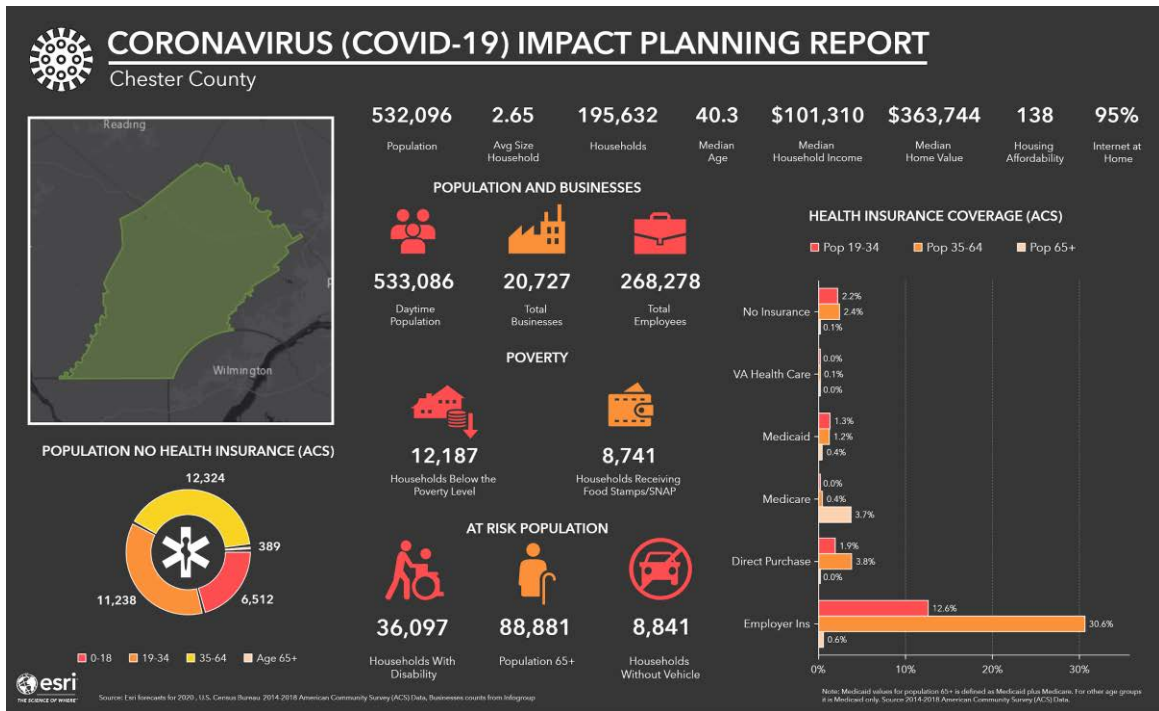
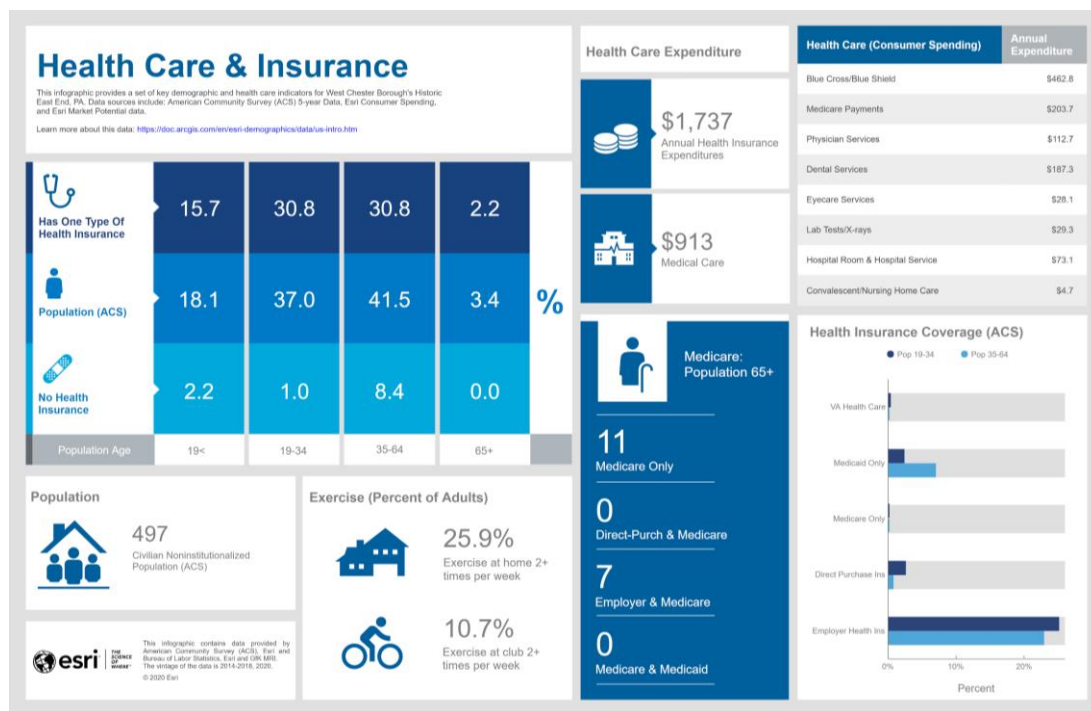


Figure 17 – COVID-19 Impact Planning: Chester County

The West Chester Borough has a population of 19,804, median age 25.6, and Chester County has a total population of 512,358, whereas the median age is 40.3. Meanwhile, the Historic East End had a population of 580. The annual health expenditures for West Chester Borough are \$3,040, more than



\$2,000 lower than Chester County at \$5,404. Clearly, you can see the difference in population between the Borough of West Chester and Chester County. The age difference, as well, is pretty significant. Of course, Chester County needs to spend even more, considering the median age is older than its smaller counterpart. The Borough spends \$1,640 on Medical Care, but the whole county spends \$2,936. In Chester County, 19,125 adults are on Medicare only, 21,199 rely on Direct-Punch and Medicare, 16,473 are on Employer and Medicare, and 2,078 are on Medicare and Medicaid. In the West Chester Borough, though, 481 adults are on Medicare only, 387 rely on Direct-Punch and Medicare, 300 are on Employer and Medicare, and 156 are on both Medicare and Medicaid. In the Historic East End, the annual health insurance expenditures were \$1,737, also spending \$913 on medical care. Of the population 65 years old and up, 11 were on Medicare only, and 7 were only on Employer and Medicare.





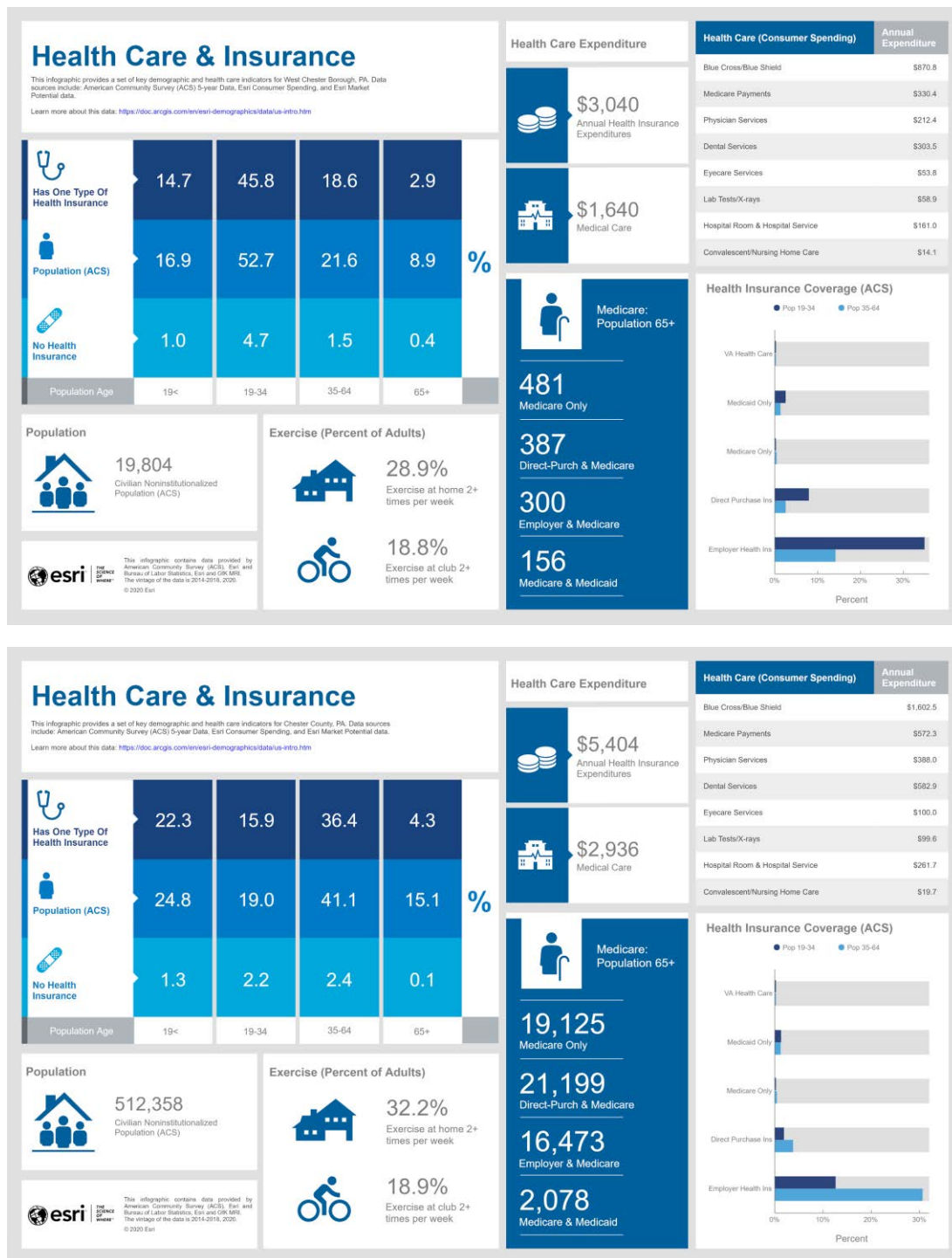


Figure 18 – Healthcare and Insurance: East End, West Chester Borough, and Chester County

## Chapter 4: Natural and Environmental Characteristics

### 1. Impervious Coverage and Urban Forestry (by Abbey Cadden, PLN 505)

The impervious coverage map is valuable because it depicts a visual projection of the developed areas and the non-developed areas, or greenspace. From this map (Figure 19), the viewer can see that there is considerable impervious surfaces, such as large buildings, homes, businesses, and parking lots. One can anticipate that stormwater runoff or flooding may be a more significant issue in areas with less greenspace. The Melton Center is located in the center of the neighborhood and it contains the largest continuous area of greenspace in the entire East End neighborhood. Preserving the greenspace in the entire neighborhood will maintain current runoff levels but if those become developed, there is genuine risk of decreasing water quality.



Figure 19 – East End Impervious Coverage I

I found a second layer titled “Urban Forestry” through the shared organization layers on Community Analyst. This map (Figure 20) pinpoints the trees in the East End neighborhood. Combined with the visual aid in the impervious coverage map, it can provide more information about natural resources that help reduce soil erosion and decrease run off.

### East End WC Impervious Coverage

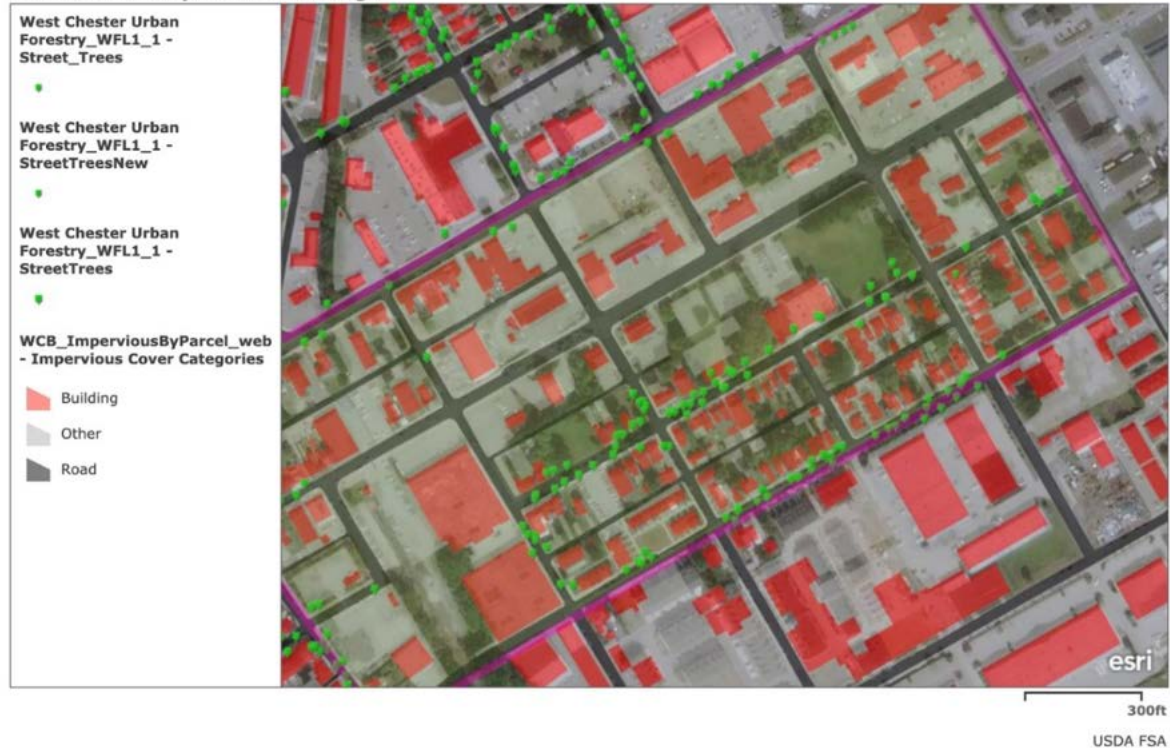


Figure 20 – East End Impervious Coverage II

“The East End is not as crowded as the center of the West Chester borough. There is more space between the buildings for water to be absorbed and some street trees. This may be the result of planners within the borough trying to address flooding and the urban heat island effect. Pin Oaks are among the best trees used to line the streets in Pennsylvania. It is known to not interfere with most concrete or hardscaping, is tolerant of urban stressors, and grows extremely quickly. The Pin Oak is also a native tree, which means that it will provide food and habitat to many more species than a non-native tree would. Street trees such as this provide shade to cool the hard surfaces of urban areas, clean and sequester rainwater to prevent water pollution and flooding and catch air pollutants. These services provided by trees are even more crucial to underprivileged neighborhoods, who tend to have less money to cool their homes and who sometimes live in less desirable areas which may have increased air pollution.” – Patricia Quinn, PLN 505

## 2. Green Spaces (by Caitlin Pedersen, PLN 505)

This map (Figure 21) identifies the East End Neighborhood in West Chester Borough with a red border. The green polygons on the map are green spaces/parks. As you can see, there is one park in the boundary, and it is in the Northwest corner of the neighborhood. This green space is named John O. Green Park and it is owned by the West Chester Borough. Located one block north of the neighborhood is another green space known as Fugett Park. Both parks are necessary greenspaces of the area and that help limit while also maintaining current stormwater runoff levels. Without these greenspaces impervious runoff levels would be higher.





Figure 21 – East End Green Spaces

### 3. 100-Year Floodplain (by Maeve Dowd, PLN 403)

This map (Figure 22) shows West Chester’s East End and the surrounding area. The red box located in the center of the map outlines the East End boundary while the purple feature portrays West Chester’s boundary. The blue floodplain can be seen intersecting with the eastern portion of the town of West Chester and cuts through the western most corner of the East End boundary. This map shows the floodplain that impacts West Chester and the East End. Since, the floodplain runs directly through the town of West Chester and through the East End it is important to have adequate infrastructure in place to maintain and prevent any flooding from highly impacting the area.



Figure 22 – East End 100-Year Floodplain

#### 4. Nearby Water Resources (by Jordan Engel, PLN 403)

The walking distance from the East End neighborhood to nearby water resources in the following increments: 5, 10, 15 minutes the focal point of the map. This information is extremely valuable if you are an individual who relies on well or other sources of natural water. More specifically for families living at or below the poverty line, that are forced to live off the natural resources of the land. This information can be valuable in the case of water shortages, or of any other valuable resources. Living near water can also mean flood plain and flooding risk. This information can be found in my teammates map “100-Year Floodplain”



Figure 23 – Water Resources near East End

#### 5. Historical Sites and Stormwater Infrastructure (by Julia Bonomo, PLN 505)

This map (Figure 24) displays West Chester’s East End Historical Sites and how they intersect with Chester county’s stormwater infrastructure. The Chester County GIS Hub shows that there is not much stormwater infrastructure in the West Chester Borough. My findings indicate that the closest type of stormwater infrastructure to the East End Boundary are two manholes on Gay Street. Each building serves a large historical purpose to the black community. Some of these buildings were places that helped people who were escaping the Underground Railroad, such as the Tent Sisters’ Hall. Other buildings had people who worked hard to improve life for the community, such as The Star Social Club.



# East End Historical Sites and Stormwater Infrastructure West Chester, Pennsylvania



Pictured above is the East End Boundary of West Chester. The closest types of stormwater infrastructure are two manholes located in the upper right-hand corner.

0 0.25 0.5 1 Miles

Julia Bonomo  
PLN 505  
09/18/2020

- Manholes
- Storm Discharge
- Inlets
- Gravity Main
- Detention
- Historical Sites
- East End Boundary

Pictured to the right is an extended view beyond the East End boundary. More stormwater infrastructure can be seen throughout the borough.



Figure 24 – East End Historical Sites and Stormwater Infrastructure

## Chapter 5: Review of Existing Plans

This chapter reviews the existing plans and finds connections to and implications for the project site. The studio teams reviewed three different comprehensive plans that cover the project site, the historic East End neighborhood. These plans are the Borough of West Chester Comprehensive Plan (local level plan), Chester County Comprehensive Plan (regional level plan), and DVRPC Long-Range Plan (mega-regional level plan). From this review, each team tried to find implications for the project site and wrote about them in the following structures:

- Team 1 (Local): [Borough of West Chester Comprehensive Plan \(2016\)](#)
  1. *Introduction of the Plan* (General description about the plan)
    - What is this plan about?
    - Why was this plan created?
    - When was this plan created?
    - Who did create this plan?
    - How was this plan created?
  2. *Plan's Implications for the East End Neighborhood* (i.e., How does this plan affect the neighborhood's present and future?) in areas such as:
    - Focus Area 1 Community & Economic Vitality
    - Focus Area 2 Environmental Sustainability
    - Focus Area 3 Preservation of the Historic Character
    - Focus Area 4 Future Enhancement Areas
    - Focus Area 5 West Chester University
    - Other Areas
      - Land Use & Housing Plan
      - Transportation & Circulation Plan
      - Community Facilities & Utilities Plan
      - Urban Center Revitalization Plan
  3. *Summary of the Review* (Summary of the two sections above)
- Team 2 (Regional): [Chester County Comprehensive Plan \(2018\)](#)
  1. *Introduction of the Plan* (General description about the plan)
    - What is this plan about?
    - Why was this plan created?
    - When was this plan created?
    - Who did create this plan?
    - How was this plan created?
  2. *Plan's Implications for the East End Neighborhood* (i.e., How does this plan affect the neighborhood's present and future?) in areas such as:
    - How We PRESERVE
    - How We PROTECT
    - How We APPRECIATE
    - How We LIVE
    - How We PROSPER
    - How We CONNECT
  3. *Summary of the Review* (Summary of the two sections above)

- Team 3 (Mega-Regional): [DVRPC Long-Range Plan \(2017\)](#)
  1. *Introduction of the Plan* (General description about the plan)
    - What is this plan about?
    - Why was this plan created?
    - When was this plan created?
    - Who did create this plan?
    - How was this plan created?
  2. *Plan's Implications for the East End Neighborhood* (i.e., How does this plan affect the neighborhood's present and future?) in areas such as:
    - Principle SUSTAIN THE ENVIRONMENT
    - Principle DEVELOP LIVABLE COMMUNITIES
    - Principle EXPAND THE ECONOMY
    - Principle ADVANCE EQUITY AND FOSTER DIVERSITY
    - Principle CREATE AN INTEGRATED, MULTIMODAL TRANSPORTATION NETWORK
  3. *Summary of the Findings* (Summary of the two sections above)

## 1. Review of the West Chester Comprehensive Plan

### 1. Introduction of the Plan (by Hadjer Ahner, PLN 505)

The Borough of West Chester comprehensive plan is a detailed document, prepared by the task force that was selected by the Borough Council in 2014. After a long in-depth process, it was finalized in 2016. The plan was forged with the assistance of professionals, public officials, diverse interest groups, stakeholders, and input from several Town Hall and public meetings. Initially, the plan was created as an “issue-based plan” to address existing problems in areas that needed immediate attention. However, it was adopted as a manual to move the borough forward into the future and accomplish five main goals, outlined in the document under Community and Economic Vitality, Environmental Sustainability, Preservation of Historic Character, Future enhancement, and West Chester University. The plan inspires West Chester to preserve the appeal and historic charm of the borough, all while serving the demands of all businesses and current and future residents, in terms of infrastructure, land use and zoning, public facilities, and services. Although the plan is not used as a regulation, it provides the groundwork for the borough to formulate strategies, recommendations, standards, and policies to oversee all potential developments and alterations in the borough (MDI Strategies 2016).

### 2. Plan's Implications for East End

#### *Focus Area 1: Community & Economic Vitality* (by Ryan Cavanaugh, PLN 403)

West Chester Borough prioritizes improving the community and vitalizing the local economy. The borough economy thrives off its restaurants, and retail stores, and it capitalizes off of everything being in close proximity of each other. Having such a historic community with everything being in walking distance is something that West Chester Borough prides itself in, so it is no surprise that when planning for future development it is important for the borough to preserve these aspects of the community, while also maintaining livability, a diverse population, and a safe environment. The community stays involved during the planning process to ensure that these values are upheld while implementing new features to the community in a creative way.

### *Focus Area 2: Environmental Sustainability (by Cameron Pursel, PLN 403)*

West Chester Borough has two main goals in making environmental sustainability a cornerstone of its comprehensive plan. The first part of this plan is enacting a set of standards and initiatives to protect, enhance, and restore ecosystems within the township, in doing so effectively setting the stage for future wildlife population growth in a township that has been developed extensively away from a place that is resoundingly welcome for animals and into a much more suburban style setting. Expansion of green spaces and restoration of areas for animals to live ties into the environmental sustainability section of the plan extensively. The second part of this plan involves introducing ideas and policies aimed at reducing energy use and greenhouse gas emissions, no doubt a goal brought about due to revelations about the effect of carbon dioxide on our atmosphere during the plans publication in 2016. With this, the borough cites the worldwide scientific communities need to reduce fuel consumption in an effort to stave off the worst effects of climate change which will no doubt adversely affect West Chester borough, and specifically the east end neighborhood in the borough. The goal of creating more green spaces will positively impact the east end neighborhood, as it will create more places for people to relax and have a higher quality of life, all the while helping mitigate the most serious effects of climate change which will affect the poorer residents of the east end more than elsewhere in town.

### *Focus Area 3: Historic Preservation (by Mahmood Sheikh, PLN 505)*

The borough's strategies for historic preservation focus on sensitive building rehabilitation suitable adaptable reuse of older buildings, oversight of design and appropriate new development and most importantly to maintaining its walkable, small town character. To that end, the borough's historic preservation plan focuses on two areas. The first area is the downtown Certified Local Historic District (CLHD). The CLHD has regulations and regulatory bodies, like the historic district ordinance and the Historical and Architectural Review Board (HARB) to protect its historic sites and ensure that all new development and redevelopment complements and contributes to the existing neighborhood. The borough's historic preservation plan also has a list of recommendations for this district, such as discouraging new single-purpose, auto-oriented uses and fast-food retail services with drive-thrus within the Market/Gay East corridor, expanding the existing certified local historic district and ensuring that all new redevelopment in the Downtown is consistent with the scale and historic character of the downtown and adjacent properties. The other area of historic preservation is the historic resources borough wide including the West Chester State College Quadrangle Historic District, the Boundary Increase Historic District and the historic sites that can be found within West Chester's East End neighborhoods. Unlike the CLHD, there are no regulations preventing the demolition of historic buildings outside the downtown area. Even if a building is on the national historic register, it still isn't protected from destruction from a private property owner. This lack of regulatory protection could have profound effects on historic character of the rest of the borough, especially the East End, which has built up its own unique cultural identity. In order to protect these historic sites these, including the sites located in the East End, recommendations like the creation of a historical commission and supporting ordinance regulations to protect individual historic properties outside the CLHD, the creation of a heritage conservation district that requires at property owners receive Borough Council approval prior to any partial or complete demolition or removal of architectural features visible from the street and incentive programs such as a revolving loan fund, would need to be implemented.

*Focus Area 4: Future Enhancement Areas (by John Newman, PLN 403)*

West Chester's comprehensive plan has a total of four areas of potential growth. When discussing the types of growth, it is considered to be large scale development. The comprehensive plans goal is to provide the least amount of impacts on the natural environment and other aspects. While also considering the potential good benefits, such as, social and economic. The four areas the borough are looking at consist of, Market/Gay corridor, Hannum Avenue corridor, Pfizer/ Wyeth Property and finally the West Chester Gold club. Looking at the Market/Gay corridor the borough plans to totally revamp this area. Creating a much more enjoyable appearance. This corridor is an entry point for the borough. The borough plans to utilize mixed use planning. Pfizer/Wyeth is the largest parcel of land within the borough, 31 Acres to be exact. Plan to do a mix of commercial, residential and recreational use that generates a tax base. The borough wants to use bicycle and pedestrian use. The golf Course/Country club is preexisting but needs to consider developing with the natural features and preservation of the town in mind. Any future development should utilize residential and recreational uses in the preexisting historic neighborhoods.

*Focus Area 5: West Chester University (by Matthew Gorman, PLN 403)*

West Chester University occupies a significant area of the Borough and creates unique planning opportunities and challenges. The University generates economic, social and cultural advantages while also serving as nuisance with traffic, parking, housing demand, and noise spillover. Over the past 12 years West Chester University has seen a drastic increase in enrollment but has had a decrease in on-campus enrollment. This new trend has therefore caused dilemma with traffic and parking and negative neighborhood impacts from inappropriate student behavior. The University looks to implement shuttle services, develop joint parking management, and revise parking requirements in the zoning ordinance to decrease traffic issues. A comprehensive strategy should include efforts to accommodate as many students as possible in campus housing, encourage faculty and staff to move into neighborhoods, and proactively address inappropriate student behavior in off-campus locations. West Chester University is located within three municipalities, including West Chester Borough, West Goshen Township and East Bradford Township. Planning for future change on the University campus would be better facilitated with a common set of regulations across the three municipalities. A campus overlay district should be explored to provide a uniform set of regulations.

*Other Areas (by Aidan Henken, PLN 403 and Patricia Quinn, PLN 505)*

- *Land Use & Housing Plan:* The Land Use and Housing Plan addressed in West Chester Borough's 2016 comprehensive plan will affect the East End neighborhood by adding improved pedestrian access from south of the neighborhood. This is a good improvement as there are some missing sidewalk connections in this area. Bringing foot traffic through the neighborhood and making it easier to walk around the borough is an advantage to those who do not own a car. The plan also aims to encourage homeownership to stabilize neighborhoods. That is especially important for the East End in preserving the history and assets within the neighborhood.
- *Transportation & Circulation Plan:* Two existing bus stops within the East End neighborhood have no shelter. This plan aims to provide shelter to both so that residents do not have to wait in the rain, snow or hot sun for the bus to arrive. One stated goal of this plan is to "Enhance the corridors east and west of downtown to make them more bike and pedestrian friendly". For the lower income



residents of the East End, this will make it safer to travel without a car. Even though there seems to be no explicit plan to complete the connectivity of sidewalks in the East End, the current plan aims to connect the sidewalks on busy streets. This is a safety priority and it makes sense to aid this problem first.

- *Community Facilities & Utility Plan:* The Borough of West Chester has and will always commit themselves to high quality municipal facilities, services and utilities in cost effective ways. These categories include but are not limited to police and fire protection, recreation programs, stormwater management, sanitary sewers, and solid waste management. Because of population rising within and around the borough, some of these services, facilities, and even utilities are overwhelmed. An example is the West Chester Police staff growing in size, while the borough grows in population, to be able to monitor and patrol effectively. The parks and natural spaces in the Borough serve as recreational and gathering spaces while also promoting sustainability. Lastly, West Chester operates two wastewater treatment plants, in which the main source of water supply for the West Chester area is from the Brandywine Creek in East Bradford.
- *Urban Center Revitalization Plan:* Originally funded by Chester County in 2003, the Urban Center Revitalization Plan was prepared to focus on four key areas; economic development, housing, infrastructure, and transportation improvements. This plan should serve all parties involved as a guide on how to implement different types of recommendations of this plan. Another key aspect of this plan is to ensure funding for future initiatives and capital improvements. The action plan involved within the revitalization plan incorporates action from each of the five Focus Areas and supplemental plans that relate to Economic, infrastructure, circulation and housing and public safety. The Borough sees a successful downtown as one of West Chester's most important assets. In order to maximize its assets, the borough believes that any future revitalization actions should build upon the Boroughs strengths. Maintaining an attractive setting that emphasizes its historic character as well as maintaining a mix of uses. By managing, maintaining, providing, and linking different entities, the Borough will continue to execute this plan in hopes of improving the town center.

### **3. Summary of the Review (by Cameron Pursel, PLN 403)**

The West Chester Borough comprehensive plan encompasses a wide range of topics and answers many questions interested citizens may have about how West Chester will look through the coming years and decades. Standards are in place for a variety of topics developers and neighbors may be interested in. Steering development of the local economy and harnessing economic growth in a positive way is one of the first examples of how the borough hopes this plan will be used, as evidenced through its rank via the focus areas of the plan. The plan does not focus a lot specifically on the east end neighborhood; however, a lot of the plan's effects will affect the east end neighborhood positively through tangential and unknowable at this time positive outcomes. For instance, the plans environmental section lays out a vision for how the environmental wellbeing of the area can be maintained and improved. The plans details on preservation of historical character lend credence to the vast historical significance of many buildings and areas of town, and in so establishing ways to maintain the historic charm of the town the plan effectively conveys its strong ties to West Chester Boroughs rich history. Defined future

enhancement areas act effectively as a useful tool for developers to focus their time on certain areas which will be best suited for the boroughs character at large. Singling out West Chester University as a unique challenge is an important aspect of the plan, as realizing that planning in West Chester Borough will be heavily impacted by the university's location, a constantly shifting student population, and demanding transportation challenges in the borough and region among other factors absolutely requires special attention in a plan of this scale. The Borough of West Chester comprehensive plan is an adequately detailed document that will effectively shape the future of the Borough.

## 2. Review of the Chester County Comprehensive Plan

### 1. Introduction of the Plan (by Dan Rafalovitch, PLN 505)

The Chester County Planning Commission, as of November 2018, created an updated comprehensive plan that would serve for establishing preservation/growth, guide county government decision-making, guide local municipal planning/implementation, and provide a framework for collaboration among municipal boundaries. Landscapes (1996) and Landscapes2 (2008) are comprehensive plans that have been established in Chester County for the last 20 years. Landscapes3 will embrace its original strategy of balancing growth and preservation will adding a unique holistic approach that will incorporate “smart growth principles”. Landscapes3 aims to meet the needs of today without compromising the needs of future generations while promoting programs that build community and environmental resiliency. Programs such as resource preservation, revitalized centers, housing diversity, transportation choices, collaboration, and resiliency are just a few programs that remain a central theme of Landscapes3. In order to create such a plan, the development of Landscapes3 needs to understand the issues, construct a vision, and implement this vision to fully prepare for this multi-year process. In order to understand the feedback from counties, municipalities, stakeholders, and the public we need to build a foundation of the general themes of a comprehensive plan. Chester County has strong high-tech/financial industries, distinctive cultural institution, attractive residential communities, and a robust agricultural industry, countryside, and dense villages/towns which remain as the core county structure. These themes and structures give Chester County a high quality of place for its residents. How we as a county protect, appreciate, live, prosper, and connect is all how we as a community can implement Landscapes3.

### 2. Plan's Implications for East End

#### *How We PRESERVE* (by Rich Alimonti, PLN 403)

Chester County's Comprehensive Plan's preserve chapter provides a variety of recommendations deemed necessary to help meet the East End Neighborhoods preserve goal and objectives. The comprehensive plan lays out nine preserve objectives that would help maintain West Chester's East End neighborhood. The first objective would be to expand open space education because we must ensure that the public and municipal officials are aware of the different types of protected open space which include farms, parks, and preserves. The second objective is increasing protected farmlands by taking advantage of opportunities to expand existing protected farmland clusters and create links between

existing protected farmlands. The third objective is to expand protection of natural habitats because protecting natural areas helps ensure that the critical functions these areas provide will not diminish due to development. The fourth objective would be to create additional recreation properties because of the anticipated population growth in Chester County. The fifth objective is enhancing protection of cultural resources because they provide Chester County with its sense of place. The sixth objective would be to expand the network of protected open space by taking advantage of opportunities to establish links in a countywide network. The seventh objective would be to encourage restoration and stewardship because if open space land is not properly managed and improved, it may cause water quality problems and other issues. The eighth objective is supporting open space policies and ordinances because ordinance regulations provide another tool for municipalities to preserve open space and the farmland, natural habitat, and scenic and historic features on that land. Finally, the ninth objective would be to convene open space summits for the purpose of information sharing to facilitate regional efforts. I believe the seventh objective is the most important because encouraging restoration and stewardship would prevent water quality problems and other issues that the East End Neighborhood of West Chester does not need. The seventh objective is also important because the East End is filled with historic landmarks that give it its sense of place, and they should be protected and maintained at all costs.

#### *How We PROTECT (by Wesley Hicks, PLN 403)*

Chapter 5 focuses on protecting the natural landscape of the county. The plan connects the natural landscape with the county's quality of life. The county is implementing programs to reduce stormwater runoff. There are eight objectives namely promoting natural resource protection, provide natural resource policy, enhancing water resource planning, monitoring impacts on water resources, promoting innovation to improve water quality, enhancing flood resiliency and supporting municipal sewage systems. For the East End neighborhood, most of the objectives can improve the overall water quality for the East End residents. The plan also aims to reduce the impact of storm water runoff. An example of stormwater management the plan provides is vegetated curb bump-outs. The call for improved flood resiliency in the county can greatly reduce the flooding in the East End.

#### *How We LIVE (by Alex Sankaran, PLN 403)*

The How We Live section of the Chester County Comprehensive Plan accounts for all housing and livability needs within the County, with an overarching goal to "nurture diverse and well-rounded communities with a balance of residential opportunities and convenient access to community facilities, services, and amenities." The plan includes six major objectives, namely diverse housing, cost accessibility, safe places for all citizens, maintenance and support, fostering healthy living, and access to quality education. It also includes thirteen recommendations to help achieve those six major objectives. The chapter provides thorough explanations regarding the implementation and achievement of the goals. Also included are many photographs to help tell the story and give the reader a better understanding of the material. With regards to the East End neighborhood, many of the policies from the plan can be implemented on this more targeted, smaller scale. One of the recommendations focuses on promoting increased access to fresh, healthy, and local food. This would be a huge improvement for the East End neighborhood, particularly if prices were reasonable. This also ties into health problems, as many lower-income areas that lack proper access to healthy foods tend to have higher obesity rates and other health complications. Another aspect looks to promote impactful public health policy and services, which is especially prudent given the current crisis surrounding the COVID-19 pandemic, particularly

with how it pertains to and affects lower-income neighborhoods. Overall, the Chester County Comprehensive Plan How We Live section provides many steps that will help both the county and the East End neighborhood in West Chester.

#### *How We PROSPER* (Evan Gardi, PLN 403)

The Prosper chapter of Chester County's Comprehensive Plan has a lot of potential to positively affect the East End neighborhood of West Chester. The 1st point is to expand workforce development by partnering with educators to enhance and create curricula to address industry concerns on worker's skill levels. The 2nd point is to create a redevelopment program for existing structures by adding green infrastructure and site buffering; and because the locations are existing, the public transportation, public water, and public sewer infrastructure can be utilized. The 3rd point would be to support flexible zoning. The 4th point has to deal with retaining and expanding existing businesses, for example the ones we took pictures of. This point can go along with the 5th, 6th, and 7th, plans as well. The 8th point of the plan has to deal with revitalizing urban centers. The East End neighborhood is very close to the center of West Chester so a revitalization movement would almost definitely affect the East End neighborhood. The 9th and 10th points couldn't really be applied to the neighborhood as easy because they have to deal with suburban areas and agricultural areas. Most of the points in the prosper section have fantastic ideas that could easily be applied to the East End neighborhood.

### 3. Review of the DVRPC Long-Range Plan

#### **1. Introduction of the Plan** (by Emily Reilly, PLN 403)

The DVRCP's Long Range plan, created on October 26, 2017, outlines planning for the future in a number of ways. This plan was developed by DVRCP's working committees, regional planning partners, stakeholder groups, as well as residents. How this plan was created is by analyzing current trends and future forecasts while reaching out to stakeholders and residents. It considers transportation, land use, the environment, economic competitiveness, equity, and quality of life issues for the community. This plan has five core goals, to sustain the environment, develop livable communities, expand the economy, advance equity and foster diversity, and to create an integrated, multimodal transportation network. It was created to prepare the region for a forecasted increase of more than 658,000 more residents and over 372,000 more jobs by 2045. With so much projected growth a region needs plenty of time to prepare.

#### **2. Plan's Implications for East End**

##### *Principle SUSTAIN THE ENVIRONMENT* (by Julia Bonomo, PLN 505)

Sustaining the environment will greatly help the East End neighborhood. This plan prevents expansion of suburban development into rural communities. This means that there would not be any more development in the neighborhood that drives lower-income residents out. This plan also promises to "protect the context and integrity of historic sites and cultural landscapes that make the Greater Philadelphia region unique." The East End neighborhood is filled with largely historical sites; this plan ensures to preserve these features. The DVRPC swears to identify the historic sites, buildings. Etc. that

contribute to community identity. This may help the West Chester Borough take better care of the East End and its residents. The Charles A. Melton center will be in good shape with this plan because the plan provides an exceptional source of outdoor recreation opportunities. This will help many people in the East End neighborhood, especially the children. Farming and food being incorporated into economic development will be sustainable and beneficial for this neighborhood. The DVRPC advocates to enhance coordination between all food system stakeholders. This includes hunger relief programs and local farmers markets. This will be helpful for the low-income community now and for generations to come in saving money and eating right.

*Principle DEVELOP LIVABLE COMMUNITIES (by Caitlin Pedersen, PLN 505)*

The DVRPC Long Range Plan predicts a growth in employment and a growth in housing in this area of southeastern Pennsylvania. The DVRPC advocates for creating and developing livable communities. “Livable communities are supported by investing in and redeveloping Centers, enhancing community design, promoting affordable housing in appropriate locations, increasing parks and recreation opportunities, and creating and maintaining community-centered schools” (p.58, *Connections 2045*). These communities strengthen local economies by preserving unique areas that have architectural character while being able to conserve open space to endorse recreational opportunities. The DVRPC has identified West Chester as a Town Center. Town Centers are areas that have high-density residential and commercial uses that highlight the unique history of the area while also creating a sense of place. West Chester has the thriving downtown and main street (Gay & Market) that highlight the pedestrian friendly atmosphere that traditional suburban residential areas lack. Within the Town Center of West Chester there is what DVRPC identifies as a Neighborhood Center. These areas have a different identity than the surrounding area. In West Chester, this area is the East End Neighborhood identified for its unique history and strong sense of community separate from the culture of West Chester.

*Principle EXPAND THE ECONOMY (by Abbey Cadden, PLN 505)*

According to the DVRPC’s *Connections 2045*, Philadelphia’s regional economy yields nearly \$400 billion annually in gross domestic product. Such success and stable growth are attributed to the diverse business sectors keeping the region insulated from extreme economic highs and lows. The southeast quadrant of West Chester Borough contributes to the region’s resiliency because it hosts an array of businesses including car dealerships, medical offices, manufacturing facilities, a recycling center, retail clothing shops, a senior center, and public facilities such as the Chester County Government Services center and the Milton Center. This is important for the East End neighborhood, which is located in the southeast quadrant, because it provides economic stability and job opportunities for a diverse workforce who may have varying levels of education, skills, and training. *Connections 2045* also notes that the region’s successful transition into the digital age was achieved by developing necessary infrastructure (i.e., highways, bridges, broadband internet, public transit, ports, etc.) to support the dynamic business environment. Looking forward, the East End neighborhood would benefit by investing in public transit by reinstating the West Chester SEPTA train line because it would provide an additional method for not only attracting businesses and outside investment that would otherwise be spent elsewhere, but also enhance the ability for low-income residents to travel throughout the region for work.



*Principle ADVANCE EQUITY AND FOSTER DIVERSITY (by Maeve Dowd, PLN 403)*

The DVRPC Comprehensive Plans section discussing equity and diversity mainly focused on creating initiatives that would allow for a better quality of life for any person within the Delaware Valley Region. Their initiatives mainly focused on upholding the idea of environmental justice and integrating that principal into different aspects of the community. The plan specifically touches on wanting to promote equitable access to transportation, creating age-friendly communities, allowing all children access to good schools, and building inclusive communities without displacement. The DVRPC Comprehensive Plan even shows a data analysis of the areas within the region that are experiencing high rates of poverty, low English proficiency and physical disability. The highest population can be seen within Philadelphia and surrounding the city. While the East End might not be specifically outlined as an area experiencing these specific issues, the goals outlined to advance equity and foster diversity can be influential to the area's prosperity. Specifically, by creating more access to transportation the East End could become more connected to downtown West Chester. This increased access in transportation would allow for the population within the East End to have more access to jobs downtown as well as jobs or education within the university.

*Principle CREATE AN INTEGRATED, MULTIMODAL TRANSPORTATION NETWORK (by Jordan Engel, PLN 403)*

The principles stated in the DVRPC's "Create an Integrated, Multimodal Transportation Network" section are reflective of their core philosophies. These key values consist of: supporting the policies and goals stated in their long-term plan, going beyond the federally required minimum "3c" process, maintain and preserve existing transportation infrastructure, financial benefits shall be strategically distributed across the region, and lastly supporting innovative technologies to help push the master plan. Information on the DVRPC's planning philosophies was found from (p.95, Connections 2045). There are many anticipated benefits to this transportation plan. Providing a safer and more sustainable transportation network that allows for more options in getting around is the focal point. Increasing the use of real time data will allow for more efficient movement of all sectors. Reducing automobile dependence will decrease co2 emissions and traffic congestion. Preserving open space as well as natural resources, by not needing to construct further highways and roads. Creating new jobs with a high performing transportation network within the Northeast and Mid-Atlantic megaregions. Reducing parking demand and increasing the connectivity of different transportation options. The last agenda in the plan is the hope of increasing citizen engagement. Information on the goals and benefits stated can be found from (p.96, Connections 2045).

## Chapter 6: Green New Deal

This chapter suggests how the Green New Deal principles might be applied when planning and designing community gardens in the East End neighborhood. For this module/chapter, new teams were formulated:

- **Team A** ([the "HACC" lot](#)): Hadjer, Wesley, Ryan, Maeve, Jordan
- **Team B** ([the "Bethel AME Church" lot](#)): Mahmood, Julia, Aidan, John, Matthew
- **Team C** ([the "Market Street Plaza" lot](#)): Abbey, Dan, Jonathan, Emily, Rich
- **Team D** ([the "John Green Memorial Park" lot](#)): Patricia, Caitlin, Cameron, Michael, Alex, Evan

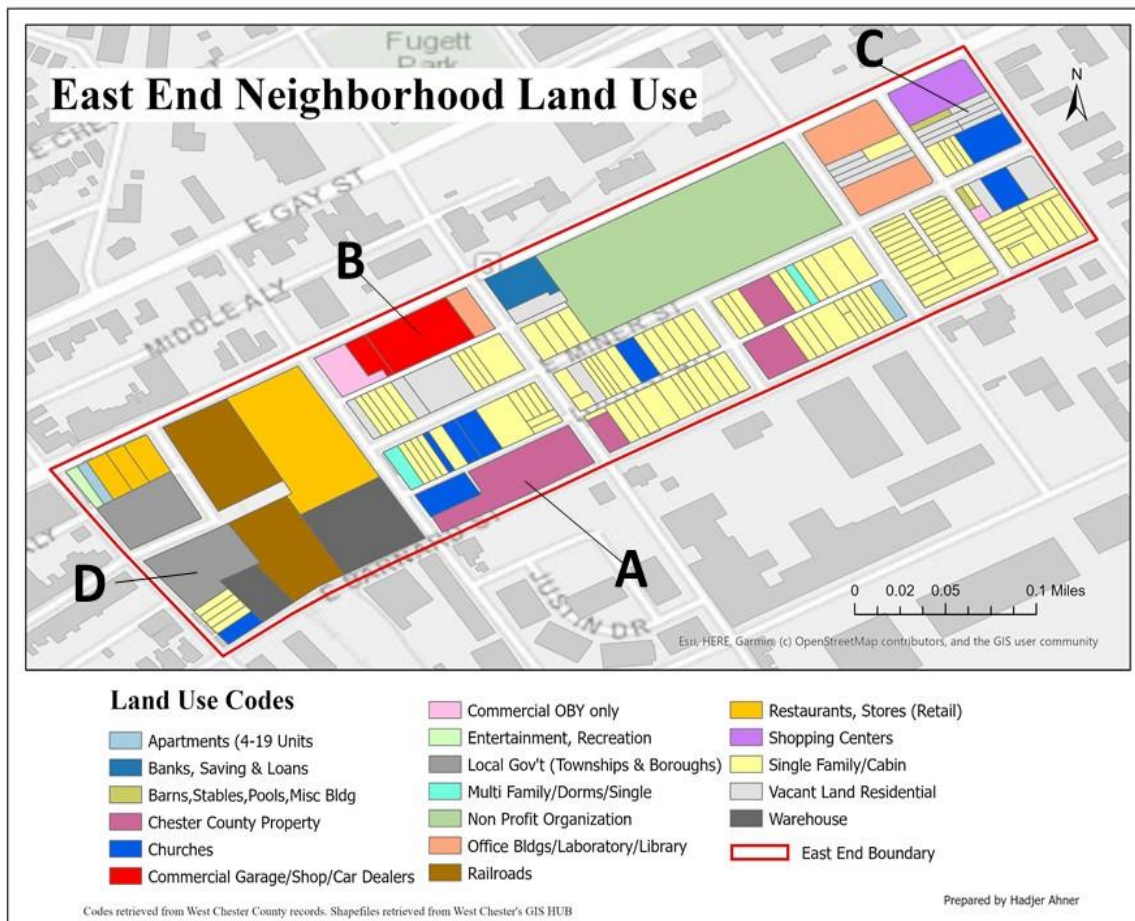


Figure 25 – Location of lots that can be developed as community gardens

Each team developed a concept of a community garden for their assigned lot, reflecting the principles of the Green New Deal. The finalized ideas were presented by each group, and the presentations (PPT slides) are available in the Appendices of this report.

## 1. Team A's Initial Ideas

The community garden will feature native plants, trees, shrubs, a small orchard, raised beds for a variety of produce, a flower garden with a sitting bench, a water feature in the corner, and a bench table. The garden will also include a storage shed, solar panels to use as a source of renewable energy, a compost bin, and rain barrels.

- Create garden sections that serve the diverse benefits and interests of the community
- Plant native trees
  - Clean air
  - Support biodiversity
  - Help with stormwater management
  - Possibly plant fruit trees (small orchard)
    - Possibly create revenue (yielded produce) and jobs (ground keeping, garden management)
  - Creates shade and reduces surface and air temperature.
- Solar street/garden lamps
- Compost bin for the community to use and use the byproduct as a natural fertilizer
- Rain Barrels to collect rainwater and reduce runoff

The proposed garden incorporates the principles of the proposed Green New Deal with the following:

- "Access to healthy foods"
- "Renewable, and zero-emission energy sources"
- "Clean air"
- "Biodiversity"
- "Access to nature"
- "Jobs"

## 2. Team B's Initial Ideas

*Economic Sustainability* (by John Newman, PLN 403 and Mahmood Sheikh, PLN 505)

A community garden could provide a community with many benefits both environmental and economical. Diving deeper into the economical aspect in relation to the Green New Deal there are many ways how a garden could benefit a community economically. Looking at our assigned location of Bethel AME church we are presented with the building and a wide-open paved parking lot. If we were to place a community garden in this area, we would directly see an increase in economic opportunity and a potentially greener future, such as:

- Increase in jobs
- Potential volunteering opportunity
- Local farmers market

Looking at the job aspect the community garden could provide both an occupation for the care of the plants, harvesting the produce and finally the upkeep of the grounds. This could entail mowing, weeding

and various other work. The salaries for these jobs can vary, ranging from a low of \$29,000 to a high of \$64,000. The volunteer aspect is another important part to a healthy future economy, providing insight and education on natural living for a green future. Providing students in the area an opportunity to get hands on with this type of thing, even the potential internships for the university. It could also provide employment opportunities for immigrants, the differently abled, the formerly incarcerated and returning veterans. Community gardens can also increase property values. A study done on community gardens in New York City found that gardens had a statistically significant positive impact on residential property within 1000 feet of the garden, particularly in low-income areas. This can lead to capital investment and other improvements. A cost-benefit analysis also suggests that the gain in tax revenue generated by community gardens within 1,000 feet of residential property may be substantial. Lastly, the food produced by community gardens can be much cheaper than foods sold in grocery stores. In Lincoln, Nebraska, research comparing the price of vegetables in garden plots to those in grocery stores found that the plots saved an average of \$497. This would, in addition to making healthier more accessible, also help to fight income inequality by allowing low-income consumers to save more money. A local farmers market would be a perfect addition to the West Chester borough. Stimulating the local economy while also encouraging people to eat fresh and local in their hometown.

*Environmental Sustainability* (by Julia Bonomo, PLN 505 and Aidan Henken, PLN 403)

One of the main goals of The Green New Deal is to have net-zero emissions by 2050. For our site location, Bethel AME Church, we strived to find alternative solutions to items that produce emissions. One of our best solutions was implementing solar power into the community garden. The solar power panels can be placed on top of high structures, such as the gazebo or pavilion, to avoid taking up extra space. The solar power panels will enable people of the community garden to use an electric grill, play band instruments, charge their phone, etc.

To be environmentally sustainable means our food must be environmentally sustainable. Our local farmer's markets will all have locally grown food, food from the community garden, bake sales, etc. Getting locally grown food is better for the environment because the process of getting this food is quicker than getting it at a grocery store. Meaning that many more emissions are produced to ship food to grocery stores and buying it locally reduces the amount of emissions. We can require that customers of the farmer's markets to bring their own reusable bag to prevent using single-use plastics. On opening day, we can hand out custom made reusable bags to everyone.

Since the East End Neighborhood is surrounded by industrial and commercial sites (27 total business sites), this community garden can offer a beautiful leisure as well as recreational area for the citizens to enjoy. The garden will serve as a sign of sustainability as well as provide benefits to the surrounding ecosystem if managed properly. This singular community garden will not change the world but hopefully it would start a domino effect in the surrounding communities. Surrounding the Borough of West Chester as well as within, there are plenty of vacant lots that would be suitable for a community garden. Also, when looking at food sources within walking distance of the East End Neighborhood it is extremely limited. Fast food options as well as other non-sustainable food sources dominate the area which in turn adds to underlying health issues as well as weight issues.

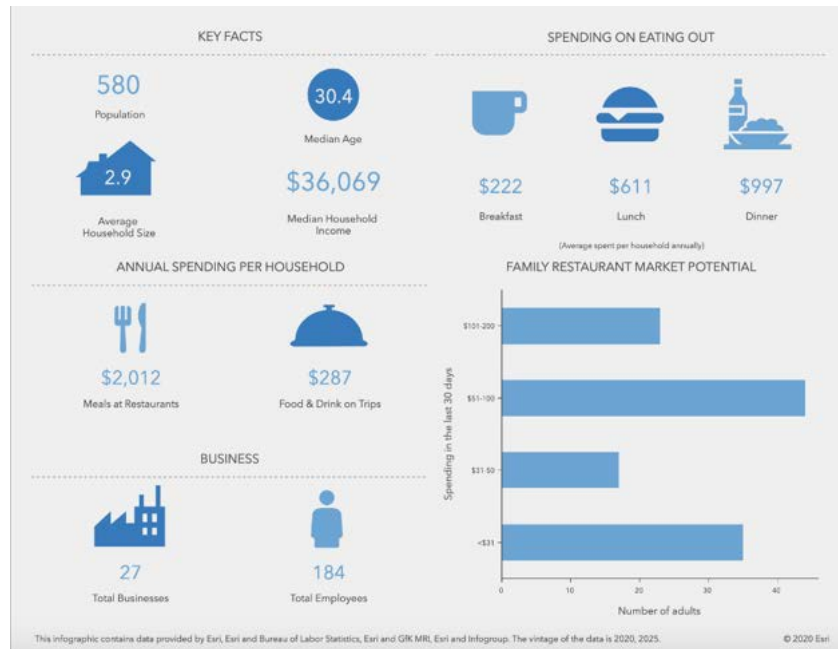


Figure 26 – Food Options near East End

“By building resiliency against climate change-related disasters and remediating or repurposing hazardous waste and abandoned sites among many others (The U.S. Congress, 2019).”

There is also an abandoned waste site that has been unused for many years. A purpose that the abstract states is to repurpose hazardous as well as abandoned sites. I am unsure of the exacts, as well as the timeline for the availability of this lot, but this lot is extremely close in proximity to our site in the East End neighborhood as well as a sizable lot that could feature several types of sustainable green technology if us or the borough decided to take this one step further.

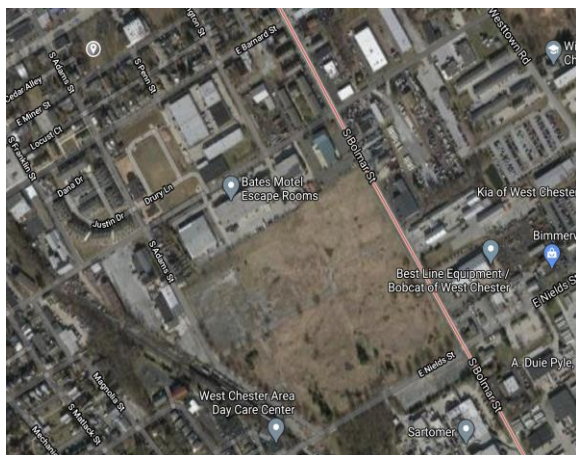


Photo 9 – The Pfizer/Wyeth land in West Chester

I added these infographics because the aspect of a community garden within the Green New Deal guidelines also touches on health and activity. As you can see from the reports, the neighborhood is an active area. Many adult citizens exercise multiple times a week whether that is at home, in a gym, or outside. Many citizens in the neighborhood maintain a healthy diet with about 11.7% of the adult community considers themselves semi-vegetarian. Also, about a fifth of the adult community buy specifically natural and organic foods. Additionally, many adult citizens of the community suffer from mental health as well as their physical health.

Diabetes is found in about 7% of the adult community as well as high blood pressure at 6.7%. Depression as well as anxiety and panic attacks are also very high in this area. Keeping that in mind, healthy low-calorie foods which are available in these communities’



gardens will benefit physical health as well as hopefully the aesthetics of the park helping some cope with their mental illness.

Table 2 – Health and Activities in East End

Product/Consumer Behavior	Expected Number of Adults/HHs	Percent	MPI
Typically spend 7+ hours exercising per week	68	17.0%	87
Typically spend 4-6 hours exercising per week	81	20.2%	106
Typically spend 1-3 hours exercising per week	86	21.4%	90
Exercise at home 2+ times per week	104	25.9%	95
Exercise at club 2+ times per week	43	10.7%	76
Exercise at other facility 2+ times/wk	26	6.5%	80
Own elliptical	7	1.7%	42
Own stationary bicycle	9	2.2%	44
Own treadmill	10	2.5%	30
Own weight lifting equipment	28	7.0%	61
Control diet for blood sugar level	37	9.2%	80
Control diet for cholesterol level	42	10.5%	94
Control diet for food allergies	9	2.2%	106
Control diet to maintain weight	25	6.2%	66
Control diet for physical fitness	26	6.5%	62
Control diet for salt restriction	16	4.0%	102
Control diet for weight loss	42	10.5%	65
Used doctor's care/diet for diet method	8	2.0%	78
Used exercise program for diet method	16	4.0%	45
Buy foods specifically labeled as fat-free	35	8.7%	97
Buy foods specifically labeled as gluten-free	32	8.0%	131
Buy foods specifically labeled as high fiber	24	6.0%	82
Buy foods specifically labeled as high protein	23	5.7%	64
Buy foods specifically labeled as hormone-free	13	3.2%	86
Buy foods specifically labeled as lactose-free	18	4.5%	114
Buy foods specifically labeled as low-calorie	38	9.5%	142
Buy foods specifically labeled as low-carb	15	3.7%	47
Buy foods specifically labeled as low-cholesterol	35	8.7%	165
Buy foods specifically labeled as low-fat	29	7.2%	87
Buy foods specifically labeled as low-sodium	48	12.0%	109
Buy foods specifically labeled as natural/organic	71	17.7%	117
Buy foods specifically labeled as probiotic	14	3.5%	75
Buy foods specifically labeled as sugar-free	47	11.7%	116
Consider self to be semi-vegetarian	47	11.7%	146
Used meal/dietary/weight loss supplement last 6 months	30	7.5%	84
Used vitamins/dietary supplements in last 6 months	162	40.4%	75
Used prescription drug for anxiety/panic	36	9.0%	153
Used prescription drug for arthritis/osteoarthritis	7	1.7%	55
Used prescription drug for rheumatoid arthritis	7	1.7%	67
Used prescription drug for asthma	18	4.5%	114
Used prescription drug for backache/back pain	27	6.7%	101
Used prescription drug for depression	29	7.2%	117
Used prescription drug for diabetes (insulin dependent Type-1)	10	2.5%	110
Used prescription drug for diabetes (non-insulin dependent Type-2)	17	4.2%	94
Used prescription drug for heartburn/acid reflux	21	5.2%	95
Used prescription drug for high blood pressure	27	6.7%	51
Used prescription drug for high cholesterol	19	4.7%	59

### 3. Team C's Initial Ideas

#### *Climate* (by Emily Reilly, PLN 403)

The Green New Deal aims to protect the environment from the effects of Global Climate Change. The Green New Deal proposes many high and low-tech solutions some of which are applicable in our own community gardens. The changes we provide certainly won't fix the problem of climate change all together but adding these few low-tech solutions will be a start and could inspire more communities to do the same. The first climate solution for our community gardens reflects problems of polluted water

runoff. Gardens absorb rainwater which reduces the amount of runoff collecting in the streets carrying pollutants. Having a few garden boxes in our land will collect this rainwater and protect our streets and water systems from runoff and pollution. In addition, another main goal of the new green deal is to reduce greenhouse gas emissions. Our plants will take in carbon dioxide and release oxygen back into the environment. Although it's only a small space it can still help reduce the carbon footprint. If our garden produces fruits and vegetables that can be picked by the East End community, that will encourage walking there rather than driving to the grocery store, therefore decreasing pollution from their cars into the atmosphere.

*Equity* (by Abbey Cadden, PLN 505)

The Green New Deal shifts traditional economic priorities and financial investment away from carbon-emitting industries because they disrupt the climate and negatively impact humans, wildlife, and global ecosystems. In its place, the GND proposes to rebuild a new economy through modern technologies that do not burden the environment or vulnerable populations. One of the main motivators for this change is a reflection that the current economy is inequitable because a very small group of individuals accept the financial benefits while the rest of the population must accept the risks.

Creating a community garden in the East End neighborhood enhances the environmental and social equity concepts outlined in the GND because it increases access to greenspace and outdoor activities, incentives revitalization, and improves accessibility to locally grown, healthy food.

- Access to greenspace and parks
  - Traditionally, people of low-income and people of color face more challenges accessing public parks and greenspace.
    - Only 52% of Pennsylvanians say they can safely walk to a park. Geographic distance, access to vehicle, and cost of public transit are persistent barriers to outdoor recreation.
    - 88.4% of Pennsylvania's outdoor enthusiasts said that outdoor recreation is an essential part of their lives.
    - 80.7% said they would like to participate more in outdoor activities (2015 DCNR, SCORP).
    - Most participants in the African American group indicated that they felt uncomfortable in certain recreation areas, particularly at events where they did not encounter many other minorities (2020 DCNR SCORP).
- Community Revitalization
  - The Market Street Plaza Lot is located in an area of the East End neighborhood that is surrounded by commercial property and off a main road. While there may be benefits to having many businesses in the neighborhood, certain aspects of commercial properties can detract from residential property values. However, community gardens have shown to improve the surrounding land value. Notably, this type of land improvement provides benefits that do not result in gentrification in the way that walking paths and trails do.
- Food Deserts
  - Over two million Pennsylvanians live in low-income areas with limited access to grocery stores. 79% of Pennsylvanians believe it's important that children have access to healthy

foods in their neighborhoods and 70% of Pennsylvanian's support financial incentives to build grocery stores in low-income areas ([Source](#)).

#### *Technology (by Dan Rafalovitch, PLN 505)*

The technology industry in the 21<sup>st</sup> century is nearly attached to every corner of the economy, resources, and political cloud behind planning. The Green New Deal aims to take the energy footprint behind technological industries and make transitions towards clean and sustainable footprints against clean energy, the manufacturing process, and uses of transportation and agriculture. Companies such as Google, Apple, Microsoft, Amazon, etc. are all making an effort to reduce carbon emissions and work only off renewable energy, yet the carbon emissions levels, towards climate change, keep widening. In order to achieve better results on lowering global emission levels big corporate tech companies will need to stop doing the bare minimum and fully focus on reliable, new, and revolutionary agendas. Suppliers and distributors will have to focus on promoting the exchange along supply chains across the globe. This includes reporting results of company carbon footprints properly, helping consumers and distributors make sustainable decisions, and advocating for reusable and future reliable policies. The Green New Deal focuses on understanding the importance between technological products that provide a productive relationship to our society and the protection of the natural environment/employee environment. Therefore, creating an agenda that aims to reduce waste and require producers to take more active roles in the entire cycle that revolves around their products. This entire Green New Deal will help companies form a better energy footprint behind the products they sell around the world. The big tech companies will also be encouraged to create a better work environment, better living wages, and create benefits that encourage the right and ability to unionize for world-class employee to consumer experience. The Green New Deal aims to encourage and change the dynamic of the technological industry. Creating a positive energy footprint and massive influence that will in turn create clean energy, more efficient manufacturing, and creating greener ways of transportation and agricultural processes. The technological industry plays a big role in the efficiency of The Green New Deal.

- Creating a community garden in the East End neighborhood that emphasizes on The Green New Deal policies would:
  - Use 100% organic material with no chemicals
  - Using water barrels, tanks, and permeable surfaces to collect rainwater
  - Repurposing house-hold items without using garbage
  - Compost all possible scraps - Green Building initiative
  - Sustainable product development (composting)

#### *Community Benefits (by Rich Alimonti, PLN 403)*

The Green New Deal brings with it many community benefits which include decreased crime, opportunity to build community ties, and many health benefits. Health benefits include cleaner air if we make our homes and buildings more energy efficient by cutting down on the use of fossil fuels. Other health benefits the deal calls for include universal high-quality healthcare, the clean-up of hazardous waste sites and access to clean water, healthy and affordable food, and nature. Residents would also find it much easier to live an active lifestyle if the deals call for guaranteed jobs with fair pay, family and medical leave, paid vacations and retirement security became commonplace. Living an active lifestyle is

possible if residents can take vacations to clear their minds and not worry about how they put dinner on the table if they couldn't work for medical reasons.

Thousands or even millions of decent and rewarding new jobs would be created for residents of small communities who may have lost their jobs because of the declining fossil fuel industry.

Gives residents the opportunity to actively participate in helping create the policy that will in turn create a better life for their family and themselves. (Especially those who live in communities already facing environmental degradation)

The deal also calls for free higher education which could possibly cut down on the amount of crime in many communities, providing residents with the opportunity to better themselves through higher learning that may not have been affordable before.

The deal would help build community ties if everyone brainstormed ideas together that would help their communities. For example, residents would get to know their neighbors through participation in creating the policy and would often see each other at the community gardens spread throughout their communities.

#### 4. Team D's Initial Ideas

Patricia Quinn, PLN 505

- The proposed Green New Deal would have America move to zero carbon emissions. This would mean an end to the use of any fossil fuels. It would completely alter the nature of our economy and create a personal financial crisis for many Americans, especially the already disadvantaged. The second part of the Green New Deal aims to address this through universal healthcare, job training, and an increase in social programs. Should America move to zero carbon emissions, one change likely to coincide with that would be a shift from imported fruits and vegetables to locally grown. Building a community garden in a lower-income neighborhood can address this proposed shift, albeit in a small way. It can keep an at-risk community healthy and teach future generations how to grow healthy food and live a more sustainable lifestyle. It would be an asset to the neighborhood and strengthen the local community, which will help support those the most in need.

- The John Green Memorial Park Lot

- Assets and Disadvantages to the Site: All Macadam/Concrete. Convenient location. Some fencing exists.



Photo 10 – The John Green Memorial Park Lot

Caitlin Pedersen, PLN 505

- Take the two rectangles slabs and convert this area into a garden
- Cover up the 4 square markings
- Build raised garden beds to minimize demolition on the site
- Fence the two rectangle slabs using bushes to minimize any basketballs from disturbing the garden beds to create a natural buffer/fence
- Put removable metal fencing around the garden beds to limit pest access but allow for humans to work in the beds
- Remove the already existing metal fencing around the lot to make access easier and more appealing for visitors - similar to already existing remodels of the John Green Memorial Park
- Repaint the crosswalk between the two sections of the John Green Memorial Park to promote walkability and safety - add in a flashing button light
- Create some type of rain garden on site that would sloped to collect rain water - then build up one side to promote seating on the wall



*Photo 11 – Vertical gardens and raised beds*

- A combination of vertical gardens and raised beds over the existing impervious surface to keep costs low. Another benefit of this is that the land is owned by the borough and they may be skeptical that it will get used. These structures are impermanent and can easily be removed if necessary.

Alex Sankaran, PLN 403

- Redo and regrade sidewalks surrounding the lot
- Community fruit and vegetable garden
- Remove some of the excess concrete
- Remove fencing that prevents easy access
- Paint parking spaces on the surrounding streets
- Create an entrance from Matlack St.

Michael Staropoli, PLN 403

- Place a comfortable bench in an open space near the low-lying horizontal garden beds so the elderly can have the convenience to sit and be comfortable and enjoy the sun.
- Install a bird seed container that accepts quarters and drops a handful of seeds to attract birds. This would entertain children and also, with every quarter, give back to the community. A birdhouse or bird bath would be great as well.
- Place smooth rocks that community members can paint to create a nice, fun aesthetic. Possibly add a sandbox, or a set of small monkey bars and a kid's slide.





*Photo 12 – Bird seed container and sculpture*

Even Gardi, PLN 403

- Remove concrete/macadam most on site
- Remove metal fencing and add either natural fencing through shrubs/bushes or add wooden fencing.
- Include entrance from Matlack St. for easier access.
- Build flower boxes near or on the fence to make the park more inviting.
- Create community garden boxes that are slightly raised, this will give the elderly more access and make it so they do not have to bend over as much.
- Add benches surrounding the garden for rest.
- Replace the surrounding sidewalk and the walkways through the garden with permeable pavers.



*Photo 13 – Permeable pavers*

Cameron Pursel, PLN 403

- The green new deal is not only about environmental stewardship but creating economic programs and plans that further protect and expand environmental causes around the world. I think one of the ways to do this is the creation of:
  - A community garden that operates on this lot with members of the community acting as stewards and educators on plants that can be used and sustainable farming practices
  - A farmer's market that operates on weekends, staffed by volunteers, selling low cost produce from both the garden and local farmers. Proceeds would go to the farmers selling goods and back into the community garden, buying supplies and seeds for the garden's operation in coming seasons.
  - The creation of a community land trust that manages the garden and can be expanded to other areas around West Chester borough, in an effort to give back to the local community and aid all residents by providing an excellent source of low cost locally sourced produce.

*Community Garden as a Green New Deal Approach* (working paper by Dr. Jongwoong Kim)

This paper discusses the implications of building a community garden in an environmentally (built and natural) and socioeconomically disadvantaged neighborhood to achieve the goals of the Green New Deal (GND) policy movement at a local level. Using multiple-case analysis on a select group of community gardens in the United States, this paper explores and describes the relationship between the benefits of a community garden and the values and goals of the GND policy movement.

A typical community garden in the U.S. is a communal space designed, developed, and managed for “urban (being in or close to a city)” agriculture. Frequently built on a vacant lot, the community garden is typically run as a co-op or by a public/non-profit agency. These community gardens are known to bring a range of benefits to their neighborhoods, such as: beautifying open spaces and industrial landscapes; providing healthy food and engaging physical activities; and even reducing crime and strengthening social cohesion within the neighborhoods (CDC, 2010). New York City alone is estimated to have more than 600 community gardens, even if counting only those on publicly owned land (GrowNYC, 2016).

The GND generally refers to a policy or legislation that aims to address the issue of climate change as well as the socioeconomic challenges resultant from the necessary industrial and economic transition to resolve this issue. Originally from, and inspired by, the New Deal (1933-39) of the Great Depression era, the term/concept, Green New Deal, coined by Thomas Friedman, (2007) now popularly refers to the congressional resolution, [H.R. 109](#) (2019). The concept, however, has been around and was a major subject of the federal government policies during the Obama administration (2008) and has been an agenda of election pledges by leading politicians from the liberal parties, such as Jill Stein (2012), Bernie Sanders (2016), and Joe Biden (2020).

In February 2019, Representative Alexandria Ocasio-Cortez and Senator Ed Markey introduced the H.R. 109, a non-binding resolution, “Recognizing the duty of the Federal Government to create a Green New Deal.” It calls to pass legislation that secures a sustainable environment, community resiliency, and healthy food for all people of the U.S. by building resiliency against climate change-related disasters and remediating or repurposing hazardous waste and abandoned sites among many others (The U.S. Congress, 2019).

This paper argues that building a community garden in a disadvantaged neighborhood can contribute to achieving the goals of the GND policy movement at the local level, by helping the neighborhood and its residents: adapt to extreme weather events such as flash floods; create a culture of individual and community health; improve economic conditions with new employment and entrepreneurial opportunities; and strengthen neighborhood social stability and cohesion with community and educational events.

Compared to the sheer scale of challenges the GND policy movement intends to address, a single community garden's impact may look minimal, but thousands of community gardens in the aggregate will bring an impact big enough to help achieve the goals of the GND policy movement.

## Chapter 7: Community Gardens

In this module/chapter, the studio students researched established community gardens, identified multiple types and characteristics of community gardens, and learned typical steps to build a community garden.

### 1. What is a Community Garden?

"A community garden is any piece of land gardened by a group of people, utilizing either individual or shared plots on private or public land. The land may produce fruit, vegetables, and/or ornamentals. Community gardens may be found in neighborhoods, schools, connected to institutions such as hospitals, and on residential housing grounds." (UCCE's Marin Master Gardeners)

According to lobby (2018), there are about 18,000 community gardens throughout the U.S. and Canada, and they are known to:

1. *Provide aesthetic benefits and fresh, healthy produce to neighbors*
2. *Make neighborhoods safer*
3. *Support food security and financial savings for individuals, especially the unemployed and those with low incomes*
4. *Improve soil, water, and air quality and increase biodiversity*
5. *Help cities save money through storm water retention and purification*
6. *Help keep food and yard waste out of landfills (when they compost)*
7. *Support neighborhood initiatives (e.g., historic preservation) with profit earned*
8. *Provide educational opportunities for kids, adults, and seniors*
9. *Act as a beacon of permanence for traditionally transient communities*
10. *Promote individual health by offering physical activity, stress relief, and a connection to nature*
11. *Promote public health by giving people a space to congregate and define themselves as a community*

### 2. How to Create a Community Garden?

First and foremost, creating and running a community garden should be done by the residents of the community itself, but we as planners and designers can help by guiding them through the development process and by presenting concepts of community gardens as options.

Typical steps (lobby 2018) of creating a community garden (*from a resident/community organizer's perspective*) are:

### 1. *Make Sure the Site is Suitable*

- A vacant lot is a great start, and check:
  - Does it get a good amount of sun (6-8 hours a day)?
  - Is it relatively flat?
  - Is it within walking distance of nearby homes?
  - Any debris in it?

### 2. *Get Permission from the Owner*

- Once having a handle on who the land belongs to, reach out to the owner, explain your idea, and ask for permission to use their land for this community benefit.
- In general, it's not a bad idea to touch base with the local government about your plans, while community garden arrangements are often made between a landowner and a group of gardeners.

### 3. *Check Zoning Laws & Water Availability*

- Since the lot you want to garden on is likely in a residential or mixed-use area, and since local governments are increasingly aware of the benefits community gardening brings, in most cases, zoning won't be a problem (but always check the municipal zoning map).
- Water is the lifeblood of any garden, so find out if a water source is available on the site. If you can't find evidence of one, and the owner isn't sure, contact the local water utility to ask if the property has a water meter.

### 4. *Formalize Efforts & Crowdfund*

- A community garden is all about community. (And it's also a lot of work!) So, you'll want buy-in from at least a handful of your neighbors before you start.
  - Ask other nearby residents to find out who might be interested in participating, and contact local organizations like block associations (e.g., EENA), houses of worship, gardening societies, and homeowners' and tenants' associations to see if they have any advice or would like to partner with you.
- After you've roused some initial interest, form a group to take charge of the project. Invite the people who show the most interest and have the most time to invest to become your "steering committee."
  - You should also consider forming an association or garden club; eventually, you may wish to incorporate as a nonprofit. Getting organized in this way can help you do things like establish garden rules, open a bank account and handle money, run meetings, and keep track of membership.

### 5. *Brainstorm a Garden*

- With your team, discuss what kind of garden would best serve the needs of your community and also suit your space. (*In our studio, we are proposing concepts to the community first, working sort of backwards...*)
  - Do you want to grow vegetables, flowers, or both? All organic, or are some pesticides okay?

- Will you have a single space that everyone manages together, or separate plots for individuals to tend?
- Will you be open to the public? If so, how often, and will a member need to supervise?
- Also, you'll need to answer this fun question: What will you name your garden?
- As a part of the brainstorming process, it's a good idea to have some soil from the lot tested for possible pollutants like heavy metals. Search for a public/private lab in your area that provides this service (e.g., WCU Geoscience Dept.).
  - If you do find the soil is polluted, you don't necessarily need to abandon the garden idea altogether, but you will want to consider growing only inedible plants or installing raised beds so you can grow your food in fresh, clean soil.
  - Testing can also tell you about soil fertility and pH: information that will be useful to have when you start preparing the site and selecting your plants.

## 6. *Budget & Fundraise*

- Now that you have a basic handle on how big your garden will be, what you want to grow there, and who will be involved to start, you can start figuring out how much it will cost to get it going, and make a plan to pay for it. Common costs include:
  - Seeds and/or seedlings
  - Tools: everything from spades and gloves to watering cans and hoses
  - Construction materials for beds, benches, bins, and more
  - Fertilizer and compost
- According to *The Community Garden Start-Up Guide* produced by the UCCE, starting a basic community garden typically costs between \$2,500 and \$5,000. Your mileage may vary! The most common ways of funding a community garden include:
  - Membership dues
  - Cash or in-kind sponsorship from community organizations and/or your city's department of parks and recreation
  - Applying for grants
  - Crowdfunding

## 7. *Prep & Building the Site*

- You can absolutely start to prepare your lot for gardening before your planting plan is totally worked out and before you've raised all the money you need. In fact, getting people away from the planning table and into getting their hands dirty is a great way to boost morale when it's all starting to seem like too much!
- You can also gain some management practice by corralling your steering committee and potentially other volunteers to take care of tasks like removing any debris from the site, marking where your garden beds and paths will go, and putting up fencing (at least eight feet tall is best, to curb vandalism, and include a gate big enough for a truck to drive in).



- Every garden is different, but most successful ones wind up containing some version of the following:
  - 15 or more plots assigned to individual members, located in the sunniest part of the garden.
  - Raised bed plots (if any) that are no more than 4 feet wide, and between 8 and 12 feet long.
  - In-ground ground plots (if any) that measure between 10 by 10 feet up to 20 by 20 feet.
  - Paths between beds that are no narrower than 3 feet—you want wheelchair accessibility!
  - Soil that is amended with aged compost or manure.
  - A simple irrigation system for every four plots. If no one in your group is very knowledgeable about irrigation, try asking a landscape contractor, plant nursery, or garden center pro to help you develop a basic layout and materials list.
  - A tool shed or similar structure for storing your supplies.
  - Recycled metal shipping containers make super storage sheds!
  - A picnic table where gardeners can sit, relax, and have a snack.
  - Locating this in the shade of trees is best, or you can build a simple arbor and plant it with vines.
  - A composting area. (Wood pallets can often be sourced for free from local businesses and make great DIY compost bins! Search online for simple construction plans.)
  - A sign—of course! You want the whole neighborhood to know your garden’s name. It’s also wonderful to shout your sponsors out with signage, and to include an email address or other contact info for neighbors who have questions about what you’re doing. Make sure this info is in multiple languages if your community is bilingual.
- Once your basic infrastructure is in place, you can start planting seeds and/or seedlings, as your garden plan dictates. Kids love this part, so don’t hesitate to recruit a few to help!

## 8. Celebrate

- Do not, we repeat, do not work so hard that you forget to have fun! Make a point of organizing an opening celebration for your garden—like a barbecue or potluck lunch—to thank everyone who’s put their time and effort into it so far, and to mark the milestone you’ve come to.

## 9. Remember

- Issues are inevitable. Not to end on a bum note, but nothing is perfect: most every community garden will experience at least occasional problems with vandalism, security, miscommunication, trash, weeds, and gardener drop-out. *The Community Garden Start-Up Guide* mentioned above gives some great tips on dealing with each of these problems. Whatever comes up, let your group know that you believe in your collective ability to handle it, do your best to address the situation, then keep on keeping on!

Each student wrote a case study about a community garden of their interest and/or familiarity. Each case study has the following sections though each can have a different and/or more descriptive title:

1. **Title** (title of your case study)
2. **Introduction** (brief introduction and overview of your case)
3. **Background** (important background information about your case)
4. **Challenges** (significant challenges faced by the community while creating the community garden)
5. **Success** (how the community garden became successful and/or overcame the challenges)
6. **Conclusion** (summary of and lessons learned from your case)
7. **References** (a list of references)

The full versions of these case studies are attached in the Appendices section of this report.

### 3. Community Garden Case Studies

*The full versions of these case studies are attached as the Appendices of this report.*

#### 1. E.D. Robinson Urban Garden (by Mahmood Sheikh, PLN 505)

The creation of the E.D. Robinson Urban farm has had very positive effects on both the 11th Street Bridge neighborhood and the city of Wilmington as a whole. Although the garden hasn't resolved all of the issues that the people within these communities' face, it is part of the solution to such problems, and it stands as one of many examples of how greening a community can be very beneficial for its residents.

#### 2. Midtown Miracle Community Garden (by Jonathan Brouse, PLN 403)

Community gardens bring the community together. They create a sense of place, and a place for people to help their local community. With Midtown Miracle Garden, we can see how much food they've come to donate after only being open for nearly six years. Along with donations, the garden hosts free monthly workshops hosted by local and regional professionals who provide hands on knowledge. Overall, this community garden seems to have taken an old abandoned lot in downtown Savannah and turned it into the talk of the town.

#### 3. Cultivating Place: Urban Development and the Institutionalization of Seattle's P-Patch Community Gardens (by Aidan Henken, PLN 403)

There is a slight catch which creates today's challenge. "Green gentrification" is now happening within Seattle because of these gardens beautifying space, thus increasing land value. As I stated earlier, Seattle is now a growing and booming city in relation to population and its size of its economy. Seattle is attracting a new demographic which can be described as the "creative class" which is exactly how it sounds. Innovative young minds with money to spend. Inherently, lower class citizens in which the program is meant to help are also being pushed out if they cannot afford the cost of living. Which also

brings me back to one of the authors main point of advocacy and community engagement between the city and the people. I think this idea can be useful in our efforts to bring a community garden to the East End Neighborhood here in West Chester. By creating a connection between the citizens and the government, trust is built as well as collaboration. We also cannot forget the goals and values of what we are attempting to create and must promote equity as well as inclusion. By getting the community directly engaged, we can push forward to creating a more sustainable and diverse community.

#### **4. Duke Farms: A Community Garden Seeded in Organic Practices** (by Caitlin Pedersen, PLN 505)

Duke Farm's Community Garden allows members to connect by growing fresh and organic food with the aim to teach how to work in harmony with nature. The Community Garden does not only allow for food to be grown but it is set up as an educational program by offering lectures through classroom settings, walk and talk, and hands-on workshops. A Duke Farm's visitor can learn anything from how to landscape for wildlife by creating a backyard habitat to seed collection and storage (Stewardship at Home, n.d.). Duke Farms still follows the last will and testament of Doris Duke as her life purpose was for Agro-Ecology, a commitment to habitat restoration through the use of renewable energy and sustainable operations, which originates from her father's dream farm (AgroEcology, n.d.).

#### **5. Saving Wiota Street Garden** (by Rich Alimonti, PLN 403)

I believe the Wiota Street Community Garden is an essential part of the lives of the residents who live in its surrounding area. The community garden is necessary because it causes local grocers to sell their produce at a lower price which benefits even those who don't regularly buy from the farm stand. The garden also acts as a standard for quality, which residents of the community believe the local grocers like Aldi lack. I learned that community gardens provide many services but one that is commonly overlooked is the ability to provide community service opportunities. Volunteering at your local community garden is a great way to not only help your community, but it's also a great opportunity to learn through hands on practice how to grow your own fresh produce which can be life changing for a less fortunate family who typically wouldn't purchase fresh produce because they don't have the money. I learned that community gardens like Wiota Street have the ability to donate to their local food banks which isn't emphasized enough because they are providing healthy options to the residents who rely on them, and these food banks would not be able to provide them with nearly as much fresh produce if not for substantial donations from community gardens like Wiota Streets. The garden is responsible for creating unlikely friendships of residents which ultimately strengthens their neighborhood ties. Finally, it goes without saying that the community gardens decision to include a library pick up and drop box at its perimeter is highly appreciated by the community and its residents because it provides them with easy access to books and other educational materials that probably wouldn't have been put there if the lot was redeveloped for apartments. This Wiota Street community garden is a heartwarming story because its caretakers believed in it, and wouldn't stop their efforts to push back against its sale even though they acknowledged back in 2016 that they lacked substantial leverage to stop the sale but never gave up hope.

#### **6. The Spring Gardens in Philadelphia, PA** (by Ryan Cavanaugh, PLN 403)

Today, The Spring Gardens is one of the most beautiful and exclusive community gardens in Philadelphia. There is currently a very big waitlist to receive a plot in the garden, members of the Philadelphia community can spend a very long time on these waitlists until they receive a plot in the

garden. The garden is also highly endorsed by local elected leaders, restaurants, and multiple other types of businesses because of its beauty.

#### **7. Borland Green in Pittsburgh, PA (by Wesley Hicks, PLN 403)**

Community Gardens can improve the sense of community in neglected neighborhoods. The garden has been a place to educate children and adults and connect the surrounding community to nature.

#### **8. Sugar Creek Garden and Herb Farm (by Jordan Engel, PLN 403)**

The key thing to remember and reflect on in this case study is making something from nothing, lemons out of lemonade. The case study of Sugar creek is one of the many community gardens being maintained from the Wylde Center. Land that at one point was nonproductive turned into something that benefits the whole community for an unlimited amount of reasons. This process needs to be prioritized worldwide in especially urban centers that are food deserts. Many urban centers do not have access to local produce since they are so far from any farms.

#### **9. The Hershey Community Garden (by John Newman, PLN 403)**

The Hershey Community Garden is a prime example of a successful not-for-profit venture. Challenges financially are met with kindness from the community, as well as donors invested in the Garden's charitable mission. The Garden's struggles have shown the importance of efficiency with resources, as they have been able to make the most out of limited money. The specific example of the low versus high-quality hoses demonstrates the organization's attention to detail in operating the Garden efficiently.

#### **10. Fenway Victory Gardens in Boston, MA (by Emily Reilly, PLN 403)**

This part of the "Emerald Necklace" is a very historic and important part of Boston's community. It was a part of helping the nation during wartime and still has lasting benefits today. It survived demolition proposals and was fought for by the community. This community garden taught me more about historic preservation and that sometimes it's better to save rather than rebuild. The Fenway Victory Garden is loved by many in the Boston Community.

#### **11. The Garden that Grew into a Movement: The Liz Christy Community Garden (by Maeve Dowd, PLN 403)**

Overall, the Liz Christy Community Garden is not only widely successful in creating a space for community members to come and learn about gardening while engaging in valuable community outreach, but also creating a movement across New York City. Today the GreenThumb Program is the largest urban gardening program in the nation and has fostered about 550 gardens around New York City (History of the Community Garden Movement). This program and these gardens would not have been so widely successful if it were not for Liz Christy and the Green Guerillas for spending a whole year showing their community how important a community garden would be. Without the countless volunteers who spent hours working to create that space and create something beautiful and influential for their community in a time of need, who knows if New York City would have so many successful gardens today.

### **12. Rutgers University Community Gardens (by Michael Staropoli, PLN 403)**

Success struck the Rutgers Gardens once they decided to take it seriously. Allocating funds in the right areas and finding the right people, who care, can make an empty area into an even more beautiful landscape than imaginable. The future of Rutgers Gardens is very bright. They have truly created something phenomenal.

### **13. Hillside Community Garden (by Abbey Cadden, PLN 505)**

The Hillside Community Park is an example of how important it is to properly plan and thoughtfully engage the community in advance of breaking ground on a project. The Hillside Park community garden faced challenges in its early days but quickly found solutions due to the overwhelming graciousness of the surrounding community. Had the AAJRB not invested time into the community on the front end, the community may not have been there throughout the process to facilitate the project's successes. Communities considering a public garden can learn lessons from Hillside by adopting their methods and using a public-private partnership to create a well-run community asset like a public garden.

### **14. Conshohocken Community Garden (by Hadjer Ahner, PLN 505)**

Conshohocken Community Garden's autonomous model is realistic and exemplary. Establishing bylaws that maintain order and advocate for sustainable gardening helps prolong the operation and success of the garden for years to come. Resolving challenges with fair and thoughtful solutions ensures reliable member involvement and enhances communication, which in turn serves the community and strengthen its unity (Conshohocken Community Garden 2020).

### **15. Eastwick Community Gardens Case Study (by Alex Sankaran, PLN 403)**

The Eastwick Community Gardens is the largest community garden in Philadelphia, comprised of the Common Ground and Victory Gardens. It faces a significant challenge with location, bordering Philadelphia International Airport. Expansion plans for the airport have often clashed with the wishes of community members. Through all of this, community stakeholders have helped make the Eastwick Community Gardens a staple of the neighborhood. The food grown in the garden helps feed many families, and the gardening techniques on display help inspire others in and around the city to create their own community gardens.

### **16. Schuylkill River Park Community Garden (by Julia Bonomo, PLN 505)**

Overall, the community garden has been a success for over 30 years and will continue to be successful as more and more people join the waiting list for a plot. This particular community garden is exactly what a community garden is all about. Prior to being official, the gardeners and CCRA members worked together for a good cause and continue to do so to this day. This case study showed me how hard these people fought and what community gardens are really about, working together. I believe that the combination of community gardens and parks is a great idea because it creates even more social connections between local people, adds a great aesthetic, and overall flows together. Both the garden and park benefit from one another, which has been an important role in both of their successes.



## Chapter 8: Methods and Analysis

Students used a Methods & Analysis worksheet to begin planning and designing community gardens. This simple worksheet guided each team to prepare for the final stage(s) of the course project, “planning and designing community gardens for the Historic East End.” Each team completed the worksheet (the third, Results of Analysis/Assessment, column). Following the Recommended Approach/Method in the second column, each team responded to the Task/Question in the first column.

This module was effective at keeping the sustainable development requirements a major priority of the course project. The table below provided each group with a ‘checklist’ to guide us into maintaining a healthy environment at our construction site. In this module, each team was proposed a question which we had to answer to the best of our ability using the method or approach recommended in the center column. This section of the project is necessary because it asked very important questions in an organized way. It allowed us to analyze our own work so we can better focus on areas in need of improvements. The tasks proposed in this table are questions future developers need to ask themselves periodically throughout a project, no matter how big or small.

The first column includes questions about the site’s landscape, amount of sunlight, debris, and public access. The table also asks about the nearby homes, zoning codes, flowers, soil, water sources, and the budget. These are questions a developer would likely have already answered throughout the project, but this module organizes all that important information into one table that can easily be communicated with to local planning board.

*Table 3 – Methods & Analysis Worksheet*

#	Task/Question	Recommended Approach/Method	Results of Analysis/Assessment
1	Does it get a good amount of sun (6-8 hours a day)?	ArcGIS Urban (sunlight & shadow analysis)	<ul style="list-style-type: none"> <li>• <b>Lot/Team A’s Response:</b> “Yes. The lot receives ample sun light during the growing season.”</li> <li>• <b>Lot/Team B’s Response:</b> “Yes.”</li> <li>• <b>Lot/Team C’s Response:</b> “Full sunlight until 4:00 PM. Full shade at 5:45 PM”</li> <li>• <b>Lot/Team D’s Response:</b> “Yes, every part of the site receives at least 7 full hours of sun.”</li> </ul>
2	Is it relatively flat?	<a href="#">CalcMaps</a>	<ul style="list-style-type: none"> <li>• <b>Lot/Team A’s Response:</b> “Yes. The lot is relatively flat. The lot is 400 ft. above sea level with a flat elevation profile.”</li> <li>• <b>Lot/Team B’s Response:</b> “Yes, it is flat.”</li> <li>• <b>Lot/Team C’s Response:</b> “Yes, it is very flat with negligible sloping.”</li> <li>• <b>Lot/Team D’s Response:</b> “Yes.”</li> </ul>

#	Task/Question	Recommended Approach/Method	Results of Analysis/Assessment
3	Is it within walking distance of nearby homes?	Any ArcGIS product or Google Map  Check whether it is within 3 blocks or 300 meters (1000 ft.) from the nearby homes.	<ul style="list-style-type: none"> <li>• <b>Lot/Team A's Response:</b> "Yes. There are several homes within walking distance, about 50 ft. from the lot."</li> <li>• <b>Lot/Team B's Response:</b> "Yes, the garden is surrounded by homes and community facilities."</li> <li>• <b>Lot/Team C's Response:</b> "Yes, there are homes within one block of our site and many homes surround the area."</li> <li>• <b>Lot/Team D's Response:</b> "Yes."</li> </ul>
4	Any debris in it?	Google Streetview or site visit (if available)	<ul style="list-style-type: none"> <li>• <b>Lot/Team A's Response:</b> "There is no debris on the site. The lot is ready to prep."</li> <li>• <b>Lot/Team B's Response:</b> "No debris."</li> <li>• <b>Lot/Team C's Response:</b> "No debris in our site via google earth."</li> <li>• <b>Lot/Team D's Response:</b> "Currently a concrete pad with wire fence around it but no debris."</li> </ul>
5	Who's the owner of your site?	<a href="#">Chescoviews</a>	<ul style="list-style-type: none"> <li>• <b>Lot/Team A's Response:</b> "Housing Authority of the County of Chester (HACC)"</li> <li>• <b>Lot/Team B's Response:</b> "Walter L. Butcher III and Myrtle T. Butcher"</li> <li>• <b>Lot/Team C's Response:</b> "Clifford DeBaptiste (3 parcels)"</li> <li>• <b>Lot/Team D's Response:</b> "West Chester Borough"</li> </ul>
6	Which zone your site sits in?	West Chester Zoning Map	<ul style="list-style-type: none"> <li>• <b>Lot/Team A's Response:</b> "Neighborhood Conservation District 2."</li> <li>• <b>Lot/Team B's Response:</b> "NC-2 (Neighborhood Conservation District 2)"</li> <li>• <b>Lot/Team C's Response:</b> "Neighborhood Conservation Group 2; Block Class C"</li> <li>• <b>Lot/Team D's Response:</b> "It is in the Town Center (TC) Zoning District and it is a Block Class B."</li> </ul>
7	Is a water source available in/near the site?	Ask the owner or the utility company	<ul style="list-style-type: none"> <li>• <b>Lot/Team A's Response:</b> "Yes, there is a water source available right on our site (<a href="#">Chester County GIS Hub</a>)."</li> <li>• <b>Lot/Team B's Response:</b> "Yes, water source is available in/near the site."</li> <li>• <b>Lot/Team C's Response:</b> "Aqua - public water access"</li> <li>• <b>Lot/Team D's Response:</b> "There is a small stream running behind the lot next to the railroad tracks."</li> </ul>

#	Task/Question	Recommended Approach/Method	Results of Analysis/Assessment
8	Will the garden grow vegetables, flowers, or both? All organic, or are some pesticides okay?	<p>Make suggestions (e.g., choose 5 crops you'd recommend)</p> <p><i>*We do this for the concept development and the cost-revenue estimation. The EE residents will eventually decide on this.</i></p>	<ul style="list-style-type: none"> <li>• <b>Lot/Team A's Response:</b> "The garden will grow vegetables and flowers; all organic."</li> <li>• <b>Lot/Team B's Response:</b> "There will be a garden board set up to decide what will be grown. (the crops most likely to be grown will be produce like tomatoes, cucumbers, potatoes, carrots and onions). The garden will also have flowers."</li> <li>• <b>Lot/Team C's Response:</b> "Vegetables and flowers are permitted. Tall growing plants must not block sunlight in other plots. The garden will focus on organic herbicides, if there is a persistent weed problem, we may consult experts for advice; if no solution works, some chemical pesticides may be used. Tomatoes, peppers, zucchini, corn, pumpkin (Seasonal crop rotation)"</li> <li>• <b>Lot/Team D's Response:</b> "There should be flowers in common spaces and organic vegetables in garden beds. High yield vegetables like peas, beans, tomatoes, zucchini, and salad greens are recommended. A social media group may help guide gardeners to alternatives to pesticides."</li> </ul>
9	Will the garden have a single space that everyone manages together, or separate plots for individuals to tend?	<p>Make a suggestion (e.g., choose from the "allotment" type, the "communal" type, or the combination of both)</p> <p><i>*The same reason applies here as the above.</i></p>	<ul style="list-style-type: none"> <li>• <b>Lot/Team A's Response:</b> "The garden will have a common space that everyone can manage together, along with separate plots for individuals to tend to."</li> <li>• <b>Lot/Team B's Response:</b> "Both; the garden will have a big single space in the center of the garden, and it will be surrounded by separate plots."</li> <li>• <b>Lot/Team C's Response:</b> "Semi-communal; mostly individually owned plots with a few communal plots"</li> <li>• <b>Lot/Team D's Response:</b> "A communal garden would make the most sense for a model that sells some of its produce to fund community projects. Members should commit to a certain number of hours in the garden each week."</li> </ul>

#	Task/Question	Recommended Approach/Method	Results of Analysis/Assessment
10	Will the garden be open to the public? If so, how often, and will a member need to supervise?	Make a suggestion. <i>*The same reason applies here as the above.</i>	<ul style="list-style-type: none"> <li><b>Lot/Team A's Response:</b> "The garden will only be available for tours, in order to spark interest and participation. Tours shall be given by individuals with specific expertise. Everyone else besides staff members are not allowed near. This is to prevent any damage and or litter to affect the garden. Tours must be booked ahead of time via call or online to sign up for designated time slots."</li> <li><b>Lot/Team B's Response:</b> "The garden will be open to the public. People who sign up for a plot have to pay a fee to use it and will be responsible for it. The garden board will oversee the activities of the members in the garden."</li> <li><b>Lot/Team C's Response:</b> "Yes, open to the public every day. Plot owners will volunteer shifts to supervise the garden."</li> <li><b>Lot/Team D's Response:</b> "The garden could be open to the public on weekends and by appointment, so that nearby schools could use them as a learning tool."</li> </ul>
11	What will be the name of this garden?	Give a temporary name to your proposed concept. <i>*The same reason applies here as the above.</i>	<ul style="list-style-type: none"> <li><b>Lot/Team A's Response:</b> "East Barnard Community Garden."</li> <li><b>Lot/Team B's Response:</b> "The garden will take the church's name and be called the Bethel AME Church Community Garden."</li> <li><b>Lot/Team C's Response:</b> "Bolmar Street Gardens"</li> <li><b>Lot/Team D's Response:</b> "John O. Green Memorial Garden (named after a former police chief of the borough, also the namesake of the park)"</li> </ul>
12	Where can the residents do soil testing?	Make a recommendation. Check where/how the residents can do soil testing affordably.	<ul style="list-style-type: none"> <li><b>Lot/Team A's Response:</b> "<a href="#">Soil Testing Kit from the Amazon.</a>"</li> <li><b>Lot/Team B's Response:</b> "The garden board will provide soil testing kits. The kits will be paid for through fundraising, grants, and the fee gardeners have to pay to use a lot. Kits can also be purchased online through sites like Amazon."</li> <li><b>Lot/Team C's Response:</b> "<a href="#">Penn State's Agricultural Extension</a> (Tests run as low as \$9 and can include add-ons for an additional cost.)"</li> <li><b>Lot/Team D's Response:</b> "Tests are available from Penn State's Agricultural Analytical Services Lab. Additionally, tests can be found on Amazon for under \$20."</li> </ul>
13	Budget	EPA Urban Farm Business Plan Worksheets	See Chapter 9 (1/2) of this report.

#	Task/Question	Recommended Approach/Method	Results of Analysis/Assessment
14	<b>Funding Sources</b>	Identify and recommend potential funding sources (and suggest how they might be obtained).	See Chapter 9 (2/2) of this report.
15	<b>Designing the Garden</b>	ArcGIS Urban, ArcGIS Pro, and SketchUp (if necessary)	See Chapter 10 of this report.



## Chapter 9: Funding Plans

As 2/3 of the course's milestones were achieved, students initiated physical planning and design of the proposed community gardens and decided on funding sources to make recommendations for financial planning.

According to loby (2018), most successful community gardens wind up containing some version of the following, although every garden is different:

- 15 or more plots assigned to individual members, located in the sunniest part of the garden.
- Raised bed plots (if any) that are no more than 4 feet wide, and between 8 and 12 feet long.
- In-ground ground plots (if any) that measure between 10 by 10 feet up to 20 by 20 feet.
- Paths between beds that are no narrower than 3 feet—you want wheelchair accessibility!
- Soil that is amended with aged compost or manure.
- A simple irrigation system for every four plots.
- A tool shed or similar structure for storing your supplies. (Recycled metal shipping containers make super storage sheds!)
- A picnic table where gardeners can sit, relax, and have a snack. (Locating this in the shade of trees is best, or you can build a simple arbor and plant it with vines.)
- A composting area. (Wood pallets can often be sourced for free from local businesses and make great DIY compost bins! Search online for simple construction plans.)
- A sign. (You want the whole neighborhood to know the garden's name. It's also wonderful to shout your sponsors out with signage, and to include an email address or other contact info for neighbors. Make sure this info is in multiple languages if your community is bilingual --- e.g., Spanish and English.)

The proposed community gardens (which are also built and designed in an ArcGIS Urban 3D model) aimed to reflect most of the above principles. Each team decided on some details about the layout of their proposed community garden using the [Urban Farm Business Plan Worksheets by EPA](#). Each team first decided on the following elements of the garden:

- Total length
- Total width
- Width of row
- Footpath area
- Tool storage area
- Composting area
- Other

Once each team completed the worksheet (#17), students began financial planning, by identifying potential funding sources.

Typically, in addition to those basic "inputs (seed, water, etc.)" costs, common costs include:

- Tools (everything from spades and gloves to watering cans and hoses).
- Construction materials for beds, benches, bins, and more.

Assuming each community garden needs \$1,500 for the common costs, each team calculated how much should be funded at the beginning of the project, by adding the common costs (\$1,500) to the "Annual Cost of Inputs" previously calculated in the worksheet #17. (According to The Community Garden Start-Up Guide authored by UCCE, starting a basic community garden typically costs between \$2,500 and \$5,000.)

The most common ways of funding a community garden include:

- Membership dues
- Cash or in-kind sponsorship from community organizations and/or your city's department of parks and recreation
- Applying for grants
- Crowdfunding

After each team calculated how much would be initially required for their proposed community garden (\$1,500 for Set Up + Annual Costs of Inputs), each team created a Funding Plan with a set of recommended approaches and strategies.

***Each team's EPA Worksheet (full details) is available in the Appendices section of this report.***

### Lot/Team A

Estimated annual cost of input for 3 seasons: \$1995 (\$1995+\$1500) = \$3495. Percentages are calculated based on \$3500.

- **Membership dues (21%):** \$30 per person (estimated \$750 total)
  - Team A's Explanation: "We chose this funding source to attract members of the community with a low membership fee. We think with 25 members at \$30 per person we will be able to make \$750. We want to keep it a yearly fee and at \$30 dollars we believe it is affordable enough to keep people committed during the non-growing season, but also allow them a very good deal during the growing season to take home produce. Members will be allowed access to the garden as a recreation area, they will be allowed access to the community produce. Possibly even have volunteers put together produce boxes every harvest that way we all members are receiving the same amount of produce. Members also have access to the community compost bin. Members are also expected to help maintain the garden. A garden association should be formed, and members should have the opportunity to elect representatives to chair the association. This association is all voluntary but is necessary to help organize and maintain membership. We want to promote a healthy diet and membership participation by keeping our membership fee affordable. The garden will offer fresh fruits and vegetables in a walk distance and can promote community engagement."

- **Cash or in-kind sponsorship from community organizations and/or your city’s department of parks and recreation (29%): \$1000**
  - Team A’s Explanation: “We have chosen to ask the West Chester parks and recreation department to sponsor our community garden with a \$1000 donation. We figured that the parks and recreation department would be likely to sponsor the community garden because it benefits and promotes the well-being of the community. It also engages community members in outdoor physical activity, which is the whole goal of the parks and recreation department. Residents can initiate contact with the parks and recreation department by attending community planning meetings and asking for their help in sponsoring the community garden.”
  
- **Applying for grants (29%): \$1,000**
  - Team A’s Explanation: “We wanted to use grants to help fund our source because there are lots of different types of grants to choose from. Especially, on the state and federal level there are lots of different grants that we could apply for that would most likely be able to cover our \$1,000 goal. The issue with federal and state grants is that there is a larger number of applicants and organizations applying for these funds. Federal and state grants will exceed our \$1000 goal. That's why we also wanted to look at local grants available because there would be more incentive for a community organization to award us the grant because the money would be staying within the community and there is a smaller applicant pool. Also, we believe our \$1,000-dollar goal is not unreasonable for a local organization to grant us.”
    - Federal/State:
      - Urban Agriculture Resilience Program
      - [EPA Environmental Education](#)
        - Team A’s Explanation: “The EPA provides grants to organizations that provide environmental education. Our garden can provide educational opportunities for youth and the surrounding area.”
      - [People's Garden Grant Program](#) (PGGP)
    - Private:
      - [Fiskars Foundation](#)
        - Team A’s Explanation: “The Fiskars Foundation provides \$3500 grants as well as \$1000 for equipment to create community gardens across North America.”
    - Local:
      - West Chester Downtown Foundation Community Grants
        - Team A’s Explanation: “The West Chester Downtown foundation offers grants to organizations within the West Chester Community that have a goal of bettering the area and citizens of West Chester. Our community garden project would fall under this criterion as it will add a lot of value to the East End community and West Chester in general. For the local grant through the West Chester Downtown Foundation you must submit an application that defines the organization and the purpose for the grant. You must create a

mission statement and then continue to define how the \$1,000 (or whatever amount you ask for) will be used.”

### Lot/Team B

Estimated annual cost of input for 4 seasons: \$9809 (\$9809+\$1500) = \$11309.

- **Membership dues (40%):** \$4524 (\$25 monthly fee, approximately 15 lots)
  - Team B’s Explanation: “Planning for individual lots. Members are repaid with a location for buying and selling of their crops.”
- **Cash or in-kind sponsorship from community organizations and/or your city’s department of parks and recreation (40%):** \$4524
  - Team B’s Explanation: “The opportunity of larger sums of money (West Chester University, Bethel Church, and Melton Center). Select a member of the garden board, act as negotiators for these organizations.”
- **Crowdfunding (20%):** \$2262
  - Team B’s Explanation: “Gives us an opportunity to gauge interest of the overall community. Go fund me and Donation pots (distributed in popular areas). Twitter, Facebook any type of online social media or local newspaper/source.”

### Lot/Team C

Estimated annual cost of input for 3 seasons: \$3572 (\$3572+\$1500) = \$5072.

- **Membership dues (25%):** \$1268
  - Team C’s Explanation: “We selected this funding source because we pre-planned that growers would purchase their plot(s) on an annual basis. To make the memberships affordable, we chose to limit the dues to 25%. The membership dues will be directly applied towards the cost to run the community garden (e.g., utilities, materials, etc.). The membership dues should be affordable but lucrative enough to cover 25% of the operating expenses. We believe we can fit a minimum of 15 plots bringing the dues to \$84/plot to cover the utility costs. However, we can create plots at various sizes and create a scaled plot size and membership system. This will offer a more affordable option for those looking for a smaller plot. Additionally, members may elect to be reimbursed if grants and other fundraising efforts yield more revenue than needed to cover expenses (see sections below or more details.) In addition to covering the cost of utilities, the dues will also allow members to use the communal plots to grow additional crops with the benefit of splitting the work between each of the participants in the plot. Members will also benefit from free programming where experts come to educate about different aspects of gardening.”
- **Cash or in-kind sponsorship from community organizations and/or your city’s department of parks and recreation (50%):** \$2536
  - Team C’s Explanation: “Given the number of businesses and strength of community support in West Chester, we felt that we could successfully fundraise 50% of the operating costs through sponsorships. Sponsorship program ideas include: purchasing a pathway in the garden, naming tools after businesses, sponsoring a plot where businesses compete for the

biggest/heaviest produce (e.g., biggest pepper), advertising signage, and more. The non-profit overseeing the garden will coordinate with the local business district and the Borough's Park and Recreation department to deploy this fundraising campaign. The community garden non-profit volunteers will conduct outreach to businesses and residences for fundraising. Additionally, the non-profit will also sell portions of each grower's yield at local farmers markets in order to generate revenue. There is a growers market in the Borough that operates year-round with significant patronage. This location would be a prime spot to sell the garden's produce."

- **Crowdfunding (25%): \$1268**

- Team C's Explanation: "Crowdfunding is an important tool because it provides the opportunity to leverage donations from sources located outside of the West Chester area. For example, someone who moved out of West Chester may see the Kickstarter campaign and feel that a community garden would be an important asset for their former home, and so they donate. Kickstarter campaigns also allow donors to receive goods in return; if donors provide funding upfront, it will help cover immediate expenses and in return, the donors will receive produce once the garden becomes productive. While crowdfunding presents a viable fundraising option, we are limiting it to 25% of the planned income because we feel sponsorships are likely to be the main funding source. There are many crowdsourcing platforms available, but the fee structures are variable. The group will consider the most affordable platform at the time of roll-out."

- **Applying for grants (0%): \$0**

- Team C's Explanation: "Due to the unreliability of grant awards, we chose to dedicate 0% of the planned funding from grants. However, the non-profit overseeing the garden will apply for grants from the state, federal government, non-profits, and private entities. If grant applications are successful, the awarded funds will be put towards reimbursing plot membership dues and/or pro-rating the following season's dues. This option allows the non-profit to budget with stable funding sources while still affording the members the opportunity to be partially reimbursed for their dues. This also incentivizes the non-profit volunteers to seek out grant opportunities and maximize their potential reimbursement. The volunteers may consult with the Borough staff or business sponsors for assistance in applying for grants if necessary. For example, an accountant who purchased a sponsorship might offer assistance to help the group develop annual spending plans that can be included in grant applications."

### Lot/Team D

Estimated annual cost of input for 4 seasons: \$3297 (\$3297+\$1500) = \$4797.

- **Cash or in-kind sponsorship from community organizations and/or your city's department of parks and recreation (84%): \$4000**

- Team D's Explanation #1 (why): "Due to the location of this garden being positioned inside the John O Green Memorial Park the West Chester Borough Parks & Recreation Department should provide a grant of \$4,000 each year to cover any renovations/expenses/additions to the garden. In the world of parks renovation \$4,000 is less than what it would cost to repave



the area that the garden covers and this amount is cheaper than purchasing a piece of play equipment that is compatible with those in the first remodel of the park across the street. This fund could also improve the walking path/stones in the garden or help fund a portion of the purchase of a gazebo to put in the garden area after a couple of successful seasons.”

- Team D’s Explanation #2 (where): “The West Chester Borough Parks & Recreation Department will do this as they ‘strive to make West Chester a healthy, fun community’. Their mission statement is ‘to provide a variety of safe, affordable and enjoyable educational and recreational programs and activities that enhance the quality of life in West Chester now and for generations to follow’ (west-chester.com). By funding a portion of the garden expenses the Parks & Recreation Department is allowing for the community garden to be affordable for its residents by reducing membership fees. The garden will also be an educational place that enhances the quality of life of the residents whether they are a member of the garden, a passerby, or a park visitor.”
- Team D’s Explanation #3 (how): “The Parks & Recreation Department is an agency under the power of West Chester Borough. All the information to contact them is at west-chester.com. This sub site for the Parks & Recreation Department has current COVID updates, summer camp info, bus trip information, events, park rules and regulations, sponsorship opportunities, applications & forms, and FAQ’s. More details can be found on the site or if any information is not covered a visitor can reach out to the department directly for an answer.”
- **Crowdfunding (16%): \$797**
  - Team D’s Explanation #1 (what): “Gofundme.com is a popular crowdfunding website. The Fillmore Gardens Community Garden in New Orleans successfully used that website to meet its goals. Causes.com can work if the entity is a nonprofit. Indiegogo has a good reputation for community projects. The fees for all sites can differ, so that needs to be considered as well.”
  - Team D’s Explanation #2 (how): “Starting with the chosen website, the crowdfunding campaign will need to be advertised. A strong social media presence is crucial. The more people who are aware of the campaign, the more donations. Additionally, it can help bring in larger donations or others who may be interested in sharing their time.”
- **Applying for grants (0%): \$0**
  - Team D’s Explanation: “We did not choose this option as the majority of grants require that your group be a 501(c)(3) nonprofit, and it would cost money to do that and then the grant money would not be guaranteed.”

## Chapter 10: Imagining Community Gardens

To *design* the proposed community gardens, an ArcGIS Urban model of West Chester (courtesy of Dr. Gary Coutu) was used. In this model, “East End Community Gardens” was created, through which each team can create and design their proposed community garden in a 3D environment. (The ArcGIS Urban has a designated feature/command called "Project" to plan and design hypothetical development scenarios in an ArcGIS Urban model.)

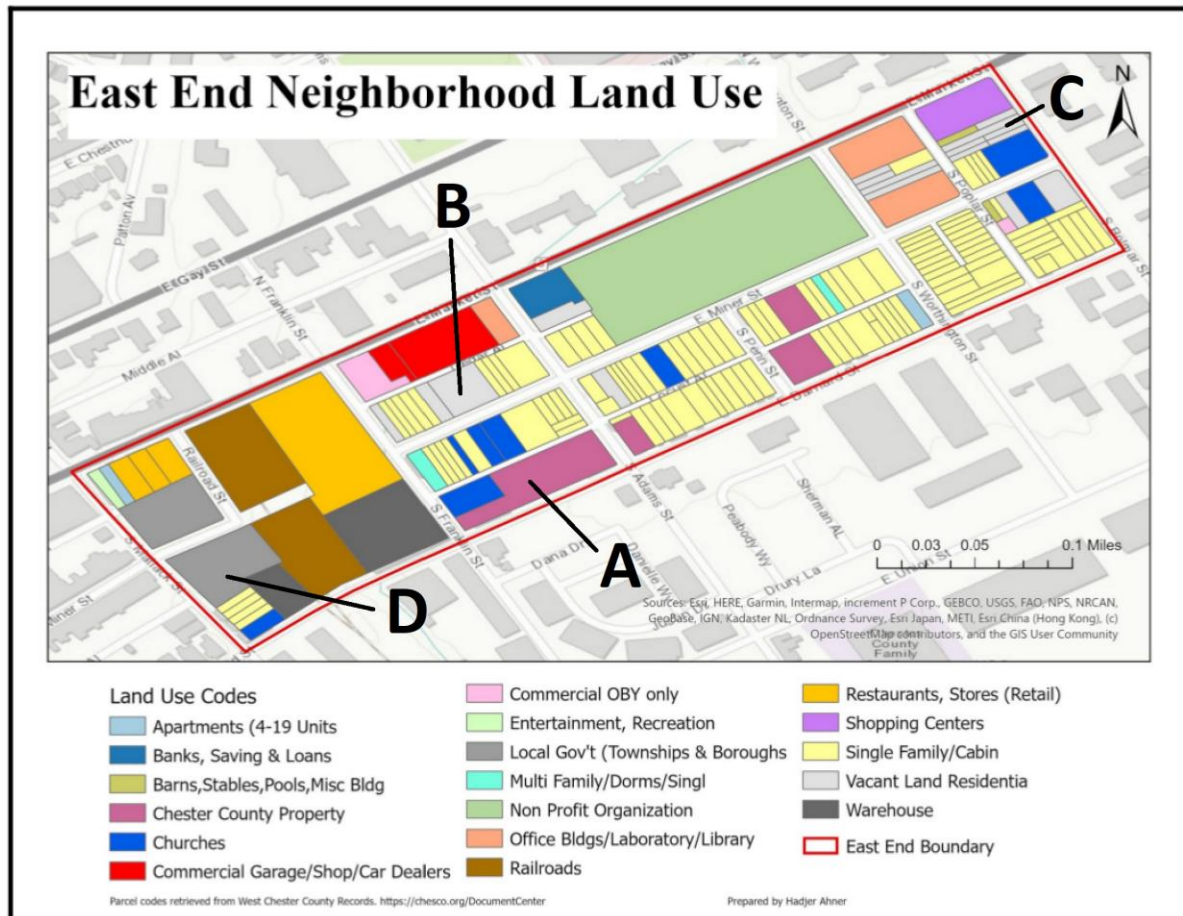


Figure 27 – East End Land Use and Potential Lots (A, B, C, and D)



*Figure 28 - Location of Team A's Lot*



*Figure 29 - Location of Team B's Lot*



*Figure 30 - Location of Team C's Lot*



*Figure 31 - Location of Team D's Lot*



a. Team A's Design Proposal



## 8-1. Urban Models and Posters: Team A



## 8-1. Urban Models and Posters: Team A

### A simple and Practical Concept

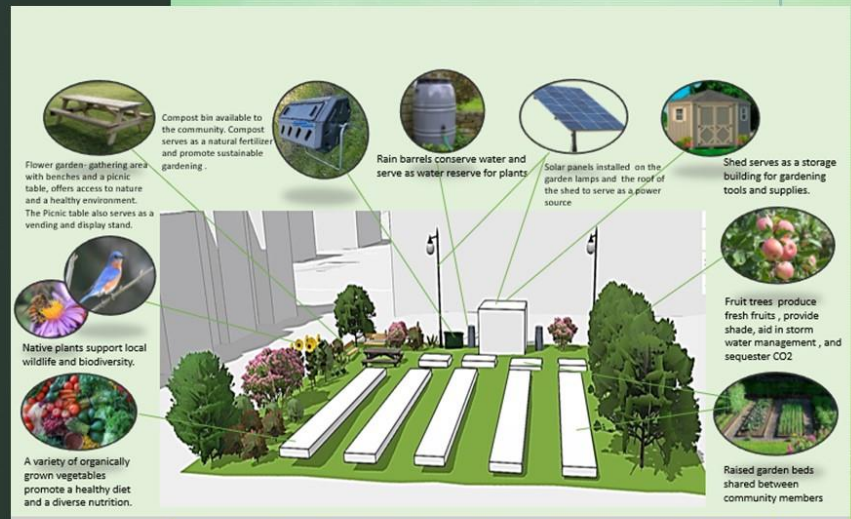
- Manageability
  - Clean ups
  - Ground maintenance
  - Planning crops
  - Repairs
- Appeal
  - Beautiful green space
  - An exciting new sense of place
- Affordability
  - Funding projects
  - Membership cost
  - Supplies
  - Mangement





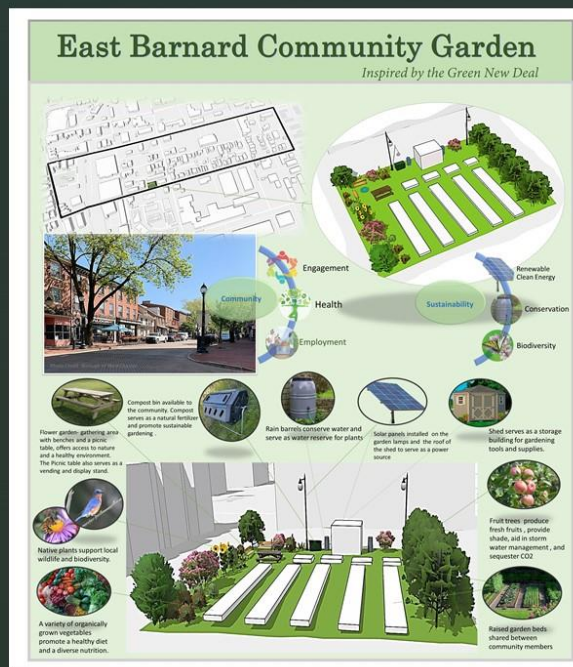
## Components align with the Concepts of the Green New Deal

- ☐ "Access to healthy foods"
- ☐ "Renewable, and zero-emission energy sources"
- ☐ "Clean air"
- ☐ "Biodiversity"
- ☐ "Access to nature"
- ☐ "Jobs"

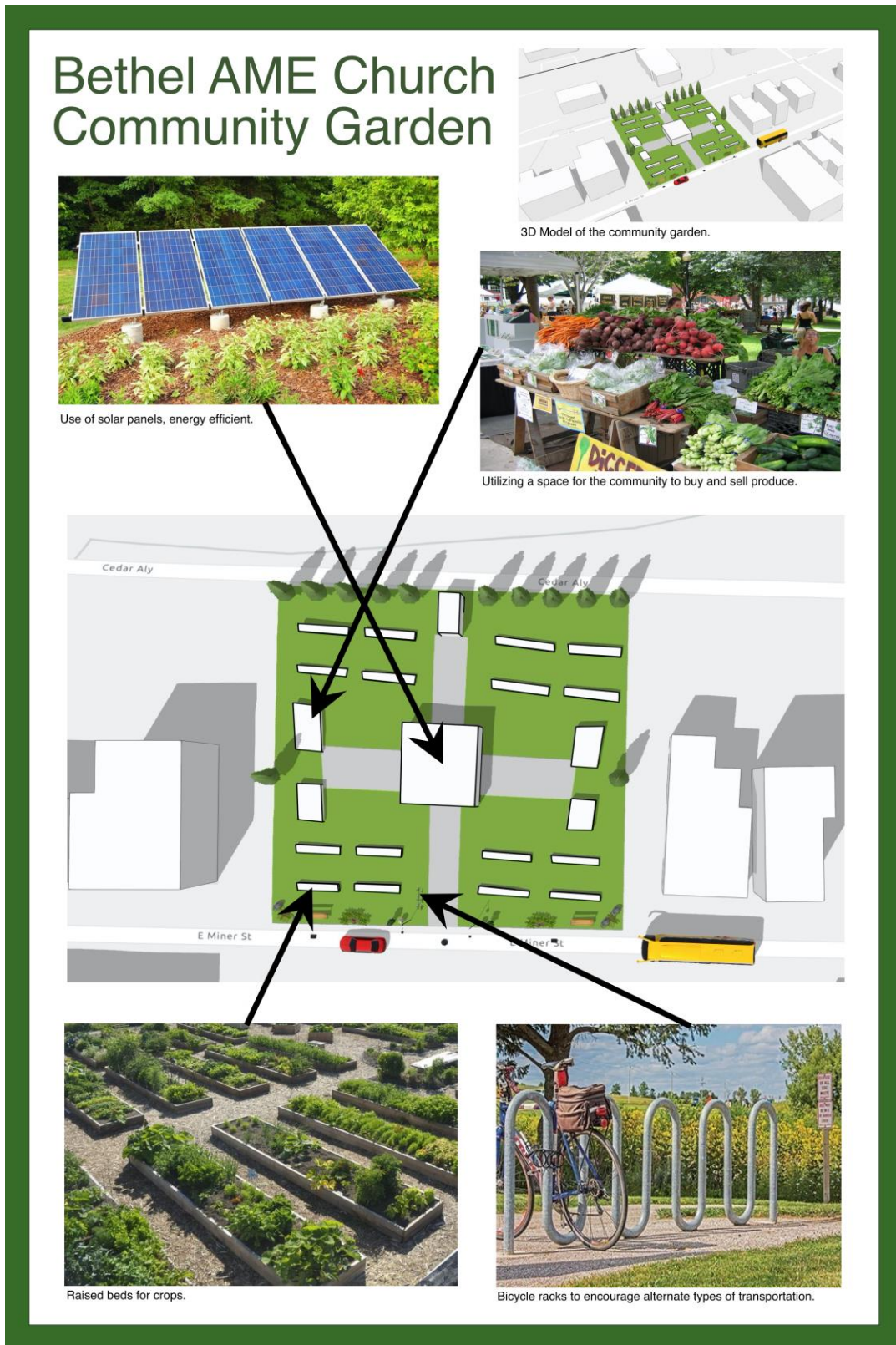


## 8-1. Urban Models and Posters: Team A

### East Barnard Community Garden Poster



b. Team B's Design Proposal

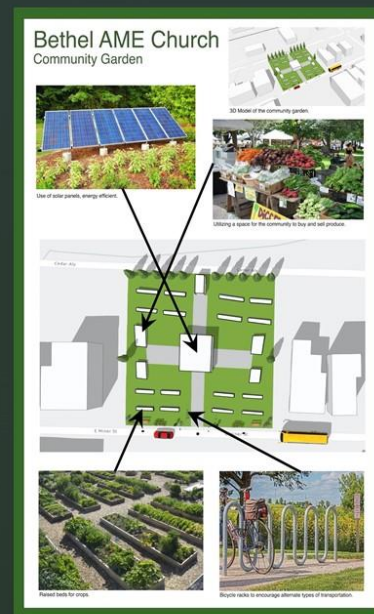


## 8-2. Urban Models and Posters: Team B



## 8-2. Urban Models and Posters: Team B

Inspired by the Green New Deal

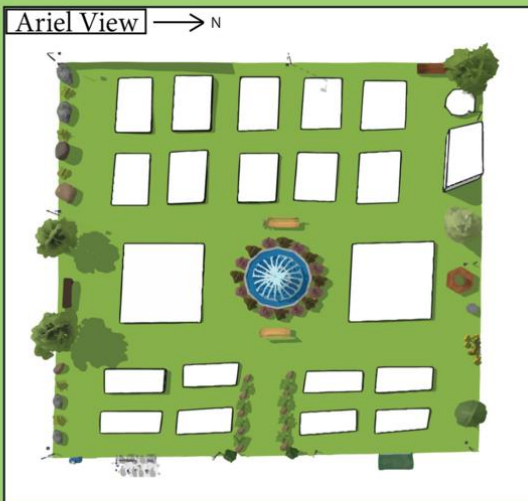




# Market Street Plaza Community Garden

Inspired by Green New Deal Concepts

Located near Mount Carmel Church on Bolmar St, West Chester PA

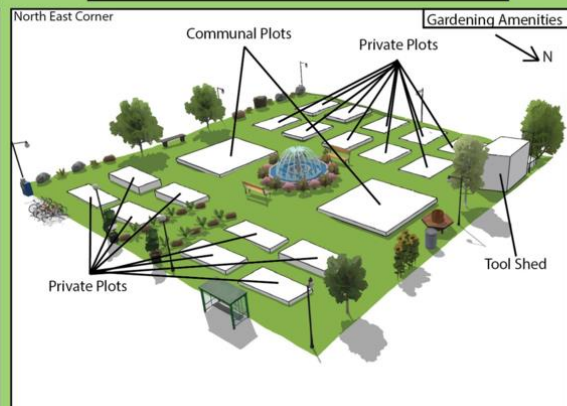
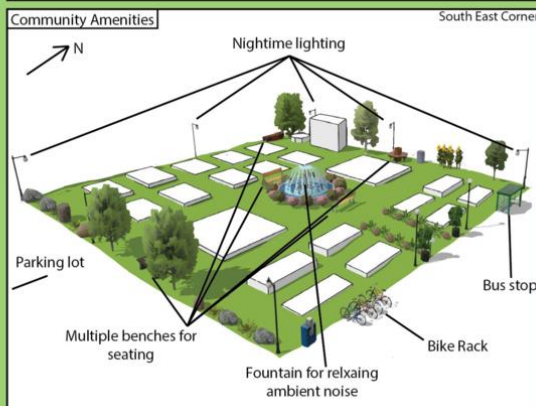


This community Garden fulfills the goals of the Green New Deal!

This garden:

- Empowers residents
- Beautifies the neighborhood
- Promotes sustainable foods systems
- Addresses food deserts
- Supports environmental justice

Grow a community,  
Grow a garden!



GREEN NEW DEAL SUPERSTUDIO



Team C: Abbey, Dan, Emily, Rich, Jon

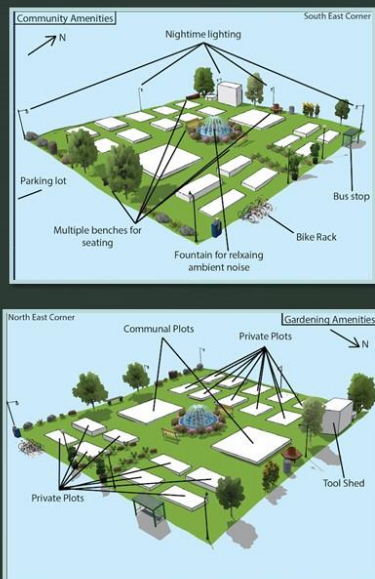
### 8-3. Urban Models and Posters: Team C

- Market Street Plaza lot in the northeast section
- Receives full sunlight for most hours of the day until 4pm.
- Relatively flat area of land.
- Located within at least a one block minimum from homes.
- Clean site with no debris, based on google earth.
- Site is in neighborhood conservation group 2, block class C.



### 8-3. Urban Models and Posters: Team C

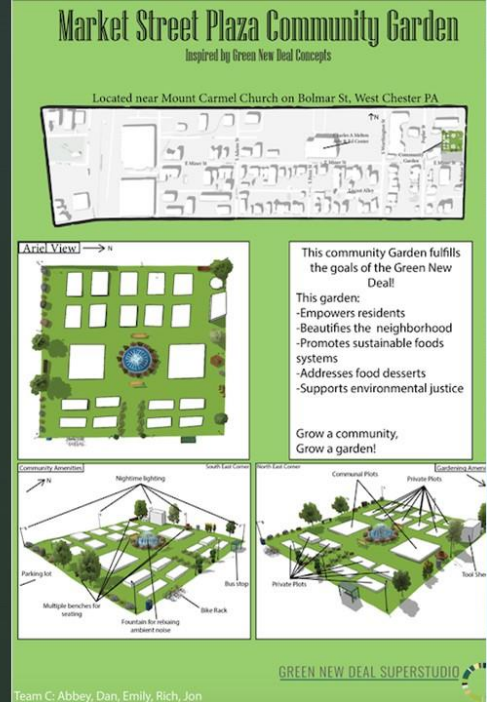
- Semi communal; individually owned plots with 2 communal plots.
- Open to the public every day, dawn to dusk.
- Plot owners will volunteer shifts to supervise garden.
- Growing tomatoes, corn, zucchini, cucumber, and peppers.
- Community amenities: nighttime lighting, a parking lot, benches for seating, a fountain, a bike rack, and a bus stop.
- Gardening amenities: two different sized private plots, two large communal plots, a tool shed, compost machine





## 8-3. Urban Models and Posters: Team C

- Exemplifies the benefits of the community garden and relates it to the Green New Deal goals.
- This garden:
  - Empowers residents
  - Beautifies the neighborhood
  - Promotes sustainable food systems
  - Addresses food deserts
  - Supports environmental justice principles



d. Team D's Design Proposal

## John Green Memorial Park Community Garden

**A great community location to gather and relax**

The John Green Memorial Park Community Garden is a community gathering spot proposed for one of West Chesters most densely populated neighborhoods.



**Raised Garden Beds**

**Semi-permeable Pavers**

This park is an attempt to provide local area residents with the tools they need to reduce community hunger and increase civic participation, all the while providing an opportunity to work towards mitigating the effects of the climate crisis.



Sustainable farming and equitable food practices affect everyone, no matter if you can afford quality sustenance or not.



With this garden providing a steady supply of year round produce to local markets, food security will increase and families experiencing food instability have more options and tools at their disposal.



60



## 8-4. Urban Models and Posters: Team D John Greene Memorial Park

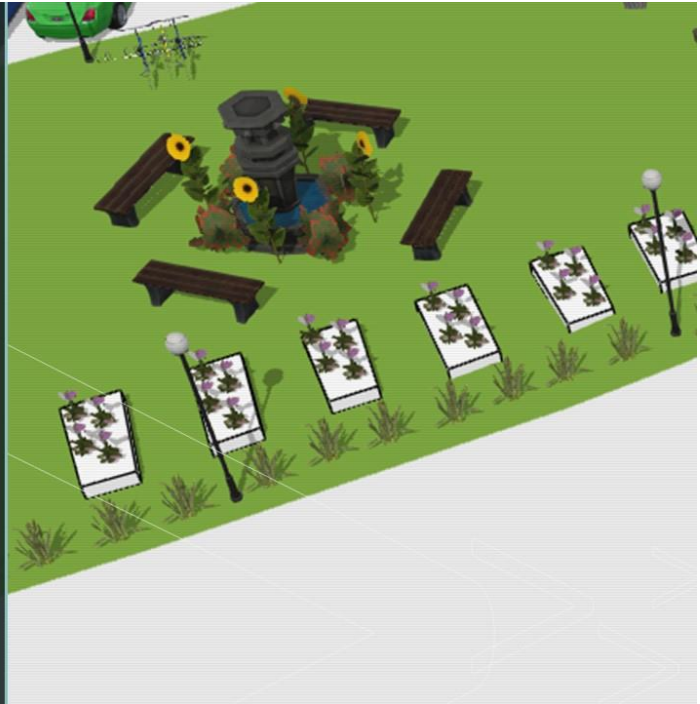
62



Bike Rack  
4 Benches  
Fountain  
2 Picnic Tables  
Compost Bin  
18 Raised Beds



## Hedge Row Street Lighting



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## Appendices

### 1. Green New Deal + Community Garden Team Presentations

#### a. Team A's Presentation

# Community Garden Proposal

By Hadjer, Maeve, Wes, Ryan and  
Jordan

## Green New Deal Summary

- Green New Deal History
  - The Green New Deal is a policy focusing on improving economic stability while working to fight the climate crisis. Inspired by FDR's New Deal the Green New Deal is being fronted by Rep. Alexandria Ocasio-Cortez.
- What we will cover:
  - "Renewable, and zero-emission energy sources"
  - "Access to Healthy Foods"
  - "Clean air"
  - "Biodiversity"
  - "...job creation and economic, social and environmental benefits"
  - "Access to nature"



**East End Neighborhood Proposed Community Garden**

■ Garden Site  
■ HACCC Property  
■ East End Boundary

Site area: 7,943 square feet

0 0.01 0.01 Miles

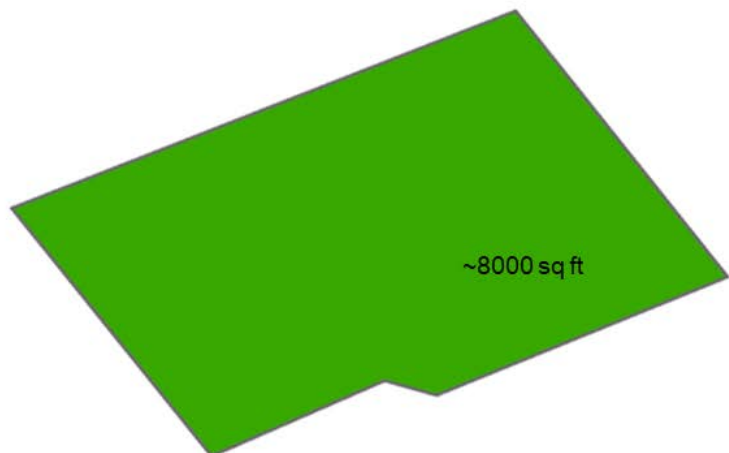
Prepared by Hadjer Almer PLN505 Fall 2020

## Proposed garden

The community garden will feature

- Native plants, trees and shrubs,
- Orchard
- Vegetable garden
- Butterfly garden with a sitting bench, and a water feature
- A bench table
- Storage shed made with recycled materials
  - solar panels on the roof to use as a source of renewable energy
- A compost bin
- Rain barrels,
- Boxed garden (herbs)

Create garden sections that serve the diverse benefits and interests of the community.





Sketched in [smallblueprint.com](http://smallblueprint.com)

## “Renewable, and zero-emission energy sources”

### Solar panels: a clean source of renewable energy

- Power the community garden and its operations
- Cuts on cost
- Eliminate the need to connect to the power grid
- Power source for visitors (phones, laptops) and the neighborhood potentially.



Approaches, Methods and Tools for Solar Energy in Urban Planning. (n.d.).



## “Biodiversity”

### The creation of the garden

- Support of the local biodiversity
  - Birds (local and migrators)
  - Pollinators
  - Creates an urban habitat
- Biodiversity of food
  - Variety of produce
  - Nutrition
  - Benefits



(Lynn, A., & Ning, P. (n.d.). *UBC Community Garden Biodiversity*.)

## “Clean Air”

### Native trees

- Remove air pollutants
  - Ozone
  - Sulfur dioxide
  - Carbon dioxide
  - Nitrogen dioxide
- Reduce volatile organic compounds (VOCs) in the air

Equally,

Reduce energy with shade in summer and coverage from wind in winter.

(Nowak 2002)





## Focus on “Sustainable Environment”: Environmentally Conscious Gardening Practices

- No use of synthetic fertilizers
  - Use natural fertilizers
    - Use compost created within the garden
    - Reach out to local farmers for manure
- Conservation of water
  - Rain Barrel
  - Teach proper watering methods
  - Clearly label and note how much water each plant needs
- Opportunity for composting
  - Create compost for waste that comes from garden
  - Also allow for community to bring their compost to the garden
  - Educate and clearly state what can be put into compost and what cannot



## Urban fruit and vegetable garden “Access to healthy foods”

- Reduce Food insecurity in disadvantaged neighborhoods
- Provides community with fresh fruit and vegetable and promotes eating a healthy diet
- Get community members involved in a skill building, physical activity.
- Getting community members to participate an interactive community garden can improve mental health
- Can encourage community members to grow their own personal food at their homes too



## “Access to Nature”

- Improves environmental health in the community
- Provides shade reducing heat island effect
- Connects disadvantaged communities to nature
- Gives community a public green space to gather



## Job Creation and Economic, Social, and Environmental Benefits



1. Create a permanent job opportunity for community members
  - a. Care for the garden, manage sales, plan events
  - b. Create a local micro economy for the neighborhood
2. Connect with local schools for educational programs similar to the Youth Garden Project (<https://www.youthgardenproject.org/> a good model)
  - a. Teaching community members (kids, and parents), essential gardening skills and the benefits of growing food locally
  - b. Growing food drastically reduces personal carbon footprints for whoever participates, due to less reliance on food that has to travel great distance.
3. Having high participation in our community garden reflects an increase in community engagement
  - a. Communities that have engagement are prone to positive change.

## Works Cited

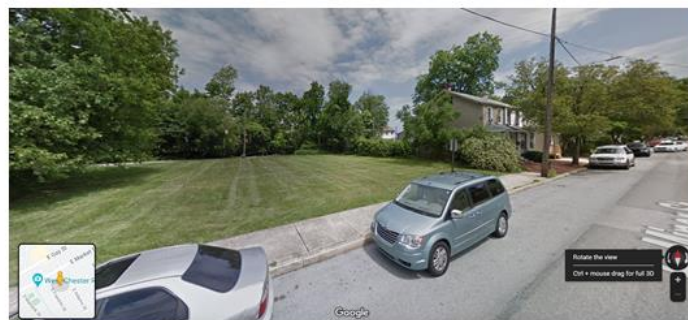
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# Community Garden Across From Bethel AME

By Mahmood, Julia, John, Aidan and Matt

## Bethel AME Lot Proposal

- Located in between 334 E. Miner St. and 316 Cedar Alley.
- Just across the street from the church.
- Proposal: Turn this lot into a community garden for the East End.





# Green New Deal

HR109 AKA "The Green New Deal."

Main Goals (to be achieved in 10 years):

- Achieve net-zero greenhouse gas emissions in a way that is fair for all communities and workers.
- Create millions of good, high paying jobs and secure economic security and prosperity.
- Substantial investment in US industry and infrastructure to meet the needs of the 21st century.
- Clean air and water, climate/community resiliency, healthy food, access to nature and a sustainable environment for future generations.
- Promote justice and equity by stopping current, preventing future and repairing historic oppression of disenfranchised communities (minorities, immigrants, indigenous peoples, deindustrialized communities, depopulated rural communities, the poor, low-income workers, the youth, people with disabilities).





## Solar Power Panels

- One of the main goals of The Green New Deal is to have net-zero emissions by 2050. For our site location, Bethel AME Church, we strived to find alternative solutions to items that produce emissions. One of our best solutions was implementing solar power into the community garden.



The solar power panels will enable people of the community garden to use an electric grill, play band instruments, charge their phone, etc.

## Locally Grown Food

- Our local farmer's markets will all have locally grown food, food from the community garden, bake sales, etc.
- Getting locally grown food is better for the environment because the process of getting this food is quicker than getting it at a grocery store. Meaning that many more emissions are produced to ship food to grocery stores and buying it locally reduces that amount of emissions.



## Focusing on a Healthier Community

Control diet for blood sugar level	37	9.2%	80
Control diet for cholesterol level	42	10.5%	94
Control diet for food allergies	9	2.2%	106
Control diet to maintain weight	25	6.2%	66
Control diet for physical fitness	26	6.5%	62
Control diet for salt restriction	16	4.0%	102
Control diet for weight loss	42	10.5%	65
Used doctor's care/diet for diet method	8	2.0%	78
Used exercise program for diet method	16	4.0%	45
Buy foods specifically labeled as fat-free	35	8.7%	97
Buy foods specifically labeled as gluten-free	32	8.0%	131
Buy foods specifically labeled as high fiber	24	6.0%	82
Buy foods specifically labeled as high protein	23	5.7%	64
Buy foods specifically labeled as hormone-free	13	3.2%	86
Buy foods specifically labeled as lactose-free	18	4.5%	114
Buy foods specifically labeled as low-calorie	38	9.5%	142
Buy foods specifically labeled as low-carb	15	3.7%	47
Buy foods specifically labeled as low-cholesterol	35	8.7%	165
Buy foods specifically labeled as low-fat	29	7.2%	87
Buy foods specifically labeled as low-sodium	48	12.0%	109
Buy foods specifically labeled as natural/organic	71	17.7%	117
Buy foods specifically labeled as probiotic	14	3.5%	75
Buy foods specifically labeled as sugar-free	47	11.7%	116
Consider self to be semi-vegetarian	47	11.7%	146
Used meal/dietary/weight loss supplement last 6 months	30	7.5%	84
Used vitamins/dietary supplements in last 6 months	162	40.4%	75

Values greater than 100 represent a higher demand.

Used prescription drug for anxiety/panic	36	9.0%	153
Used prescription drug for arthritis/osteoarthritis	7	1.7%	55
Used prescription drug for rheumatoid arthritis	7	1.7%	67
Used prescription drug for asthma	18	4.5%	114
Used prescription drug for backache/back pain	27	6.7%	101
Used prescription drug for depression	29	7.2%	117
Used prescription drug for diabetes (insulin dependent Type-1)	10	2.5%	110
Used prescription drug for diabetes (non-insulin dependent Type-2)	17	4.2%	94
Used prescription drug for heartburn/acid reflux	21	5.2%	95
Used prescription drug for high blood pressure	27	6.7%	51
Used prescription drug for high cholesterol	19	4.7%	59

## Creating a Sense of Place

A community garden can help achieve this goal.

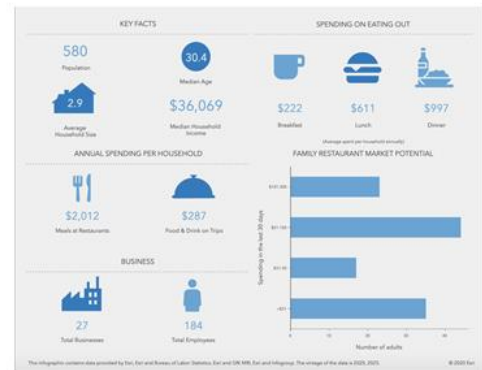
Addition of sustainable furniture and infrastructure (ex: gazebo).

The main goal is to create an attractive space that in turn would turn into a desirable place for the community to interact and get involved.



## Maximizing the Potential of Green Space

- Within our East End Neighborhood boundary, there are 27 total businesses.
- Creation of a space for recreation and leisure.
- Possibly start a domino effect throughout the surrounding areas.





## Jobs and Volunteer Work

- Community Gardens can create jobs and provide employment opportunities for immigrants, veterans, formerly incarcerated, and the differently abled.
- Around 29,000 community garden plots in the US.
- Jobs mostly involving occupation and care for the garden, weeding, mowing, etc.
- Develop job related skills and experience.
- They can provide potential volunteering opportunity for students.



## Effect on Property Values and Investment

- Community gardens can have a statistically significant positive impact on residential property values within 1,000 ft of each garden.
- They help to beautify a community, and homebuyers, especially younger homebuyers, may see the value of having local urban agriculture.
- A cost-benefit analysis also suggests that the gain in tax revenue generated by community gardens within 1,000 feet of residential property may be substantial.
- Leading to capital investments and other improvements.



## Fighting Income Inequality

- Community gardens can offer healthier foods at prices cheaper than what is offered at grocery stores.
- In Lincoln, Nebraska, research comparing the price of vegetables in garden plots to those in grocery stores found that the plots saved an average of \$497.
- This would allow a lot of people, including those with low-incomes, to save more money while growing their own foods.
- Salaries can vary from \$29,000 to \$64,000.



## Conclusion

- A community garden across the street from Bethel AME would be very beneficial to the community, and would be in step with the Green New Deal.
- Give an empty lot a sense of place.
- Would provide locally grown, healthy foods.
- Would be environmentally beneficial.
- Would be economically beneficial and would fight income inequality.



# Green New Deal & Community Gardens

## Group C - Market Street Plaza

Emily Reilly, Abbey Cadden, Dan Rafalovitch, Rich Alimonti

### Green New Deal Considerations

When thinking about our community garden and how it would relate to the Green New Deal, we thought of four categories that would be important to break down.

1. Climate Change
2. Equity
3. Technology
4. Community Benefits



# Climate Change

The Green New Deal aims to protect the environment from the effects of Global Climate Change. The Green New Deal proposes many high and low tech solutions some of which are applicable in our own community gardens. The changes we provide certainly won't fix the problem of climate change all together, but adding these few low tech solutions will be a start and could inspire more communities to do the same.

## Rainwater Absorption

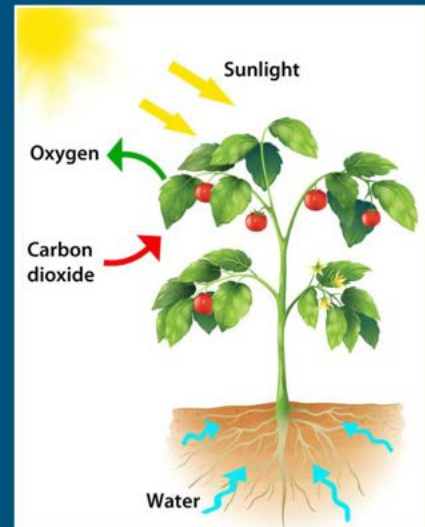
The first climate solution for our community gardens reflects problems of polluted water runoff. Gardens absorb rainwater which reduces the amount of runoff collecting in the streets carrying pollutants. Having a few garden boxes in our land will collect this rain water and protect our streets and water systems from runoff and pollution.



## Reduce Greenhouse Gases

Another goal of the new green deal is to reduce greenhouse gas emissions.

Plants take in carbon dioxide and release oxygen back into the environment. Although the lot is only a small space, it can still help reduce the carbon footprint.



## Less Car Pollution

If our garden produces locally grown fruits and vegetables for the East End community, it may encourage more walking to the garden as opposed to driving a car to the grocery store. As a result, there is potential to decreasing greenhouse gas emissions and automobile reliance.



# Equity

## What?

The Green New Deal shifts traditional economic priorities and financial investment away from carbon-emitting industries because they disrupt the climate and negatively impact humans, wildlife, and global ecosystems.

## How?

In its place, the GND proposes to rebuild a new economy through modern technologies that do not burden the environment or vulnerable populations.

## Why?

One of the main motivators for this change is a reflection that the current economy is inequitable because a very small group of individuals accept the financial benefits while the rest of the population must accept the risks.

## Equity Continued

### *The Green New Deal and the East End Neighborhood*

Creating a community garden in the East End neighborhood enhances the environmental and social equity concepts outlined in the GND because:

- It increases access to greenspace and outdoor activities,
- incentives revitalization,
- and improves accessibility to locally grown, healthy food.

10 THE GREEN NEW DEAL	
In ten key points	
01	 Rapid and total shift to renewable and zero carbon energy sources
02	 A "smart grid" to maximize efficiency and reliability in electricity transmission
03	 A new transportation system focused on high-speed rail and other technologically advanced public transport options
04	 Forest and grassland restoration to recapture CO2; regulation of agriculture to reduce greenhouse gas emissions
05	 Guaranteed job leave, retirement, vacation; tougher workplace safety & anti-discrimination laws; fair wage guidelines
06	 Resources and high-quality education for all, particularly vulnerable, communities
07	 Increased protection of trade unions
08	 Enforced trade rules with stronger environmental & labor protections
09	 Protection of rights and sovereignty of indigenous people
10	 Universal access to health care, housing, economic security, and clean water, food, and air

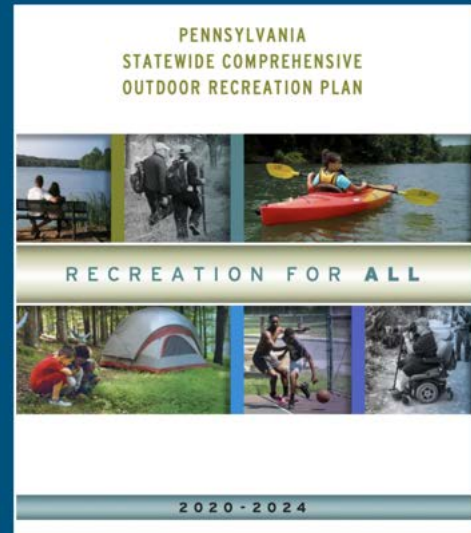
## Equity Continued

### Access to greenspace and parks

Traditionally, people of low-income and/or people of color face unique challenges accessing public parks and greenspace.

- 52% of Pennsylvanians say they can safely walk to a park. Geographic distance, access to vehicle, and cost of public transit are barriers for outdoor recreation.
- 88% of Pennsylvania's outdoor enthusiasts said that outdoor recreation is an essential part of their lives.
- 80% said they would like to participate more in outdoor activities.
- Most participants in the African American group indicated that they "felt uncomfortable in certain recreation areas, particularly at events where they did not encounter many other minorities."

Source: DCNR Statewide Comprehensive Outdoor Recreation Plan



## Equity Continued

### Community Revitalization

The Market Street Plaza Lot is located in a particularly commercially developed part of the Borough. While there may be benefits to having many businesses in the neighborhood, certain aspects of commercial properties can detract from residential property values.

However, community gardens have shown to improve the surrounding land value. Notably, this type of land improvement provides benefits that do not result in gentrification in the way that walking paths and trails do.







## Equity Continued

### Food Deserts

- Over two million Pennsylvanians live in low-income areas with limited access to grocery stores.
- 79% of Pennsylvanians believe it's important that children have access to healthy foods in their neighborhoods
- 70% of Pennsylvanian's support financial incentives to build grocery stores in low-income areas.



Source: [http://thefoodtrust.org/uploads/media\\_items/pabifoldfinal.original.pdf](http://thefoodtrust.org/uploads/media_items/pabifoldfinal.original.pdf)

# Technology

The Green New Deal aims to take the energy footprint behind technological industries and make transitions towards clean and sustainable footprints against clean energy, the manufacturing process, and uses of transportation and agriculture.

This includes, reporting results of company carbon footprints properly, helping consumers and distributors make sustainable decisions, and advocating for reusable and future reliable policies. These ideals focus on understanding the importance between technological products that provide a productive relationship to our society and the protection of the natural environment

## Rain Water Barrels

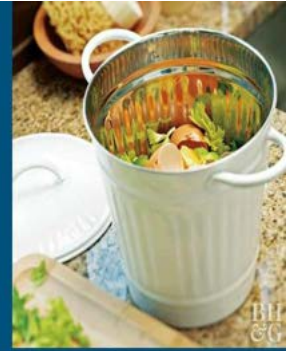
- Repurposing household items
- Rain water contains more oxygen
- Saves money
- Overall garden is healthier
- Natural use of transportation
- Easy to make - DIY





## Growing Your Own Food & Composting

- Healthier food consumption
- Financially beneficial
- Enriches new soil
- Reuses bacteria and fungi in an organic/healthy manner
- Less need for chemical fertilizers
- Reduces methane and carbon footprints
- Fewer trips to grocery store / gardening supplier



BEFORE

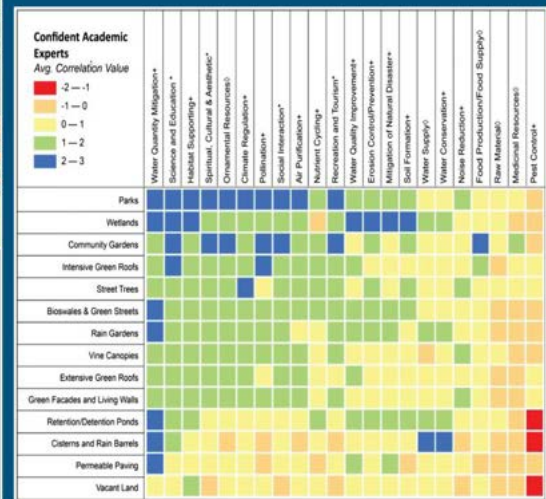
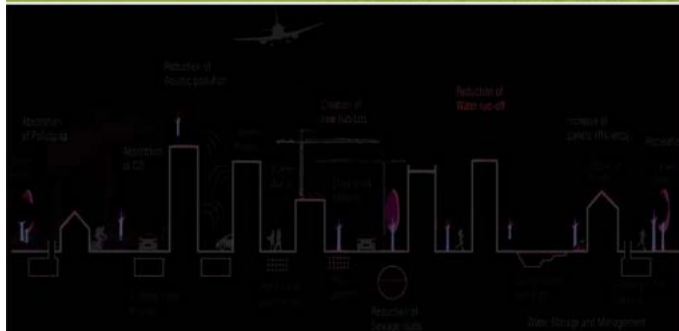


AFTER

## Green Infrastructure

- Examples such as rain gardens, green roofs, tree plantings, and permeable pavements rely on soil, plants, and the natural processes (rain, precipitation, etc.) to create green infrastructures
- Cost-effective
- Resilient against managing stormwater
- Social, economic, and public health benefits





## Community Benefits

- Opportunity to build community ties
- Health benefits
- Education
- Potential job opportunities
- Decreases crime



## Opportunity to build community ties

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The deal would help build community ties if everyone brainstormed ideas together that would help their communities. For example, residents would get to know their neighbors through participation in creating the policy and would often see each other at the community gardens spread throughout their communities.

Gives residents the opportunity to actively participate in helping create the policy that will in turn create a better life for their family and themselves, especially those living in communities facing environmental degradation.

## Health Benefits

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Health benefits include cleaner air if we make our homes and buildings more energy efficient by cutting down on the use of fossil fuels. Other health benefits the deal calls for include universal high-quality healthcare, the clean-up of hazardous waste sites and access to clean water, healthy and affordable food, and nature.

Residents would also find it much easier to live an active lifestyle if the deals call for guaranteed jobs with fair pay, family and medical leave, paid vacations and retirement security became commonplace. Living an active lifestyle is possible if residents can take vacations to clear their minds and not worry about how they put dinner on the table if they couldn't work for medical reasons.



## Education, job opportunities, & decreased crime

---

Many decent and rewarding new jobs may be created for residents of small communities. This can be beneficial for those previously employed in fossil fuel industries.

The deal also calls for free higher education which could possibly cut down on the amount of crime in many communities, providing residents with the opportunity to better themselves through higher learning that may not have been affordable before.

# Module 6 Group 4 Team D

## Midterm Presentation

Cameron Pursel, Mike Staropoli, Patricia Quinn,  
Alex Sankaran, Evan Gardi & Caitlin Pedersen

### Farmers Market on the Plot - Cam

- Reduces emissions from produce being sold as is, not by being heavily processed
- Captures carbon from the atmosphere in both the community garden, and incentivizes farmers to grow crops that they otherwise may not have been able to sell
- Creates a walkable location for people in the neighborhood to source produce, rather than a grocery store that needs to be driven to



## Park Enhancements and Accessibility - Alex

- Redo and regrade sidewalks surrounding the plot for esthetics and ADA compliance
- Remove current fencing that hinders access to land, replace with decorative fencing to change mood
- Create a new entrance from Matlack Street
- Add bike racks
- Repaint parking spaces
- Add signs around the neighborhood for wayfinding



## Making the most of a small space



Using vertical and raised bed gardens will yield more than raised beds alone. The raised beds can also be covered to grow hearty vegetables like broccoli, spinach, kale, peas, etc. In the winter months.





## Building Green on Concrete

- Creating a vegetative fence between garden area and the basketball court
- Slope the concrete basketball court towards the garden area
- Allow rainwater to flow towards the natural fence area
- Use the separation of the court and garden as a rainwater basin



## Community Engagement in the New Garden - Mike



With the construction of this new garden comes a great opportunity for the community members to express themselves and socialize with others in the town. When people are engaged, it is proven they are more likely to invest their time and effort and come back to the garden.

## Incorporation of Green Infrastructure- Evan



- Remove metal fencing and replace with natural fencing with the use of shrubs/bushes.
- Replace concrete/macadam with grass or permeable pavers.
- Create community garden boxes to give residents fresh produce and the elderly/unemployed population a hobby or a job.





## 2. Community Garden Individual Case Studies

### a. Abbey Cadden, PLN 505

Hillside Community Garden

A Case Study of Hillside Park Community Garden  
Abbey Cadden  
West Chester University

### **Introduction**

Hillside Park provides a vast area for families to recreate, athletes to compete, and green thumbs to grow produce. Thirty-five years in the making, a large parcel of land once owned by a state-run psychiatric hospital now provides ample outdoor recreational opportunities for the five surrounding boroughs and townships. Residents quickly became to treasure the expansive outdoor area and the new park amenities. While all aspects of the park are revered, one aspect of the park, the community garden, faces its own set of challenges and successes. Its smoothly run operation is due to a group of dedicated volunteers who offer hundreds of hours of free manual labor and community coordination every year.

### **Background**

Hillside Park is nestled in South Abington Township, a community located in Lackawanna County, Pennsylvania, as highlighted in figure 1. Within its 100-acre footprint, the park offers a playground, picnic area, pavilion, dog park, walking trails, farmers market, athletic fields, fishing and boating activities, and a community garden (Johnson 2020) (figures 3-4).

The park's origin story began in the 1980s when the state established a municipal authority, the Abington Area Joint Recreation Board (AAJRB), to manage the 100-acre parcel of land formally belonging to the neighboring State Hospital facility. The state specifically requested that the land be developed into a recreational area for the community. In the early 2000s the AAJRB developed a master site plan and a community needs survey in which a community garden was identified as a desirable project. Now, people travel from across the region to visit this park because it is well-run, clean, scenic, safe, and offers activities for people of all ages (Abington Area Joint Recreation Board, 2020).

### **Challenges**

The garden is located across the street from the majority of Hillside Park, in a prairie field surrounded by woods (figure two, outlined in yellow). This location was ideal because it offered full sun and room for the garden to expand. However, the garden volunteers quickly realized this location also would require a fence to keep out deer, bears, foxes, and other wildlife. This was problematic because the municipalities only provide funding for operating expenses, and a fence was considered a material expense. A solution was quickly devised, and the group networked with businesses, politicians, and community leaders to secure the \$6,000 needed to buy and install the fence (Crowley, 2020).

Next, the garden needed a water supply connection. This was problematic because the volunteers knew that it would be too expensive to pay for public water infrastructure at the garden. Instead, they considered drilling a well, purchasing water reservoirs and holding tanks, and installing rain barrels but ultimately, none of those options were practicable. Soon after, the volunteers were approached by a generous neighbor who offered to help install the necessary vault and tap to access the public water main that ran along the road below the farm. Once installed, the water company connected a meter to the line and the water utility problem was solved (Crowley, 2020).

The group then needed assistance with turning the overgrown field into a space with tilled soil and measured out plots. Like the two previous challenges, the volunteers turned to the community for support and the group was not disappointed. A local farmer offered to bring his

## Hillside Community Garden

equipment and till the land with his tracker, which saved a significant amount of time and labor (Crowley, 2020).

The next significant challenge did not arise until the garden was operating in full force. According to the community garden head volunteer, there was an issue with growers becoming overwhelmed with their excess produce. Normally, the garden donates the extra produce to the local food bank, but sometimes, some growers pick ripened vegetables in another plot because they do not want it to go to waste. Often, growers intentionally leave ripe produce and return to pick it on the day they intend to eat it so to maximize its freshness. Apparently, it is tough for growers to see fully grown produce potentially going to waste. While there is now a strict rule that produce cannot be picked from someone else's plot without permission, it has not been an issue for a while because most of the plot owners are now friends and able to contact each other if they are interested in someone else's produce (Crowley, 2020).

### Successes

The head garden volunteer, who has overseen the development and operation of the garden since its inception in 2008, believes the success started during the master planning and the community survey effort. The AAJRB thoughtfully considered residents' input and made decisions based on the feedback gained from the survey.

The successful planning continued throughout the development of the park and garden. For example, after the garden was built the volunteers held free gardening classes at the local library and used that class as a method to sell plots at the community garden. For the AAJRB, it was important to keep the plots affordable for all but also important to raise enough money to pay for the water and the landscaper who rakes wood chips and leaf debris to the compost stockpile. To recoup these costs, the plots are sold every year at three difference sizes ranging from \$36-\$136 (Crowley, 2020).

Overall, it is clear that the continued success of this garden is due to the strong community relationships forged with residents over the past twelve years. Without the community support, the AAJRB would not have quickly raised \$6,000 in donations from local businesses, politicians, and leaders for the fence project. Without community support, the plots would not have been designed, built, and available to the public so quickly. The community also submitted a successful grant application, on behalf of the entire community garden, to Lowes which and provided the garden with hundreds of dollars' worth of free tools, lumber, compost and professional landscapers who taught the gardeners about pest mitigation and organic fertilizer. In addition to all of the fiscal and physical support donated by the community, they also offer friendship to each other. The growers come with varying levels of growing expertise and the veterans offer wisdom and guidance to the new gardeners. According to the head garden volunteer, one of their most successful gardeners started out having never grown anything in their life before buying a plot and that their success is due to the guidance shared by neighboring plot owners (Crowley, 2020).

### Conclusion

The Hillside Community Park is an example of how important it is to properly plan and thoughtfully engage the community in advance of breaking ground on a project. The Hillside

## Hillside Community Garden

Park community garden faced challenges in its early days but quickly found solutions due to the overwhelming graciousness of the surrounding community. Had the AAJRB not invested time into the community on the front end, the community may not have been there throughout the process to facilitate the project's successes. Communities considering a public garden can learn lessons from Hillside by adopting their methods and using a public-private partnership to create a well-run community asset like a public garden.

## Hillside Community Garden

### Figures and Graphics

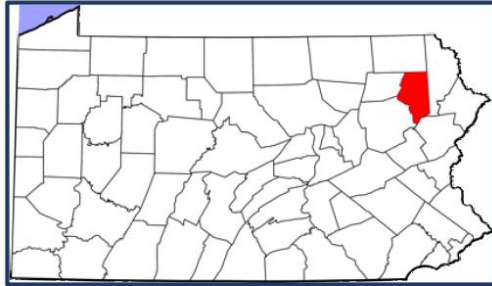


Figure 1 Lackawanna County. Source: Nationalatlas.gov

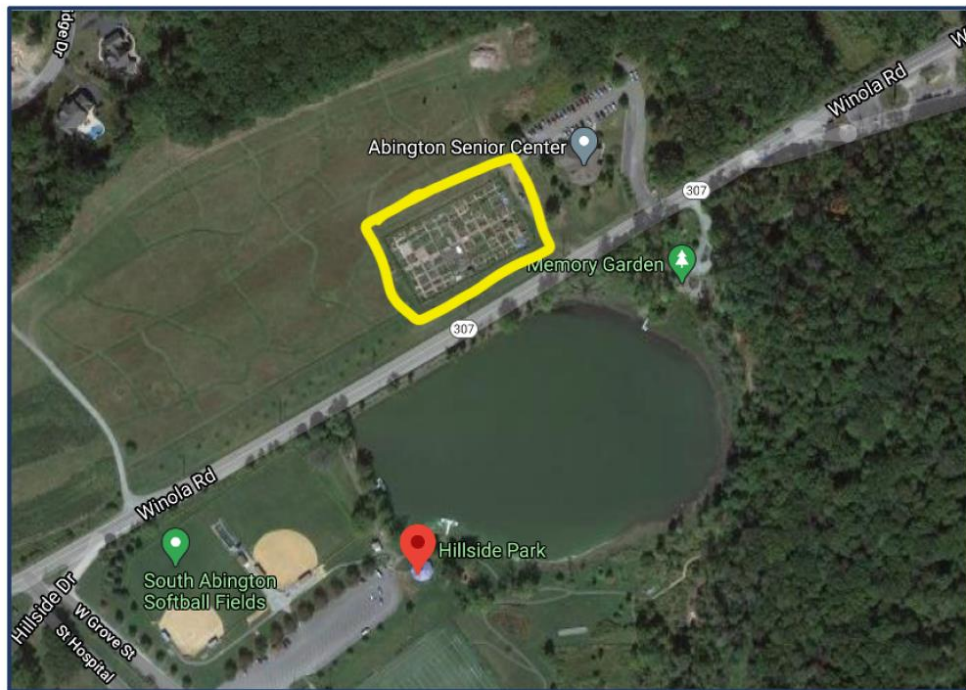


Figure 2 Aerial View of Hillside Park's Community Garden, Outlined in Yellow



## Hillside Community Garden



*Figure 3 Partial photo of Hillside Park*



*Figure 4 Pavilion Concert Series*

Hillside Community Garden



Figure 5 Post Initial Garden Tilling, 2007



Figure 6 Community Garden Plot Owners, 2020



## Hillside Community Garden

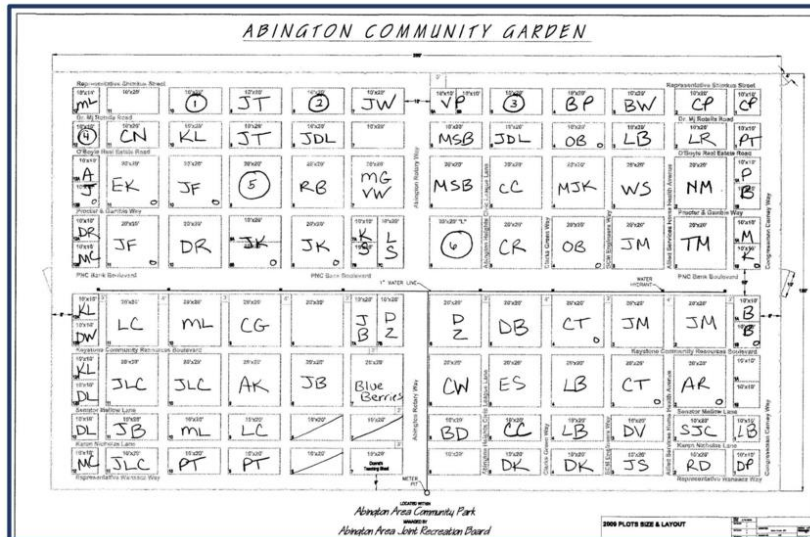


Figure 7 Garden Plot map



Figure 8 Community Garden Plots

Hillside Community Garden



*Figure 9 Garden Plots, fall*

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b. Aidan Henken, PLN 403

**Cultivating Place: Urban Development and the Institutionalization of Seattle's P-Patch  
Community Gardens; a case study by Charlotte Glennie**

Aidan Henken

PLN 403: Planning and Design Studio A

Dr. Kim

October 15, 2020

Seattle Washington has been the epicenter in the United States for “green” growth and infrastructure, while also climbing to the top of the ranks in High-Tec economies. The case study that I decided to read and write about takes place in this city and is written by Charlotte Glennie. The author dives into a very interesting case that involves the P-Patch Gardens, which were and still are community gardens within the city of Seattle. Due to many different issues within the city’s governance, during the 1980’s and even early 1990’s, these gardens were at risk to becoming developed. This case draws upon how less powerful citizens can use ideals such as culture and institution to amplify their voice in order to be heard as well as gain political clout in order to increase influence. Through grassroot groups, P-Patch advocates, and resiliency within these smaller communities in the city of Seattle, the general public pushed back against the city government in an attempt to preserve the land.

In 1973, well before these issues and the technology industry came to the region, the first community garden was created. Seattle then acquired a piece of land from the Picardo family farm, in which the program was started and came to be known as the P-Patch Program; the P meant to commemorate the Picardo family (seattle.gov, 2020). However, spanning from 1982-1997, the P-Patch Program was faced with many challenges due to changes in the political realm as well as changes in the economy in Seattle. A citywide budget crisis reduced services as well as high vacancy rates in the community gardens. As the years went on and the economy grew, so did real estate value and pressure to develop land which in turn threatened the future of some of these P-Patch gardens (Glennie, 2020). This case study also looks at the role of culture within communities and their opposition to development or in their eyes, gentrification. The residents that utilized these gardens, in which the majority were low to moderate income citizens as well as people of color, viewed them as areas of diversity as well as inclusion. Which brings us to another challenge, the people that were in charge of decision making when it came to the P-Patch Program were predominantly white educated professionals as well as artists (Glennie, 2020). Seattle is known for having a very complex racial history. Even though they have claimed since the mid 1900’s that they are making efforts to end racism and exclusion, Seattle lacks the resources in order to promote equity. Because of this, P-Patch advocates during the 80’s and 90’s were more focused on the gardens in the city planning aspect, forgetting equal opportunity for the city residents (Glennie, 2020).

The specific instance that this case brings up was the attempt to remove Bradner Gardens in 1996 in order to make room for housing developments. This proposal brought about an uproar from advocates and citizens who valued these gardens and allowed these citizens to remember the roots and values of the P-Patch Program; to serve the city residents, especially those at a disadvantage and beautify space. Thus, bringing us to the success in this case, The Protect Our Parks Initiative. Through participation within the government, P-Patch advocates, grassroots groups, as well as common citizens helped push The Protect Our Parks Initiative through to becoming a part of the city’s legal policy infrastructure. This rule prohibits Seattle from rerouting any land “held now or in the future by The City of Seattle for parks and recreation purposes” without first (1) establishing in a public a public hearing that there is a public need to repurpose the land and (2) providing land of greater or equal size and quality, in the same neighborhood, to be used for the same purposes (City of Seattle, 1997).” This meant that P-Patch gardens that are on land owned by the city are permanently preserved unless the city decided to engage in an expensive public process in order to change the future of what occupies that land (Glennie, 2020).

The P-Patch program now has 89 community gardens within the city of Seattle. This amounts to roughly 34 acres of total land ran by the program as well as community gardeners. The programs main goals are to help communities grow, practice organic gardening, provide access to local as well as organic and culturally appropriate food, connection to nature within an urban setting, while also creating an understanding between generations and cultures through gardening and cooking (seattle.gov, 2020). The program also aims to give back by generating fresh organic produce to various feeding programs as well as the Seattle food bank. The P-Patch Program facilitates as well as partners with various other organizations to assist with community food security programs that serve across the city of Seattle with an emphasis on the City's immigrant, youth, and lower income residents (seattle.gov, 2020). The P-Patch gardens pull from every demographic culture and economic status which in turn brings people of many different backgrounds together, by doing so they are also strengthening bonds within their community. Also, non-profit organizations help pay lot fees so that low income gardeners benefit as well as those who use food banks where surplus produce is then donated. Some gardeners will sell their produce in order to generate some sort of income. The creation as well as preservation of these gardens are crucial to creating Seattle's place character as well as serves to enhance the ecosystem within an urban setting.

There is however a slight catch which creates today's challenge. "Green gentrification" is now happening within Seattle because of these gardens beautifying space, thus increasing land value. As I stated earlier, Seattle is now a growing and booming city in relation to population and its size of its economy. Seattle is attracting a new demographic which can be described as the "creative class" which is exactly how it sounds. Innovative young minds with money to spend. Inherently, lower class citizens in which the program is meant to help are also being pushed out if they cannot afford the cost of living. Which also brings me back to one of the authors main point of advocacy and community engagement between the city and the people. I think this idea can be useful in our efforts to bring a community garden to the East End Neighborhood here in West Chester. By creating a connection between the citizens and the government, trust is built as well as collaboration. We also cannot forget the goals and values of what we are attempting to create and must promote equity as well as inclusion. By getting the community directly engaged, we can push forward to creating a more sustainable and diverse community.

Resources:

About the P-Patch Program. (2020). Retrieved October 16, 2020

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doi:[10.1111/cico.12464](https://doi.org/10.1111/cico.12464)

c. Alex Sankaran, PLN 403

Eastwick Community Gardens Case Study  
Alex Sankaran  
West Chester University



#### Introduction:

The Eastwick Community Gardens encompass two gardens, the Common Ground and the Victory Garden. The gardens are in Eastwick, a neighborhood in Southwestern Philadelphia, located adjacent to Philadelphia International Airport. Because of its location, it is also known as the Airport Garden. It is the largest community garden in the city of Philadelphia. Despite facing many hurdles, the Eastwick Community Gardens has overcome these obstacles. It represents the good that a community garden can do for all members of the community. Throughout its history, the Eastwick Community Gardens has provided a dependable source of food for many in the community, as well as a way to pass down gardening traditions to the new generation.

#### Background:

The original Common Ground garden was the only garden, until the addition (technically a relocation) of the nearby Victory Garden in 2008 (Geringer, 2010). The new Eastwick Community Gardens has a gross area of 430,445 square feet (Vitiello and Nairn, 2009). Eastwick is fairly unique among Philadelphia neighborhoods. Due to a large-scale urban renewal project, most of the housing stock dates back only to the 1960s (Cahn, 2014). The area was considered heavily blighted, and the city destroyed much of the existing infrastructure. With these actions, many smaller community gardens were permanently lost (Cahn, 2014). In this context, the Eastwick Community Gardens stand out as a modern counterpart of those gardens decades ago, albeit much larger in size.

#### Challenges:

The most significant challenge faced by the community occurred in 2011. The garden's location proved to be problematic for expansion plans for Philadelphia International Airport. The garden leased the land from the airport, but the original long-term lease turned into a year-by-year lease. The expiration of the lease on June 30, 2011 opened the possibility of the airport deciding to use the land (Geringer, 2010). The airport expansion plan would have been catastrophic for the garden. While the airport expansion did not incorporate the land used by the Eastwick Community Gardens, volunteers and other advocates remained worried, as the situation could change at any time. Further, as lessees, they would be at the mercy of the airport authority. Another challenge was demonstrated by the move of the Victory Gardens. In 2008, Philadelphia International Airport acquired that land, which removed the garden (Geringer, 2010). This was only a few miles from the Eastwick Gardens, so the impact on the local community was large. Additionally, it underscored the tenuous situation that community gardens all across the city faced (Gates, 2012). Of note is the removal because of airport needs, which was a common problem to the two sites.

#### Success:

The biggest success story from the Eastwick Community Gardens is the founding of the Rebel Gardeners group. As mentioned in the previous section, the gardens were under serious threat of destruction due to expansion at Philadelphia International Airport. 8<sup>th</sup> grade students from Pepper Middle School visited the site as part of a class field trip ("Who we Are," n.d.). There, they were captivated by the importance of the gardens to the local community, as well as learning the stories and techniques from the senior gardeners. Meanwhile, they also understood the threat the airport expansion placed upon the garden. Inspired by the senior gardeners, these students created the Rebel Gardeners group, with the help of undergraduate students from the University

of Pennsylvania (“Who we Are,” n.d.). These young gardeners helped invigorate the local gardening community. Additionally, they brought attention to the cause, as local news outlets and websites picked up on the story. Unfortunately, the city closed Pepper Middle School in 2013 because of flooding issues (Jaramillo, 2013). However, the spirit of those students lives on, both through their online presence and to the other people they have inspired.

The Victory Gardens did not have the same happy ending, as mentioned in the Challenges section. However, there was a still a positive to come out of it. The Victory Gardens did not have a lease with the city, meaning they had nowhere to go once displaced (Geringer, 2010). The Eastwick Garden was able to accommodate the uprooted gardeners and land from the Victory Gardens. Philadelphia International Airport helped clear land around the original site to aid in the growth of the new, now much larger, Eastwick Community Gardens. This demonstrates the willingness of area stakeholders to work together to find solutions that please all involved parties.

One of the most important aspects of the garden is the food production. While the food grown cannot be sold, it still feeds many hungry families in the Eastwick neighborhood. Additionally, through the work of the Rebel Gardeners and others, a monthly newsletter with healthy eating guides was published. This community work was paired with the Agatston Urban Nutrition Initiative (AUNI) to help facilitate healthier habits for residents in urban areas without traditional access to food sources (“Who we Are,” n.d.).

#### Conclusion:

The Eastwick Community Gardens is the largest community garden in Philadelphia, comprised of the Common Ground and Victory Gardens. It faces a significant challenge with location, bordering Philadelphia International Airport. Expansion plans for the airport have often clashed with the wishes of community members. Through all of this, community stakeholders have helped make the Eastwick Community Gardens a staple of the neighborhood. The food grown in the garden helps feed many families, and the gardening techniques on display help inspire others in and around the city to create their own community gardens.

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## **Duke Farms - A Community Garden Seeded in Organic Practices**

### **Introduction**

The idea behind Duke Farms was originated by James Buchanan Duke who in the 1890's purchased land in New Jersey with the hope of creating a farm similar to the one he grew up on in North Carolina. After some years of collecting land, he found himself owning 2,700 acres. He employed multiple architects and engineers to build his dream farm but unfortunately his death in 1925 limited all of his ideas from being brought to fruition. After this time his daughter, Doris Duke, took ownership of the property and spent her whole life following the ideas of her father to restore and create a farm that was based in ecological farming methods that had education built into its roots (About Duke Farms, n.d.). Duke Farms mission statement is to make the farm "a model of environmental stewardship in the 21<sup>st</sup> Century and to inspire visitors to become stewards of the land" says Executive Director Timothy M. Taylor (Publishing, 2011).

### **Background**

After more than 100 years of sustainable farming ideas being put in place, Duke Farms opened the community garden in 2011. The organic garden originated at 2.5 acres but has since been expanded to 5 acres to offer the public over 420 plots ranging in sizes from 10x10ft, 15x15ft, and 15x30ft. After multiple successful growing seasons, the community garden is planned to expand as Duke Farms has 32 acres available if gardeners want more plots (Publishing, 2011).



*Figure 1: Photo Courtesy of Publishing, 2011.*

The Farm provides water, compost and wheelbarrows but the gardeners must provide all of their own seeds and tools. The idea behind the gardeners providing their own seeds is that the Farm does not want to impede the originality that farming allows; they did not want to limit what was grown within the garden. According to Holly Dunbar, Duke Farm's Spokeswoman, in the beginning of the growing season all of the plots looking similar but once midseason hits all of the garden plots come alive and look so different. These organic practices do not limit originality as you will find bird baths, pollinator boxes, and even benches within some of the plots.

### **Challenges**

After nine growing seasons Duke Farms has had to start a Garden Logbook which records which environmental gardening classes the plot renters attend as it is now required that first year gardeners take three courses and returning gardeners take one elective course. The Garden Logbook also records attendance for the new gardener orientation class, as well as volunteer hours. Another additional program is signing a contract stating that the gardener is



required to maintain the plot and if not, Duke Farms will take back the plot and plot renters will forfeit all of their plants. As well, plot production should be centered around food – no trees,

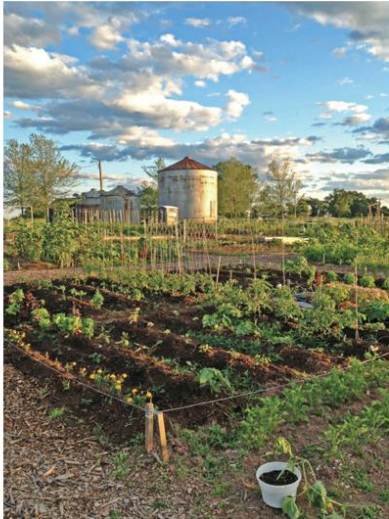


Figure 2: Photo Courtesy of Magazine, n.d.

illegal, invasive or poisonous plants allowed, no plants or structures of five feet tall. The Code of Conduct is included in the contract which states that gardeners must be courteous to others, no alcohol or illegal substances allowed, do not enter or take anything from another gardener's plot (no exception)s, and disputes between gardeners that cannot be resolved will be referred to the Community Garden Coordinator whose job position was created to solely manage the plots and the plot renters. All of the regulations that plot owners must follow are stated in the Duke Farms Community Garden Handbook – which was created after issues about the information above were observed (Community Garden, n.d.).

### Success

There were few opposing viewpoints for the creation of the Duke Farms Community Garden because it was going to be run by a private organization who had the funds to hire personnel to manage and secure the garden. One issue that was discussed, however, was the lack of ability to rent plot due to financial hardship. It was

decided that if this was an issue to a prospective plot renter than the plot renting fee was waived after proof of financial hardship was given to the Community Garden Coordinator (Community Garden, n.d.).

A majority of the food grown in the community garden is donated to food banks. In 2016 Duke Farms announced that over the previous growing season they donated 3,190 pounds of fresh produce to area food pantries. "Our gardeners volunteered for every aspect of this program - from growing the produce through delivery to distribution sites. We are thrilled to provide those who are less fortunate in our community with healthy, local organic produce. We're already looking forward to building on this wonderful momentum and increasing our donation next season to two tons" says Tanya Sulikowski the Duke Farms Community Garden Coordinator (Farms, 2016).

### Conclusion

Duke Farm's Community Garden allows members to connect by growing fresh and organic food with the aim to teach how to work in harmony with nature. The Community Garden does not only allow for food to be grown but it is set up as an educational program by offering lectures through classroom settings, walk and talk, and hands-on workshops. A Duke Farm's visitor can learn anything from how to landscape for wildlife by creating a backyard habitat to seed collection and storage (Stewardship at Home, n.d.). Duke Farms still follows the last will and testament of Doris Duke as her life purpose was for Agro-Ecology, a commitment to habitat restoration through the use of renewable energy and sustainable operations, which originates from her father's dream farm (AgroEcology, n.d.).



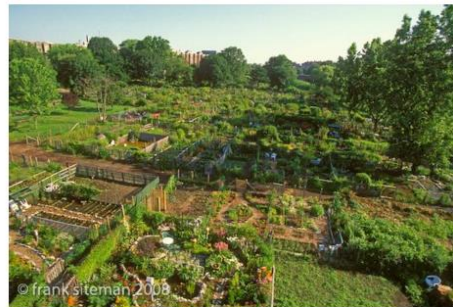
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### Fenway Victory Gardens, Boston Massachusetts

The Fenway Victory Garden is located in Boston's "Emerald Necklace" system of parks and waterways and is the oldest surviving victory garden in the United States. The Fenway Victory Garden has a mission for the City of Boston. They want to encourage urban gardening, while providing a chance to work outdoors, enjoy greenery, and work within nature. It also hopes to preserve and beautify city park areas and green spaces. This garden holds more than 500 plots for the City of Boston residents only and is tended by more than 375 members from each neighborhood in Boston. Most plots are around 15' by 25' which is very large and some gardens have been there for many decades. It even spans 7.5 acres along Boston's Muddy River. While there is a waitlist for a plot of the garden, visitors can still enjoy the park spaces for other activities.



The Fenway Victory Garden was founded in 1942 as a part of the Roosevelt Administration's Department of Agriculture. All over the nation there were more than 20 million Victory Gardens created during World War 2 and they were responsible for nearly half of all the



vegetables produced. These gardens were needed to reduce the pressure on the nation's food supply during the war. Once the war was over, the garden shifted from providing food for the city and more concerned with city green growth. The Fenway Victory Garden is the only one that still remains operational.

Once the war was over, there was intense pressure to tear down the garden because it wasn't needed to feed to city anymore. There were three proposals to develop the site. The first called for a school, the second for a hospital, and the third for a parking lot. The community, led by Richard D. Parker a member of the original victory garden committee, organized in order to save the garden from development. Their mission was successful as the garden still stands today.

This community garden is extremely successful for many reasons. It has lasted for over 75 years, which is

beyond impressive for a community garden. It was a success for producing vegetables for families during war time which helped enormously. Today, the garden allows for educational workshops and volunteer opportunities as well as normal gardening.

This part of the “Emerald Necklace” is a very historic and important part of Boston’s community. It was a part of helping the nation during wartime and still has lasting benefits today. It survived demolition proposals and was fought for by the community. This community garden taught me more about historic preservation and that sometimes it’s better to save rather than rebuild. The Fenway Victory Garden is loved by many in the Boston Community.

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PLN 505

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### Case Study: Conshohocken Community Garden

#### **Introduction**

This case study examines the Conshohocken Community Garden, an unincorporated organization located in the Borough of Conshohocken, Pennsylvania, and its model to understand the implications of operating a community garden.

#### **Background**

Conshohocken Community Garden (CCG) is an autonomous organization located on the 400 Block of Elm Street in the Borough of Conshohocken, Pennsylvania. The parcel of land the garden occupies was donated by the Borough of Conshohocken Authority. CCG relies on membership to operate its sixty-eight plots. Members are offered personal ten by ten-foot plots for a yearly fee of forty-five dollars per section, with the option to partake in shared plots. Other membership benefits include common fruit trees, water source, gardening tools, a storage shed, composting, an herb garden, and a space for community gatherings. All members are required to adhere to the established bylaws, which outline rules of conduct and gardening, organic gardening, and sustainable practices. The operation of the garden is managed by an eight-member Board. The Board oversees the garden's success by managing finances, membership applications, and the planning of events. The organization keeps the community informed through social media, newsletters, and blogs, all of which are connected to their website, [conshohockencommunitygarden.com](http://conshohockencommunitygarden.com). The organization promotes community unity through education and events, and makes donations of fresh fruits and vegetables to the local food pantry, Colonial Neighborhood Council, ("Conshohocken Community Garden," n.d.).

#### **Challenges**

CCG maintains a realistic community garden model. However, it is not without its challenges. In an email, Membership Co-chair N. Zapata, expresses that lack of members' participation makes it arduous to manage the upkeep of the garden. Often, plots are left unattended, which has resulted in rotted produce and overgrown plots. Zapata also mentions that Planning projects is another challenge, as most plans require time to plan and finances. However, when funds are available, it is difficult for the organization to reach a consensus on spending. In addition,

keeping in touch with seventy-eight members is overwhelming and stresses CCG Board with more duties. Since CCG prohibits the use of pesticides and chemicals, rodents, pests, and insects cause yearly damages to the garden and, as a result, reduce crops yields (N. Zapata, personal communication, October 13, 2020).

### **Overcoming challenges**

CCG strives to find practical solutions and has successfully resolved many issues. Zapata affirms that keeping a friendly atmosphere and offering incentives and exchanges has proven to be the most successful approach. The organization keeps membership fees low, reduces membership fees for members who help with events and the upkeep of the garden, and charges the difference to those who do not want to be involved. The organization values interactions with members and understands that face to face communication is much more efficient than using social media, so CCG holds potlucks and gatherings, which reconnect gardeners and give the opportunity for the Board to remind members to tend to their plots twice weekly, at minimum. Along with social gatherings, CCG holds fund raisers to finance projects and reaches out to supporters, notably Public Works and Borough of Conshohocken Administration, for help with supplies, projects, and new equipment. When members cannot unanimously decide on expenditures, they agree to table the issue and reassess the matter at another time. To solve the rodent and insect problems CCG uses fencing and educates members on adding companion plants to their crops to serve as natural pest repellents (“Conshohocken Community Garden,” n.d., N. Zapata, personal communication, October 13, 2020).

### **Conclusion**

Conshohocken Community Garden's autonomous model is realistic and exemplary. Establishing bylaws that maintain order and advocate for sustainable gardening helps prolong the operation and success of the garden for years to come. Resolving challenges with fair and thoughtful solutions ensures reliable member involvement and enhances communication, which in turn serves the community and strengthen its unity.



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### **The Hershey Community Garden**

The Hershey Community Garden is a 225-plot 1-acre area which provides community members with a place to learn to garden and to grow their own crops. The Hershey Community Garden is family-friendly and accessible to those with varying degrees of physical and mental capabilities, hoping to inspire community-building amongst gardeners ("Hershey Community Garden," 2019). In addition to being open to the public for their own use, the Hershey Community Garden donates significant amounts of fresh produce to local organizations such as the Food Bank, the Ronald McDonald House, and the Hope Lodge. The Hershey Community Garden is located on the campus of Penn State Milton S. Hershey Medical Center, situated halfway between Hershey and Hummelstown, Pennsylvania.

The Garden opened in 2014 and is founded by the Hershey Impact Group. The Hershey Impact Group is comprised of the Medical Center, as well as the Hershey Company, Milton Hershey School, Hershey Entertainment & Resorts, and the M.S. Hershey Foundation. Their goal in opening the garden was to offer health and community benefits through fresh produce and stress-relieving activities. The partnership with the Milton S. Hershey Medical Center is a natural and advantageous one. The Medical Center's mission of promoting healthy lifestyles in the community is served well by hosting a community garden on the west end of campus.

Moreover, a section of 17 plots of the Garden is used exclusively for philanthropic purposes (McGraw, 2018). As of late 2018, the Hershey Community Garden has donated over 2,700 pounds of fresh produce to several different non-profit organizations ("Hershey Community Garden grows strong community ties," 2018). Another section of the Garden is reserved for children and educational programs, promoting lifelong nutritional skills (Weigel, 2013). The Community Garden serves a purpose in the short-term, by providing healthy foods now, but also provides gardening skills and dietary education that benefit individuals, their families, and communities for far longer.

The initial challenge for a non-profit community garden is finding the funding to be able to open it. Fortunately for the Hershey Community Garden, the land was donated by the Medical Center in hopes of a mutually beneficial partnership. The remaining \$110,000 investment into the project was provided by the founders—all majorly profitable companies in the Hershey area (Weigel, 2013). Dozens of community members, including Hershey employees and medical students, dedicated their weekends to installing the plots. After the Community Garden's foundation, the Hershey Community Garden became incredibly popular in the first several years of existence. While the positive response was welcomed, the influx of interested gardeners posed challenges for the Garden. Because the Garden only had 100 plots, an extensive Gardener Wait List formed and thus not everyone in the community was able to access the garden due to its popularity ("Hershey Community Garden," 2019). In order to solve this problem, the Garden expanded significantly from its original 1-acre size. In early 2018, the garden doubled in size with the addition of 100 plots, bringing the number to what is present today—225 plots (Gilbert, 2018). This shortened the waitlist significantly by delivering opportunities to double the number of gardeners.

The Hershey Community Garden aims to provide community members with all of the equipment that they need to be a successful gardener: tools, storage sheds, hose access, gardening lessons and demonstrations, as well as areas for socialization. Providing these services and maintaining the Hershey Community Garden is not free—which is the primary challenge for any non-profit project. For example, the Hershey Community Garden experienced challenges with maintaining high-quality equipment year-to-year. The lower-quality hoses required replacement more often; this caused expenses to increase over time. Donations to the Garden which allowed them to purchase higher-quality hoses upfront has prevented the need for excessive replacements ("Hershey Community Garden," 2019). This more efficient use of funding will help to ensure the longevity of the Community Garden.

While donations are never guaranteed, in order to alleviate costs without burdening the community members, the plot fee remains optional. The Garden suggests an annual donation of \$35, which many community members oblige. The Community Garden maintains funding through its founding organizations, grants, donations, and the plot fees. Volunteers deliver the donated produce to their respective organizations (McGraw, 2018). Throughout the past six years that the Hershey Community Garden has been in existence, the community has served them in return. This has contributed to the Garden's success.

In conclusion, the Hershey Community Garden is a prime example of a successful not-for-profit venture. Challenges financially are met with kindness from the community, as well as donors invested in the Garden's charitable mission. The Garden's struggles have shown the importance of efficiency with resources, as they have been able to make the most out of limited money. The specific example of the low versus high-quality hoses demonstrates the organization's attention to detail in operating the Garden efficiently.

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### Midtown Miracle Community Garden

A community garden is a great way to bring together the neighborhood. These once empty plots of land become repurposed and are used to grow food for the local community. The term community garden came into popular use around the 1960's as a result of a grassroots organization promoting environmental stewardship and revitalization of urban neighborhoods. Since then community gardens have been popping up all over the country. For example, a community garden in Savannah Georgia was recently named one of the best community gardens near Hilton Head South Carolina on yelp.

The idea for this community garden began with a collaboration between the MorningStar Cultural Arts non-profit group and the City of Savannah. Once initial plans were drawn up, UGA Extension of Chatham County pledged to provide free gardening and food preservation classes and research publications to residents in the area. The community gardens objectives were made clear to the community to muster up support: Grow veggies and herbs for personal use, grow food for use in the local food bank, promote gardening and food preservation education, promote sustainable living practices for urban environments in a food desert, provide community service hours for youth and adults, mentorship opportunities with neighboring schools, civic groups, universities, and neighborhoods, and to encourage more neighborhoods to establish community gardens.

The community garden came with a price. The location selected needed a lot of attention. Community members came together to begin cleaning up the lot. Multiple wheelbarrows worth of pine straw and tree branches were moved out of the way to make room for the larger construction equipment. When it came time to begin heavy construction there were strict guidelines that needed to be followed. The lot was an old FEMA site and required the use of specialized protection in order to allow for the drainage of the lot. Draining this lot required a vast amount of expertise which came from the City of Savannah, UGA Extension County Agents, Master Gardeners, Landscaping professionals, Engineers/Architects/Carpenters, and garden volunteers.

Since the opening of this community garden, over 1000 pounds of protein and produce were donated to America's Second Harvest Food Bank of Coastal Georgia for Kids Café, Garden volunteers have donated nearly 600 pounds of fresh herbs and vegetables this year, Fresh flowers are delivered to ill neighborhood residents and fresh vegetables are delivered to neighborhood residents. The community Garden has also rallied local volunteer organizations. People from United Way Hands-on-Savannah, Congregations-in-Service, Ft. Stewart/Hunter Army airfield, UGA Extension, Team Target, Boy Scout Troop 1, Rotarians, and Kessler Cares, have all come together and supported the local garden.



Community gardens bring the community together. They create a sense of place, and a place for people to help their local community. With Midtown Miracle Garden we can see how much food they've come to donate after only being open for nearly six years. Along with donations, the garden hosts free monthly workshops hosted by local and regional professionals who provide hands on knowledge. Overall this community garden seems to have taken an old abandoned lot in downtown Savannah and turn it into the talk of the town.

#### Source Material

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## **Sugar Creek Garden and Herb Farm**

### *Introduction*

Located in Decatur, Georgia, this community farm is 100% free of any mechanization, everything done by human hands! This land sits on 4 acres of flood plain, and the 1 acre contains pollinator flowers, herb meadows, fruit trees, shrubs, and veggie beds. Although this a farm, it has an array of community gardens residing in it. It was created in 2010 and was created with the hopes as setting very high expectations for urban farming in unusable landscapes.

### *Background*

As mentioned above, this farm is located on unusable land, in which residential and commercial buildings are prohibited. The trend of turning desolate land into fully productive land is so important for every aspect of sustainable living. Back in 2010 is when this community farm was established, in response to the agriculture initiative created by the City of Decatur. In 2014, is when it was decided that the farm would focus on producing herbs, to be distributed to local Atlanta, as well as nearby communities. All sales help to fund for the Wylde Center, the green space the farm is located on. Not only does this center produce products for the community, but they also take in compost from the local community. The land has 16 plots that can be rented to grow produce and flowers.

### *Challenges*

A lot nearby was being investigated for residential development during a period with intense gentrification. The owners saw an opportunity and jumped on it. They purchase this lot facing tons of backlash from developers. This lot they picked up became the cornerstone of what this community farmed developed into.

### *Success*

This community garden has encourages and educated decades amount of local youth in the community. What started out as just an idea, turned into a crucial aspect of this local community of Decatur, Georgia. Turing desolate land into something the complete opposite is what makes this community farm special. Teaching youth why it is so crucial to understand how the environment works and how we must protect and coexist with it. Today, Sugar Creek Garden is a fully functioning farm that provides its community education, fresh produce, herbs, and space to grow your own gardens.

### *Conclusion*

The key thing to remember and reflect on in this case study is making something from nothing, lemons out of lemonade. The case study of Sugar creek is one of the many community gardens being maintained from the Wylde Center. Land that at one point was nonproductive turned into something that benefits the whole community for an unlimited amount of reasons. This process needs to be prioritized worldwide in especially urban

centers that are food deserts. Many urban centers do not have access to local produce since they are so far from any farms.

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### **Schuylkill River Park Community Garden**

The Schuylkill River Park Community Garden was first constructed by pioneer gardeners in 1982. It is exactly 70 plots in size, and is located at 25th and Manning Streets in Philadelphia, Pennsylvania (Schuylkill River Park Community Garden, n.d.). It is just one of almost 400 community gardens located in Philadelphia. Community gardens aim to achieve various goals in order to promote healthy and sustainable lifestyles that benefit a community. They do this by providing access to healthier, fresh foods which in turn creates social connections with local neighbors (PHSONline, n.d.). This case study provides an overall summary of the Schuylkill River Park Community Garden including its background, challenges, and successes.

#### **Background**

Although the land was seemingly uninviting for a community garden, because it lies on the Kelly Brickyard and past B&O Railroad Sidings, the pioneer gardeners successfully revived it by tearing up the dirt, removing rocks and debris from construction, creating borders for plots, adding topsoil, and filling gallon jugs of water from a nearby fire hydrant. It was not until 1988 that the SRPCG was expanded and slowly developed into what it is today. This vision was possible with the hard work of numerous CCRA (Center City Residents Association) members, advocacy from a landscape architect named John Collins, support from Park Commissioner Ernesta Ballard, and funding from the City of Philadelphia/Fairmount Park Commission. In agreement with the city, the SRPCG was granted to maintain a 350 perennial border outside the garden fence, adjacent to the park to add to the garden's aesthetic (Schuylkill River Park Community Garden, n.d.).

#### **Challenges**

As previously stated, the SRPCG was started in 1982, but was not fully completed until 1988. This six year gap was caused by the challenges that CCRA members faced. The land was leased to the CCRA members by the city, costing only one dollar per year. When created in 1982, the garden ran successfully and happily the same way until around 1985. However, that was not the original plan the city had for the land. Therefore, construction began on the land for a new park and the lease was unfortunately revoked (Schuylkill Park Community Garden, 1997). After much persuasion and compromise, the city finally decided to include the community garden within the park. The city agreed to complete the construction and pay for new facilities if the gardeners maintained the flowers outside the boundary of the garden and followed a set of rules. However, after the compromise was made, the enforced rules began to anger many gardeners. Over time the rules had been simplified, however the process of these rules has created a highly organized political dynamic (Schuylkill Park Community Garden, 1997).

Another struggle faced by the SRPCG was in the summer of 2016, when construction began on a 22-story residential tower, known as One Riverside. Located directly next to the SRPCG, the construction resulted in nails, hardware, and other building materials falling into the garden. Being an obvious obstacle to gardening, the gardeners needed to find a way around the situation. This resulted in meetings, closures, special committees, and advice from a lawyer. The CCRA firstly voted to close the community garden until further notice. There were many mixed results from the gardeners, but overall most of them were upset because precious time was being wasted. Gardeners own the plots for six years and then it gets passed onto someone in the

waiting list, which has tens and tens of people. Eventually, the city got involved by running inspections through the construction site, but found no violations. Eventually, a proposal to have fencing block off the garden only during work hours was made, which the CCRA members warmed up to (Feiner, 2016).

#### **Successes**

The SRPCG is one of the most popular in the area. After overcoming the initial challenge of creating the community garden, it built up its success and received great recognition for it. In January of 2007, the garden became noted as an official part of the Smithsonian Institution's Archives of America. At the time, only 30 gardens were chosen out of the 300 that were being considered. In the spring of 2009, the SRPCG joined the PHS City Harvest Program. The program produces food that is later donated to local food cupboards (Schuylkill River Park Community Garden, n.d.). In a statement directly from their website, "Gardens participating in PHS's City Harvest initiative have access to seedlings, as well as other inputs to grow successfully for donation. Once grown, these gardens donate produce to local food pantries or share the crops with their community" (PHSOnline, n.d.). The process of the program starts in prisons of Philadelphia, where inmates grow seedling plants. These plants are distributed to area community gardens who grow them into produce. Then, the produce is donated by gardeners to local food cupboards. These food cupboards distribute the food to those in need. In 2011, the SRPCG was filmed by PBS for their SPROUT network and the gardeners were able to donate over 500 pounds of produce to their food cupboard, matching their donation from the year prior (Schuylkill River Park Community Garden, n.d.).

The members of the community garden have recently worked on capital projects, but have started as early as 2008. Over that time, they have raised over \$41,000, not including various other major contributions. Their website includes a long list of groups and organizations that they have thanked and shared their appreciation for their funding. The money was put towards areas of the park that required much needed attention, including the main entrance gate, lighting, tool shed, Pergola at Cistern, interior and exterior garden benches, parkside plantings fence, cherry trees, interior bed landscaping, and plot boards. The SRPCG website includes before and after pictures, highlighting specific details on what were the issues with each item fixed (Schuylkill River Park Community Garden, n.d.).

The community garden surely benefits from the visitors of the park. The park offers two dog parks, community buildings, a playground, tennis courts, basketball courts, a baseball field, and a pool. Both the community garden and park have multiple events throughout the year, which also brings in new visitors. It also includes a garden dock, public restrooms, nature trails, water fountains, and more (Schuylkill Banks, 2019).

#### **Conclusion**

Overall, the community garden has been a success for over 30 years, and will continue to be successful as more and more people join the waiting list for a plot. This particular community garden is exactly what a community garden is all about. Prior to being official, the gardeners and CCRA members worked together for a good cause, and continue to do so to this day. This case study showed me how hard these people fought and what community gardens are really about, working together. I believe that the combination of community gardens and parks is a great idea because it creates even more social connections between local people, adds a great aesthetic, and overall flows together. Both the garden and park benefit from one another, which has been an important role in both of their successes.



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### The Garden that Grew into a Movement

#### The Liz Christy Community Garden

The Liz Christy Community Garden is one of the most notable community gardens in all of America. It is the first community garden to be founded in New York City, New York and is still operating today after being founded in 1973. The Liz Christy Community Garden is located on Houston Street in between Bowery and Second Avenue in Manhattan (Liz Christy Community Garden). The garden currently offers a plethora of resources and opportunities to community members. Some of those resources include a pond that is 2.5 feet deep that acts as a habitat to fish and turtles. The garden is organized by individual areas that hold a variety of flora and vegetation including vegetables, wildflowers, fruit trees, herbs and more. The garden is open to any community member year-round and with specific operating hours posted (Liz Christy Community Garden).

#### How it Started

As the first community garden organized in New York City the Liz Christy Garden has a rich history. The lot that the garden is situated on was originally owned by Peter Stuyvesant, who was the last Dutch Governor of New Amsterdam. The lot was located on the southern point of his farm back in the 17<sup>th</sup> Century (Liz Christy Community Garden). As New York City developed, so did Stuyvesant's farmland which eventually was developed into buildings, but they became abandoned and many of them torn down by the 1970's. The lot was then considered vacant when community member Liz Christy and a group she was involved in called the Green Guerillas approached local government to see if they could use the lot as a community garden. Liz Christy and her organization were approved to rent the lot for \$1 a month during the 1970's and began creating the garden.

#### Garden Creation and Challenges

Due to the economic crisis during the 1970's there was an increase in vacant and abandoned lots due to businesses closing from the financial strain. This actually created a larger push for community gardens to be created during the 1970's because it allowed for the beautification of these otherwise abandoned lots. Liz Christy and her organization took advantage of this opportunity when it came to creating the first community garden in New York City. The largest set of challenges that Liz Christy and her organization the Green Guerillas faced was the manual labor that was needed to be able to use the lot for gardening. Due to the amount of debris and trash that was left in the lot it took about a year to get the lot to a viable point. Once all debris was removed the volunteers added topsoil and fencing to add proper infrastructure for the garden (Liz Christy Community Garden).

### Lasting Impact and Success

The success that has come from this garden is hard to measure because it has paved ways for so many other community gardens in New York City and just pushed the environmental movement forward in general. The Liz Christy Garden was the first community garden the Green Guerillas worked on and influenced the future work the organization would continue to do. Because of the work done by the Green Guerillas at the Liz Christy Garden New York City so the potential for incorporating gardening into more communities. Therefore, the GreenThumb program was created in 1978 and essentially works to grant funding to communities to purchase and transform vacant lots into community gardens all around New York City. In the 1990's the GreenThumb program and many community gardens were threatened by the cities need for more development and affordable housing, but because of the success of the GreenThumb program and New York Restoration Project the city was able to maintain over 400 of the at risk gardens (History of the Community Garden Movement).

### Summary and Important Outcomes

Overall, the Liz Christy Community Garden is not only widely successful in creating a space for community members to come and learn about gardening while engaging in valuable community outreach, but also creating a movement across New York City. Today the GreenThumb Program is the largest urban gardening program in the nation and has fostered about 550 gardens around New York City (History of the Community Garden Movement). This program and these gardens would not have been so widely successful if it were not for Liz Christy and the Green Guerillas for spending a whole year showing their community how important a community garden would be. Without the countless volunteers who spent hours working to create that space and create something beautiful and influential for their community in a time of need, who knows if New York City would have so many successful gardens today.

## Works Cited

“History of the Community Garden Movement.” *History of the Community Garden Movement* : NYC Parks, [www.nycgovparks.org/about/history/community-gardens/movement](http://www.nycgovparks.org/about/history/community-gardens/movement).

“LIZ CHRISTY COMMUNITY GARDEN.” *"Liz Christy Community Garden"*, [lizchristygarden.us/](http://lizchristygarden.us/).



Current Garden



development.

Garden during 1970's during

Images from [lizchristygarden.us/](http://lizchristygarden.us/).

## I. Mahmood Sheikh, PLN 505

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10/5/20

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Mod 7/8 Case Study

### Community Garden Case Study: E.D. Robinson Urban Garden

#### Introduction

This case study will be examining the history, development and success of the E.D. Robinson Urban Farm at 12<sup>th</sup> and Brandywine in Wilmington, Delaware. The Urban Farm was founded in 2008 and is located in the 11<sup>th</sup> Street Bridge neighborhood on the corner of 1113<sup>th</sup> East 12<sup>th</sup> Street and 1110<sup>th</sup> East 12<sup>th</sup> Street. The farm itself is a medium sized plot and it consists of 2,000 square feet of growing space, 600 square feet of intergenerational community garden space and 1,400 square feet of commercial growing space. The farm was created by the non-profit organization the Delaware Center for Horticulture (DCH) and was named after the late city councilman Eric D. Robinson. The garden's primary purposes are to provide more green space for Wilmington and to offer a creative approach for neighborhoods to produce their own healthy, fresh, and local food.

#### Background

In 2008, the farm's location was developed after the residents of the 11<sup>th</sup> Street Bridge neighborhood asked The DCH for help with greening the abandoned house lots that comprised the site. The residents' main decision boiled down addressing food security and economic development, vs. adding more park-like improvements. Wilmington as a whole has struggled when it comes to issues relating to health and the environment. Several neighborhoods in Wilmington are dotted with brownfields and industrial sites. Even the lot that would become the urban farm was once a blighted, trash strewn lot. Moreover, according to the Environment America Research & Policy Center, in 2017 the Wilmington metropolitan area experienced the worst air pollution in Delaware, experiencing 97 days of elevated smog pollution and 212 days with unhealthy levels of soot. Health is another area in which Wilmington see problems, particularly for minority groups. Minorities in Wilmington experience higher rates of diabetes, asthma and high blood pressure than their white counterparts. Southbridge also has very concerning economic problems. It was for these reasons that the urban farm would ultimately be formed into what it is now, a rehabilitated area that now provides residents with better access to healthier foods.

#### Challenges/Successes



When development began there were some challenges, particularly when it came to finding a piece of soil, raising the funds to put in the raised beds, and putting in a water source. These issues, especially finding funding, could really only be tackled with an overhead organization. Fortunately for the residents of the 11<sup>th</sup> Street Bridge neighborhood, most of these problems were handled by the DCH. The DCH is responsible for community greening throughout the entire state of Delaware in urban and suburban environments. They are the ones responsible for beautifying the public landscapes across the state. It was thanks to their involvement that a vacant brownfield on the corner of 1113th East 12th Street and 1110th East 12th Street was transformed into a new greenspace in the E.D. Robinson Urban Farm, thus helping to further clean up and beautify the city of Wilmington. The farm also gives residents in the neighborhood better access to healthier foods. The closest grocery store to the 11<sup>th</sup> Street Bridge neighborhood is a mile and a half away. Although this is not a challenging distance for families with a vehicle, many of the 11<sup>th</sup> Street Bridge's residents are elderly or single parent households with no means of transportation. Prior to the farm's creation, these residents were more likely to run to the corner market for processed food than travel that distance to buy affordable fresh produce. Not only that, the produce in the farm is sold at a fraction of what it costs in the grocery store. Residents can even grow their own produce in the urban farm. The farm has enough space to grow food for 19 families, and residents can rent beds to grow their own fruits and vegetables for \$5.00 a month. In addition to making healthy food more accessible, the farm also takes on the responsibility of educating area residents and youth on the potential of urban farming and the personal benefits of growing food, teaching kids how to properly use tools, plant seeds and care for plants.

#### Conclusion

The creation of the E.D. Robinson Urban farm has had very positive effects on both the 11<sup>th</sup> Street Bridge neighborhood and the city of Wilmington as a whole. Although the garden hasn't resolved all of the issues that the people within these communities' face, it is part of the solution to such problems, and it stands as one of many examples of how greening a community can be very beneficial for its residents.

#### Resources

<http://seedstock.com/2016/11/08/delaware-urban-farm-offers-residents-oasis-to-grow-crops-in-food-desert/>

<https://thedch.org/who-we-are/>

<https://environmentamerica.org/news/ame/new-report-wilmington-area-ranked-2nd-northeast-smog->

[pollution#:~:text=According%20to%20a%20new%20report,with%20unhealthy%20levels%20of%20soot.](#)

<https://www.delawareonline.com/story/news/2019/08/20/dnrec-approves-permit-over-southbridge-neighbor-concerns/2051873001/>

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[https://s3.amazonaws.com/udextension/lawngarden/files/2013/07/DEUFFC-handout\\_compressed.pdf](https://s3.amazonaws.com/udextension/lawngarden/files/2013/07/DEUFFC-handout_compressed.pdf)

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#### Rutgers University Community Gardens

##### **Introduction**

The incredible Rutgers University in New Brunswick, New Jersey, shares a massive series of community gardens and farmers' markets. Along with the university's other elite programs, this agriculture project was a huge success. Their mission is to share the space with their students, community, and home gardeners, and to create a beautiful place that is both peaceful and educational.

##### **Background**

Just to be absolutely clear, this is not just an area on campus with a few pretty plants. Often called a living museum, Rutgers Gardens is a 180-acre botanical garden, consisting of designed gardens, farms, plant collections, natural habitats, and a farmers' market. The garden provides an incredible learning experience for the school's undergraduate and graduate students, as well as the local youth. The Garden was open 365 days a year, but because of Covid-19, there were some unfortunate changes to the schedule. Though, for the faculty and staff of plant science research, landscape architecture, and public horticulture, the gardens are extremely helpful and enjoyable.

##### **The Historic Challenge**

Believe it or not, the Rutgers Garden has been around for quite some time, since 1916 to be exact. With that age and history, there are bound to be some low moments. Well, in the early 1960s, the university saw just that. The cost of maintenance had simply become too much

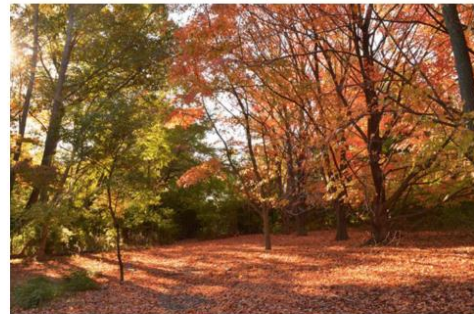
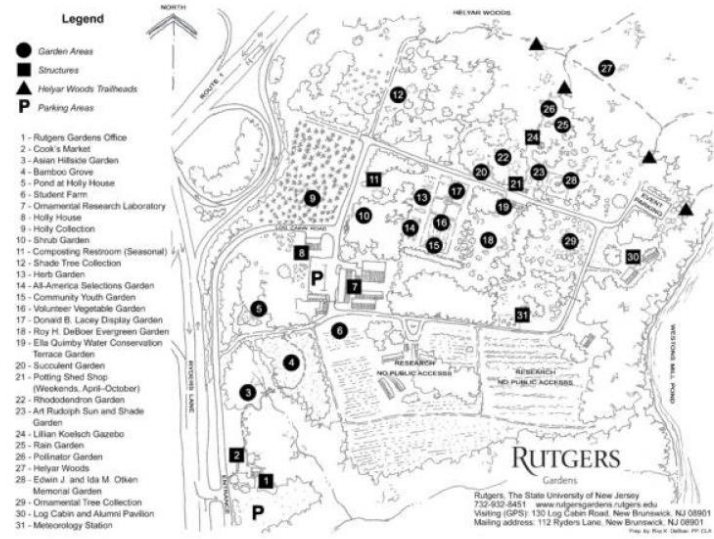
to handle, and its decline began. Through plant sales, donations, and volunteerism, the garden was able to stay afloat, but there was hardly any growth at this time. Without support, funding, and enthusiasm, maintaining a garden like this is a huge challenge. As goes for any community space, a limited staff and a low budget could not possibly keep a prospering garden. It is a major challenge for all when there seems to be no support.

### **Success through Commitment**

After years of a dormant community garden, the School of Environmental and Biological Sciences finally decided to fund a full-time garden director in 2004. With this progressive action came hope that it could finally reach its true potential. No longer did the university want to put only a percentage of effort into the area; they wanted it perfect. Following this commitment, the next several years included smart expansion and beautiful additions. With the help of donors, a number of new gardens were built, which has contributed to the massive green space that makes up what the Rutgers Garden is today. Each section was architected with a particular purpose, whether it be pollination, shade, or beauty. The gardens, about 18 differing sections, range from bamboo and evergreen to shrubs and succulents. The array of life is truly beautiful, but that's not all. The farmer's market has also been a huge success for Rutgers. Feeding and educating the community has truly become what this garden is about.

### **Conclusion**

Success struck the Rutgers Gardens once they decided to take it seriously. Allocating funds in the right areas and finding the right people, who care, can make an empty area into an even more beautiful landscape than imaginable. The future of Rutgers Gardens is very bright. They have truly created something phenomenal.





### References

Community Gardening Series - <https://njaes.rutgers.edu/community-garden/>

Rutgers Gardens: About - <https://rutgersgardens.rutgers.edu/about/>

Rutgers Gardens: Gardens - <https://rutgersgardens.rutgers.edu/gardens/>

Rutgers Gardens: History - <https://rutgersgardens.rutgers.edu/about/history/>

Rich Alimonti

PLN 403

October 8, 2020

### Case Study: Saving Wiota Street Garden

#### Section 1: Getting to know Wiota Street Garden

John Lindsay started Wiota Street Garden in 1984 when he reactivated the vacant lot at Powelton and Wiota Streets. Today, Lindsay's garden needs support from its community to fend off the Redevelopment Authority who aims to sell the lot. In 2016, the final decision to sell the lot had been deferred to Councilwomen Jannie Blackwell who agreed to allow the garden to remain open for the time being. The future of Wiota Street Garden remained in jeopardy as Councilwomen Blackwell's decision to allow the garden to exist remained 'open-ended'. Caretakers of the community garden in West Philadelphia received news in 2014 that the sale of the publicly owned lot may be in the works, and they have been fighting for its preservation ever since.

#### Section 2: Historical background

The 36-year-old community garden has been a topic of dispute between residents and city council. In 2014, an impasse was reached which resulted in temporary postponement of the sale of the lot. Councilwomen Blackwell helped forge the postponement which gave Lindsey and the other leaders of the garden time to step up their game. Since postponement of the sale in 2014, Lindsey and his fellow leaders have increased programming, improved farm market sales, and added volunteers. When, made aware that the Philadelphia City Planning Commission had a deal in place to sell the property in 2016, Lindsey and the garden's other caretakers planned a picnic and rally to raise support for keeping the community garden at 4022 Powelton Street. So, the big challenge has been trying to convince The Philadelphia Redevelopment Authority who owns the lot to continue letting Lindsay and the community grow their produce without interference.

#### Section 3: Challenges that require community support

A surge in real estate development at the time outweighed the success of the community garden leaving its future uncertain. Lindsay first attempted to save the garden in 2014 by enlisting the Neighborhood Gardens Trust to help him obtain the title to the property. He learned that his community garden was competing with a developer who desired to make new apartments on the lot where the garden currently resides. In response, Lindsay erected a sign at the front of the garden stating "Jannie Blackwell wants 12 houses built here". Shortly after, Lindsay and Councilwomen Blackwell struck a deal to keep the property from being sold. The deal was agreed upon because Lindsay made the garden even more accessible to the surrounding community. One big step Lindsay took to make the garden more accessible to the surrounding community included starting up a guest list of people who could use the garden for volunteer purposes, to buy fresh produce on Sundays, or just hangout at the garden and enjoy its beauties.

The implemented guest list garnered 247 signatures from April to August of 2014, expanding community involvement and support.

#### Section 4: The success story of Wiota Street Garden

The community garden initially became successful in 2013 when it was awarded first place in the Pennsylvania Horticultural Society's City Gardens Contest. This community experiences daily success because it's able to provide fresh produce to its surrounding community at affordable prices. For example, they were able to sell a pound of tomatoes for just two dollars in 2016. The gardens affordable prices make it a huge success story because it resulted in nearby grocery Aldi to match the discount prices offered at Wiota Street Garden's farm stand. Another reason the community garden is successful today is because Lindsay uses some of the proceeds from the farm stand to pay for cleaning services at the Powelton Playground and donates produce to the Red Cross House across the street from the garden. The garden is also successful because it provides opportunities for community service hours which one of the caretakers who is also a teacher takes advantage of by bringing his 8<sup>th</sup> grade students to help.

At the end of 2016, the community garden had donated 1,000 pounds of produce to Philadelphia food banks and was presented with the Blue Ribbon Greening Award for Urban Farms. Wiota Street Garden's success expanded to its ability to sponsor a neighborhood clean-up at Barring and Wiota Steets which speaks volumes to its role as a fixture of its community. A small success story that probably gets overlooked is addition of a library pick up and drop box at its perimeter which further cemented its argument as to why the garden does much more than just provide fresh affordable produce. The community garden overcame its seven year challenge this past August when the Philadelphia Redevelopment Authority accepted the Neighborhood Garden Trust's application to designate the Wiota Street Garden as a protected open space. In 2016, Lindsay thought he had lost the fight to keep the garden but his continued efforts along with his other caretakers would prove to be to be compelling after continued years of success.

#### Section 5: Why Wiota Street Garden was saved

In conclusion, I believe the Wiota Street Community Garden is an essential part of the lives of the residents who live in its surrounding area. The community garden is necessary because it causes local grocers to sell their produce at a lower price which benefits even those who don't regularly buy from the farm stand. The garden also acts as a standard for quality, which residents of the community believe the local grocers like Aldi lack. I learned that community gardens provide many services but one that is commonly overlooked is the ability to provide community service opportunities. Volunteering at your local community garden is a great way to not only help your community, but it's also a great opportunity to learn through hands on practice how to grow your own fresh produce which can be life changing for a less fortunate family who typically wouldn't purchase fresh produce because they don't have the money. I learned that community gardens like Wiota Street have the ability to donate to their local food banks which isn't emphasized enough because they are providing healthy options to the residents who rely on them, and these food banks would not be able to provide them with

nearly as much fresh produce if not for substantial donations from community gardens like Wiota Streets. The garden is responsible for creating unlikely friendships of residents which ultimately strengthens their neighborhood ties. Finally, it goes without saying that the community gardens decision to include a library pick up and drop box at its perimeter is highly appreciated by the community and its residents because it provides them with easy access to books and other educational materials that probably wouldn't have been put there if the lot was redeveloped for apartments. This Wiota Street community garden is a heartwarming story because its caretakers believed in it, and wouldn't stop their efforts to push back against its sale even though they acknowledged back in 2016 that they lacked substantial leverage to stop the sale but never gave up hope.

#### Section 6: References

1. Horst, T., (2016, September 08). Again Under Threat, Wiota Street Garden Organizers Seek Public's Support. Retrieved October 08, 2020, from <https://hiddencityphila.org/2016/09/again-under-threat-wiota-street-garden-organizers-seek-publics-support-september-18/>
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3. The Wiota Street Garden. (n.d.). Retrieved October 08, 2020, from <https://www.facebook.com/SaveWiota/>

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## **Title – The Spring Gardens - Philadelphia, PA**

### **Introduction**

Located in Spring Garden, an urban community in Philadelphia, The Spring Gardens is a community garden that provides the opportunity for families within the community to grow food and flowers for themselves or to put up for donation. The Spring Gardens is home to many events, cooking workshops, gardening classes, school education tours, farm bike tours, and a number of other hands-on learning events are often hosted here.

### **Background**

The Spring Gardens was built by members of the community in 1995. The neighborhood worked together to transform an abandoned lot filled with rubble from old housing into a beautiful community garden. In the gardens first season, Councilman, Darrel Clarke, was kind enough to donate a layer of topsoil for the whole garden. In the gardens second season, the community was able to receive a grant from Philadelphia Green, which gave them enough money to purchase soil, materials, and wood, which allowed them to build raised garden beds.

### **Challenges**

The challenges that came with The Spring Gardens came at the beginning of the process. Once a lot was selected for the community garden to be on, they had to deal with the lot being filled with rubble and debris from old housing. They also struggled to gather enough money for the garden to become a success.

### **Success**

The Spring Gardens now consists of many types of plants, vegetables, and trees. It also includes large plots of open space which is good for picnics and events. The garden is managed by a "Steering Committee" full of neighborhood gardeners. This group meets for monthly meetings to discuss planning, project implementation, fundraising, and policy making. All of the gardeners are responsible for taking care of the garden. They handle all of the gardens maintenance, carpentry, and landscaping needs.

### **Conclusion**

Today, The Spring Gardens is one of the most beautiful and exclusive community gardens in Philadelphia. There is currently a very big waitlist to receive a plot in the garden, members of the Philadelphia community can spend a very long time on these waitlists until they receive a plot in the garden. The garden is also highly endorsed by local elected leaders, restaurants, and multiple other types of businesses because of its beauty.



## **References**

"About." *The Spring Gardens*, 2020, [thespringgardens.org/about](https://thespringgardens.org/about).

*The Spring Gardens*, 2020, [thespringgardens.org/](https://thespringgardens.org/).

## Module 7 and 8

Case Study: Borland Green, Pittsburgh, PA

### Intro and Background



The Borland Garden in Pittsburgh's East Liberty is a shared community space. Located in Borland Green Cohousing community, the garden is near Downtown Pittsburgh, community center and Highland Park. The Cohousing community was founded in 2011 by teachers, environmentalists and artists. The project renovated rundown homes and used the empty lot for community garden. The goal of the garden is to improve the social, mental, spiritual and physical well-being in the community. The garden contains a rain garden, vegetable beds, herb gardens and a small fruit orchard. The goal of the garden is to empower children and their families and connect them with nature.

## Successes and Challenges

The garden hosts several events throughout the year for the community. The most successful event in the Borland Garden was “Art in the Garden.” This event aims to help Pittsburgh’s youth to build resiliency. The garden is a great place for an outdoor classroom.

## Conclusion

Community Gardens can improve the sense of community in neglected neighborhoods. The garden has been a place to educate children and adults and connect the surrounding community to nature.

## References

Get inspired with these 3 successful community gardens. (2019, April 10). Retrieved October 16, 2020, from <https://blog.ioby.org/get-inspired-with-these-3-successful-community-gardens/>

### 3. EPA (Urban Farm Business Plan) Worksheets

#### a. Team A's Worksheet

Urban Farm Business Plan Worksheet #17 Planning

**Proposed Community Garden Name** Team A

User can change the values in these cells to optimize outputs.  
Pre-set formula's that will be calculated by Excel

Total Length 78.5 ft  
Total Width 59 ft  
Width of Row 1.5 ft  
Footpath Area 40% percent  
Tool Storage Area 100 ft<sup>2</sup>  
Composting Area 25 ft<sup>2</sup>  
Other 300 ft<sup>2</sup>  
**TOTAL GROWING AREA** 2353.9 ft<sup>2</sup>  
**TOTAL BED LENGTH** 1569 ft

To account for raised beds, irrigation, and moving a wheelbarrow to carry compost, soil, and gardening materials.  
Shed will contain seed starters/trays, tables, gardening tools, potting soil, seeds, pots, wood for raised beds, fencing material, weed barrier sheets, and other gardening materials and tools.

To account for gatherings, tables, bench, and other edible and non edible potted and non potted plants (flowers and herbs)

**Growing Medium**  
Depth 18 inches  
**TOTAL SOIL VOLUME** 1177 yards

Data Entry and Calculations

Crop	Percent of Total Growing Area	Crops					Inputs				
		Distance Between Plants (ft)	Time to Maturity (from seed) (days)	Yield (per plant) (pounds)	Yield (per foot of row) (pounds)	Market Price (per pound) (\$)	Seed/ Starter (\$/plant)	Nutrients (\$/ft <sup>2</sup> /day)	Pest Control (\$/ft <sup>2</sup> /day)	Water (\$/ft <sup>2</sup> /day)	TOTAL COST OF INPUTS (\$/ft <sup>2</sup> /day)
Tomatoes	25%	2	130	3	1.5	\$ 1.25	\$ 0.010	\$ 0.001	\$ 0.001	\$ 0.001	\$ 0.003
Strawberries	10%	2	90	3	1.5	\$ 3.00	\$ 0.010	\$ 0.001	\$ 0.001	\$ 0.001	\$ 0.003
Peppers	25%	1	45	3	3.0	\$ 2.45	\$ 0.010	\$ 0.001	\$ 0.001	\$ 0.001	\$ 0.003
Collards	25%	1.5	90	2	1.3	\$ 1.45	\$ 0.010	\$ 0.001	\$ 0.001	\$ 0.001	\$ 0.003
Cucumbers	15%	2.00	120	5	2.5	\$ 0.75	\$ 0.010	\$ 0.001	\$ 0.001	\$ 0.001	\$ 0.003
	0%	0	0	0	0.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	0%	0	0	0	0.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	0%	0	0	0	0.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	0%	0	0	0	0.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	0%	0	0	0	0.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	0%	0	0	0	0.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	0%	0	0	0	0.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	0%	0	0	0	0.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	0%	0	0	0	0.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	0%	0	0	0	0.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Crop Yield

Business Name

Crop	Percent of Total Growing Area	Total Length of Row (ft)	Expected Annual Yield		Value of Annual Yield		Annual Cost of Inputs	
			3 Season (lbs)	4 Season (lbs)	3 Season	4 Season	3 Season	4 Season
Tomatoes	25%	392	1239	1652	\$ 1,549	\$ 2,065	\$ 489	\$ 653
Strawberries	10%	157	716	955	\$ 895	\$ 2,864	\$ 197	\$ 263
Peppers	25%	392	7160	9546	\$ 8,950	\$ 23,389	\$ 519	\$ 692
Collards	25%	392	1591	2121	\$ 1,989	\$ 3,076	\$ 495	\$ 660
Cucumbers	15%	235	1342	1790	\$ 1,678	\$ 1,342	\$ 294	\$ 392
0	0%	0	0	0	\$ -	\$ -	\$ -	\$ -
0	0%	0	0	0	\$ -	\$ -	\$ -	\$ -
0	0%	0	0	0	\$ -	\$ -	\$ -	\$ -
0	0%	0	0	0	\$ -	\$ -	\$ -	\$ -
0	0%	0	0	0	\$ -	\$ -	\$ -	\$ -
0	0%	0	0	0	\$ -	\$ -	\$ -	\$ -
0	0%	0	0	0	\$ -	\$ -	\$ -	\$ -
0	0%	0	0	0	\$ -	\$ -	\$ -	\$ -
0	0%	0	0	0	\$ -	\$ -	\$ -	\$ -
0	0%	0	0	0	\$ -	\$ -	\$ -	\$ -
0	0%	0	0	0	\$ -	\$ -	\$ -	\$ -
100%		1569			\$ 15,061	\$ 32,736	\$ 1,995	\$ 2,660

### b. Team B's Worksheet

## Urban Farm Business Plan Worksheet #17 Planning

Proposed Community Garden Name	Team B	
Total Length	105	ft
Total Width	95	ft
Width of Row	3	ft
Footpath Area	20%	percent
Tool Storage Area	36	ft <sup>2</sup>
Composting Area	25	ft <sup>2</sup>
Other	50	ft <sup>2</sup>
<b>TOTAL GROWING AREA</b>	<b>7869</b>	<b>ft<sup>2</sup></b>
<b>TOTAL BED LENGTH</b>	<b>2623</b>	<b>ft</b>
Growing Medium		
Depth	18	inches
<b>TOTAL SOIL VOLUME</b>	<b>3935</b>	<b>yards</b>

### Data Entry and Calculations

[illegible]

### Crop Yield

## Business Name

Crop	Percent of Total Growing Area	Total Length of Row (ft)	Expected Annual Yield		Value of Annual Yield		Annual Cost of Input	
			3 Season (lbs)	4 Season (lbs)	3 Season	4 Season	3 Season	4 Season
Tomatoes	25%	656	9574	12765	\$ 19,148	\$ 25,531	\$ 1,652	\$ 2,202
Corn	10%	262	2393	3191	\$ 4,787	\$ 2,553	\$ 682	\$ 910
Cucumbers	25%	656	12822	17096	\$ 25,645	\$ 21,541	\$ 1,693	\$ 2,257
Carrots	15%	393	53853	71805	\$ 107,707	\$ 48,109	\$ 1,508	\$ 2,011
Dry Bulb Onions	25%	656	3452	4603	\$ 6,904	\$ 4,833	\$ 1,823	\$ 2,430
0	0%	0	0	0	\$ -	\$ -	\$ -	\$ -
0	0%	0	0	0	\$ -	\$ -	\$ -	\$ -
0	0%	0	0	0	\$ -	\$ -	\$ -	\$ -
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# c. Team C's Worksheet

## Urban Farm Business Plan Worksheet #17 Planning

**Proposed Community Garden Name**

Total Length  ft  
 Total Width  ft  
 Width of Row  ft  
 Footpath Area  percent  
 Tool Storage Area  ft<sup>2</sup>  
 Composting Area  ft<sup>2</sup>  
 Other  ft<sup>2</sup>  
**TOTAL GROWING AREA**  ft<sup>2</sup>  
**TOTAL BED LENGTH**  ft

**Growing Medium**  
 Depth  inches  
**TOTAL SOIL VOLUME**  yards

User can change the values in these cells to optimize outputs.  
 Pre-set formula's that will be calculated by Excel

Data Entry and Calculations							Inputs		
Crop	Percent of Total Growing Area	Crops					Inputs		
		Distance Between Plants (ft)	Time to Maturity (from seed) (days)	Yield (per plant) (pounds)	Yield (per foot of row) (pounds)	Market Price (per pound) (\$)	Seed/ Starter (\$/plant)	Nutrients	Pest Control
Tomatoes	25%	2	75	6	3.0	\$ 2.00	\$ 0.010	\$ 0.001	\$ 0.001
Corn	10%	0.5	80	3	6.0	\$ 4.19	\$ 0.010	\$ 0.001	\$ 0.001
Zucchini	20%	2	50	6	3.0	\$ 1.54	\$ 0.010	\$ 0.001	\$ 0.001
Cucumber	25%	0.5	65	5	10.0	\$ 1.00	\$ 0.010	\$ 0.001	\$ 0.001
Peppers	20%	1.00	60	3.6	3.6	\$ 1.00	\$ 0.010	\$ 0.001	\$ 0.001
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Crop Yield									
Business Name									
Crop	Percent of Total Growing Area	Total Length of Row (ft)	Expected Annual Yield		Value of Annual Yield		Annual Cost of Inputs		
			3 Season (lbs)	4 Season (lbs)	3 Season	4 Season	3 Season	4 Season	
Tomatoes	25%	514	5631	7508	\$ 11,261	\$ 15,015	\$ 863	\$ 1,151	
Corn	10%	206	4223	5631	\$ 8,446	\$ 23,593	\$ 366	\$ 488	
Zucchini	20%	411	6757	9009	\$ 13,514	\$ 13,874	\$ 698	\$ 931	
Cucumber	25%	514	21657	28875	\$ 43,313	\$ 28,875	\$ 931	\$ 1,242	
Peppers	20%	411	6757	9009	\$ 13,514	\$ 9,009	\$ 713	\$ 951	
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	100%	2057			\$ 90,048	\$ 90,366	\$ 3,572	\$ 4,763	

## d. Team D's Worksheet

### Urban Farm Business Plan Worksheet #17 Planning

**Proposed Community Garden Name** Team D

User can change the values in these cells to optimize outputs.  
Pre-set formula's that will be calculated by Excel

Total Length	81 ft
Total Width	49 ft
Width of Row	1.5 ft
Footpath Area	30% percent
Tool Storage Area	25 ft2
Composting Area	25 ft2
Other	50 ft2
<b>TOTAL GROWING AREA</b>	<b>2678.3 ft2</b>
<b>TOTAL BED LENGTH</b>	<b>1786 ft</b>

**Growing Medium**

Depth	18 inches
<b>TOTAL SOIL VOLUME</b>	<b>1339 yards</b>

#### Data Entry and Calculations

Crop	Percent of Total Growing Area	Crops					Inputs				
		Distance Between Plants (ft)	Time to Maturity (from seed) (days)	Yield (per plant) (pounds)	Yield (per foot of row) (pounds)	Market Price (per pound) (\$)	Seed/Starter (\$/plant)	Nutrients (\$/ft2/day)	Pest Control (\$/ft2/day)	Water (\$/ft2/day)	TOTAL COST OF INPUTS (\$/ft2/day)
Tomatoes	25%	1.5	130	5	3.3	\$ 2.00	\$ 0.010	\$ 0.001	\$ 0.001	\$ 0.001	\$ 0.003
beans	10%	0.75	60	2	2.7	\$ 2.13	\$ 0.010	\$ 0.001	\$ 0.001	\$ 0.001	\$ 0.003
Salad Greens	25%	0.25	45	0.2	0.8	\$ 2.55	\$ 0.010	\$ 0.001	\$ 0.001	\$ 0.001	\$ 0.004
Kale	25%	1	75	1	1.0	\$ 2.88	\$ 0.010	\$ 0.001	\$ 0.001	\$ 0.001	\$ 0.003
zucchini	15%	0.33	55	2	6.0	\$ 1.64	\$ 0.010	\$ 0.001	\$ 0.001	\$ 0.001	\$ 0.004
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#### Crop Yield

Business Name									
Crop	Percent of Total Growing Area	Total Length of Row (ft)	Expected Annual Yield		Value of Annual Yield		Annual Cost of Inputs		
			3 Season (lbs)	4 Season (lbs)	3 Season	4 Season	3 Season	4 Season	
Tomatoes	25%	446	3133	4178	\$ 6,267	\$ 8,355	\$ 559	\$ 746	
beans	10%	179	2172	2897	\$ 4,345	\$ 6,170	\$ 236	\$ 315	
Salad Greens	25%	446	2172	2897	\$ 4,345	\$ 7,386	\$ 713	\$ 950	
Kale	25%	446	1629	2172	\$ 3,259	\$ 6,257	\$ 574	\$ 766	
zucchini	15%	268	7998	10665	\$ 15,997	\$ 17,490	\$ 390	\$ 520	
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	100%	1786			\$ 34,211	\$ 45,657	\$ 2,473	\$ 3,297	

# Sustainability



# Community



# Diversity