

# A Feasibility Study for the Creation of a Garden Commons Network Across Philadelphia

*Produced for:*

*The Pennsylvania Horticultural Society*

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## EXECUTIVE SUMMARY

This capstone was completed in collaboration with the Pennsylvania Horticultural Society (PHS) to assist the organization as they look to expand access to urban gardens throughout Philadelphia. PHS has a long history of working to build healthy and beautiful communities in the Greater Philadelphia region and is now looking to formalize and expand the network of garden spaces that they directly maintain in the area. To help accomplish this goal, this project will work to answer three main questions:

- 1) **Why** are urban green spaces crucial for the well-being of urban residents and communities?
- 2) **What** are the current best practices being implemented by other organizations doing similar work in Philadelphia and other US cities?
- 3) **How** can PHS integrate lessons learned from the first two questions into their protocols to create the most effective and impactful network of gardens?

These questions will be addressed by completing both an in-depth literature review of peer-reviewed scientific articles as well as conducting a series of qualitative interviews with individuals in Philadelphia, Chicago, Denver, Boston, and New York City.

The first part of this paper will provide further background information about PHS as an organization and more about the specific context for why this project was conducted at this time. The next part will present the scientific argument for why green spaces and gardens are so crucial to the health of individuals and urban communities. Through my literature review, I have found strong evidence for how gardens can help increase individual wellness (both physically and mentally), as well as reduce crime, build community cohesion, and improve the livability of a neighborhood..

The third part of this paper will then transition into presenting the information gained through the interviews I conducted. The information is organized into and presented as five key themes. Within each theme, I will present the key findings and relevant quotes from individuals who participated in the interviews. I will also present recommendations on how PHS may wish to integrate these learnings into their project moving forward.

The first theme, Impact, I explore continues to build on the argument from part two of this paper for why gardens are important and how they provide additional benefits compared to other types of urban green spaces. To help maximize these impacts, PHS may wish to develop creative ways to provide additional seating and spaces for relaxing and lounging within newly created gardens. I also recommend that PHS designers explore how viewsheds and garden entrances can be maximized to help bring in visitors and to create welcoming spaces. The next four themes presented in this paper focus on community input,

design, operations, and support and partnerships. The table below summarizes the recommendations for each of these themes.

Community Input Recommendations	Design Recommendations
<ul style="list-style-type: none"> <li>■ Allow ample time for community engagement during the design phase.</li> <li>■ Develop ongoing data collection protocols.</li> </ul>	<ul style="list-style-type: none"> <li>■ Integrate sustainability into each garden.</li> <li>■ Find ways to integrate physical art.</li> </ul>
Operations Recommendations	Support & Partnerships Recommendations
<ul style="list-style-type: none"> <li>■ Create formalized agreements for all spaces.</li> <li>■ Hire horticultural professionals to maintain a specific subsection of the garden commons network (zone maintenance).</li> <li>■ Develop a unified communication plan across all locations.</li> <li>■ Create an ambassador program.</li> </ul>	<ul style="list-style-type: none"> <li>■ Don't just build gardens, advocate for gardens.</li> <li>■ Create a garden advisory committee.</li> </ul>

Based on the Pennsylvania Horticultural Society's current work and expertise it is clear that the organization already has the capabilities to create and maintain a network of beautiful gardens across Philadelphia. Therefore this paper hopes to empower PHS and its leadership to move forward in a way that fully welcomes and embraces the people who will be most impacted by these new spaces - including neighbors, community leaders, staff members, and local partners. Historically, gardens have been spaces of privilege and privacy, and therefore to create a network of beautiful, sustainable, and equitable public gardens, the focus must shift away from the purely physical resources toward the human resources as well.

## Part I: Introduction

The 2010 census estimated that approximately 71% of the United States population lived in urbanized areas, representing an approximate 12% increase from the 2000 census.<sup>1</sup> The 2020 census data has yet to be fully released, but the percentage of urban residents is expected to increase yet again.<sup>2</sup> While living in a city provides easy access to various resources, green spaces, biodiversity, and open areas are often limited. These resources, however, improve the quality and longevity of life for individuals and communities who can access them.<sup>3,4</sup> Problematically, communities with easy access to such green spaces in cities tend to be communities with higher median income, higher levels of education, and a higher percentage of White residents. Furthermore, green areas located within historically underserved neighborhoods tend to be of lower quality and receive fewer improvements. Therefore, it is critical for cities to increase the access to and quality of green spaces in an equitable fashion to help improve communities and create more just, fair, and livable spaces.

To address this issue, the Pennsylvania Horticultural Society (PHS) has partnered with corporate, non-profit, and governmental entities for over 30 years to create and manage a network of public landscapes throughout Philadelphia and Abington Township, including spaces in public parks and on private land. Moving forward, PHS aspires to create a citywide network of free-to-all high-end gardens that will become a core part of the city's public land network and address concerns of access to green space within Philadelphia. PHS believes that gardens are a unique public good that provides social benefits created by the interaction with nature, and that these spaces are under-represented and inequitably distributed in the city of Philadelphia. By applying PHS's horticultural expertise to Philadelphia's open land area, there is an opportunity to create impactful public spaces that help reduce environmental and societal stressors for communities throughout Philadelphia.

To move this aspiration into reality, this report aims to build a strong argument for why such a network of gardens is critical to the well-being of the city while also providing best practices in urban green space creation and operation. Specifically, this project works to answer three main questions:

- First, **why** are urban green spaces crucial for the well-being of urban residents and communities?
- Next, **what** are the current best practices being implemented by other organizations doing similar work in Philadelphia and other US cities?

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<sup>1</sup> ("2010 Census Urban and Rural Classification and Urban Area Criteria" 2021)

<sup>2</sup> (Henderson 2021)

<sup>3</sup> (Branas et al. 2018)

<sup>4</sup> (Fuller et al. 2007)

- And finally, **how** can PHS integrate lessons learned from the first two questions into their protocols to create the most effective and impactful network of gardens?

Part two of this paper will first provide an in-depth literature review of how urban green spaces can impact the physical, mental, and community well-being of those who have access to them. It will then go into how gardens, in particular, may enhance these benefits and lead to increased activation of urban green spaces. The final subsection of part 2 will also provide peer-reviewed evidence of racial and socio-economic discrepancies in access to high-quality green spaces in urban settings.

The latter two questions will be answered in Part III of this report through my analysis of a series of interviews I conducted over the months of March and April. This part of the paper is divided into five subsections, each focusing on a key theme and associated recommendations for how PHS can integrate the lessons learned into their proposed garden network.

## Terminology

One of the first obstacles PHS is already encountering in creating this new network of gardens is an agreed-upon and widely accepted set of terminology. Urban green space is a vague term with no universally accepted meaning. In a 2016 report from the World Health Organization, the group defined urban green space as “places with ‘natural surfaces’ or ‘natural settings’, but may also include specific types of urban greenery, such as street trees, and may also include ‘blue space’ which represents water elements ranging from ponds to coastal zones.”<sup>5</sup> Under such a broad definition, the term green spaces could include public parks as well as private garden spaces, cemeteries, sports fields, walking paths through natural settings, and even roadside vegetative areas. The 2016 WHO report concludes that the term urban green space can be vague and is often context-specific.<sup>6</sup> PHS, however, wants to develop spaces that are more than just urban green spaces and is specifically interested in higher-end horticultural displays within public areas.

A similar issue, though, arises with the use of the term “garden,” which, by definition, is simply “a rich well-cultivated region” and originates from a middle English word used for an enclosed space.<sup>7</sup> Gardens are frequently seen as private spaces associated with private properties and can include vegetable production, flower production, or privacy plantings. Thus there is a need to differentiate private gardens from spaces that are accessible to a border population. In North America, though, the term “public garden” is frequently used to

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<sup>5</sup> (World Health Organization 2016, 3)

<sup>6</sup> (World Health Organization 2016, 3)

<sup>7</sup> (“Garden Definition & Meaning”, n.d.)

refer to gardens run by non-profit organizations and does not imply that the garden is freely accessible by those living in close proximity to the space. Therefore the terms garden and public garden are both inaccurate and misleading when referring to the system of spaces that PHS wishes to create.

Thus, this lack of pre-existing vocabulary presents both a challenge and an opportunity for PHS to build a new unified language around creating high-end display gardens on public grounds that are accessible and welcoming to all. While the terminology will inevitably be shaped by PHS's actions, while simultaneously shaping the future of PHS's objectives, it was essential to create a consistent term to be used during this study. This report will therefore use the term "garden commons network" to refer to the collective system of urban green spaces that is freely accessible by all and contain high-end, horticulturally-intensive displays. I believe this term accurately reflects the desire of PHS to cultivate a series of places that are in service of the general public and are seen as a true public good, as the original commons were intended.



## Part II: Literature Review

### Introduction

While this project is specifically looking at the proposed garden commons network, most research looks at green spaces in a broader sense. Studies find that spending time in any type of green space can have positive effects on an individual's physical and mental health and that the presence of such green spaces can benefit the surrounding community as a whole. In this section, we will first look at the general benefits derived from access to green spaces, and then explore how increasing biodiversity and plant design in a green space can lead to additional benefits. The final part of this section will then discuss how green spaces are not equally accessible by all and the implications of that on historically underserved communities.

### Physical Benefits

In 2008, The U.S. Department of Health and Human Services recommended adults complete "at least 150 minutes per week of moderate physical activity, or 75 minutes per week of vigorous physical activity, in addition to muscle-strengthening activities two or more days per week."<sup>8</sup> A study by Dr. Debra Blackwell and colleagues, however, found that between 2010 and 2015, only 23% of the adult U.S. population actually met these recommended guidelines, with men generally performing better than women. Furthermore, in 2010, the World Health Organization (WHO) listed physical inactivity as one of the top five risk factors contributing to the world's morbidity.

One way the WHO recommends addressing this health crisis is through green spaces, which have been correlated with increased physical activity and improved physical fitness<sup>9</sup> in the US and across the globe. A 2011 study in Denmark estimated that individuals living less than a quarter of a mile away from green space were significantly less likely to be classified as obese (BMI > 30) compared to those who were living farther away;<sup>10</sup> and an Australian study found that individuals living in areas with a higher percentage of green space were more likely to participate in moderate to vigorous physical activity at least once a week.<sup>11</sup>

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<sup>8</sup> (Blackwell and Clarke 2018, 1)

<sup>9</sup> (World Health Organization 2016, 5)

<sup>10</sup> (Toftager et al. 2011, 744)

<sup>11</sup> (Chong et al. 2017, 31)

## Mental Health Benefits

Researchers from the RAND Corporation, a not-for-profit global policy think tank organization based in California, found similar results, correlating physical activity with proximity to parks, and additionally found a similar correlation between mental health and the distance to the nearest urban park. By the RAND Corporation's estimate, living close to an urban park had similar positive mental health benefits as reducing local unemployment rates by two percentage points across the area.<sup>12</sup>

While there is an understood connection between increased physical activity and mental health, the mental benefits derived from accessing urban green space appear to be independent of the associated increased physical activity. Research studies have shown that simply spending time in and around green areas can reduce stress and improve mental health. Studies from around the globe have shown that populations that live with larger amounts of vegetation tend to exhibit lower levels of depression, reduced anxiety, and decreased stress levels.<sup>13</sup> Some studies additionally show that the mental benefits of accessing green areas can be felt within mere moments of entering the space.<sup>14</sup> While the underlying mechanism for why access to green space increases physical activity and improves mental health may be questioned, it has been shown time and again that the correlation is present and strong.

## Community Benefits

Additionally, the benefits of green spaces reach beyond the individuals utilizing the space and extend into the surrounding community as a whole. Street trees, parks, and general green spaces, both public and private, are effective tools for reducing urban heat, flooding events, and ambient noise levels,<sup>15</sup> thus creating positive externalities for all who are in proximity to parks and green spaces. Creating more hospitable neighborhoods can then lead to reductions in vandalism, crime, and violence. Researchers at Columbia University and the University of Pennsylvania have published results from a randomized controlled experiment showing that converting vacant lots into small park-like spaces—by removing trash and debris, sowing grass, planting trees, and installing a fence (figure 1)—had significant positive impacts on the community.<sup>16</sup> After converting the vacant lots, neighbors reported a 58% reduction in fear of going outside due to safety concerns, a 75% increase in time spent relaxing and enjoying the outdoors, and a 40% reduction in concerns about

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<sup>12</sup> (Sturm and Cohen 2014, 23)

<sup>13</sup> (World Health Organization 2016, 9)

<sup>14</sup> (Barton and Pretty 2010, 3950)

<sup>15</sup> (World Health Organization 2016, 9)

<sup>16</sup> (Branas et al. 2018, 2946)

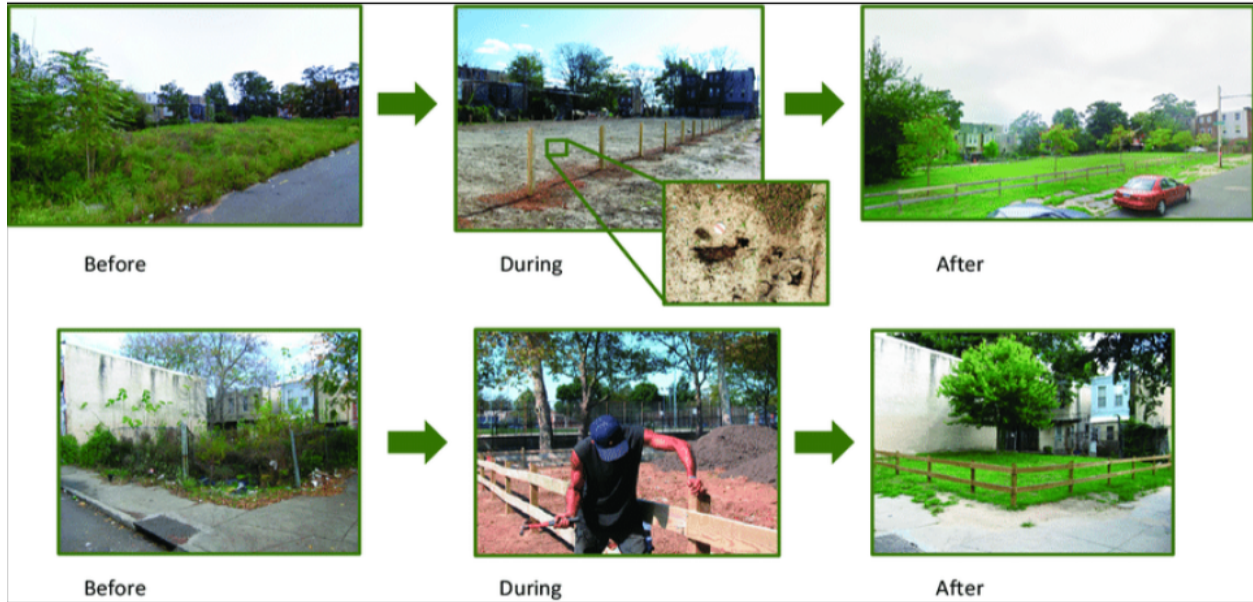


Figure 1: Demonstration of vacant lot intervention; Source: Branasa et al. 2018

vandalism. Furthermore, neighborhoods experienced a reduction in all types of crime, including gun assaults, burglaries, and general nuances.<sup>17</sup> It can be seen that urban green spaces are valuable public goods that benefit not only those who actively use the spaces but all those who live in close proximity.

## Impacts of Increased Biodiversity and Aesthetic Displays

As demonstrated thus far, urban green spaces are an extraordinary resource for improving communities and the lives of individuals living in close proximity. The Pennsylvania Horticultural Society's mission, however, doesn't focus on just green space; rather, it challenges the organization to connect people to horticulture and then, in partnership, create "beautiful, healthy, and sustainable communities." This vision pushes PHS to go beyond just creating parks and open spaces, and instead to "elevate and integrate its public landscapes and public gardens ... into examples of horticultural excellence where visitors can find inspiration and learn about the best practices in gardening."<sup>18</sup> Core to this mission is the belief that gardens create additional benefits when compared to parks, greenways, or open urban green areas. While it can be difficult to standardize and study the exact impact gardening and horticulture has - as there are many forms of and approaches to gardening - one key feature of gardening is that it works to increase the biodiversity of an area: not only the diversity of plants, but also of birds, insects, small mammals, and many other living

<sup>17</sup> (Branas et al. 2018, 4)

<sup>18</sup> (The Pennsylvania Horticultural Society 2019)

organisms. This increase in biodiversity is perceivable by visitors and has been shown to increase the psychological benefits derived from those spaces.<sup>19</sup>

Relatedly, when asked to rank space preferences, individuals show a higher preference for a “well-maintained planting scheme, including both trees and accessory vegetation.”<sup>20</sup> Another robust study from the University of Melbourne worked to better understand the general public’s preferences for park design by mailing out a questionnaire asking respondents to rank different photos of landscape elements. The subsequent analysis showed that the complexity of plant design in a landscape was positively correlated with preference, and the researchers concluded that “Areas of dense vegetation could be incorporated into public parks in order to increase biodiversity values and public preference, without compromising safety, preference, or value as multi-use spaces.”<sup>21</sup> Quantifying and standardizing what “high-end horticulture” looks like is a near-impossible task; however, studies continue to show that humans instinctively prefer more diverse and aesthetically pleasing spaces. This preference encourages them to spend more time in those spaces, and therefore derive more benefits from them.

## Access to Green Space

Another key aspect of PHS’s proposed garden commons network is that it extends across Philadelphia and benefits all citizens, regardless of neighborhood demographics. This is a critical component since recent analysis shows that urban parks and recreational areas are not equitably and equally accessible by all; rather, urban green spaces have largely benefited middle-class communities.<sup>22</sup> Studies looking at major urban centers across the U.S. have consistently found that the density of park space and tree canopy cover tends to increase in communities that are predominantly White, have higher levels of education, and higher median incomes, indicators that are generally associated with communities of privilege in the United States.<sup>23</sup> These are communities that, in general, already experience higher levels of access to education, health care, generational wealth accumulation, food security, and general welfare, but are now also experiencing the extra benefits of green space, e.g. increased physical activity, increased mental relaxation, and lower crime.

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<sup>19</sup> (Fuller et al. 2007, 393)

<sup>20</sup> (Brethour et al. 2007, 10)

<sup>21</sup> (Harris et al. 2017, 159)

<sup>22</sup> (Jennings, Gaither, and Gragg 2012, 1)

<sup>23</sup> (Nesbitt et al. 2019, 63)

## **Median Income & Education**

Increased income and higher levels of education were most strongly associated with increased access to green spaces.<sup>24</sup> This can be partially explained by the fact that areas of higher poverty and lower educational attainment are generally segregated into urban centers or post-industrial sections of cities where urban green space is inherently scarcer.<sup>25</sup> This correlation remains true when looking at both general vegetation coverage in a neighborhood as well as when looking at access to parks and recreational facilities.<sup>26</sup> In a 2016 study of parks in 25 major urban cities, it was observed that for every 10 acres of parks located in high-income areas, there were only 7.8 acres located within low-income (high-poverty) neighborhoods.<sup>27</sup> Additionally, studies have found that recreational facilities and associated amenities (such as trash cans) in high-income areas were more likely to be rated as being in good condition than those in low-income areas.<sup>28</sup>

## **Race**

The correlation between race and access to green space is more nuanced. Access to general urban vegetation and parks is usually negatively associated with communities with higher proportions of racial and ethnic minorities, though the correlation is not exceptionally strong. Researchers from the University of British Columbia found that Latinx communities, generally, had the lowest access to urban vegetation, followed by African American and Indigenous populations.<sup>29</sup>

Recently the Trust for Public Land (TPL) developed the ParkScore© ranking system, which works to assess the park systems of major cities and score them on key factors such as general accessibility, size, equitable distribution, and financial support (measured as spending per resident). During their data collection, TPL found that of the “100 most populated cities, neighborhoods where most residents identify as Black, Hispanic and Latinx, American Indian/Alaska Native, or Asian American and Pacific Islander have access to an average of 44 percent less park acreage than predominantly white neighborhoods.”<sup>30</sup> The space that is accessible to majority-minority populations is estimated to serve approximately five times more people than parks that are in predominantly White neighborhoods and communities.<sup>31</sup> In Philadelphia, TPL found that while 95% of Philadelphians live within a 10-minute walk from a

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<sup>24</sup> (Nesbitt et al. 2019, 61)

<sup>25</sup> (Wolch, Byrne, and Newell 2014, 235)

<sup>26</sup> (Nesbitt et al. 2019, 63)

<sup>27</sup> (Cohen et al. 2016, 422)

<sup>28</sup> (McKenzie et al. 2013, 17)

<sup>29</sup> (Nesbitt et al. 2019, 61)

<sup>30</sup> (Chapman et al. 2021)

<sup>31</sup> (Chapman et al. 2021)

park, the amount of park space per person can vary drastically based on race. Predominantly White neighborhoods have access to about 48% more park space than the city median, while Hispanic and Asian neighborhoods have 30% and 24% less park space, respectively, than the city median.<sup>32</sup>

## Conclusion

Parks, natural areas, and general vegetation have all been shown to help improve the quality of life for individuals and communities. The benefits are derived not just from being in these spaces, but also by simply being around them. This section has reviewed the correlation between access to green spaces and improved physical and mental health of individuals. Additionally, it has explored how even simple park-like areas can actively improve communities by reducing crime and improving social cohesiveness. All of this research is to demonstrate the important role that these green areas play in our modern urbanized society. Research has shown that creating gardens, or more specifically biologically diverse spaces, further amplifies these benefits and that these spaces are in fact preferred by residents over simple green areas.

The latter part of this section, however, worked to demonstrate how access to green spaces is not equitable. Individuals living in urban neighborhoods with higher indicators of historic privilege, (e.g. higher percentage of White families, higher median income, and higher levels of education) in general have greater access to parks and open spaces. These spaces tend to be of higher quality and are better maintained than green spaces located in lower-income and historically underserved areas. This is a critical issue that must be addressed as the nation continues to become more urbanized in the coming years, and as we work to address the inequalities that continue to be pervasive in our society. Addressing the inequitable access to green space can help lead to improved health outcomes for individuals, reduce crime for communities, and an overall more just and fair culture.

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<sup>32</sup> (The Trust for Public Land 2020)

## Part III: Qualitative Surveys

### Introduction

Part II of this capstone developed a strong science-backed argument for increasing access to green spaces, especially in underserved communities. The next part of this project aims to develop a list of recommendations and best practices for PHS to follow as they work to actualize their proposed garden commons network.

### Methodology

In order to build this list of recommendations and best practices, I conducted a series of interviews with key stakeholders inside of Philadelphia, as well as experts in the field of public green space management outside of the city. The aim of these interviews was to garner input and expertise from

- Philadelphia community members who live within communities where PHS is most interested in expanding their garden commons network first.
- Individuals who professionally manage large public greenspaces in other major cities in the United States.
- Individuals who professionally manage large public greenspaces within Philadelphia.
- Individuals who volunteer as part of a Friends-of group associated with existing public parks within Philadelphia.

PHS senior staff representatives and I collaborated to generate the list of individuals that I then contacted for this project. This process partially relied on our own professional networks. By engaging our existing contacts, we hoped to maximize the likelihood of being able to recruit participants into the study; however, it also introduced an inherent selection bias into the data collection process, as described below.

Out of consideration for the privacy of those who participated in this study, their names and organizations are not included in this report. In total eight sessions were held with ten participants (for two organizations, two individuals joined the session). Five participants were from Philadelphia, one was from Denver, one was from Chicago, one was from Boston, and two were from New York City

After the list of participants were agreed upon by PHS senior staff and myself, I began to reach out to each person individually to set up a one-hour interview conducted over zoom.

The general procedure for setting up each interview is described below in Table 2, along with specific action items for each stage.

Table 2: Interview scheduling work-flow

Stage	Flow
Schedule	<p>A. A template email was prepared (see Appendix A for all templates), and then customized and sent to each identified individual.</p> <p>B. If a response was received, then I moved on to the “prepare” stage</p> <p>C. If no response was received within a week, I sent a follow-up email. If still no response was received, I worked to verify that the email address was correct, and then sent a final follow-up.</p>
Prepare	<p>A. Once a time was set, a calendar invite was sent which included a zoom link, as well as the list of questions I prepared to ask during the session.</p> <p>B. A full script was also prepared for the interview, which included a standardized introduction and closing section (see Appendix A for template), along with the questions distributed above.</p>
Interview	<p>A. During the interview, I asked permission to record the session before starting the zoom recording. I also took additional notes via pen and paper in order to reduce excessive typing noise and to minimize distractions from other computer notifications.</p>
Analyze	<p>A. In cases where a zoom transcript was produced, I imported it into Google Sheets and then added in any notes or resources I collected in my notes.</p> <p>B. I then replayed the entire interview while reading along with the transcript. I used the Google Doc comment feature to quickly tag key themes and concepts in each interview. I completed this process by myself without additional reviewers.</p> <p>C. I then transferred these key themes and concepts, along with exemplary quotes, into a unified Google Sheet. I used this consolidated document to develop the overarching key themes and recommendations presented below.</p>

## Limitations

- **Limited numbers of participants:** While a diverse group of individuals was invited to participate in the interviews, there were only eight interviews completed. The other

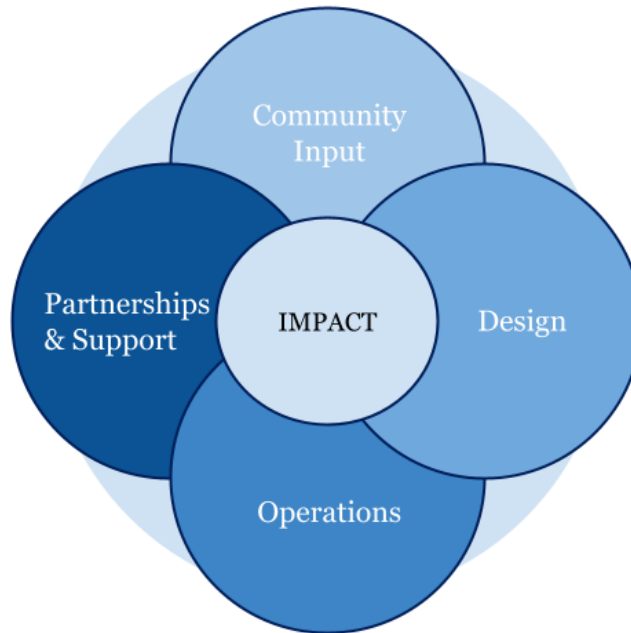


individuals contacted either could not schedule an interview within the window of time allotted for this project or did not respond to my requests. While I was able to develop recommendations and key findings from these interviews, these are based on a relatively small sample and therefore may not be fully representative.

- **No government officials were contacted:** Due to the potential ramifications of presenting this idea to governmental officials before a more finalized plan was created, PHS asked to not include governmental partners in the list of interviews. The topic of governmental support was discussed during the interviews and will be explored further in this report, but the perspective of Philadelphia Parks and Recreation and the City Council was purposefully not sought out.
- **Data collection biases:** As mentioned above, the final list of key individuals contacted for this project was generated in consultation with PHS senior staff. The goal was to find individuals that could address the different viewpoints that we had previously identified, and that we believed would be able to provide informative and meaningful input. We relied primarily on our own professional networks, and the final list does not represent a randomized sample. This has the potential to introduce a bias into the data collected. Additionally, since the interviews were conducted and analyzed only by me, I may have introduced my own biases accidentally into the analysis.

## Key themes & Recommendations

After reviewing my notes and transcripts from each interview, I developed a list of unique categories, which I further grouped into five broad themes: community input, design, operations, partnerships and support, and impact.



Below, I will discuss each theme in greater detail and give more insight into the information gained from the interviews I conducted. For each of the five themes, I will provide more context and meaning behind the theme, as well as provide recommendations on how PHS may integrate this information into their current plans to create the garden commons network across Philadelphia. It is important to note that many of these themes are interconnected and are not discrete concepts, so while a recommendation may be included under a particular theme heading, it may directly impact, or be influenced by, other recommendations presented under different themes.

### **Key Theme #1 - Impacts of Gardens**

Part II of this project provided peer-reviewed scientific evidence about the importance of green space, and how gardens can help increase usage and interest in those spaces. However, in the course of conducting these interviews, I identified two additional benefits of gardens and why they are important. I ultimately called

"I almost hold the word garden as a sort of fill-in for intentionality and thought, and care, and ongoing maintenance."

these two findings “intentionality” and “space for reflection.” These benefits are not easily quantifiable; however, they may be equally important in understanding the increased benefits derived from gardens as opposed to other urban green spaces. The concepts presented below could be used in conjunction with the scientific evidence presented previously to create both a data-driven and values-driven argument for increasing access to urban gardens.

Almost all interviewees explicitly expressed that the presence of a garden indicates that a space is cared for, and presents a positive message that a group is actively improving their environment. While the physical garden can add beauty and provide environmental services, the simple presence of the garden helps build community cohesion. One interviewee reflected:

“[I am] just thinking about when you see a really well-maintained garden. What kind of social implications that might have and how that might make people feel about the space...what kind of interaction does that invite inside the garden.”

In this same interview, the participant used the term “cues of care” and noted how a well cared for space feels more inviting. While a traditional park space – with lawn, trees, and benches – is beneficial, the garden demonstrates a commitment to maintaining that space for a longer period of time.

This is of course more important in historically underserved Black and Brown communities throughout Philadelphia. As one Philadelphia resident put it, “Black and Brown neighborhoods need [gardens] even more.” She went on to add, “We shouldn’t always have to be going someplace else just to get inspired to make our lives better.” The PHS land care program already works to address abandoned and blighted properties across the city; however, the properties are still owned by a third party, leading to concerns that the property may be developed in the near future. The presence of a garden, though, can help indicate a longer commitment to the space and can generate more long-term support from the surrounding community.

Along with demonstrating intentionality, many participants in these interviews mentioned how gardens give a space for people to reflect and process their own thoughts. While this again ties in directly with the evidence regarding the psychological benefits of green space presented earlier, hearing this theme come up in multiple interviews demonstrates the importance of this benefit. Many interviewees mentioned how gardens invite people in to just sit, relax, and enjoy a moment of introspective reflection. This is increasingly important as more houses are built across the city, and older single-family homes are converted into apartments. As the population density of the city increases, the

"If we continue to just build ... that's just going to increase tension. Everybody is all on top of each other, you don't have anywhere to go and just breathe."

need for open spaces becomes critically important. One interviewee, who is a Philadelphia resident, shared the story of observing new neighbors from an apartment complex come and stand in front of their house to smoke cigarettes. At first, the interviewee thought "they're loitering, [or were] getting ready to do something," but after observing this behavior for a while, the interviewee realized "they are coming up the block to stand in front of my [garden], just to get away...they're not doing anything, just trying to find a place to think." Personally, I have had very similar experiences with just my small container garden and window boxes in front of my house where pedestrians frequently stop to remark on what is flowering or what has recently changed. Even small reprieves of plants and green space in an urban setting can have an immense draw and greatly impact the surrounding community, thus illustrating the need and desire for more of these spaces.

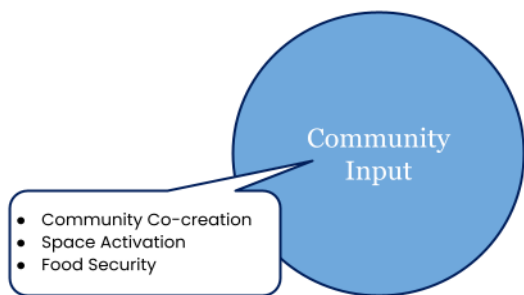
This theme of impact mostly came from the conversation at the beginning of each interview about the differences between parks and gardens. Another interesting theme that came up in this portion of the interview was the differences in the time scales of parks and gardens. One interviewee described parks as being designed "on a scale of decades, generations, and even centuries... [they operate] on cycles that would take multiple generations to sustain." Alternatively, the interviewee noted that gardens invite individuals on "a weekly or daily, or at least seasonal or annual, basis to come back to a specific location and then cultivate that space with a level of tending that is clearly of a human cultivation scale." While this is not directly an impact of gardens, I thought it relevant to include these remarks here as well.

### **Recommendations #1: Impacts of Gardens**

- **Maximize viewsheds:** To maximize the impact of the garden on the surrounding community, PHS could design each space within the garden commons network with multiple viewsheds that can be enjoyed from the perimeter. This would allow anyone passing by to see and recognize the garden and would ensure that everyone notices the intentionality of the space. Additionally, visually welcoming entrances will invite visitors to come in and find moments of reflection and relaxation.
- **Ensure adequate seating:** In order to design the most impactful spaces, PHS could explore options to provide sufficient seating space within each garden. Alternatively, the organization may wish to integrate smaller alcoves into the gardens, allowing people to have room to reflect and relax in semi-privacy. Heavily planting a garden

can maximize environmental benefits - such as providing more ecological habitats or host plants - but may prevent people from stopping and finding "a place to think." As will be discussed later in Key Theme #2, the ultimate design of the space must be co-created with the surrounding community, but PHS designers may want to consider seating and reflection spaces as design criteria when creating new spaces. The Azalea Garden, located on the Schuylkill waterfront and currently maintained by PHS, can serve as a potential model for this concept. There are plenty of spaces for people to engage in physical activities within the garden, but there are also more secluded areas along the perimeter where individuals or small groups can sit and enjoy being in the open space.

## **Key Theme #2 - Community Input**



In almost all the interviews completed, the importance of community input came up. All participants agreed that to create dynamic and impactful spaces of any kind, the voice of the community must be built into the planning process. As one interviewee clearly put it, "there is no one size fits all. It's always customized" when it comes to space creation.

When coming into a community to either develop a new garden space or revitalize an existing one, it is important for the designers to actively seek out input from the immediate community members. PHS already has cultivated a reputation for working with community partners, and this strength will be increasingly important as PHS works to expand its network of gardens. While one may argue that it is more cost-effective to use templated garden designs, each new garden within the PHS garden commons network should be built with its own unique style and characteristics as prescribed by the community. This is the only way PHS can create a garden network that truly serves the communities surrounding it.

The pier park system along the Delaware River, operated by the Delaware River Waterfront Corporation (DRWC)<sup>33</sup>, can serve as a great example of how to integrate community input. The DRWC's goal is to operate a park every half-mile along the Delaware River. Each park is created on a revitalized pier and is designed to explicitly meet the needs of the nearby community. DRWC's goal is to get the most complete picture possible of what is desired from any new space before construction planning begins.

The success of this outreach is demonstrated by the resulting uniqueness of each park that exists along the river today. The first park created by DRWC was the Race Street Pier,

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<sup>33</sup> A representative from DRWC participated in this study and provided additional insight into their organization.

which includes “high design” elements, with many sitting areas, spaces for peaceful reflection, and a “nod towards its original function as a bi-level shipping pier built in 1896.”<sup>34</sup> However, in contrast, the Washing Street Pier Park, which opened in 2014, focuses more on ecological sustainability and coastal resilience - a reflection of research done in collaboration with the Philadelphia Water Department to understand the benefits derived from allowing piers to return to more natural settings. Furthermore, an art installation was installed on the Washington Street Pier to commemorate the immigration center that once stood there. This idea was generated after the organization spoke with the surrounding community and learned the importance of the immigration station that once stood on this pier.

At the beginning of each new project, DRWC engages its constituents through organized sessions and active community outreach; however, the work to seek input does not end after the garden is created. After opening a new space, DRWC works to honor and elevate the voices of the current users as well and utilize that input to inform decisions moving into the future. For example, DRWC began asking users and neighbors of the Race Street Pier what kind of programs they wanted to see in the space and learned that there was a desire for some programmatic elements, but nothing too large or boisterous. From this feedback, DRWC piloted a yoga series on the pier, which was a huge success. As a representative from the organization put it, they now believe it is “one of the biggest yoga programs in the city.”

This theme of ongoing information gathering and outreach came up in other interviews as well. While DRWC describes it as a “constant dialogue,” other organizations I interviewed described creating an “active engagement protocol” to engage with visitors; and others utilize docents to answer questions from guests and to collect user data throughout the year. These engagements both encourage preferred behavior (see Key theme #3 operations) and help gain information about how a space is being used regularly.

“any group of any size that's here...is going to have a conversation with somebody who works here on the weekend.”

Collecting this data and creating actionable items from it, though, is not easy. As one organization that I interviewed put it,

“We want what most organizations want, we want the communities that use the parks to have a sense of ownership, but with that sense of ownership comes opinions and feedback. Figuring out the structure or the structure

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<sup>34</sup> <https://www.delawareriverwaterfront.com/places/race-street-pier>

options for harnessing that feedback I think is going to be vital for all parks to figure out.”

The interviewee went on to say, “What the evaluation metrics are and figuring out what success looks like [is difficult]. People could have a million ideas, and you could try all of those ideas, but probably not all of them are going to work for every space.”

If done well, though, these feedback loops and community partnerships can help not only with getting feedback on current practices, but also with generating new ideas for the educational and programmatic activation of spaces. Participants in my interviews reported success in inviting community partners into their space to co-create events rather than creating events internally and inviting the community to attend. As one interviewee put it, “[Our] work is following the interests of partners. Depending on what a partner’s interest is, [we] will try to amplify and support that....” For example, interviewees reported partnering with local indigenous groups to “do a walk through the garden and talk about some different plant species and how they relate to people and culture and place.” Others reported success in collaborating with local community leaders to bring new activities to their space. As the interviewee put it, “We did not imagine a Southeast Asian market or a Mexican soccer league... these are not things that we created.” So while community input is important during the garden creation, it must become a core value of how the space is managed and operated.

“our job is not an effort in curation, it's actually an effort in facilitation.”

A minor element of this theme that came up in several interviews was that of food crops and nutrition. PHS is a known resource and is seen as an expert in the realm of urban agriculture within Philadelphia, and the organization actively works to support community gardens and promote access to fresh fruits and vegetables. However, in early conversations about this project, PHS expressed a desire to focus primarily on visually aesthetic gardens and not food-producing spaces. In western society, we tend to separate display-horticulture and food-production agriculture, but they are in fact closely related fields. For many, horticulture can play an important role in “nutritional security for many undernourished populations.” As one interviewee noted, “To me, the food and vegetables are still horticulture.” Other interviewees also noted that visitors to their garden

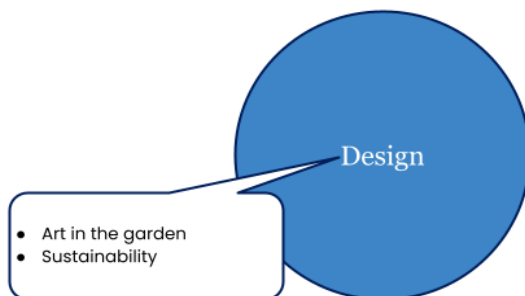
“enjoy the nice green grass, all the pretty flowers and they enjoy seeing the vegetables grow in the raised beds, and from what we’ve noticed, it has helped to build community too.”

So while PHS may not be actively pursuing food production within the garden commons network, it may still be beneficial to integrate some nutrition-oriented aspects into the visual displays. As one participant I interviewed discussed, “Food justice isn’t counter to park space that is only for recreation, or only for passing through...how can we think a little bit more creatively, whether or not it’s planting trees with edible fruits, as opposed to non fruiting trees, or something else to produce food.”

## **Recommendations #2: Community Input**

- **Allow ample time for community engagement during the design phase:** PHS has many skilled designers who are able to quickly envision and implement gardens if needed. For this proposed endeavor, though, it is important that PHS explore ways to fully engage the surrounding community and solicit input before even starting to create designs. PHS already has meaningful and deep connections with many neighborhoods and could therefore leverage these existing relationships to convene listening group sessions or solicit input through trusted representatives. Since each community is different and unique, the tactics used to solicit input for each garden may also need to change in order to properly reflect the community.
- **Develop ongoing data collection protocols:** Once a garden is created, PHS should consider developing additional data collection protocols to ensure that the garden is able to grow and adapt to changes in the neighborhood, and meet changing desires of the community that it serves. These processes could include intercept surveys, regular community meetings, and soliciting feedback through quantitative or qualitative surveys. Furthermore, there must be a clearly defined protocol for how the information gained from these various methods can be implemented in a timely manner. This can be done by empowering staff to have ownership and decision-making capabilities within their designated section of the garden commons lattice (as discussed below).

## **Key Theme #3 - Design**



As demonstrated above, the design of the garden should be co-created with input from the community and targeted users. Throughout the interviews I conducted, however, specific elements of design continued to emerge as important regardless of the context of the garden. The first of these design themes was sustainability. Many of the individuals I



spoke with indicated that it was important to them, and to their teams, to implement sustainable practices, including using ecologically-appropriate perennials; creating designs that require minimal inputs (such as fertilizer and water); avoiding any plants that may pose a risk of becoming invasive; and creating habitat for insects, pollinators, and birds. It is also important to note that none of the individuals I spoke with believed that gardens should be planted with only native plants, but rather stressed using plants that were shown to pose no ecological harm.<sup>35</sup>

"I love ... seeing the bright colorful annual displays and I hope that is always a part of public horticulture, but also I think that us being responsible and taking our jobs seriously ... can an make a difference, for the environment."

The second theme that I identified, in regards to design elements, is having art installations in the garden. Gardens and parks can be seen as forms of art themselves, and frequently those who create and tend for these spaces see them as such. For example, one interview participant described the great landscape architect Fredrick Law Olmstead as "an artist or somebody who was really composing with these larger aesthetic aims in mind." The addition of physical art into a garden, however, also seems to play an important role in building meaningful spaces. This can include large commissioned pieces,, or smaller murals painted on the side of buildings. One participant described art and physical installations as ways to engage new audiences: "There are other avenues - if it is through storytelling, through partnerships with artists, or through partnerships with technology, there are ways to help people understand why these spaces matter."

Interestingly, many of the larger institutions that participated in this study have staff devoted to physical art. While having this type of expertise on staff may not be an option that PHS wishes to pursue, it does open up potential opportunities for partnerships, as described below in theme #5.

### **Recommendations #3: Design**

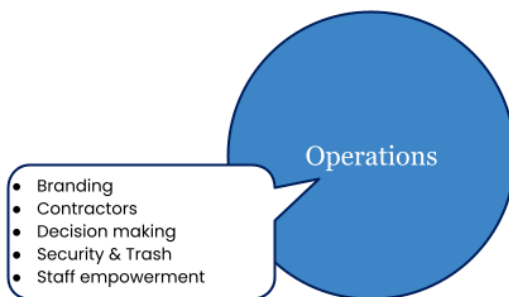
- **Integrate sustainability into each garden:** As stewards of the natural environment and as horticultural professionals, PHS should ensure that all gardens are designed to maximize their sustainability. This does not necessarily mean using only native plants or only planting perennial plants. Rather, a whole-system approach should be taken when creating a new space within a community. Integrating elements of environmental sustainability and ecological horticulture can also provide avenues for promoting other PHS programs and existing messaging.

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<sup>35</sup> Associated with planting appropriate plants, many of the horticultural professionals I interviewed during this project directly raised the issue of having to remove and control invasive plants in their gardens. The larger organizations in this study indicated that they relied on volunteer workers to help remove invasives, but also cautioned that trained staff is needed to help supervise those efforts.

- **Find ways to integrate physical art:** Creating a garden is a form of art in itself, but PHS could explore ways to integrate physical art into gardens as well. Art installations may help PHS build buy-in and a sense of ownership from the community for each garden. By partnering with other organizations, e.g., the Mural Arts Program, new pieces can be commissioned for each garden, adding to its unique brand and appeal. These pieces of art can also help the garden reflect the history and diversity of the individuals who use the space the most, making them feel welcomed and celebrated.

### **Key Theme #4 - Operations**



Due to the nature of many of the questions I asked during the interviews, I spent the most amount of time discussing various aspects of operations with each of the interviewees. While each participant had their own unique combination of skills, challenges, and opportunities particular to their location, there were some universal themes that emerged. The most frequently discussed themes

were branding & marketing, use of contractors, decision-making models, security, and staff empowerment. Below I will delve deeper into each of these subsections.

**Branding & Marketing:** All but one non-profit organization that participated in this study all indicated that they have a centralized marketing/communications team, yet they work to develop the unique identity of their different locations. These organizations developed a subset of branding for different locations to address the feel and functionality of those spaces while also working to connect them back to the larger organization's mission. The tools used to accomplish this included developing a unique color palette, creating separate naming conventions for events and activities, and maintaining separate social media handles for each location.

Relatedly, one interviewee did warn about the risk of trying to put out too many messages at once. The individual recommended choosing "a very small handful of messages and driving them consistently and aggressively." Whether this is about promoting an event, or encouraging a certain behavior, being selective about what messages are being elevated is important. Several Philadelphia interviewees, for example, directly indicated that the signage Philadelphia Parks and Recreation uses to convey acceptable behaviors in city parks is ineffective because it is trying to relay too many messages at once. One participant went as far as to say that the signs were in fact counterproductive towards getting people to respect and protect city green spaces. It is therefore important to find the balance between creating

multiple unique brands while not overwhelming the target audiences with too many messages or calls to action.

**Contractors:** All interview participants discussed utilizing contractors to accomplish regular maintenance tasks. All organizations that participated in this project discussed how staff and volunteers worked to complete specialized tasks - such as weeding, planting, and invasive removal - but then contracted out more routine maintenance such as mowing, hedge trimming, and or dangerous work such as tree maintenance. The amount of work that is contracted out depends on the staff size of the garden and the level of expertise employed by the organization. One organization I spoke with, for example, has no horticultural staff members and therefore must contract out all work, while another organization employs two full-time gardeners along with an intern each year, so they are able to handle most tasks except for maintaining their trees and large hedges. Yet another organization had hundreds of employees and was able to accomplish all tasks internally except for large clean-ups after storms, or major capital projects. As will be discussed in theme #5, contracting work can be an opportunity for partnering with other organizations, such as workforce development programs. While none of the individuals I interviewed directly engaged with these types of programs, one interviewee did note that they know of other groups that do partner with job training programs to help complete basic maintenance tasks such as weeding, litter removal, or lawn maintenance.

**Decision-making processes:** When maintaining any garden, there is always a range of decisions that must be made. These can be day-to-day decisions such as what areas to prioritize for weeding, or larger decisions such as when to redesign a section of the garden or to expand certain plantings. These decisions become increasingly complex as garden locations become physically dispersed and intimate knowledge of the space becomes decentralized. Some of the organizations I spoke with during this project, therefore, expressed how they work to empower frontline staff to become stewards of their assigned gardens and to make decisions with their own judgments within certain constraints.

"[For] a larger capital project, they would ask more questions...but in terms of planting and doing small design changes that's all me and my team."

For most of these organizations, however, these decision-making processes were not formally documented. Instead, they were generally understood within the line of command inside the organization. One group that I spoke with, however, was starting to plan for future growth and therefore believed that formal agreements about decision-making and responsibility would be required. "Right now we're modeling it through trust. [We're] creating facts on the ground, which will be enshrined in documents." For now, while the organization is still small, decisions are being managed through informal conversations, but the group is

cognizant that these are the first steps in creating legally binding agreements in the future. This applies to both relationships with external partner organizations, as well as internal decision-making processes.

**Security and Trash:** A major theme during these interviews was the issue of security; or, more specifically, trash and vandalism mitigation. A common feature of urban public spaces is that they are not easily secured at night and are frequently utilized by an unsupervised public. Interviewees all discussed different ways of trying to mitigate damage and security risks, but all acknowledged that “you have to expect things to get broken.” Some of the larger organizations that participated in this study actively contract or employ security staff to patrol their properties, though these were primarily organizations that oversee large pieces of congruent property. Another technique for mitigating security issues was by working to more actively utilize their space or, as one participant put it, “You change your culture of security through activation of the space.” Having more of a regular presence at the site and promoting preferred and acceptable behavior in the space throughout the day limits the time that deviant behavior can occur. As discussed in the branding section above, it is important to also carefully choose what messages are being presented to the users of the space. Not all messages can be shared at one time, so creating a dynamic communication plan is necessary to ensure only the desired information is shared as needed.

“You have to expect things to get broken and you still have to create a sense of momentum, or you will lose all those partnerships with people if they see it going backwards.”

Additionally, prompt and regular trash removal and vandalism remediation also help demonstrate that the space is cared for and has a strong steward. As discussed before, people enjoy gardens for the sense of intentionality and notion of commitment that they represent. It is important to not allow these spaces to become overrun with garbage, weeds, or vandalism.

**Staff:** The discussion around staffing structures varied the most across interviews. Some organizations were entirely volunteer-run, while other organizations had hundreds of employees. A common theme that did appear was that staff were seen as not just important for the physical upkeep of the space, but also as ambassadors for the organization. Each group discussed how they train their volunteers and staff to interact with the public and to serve as leaders within their space. One community space organizer recalled,

“People are always driving up asking ‘Oh, how can I become a part of this?’ So it’s become a habit when we’re out there to make sure that we have extra flyers on hand so that we can share with other people. These are the days and the times that we’re typically out there, so you just stop by.”

These interactions can help the organization gain information and input on what the community would like to see in the garden (key theme #2), encourage visitors to help keep the space clean by properly disposing of all personal trash (security & trash), or provide visitors with information and a pleasant experience. Staff working in public spaces should therefore be equipped, trained, and ready to serve as representatives of the organization. Several interviewees that I spoke with discussed having their staff in formal uniforms with organizational logos and colors, and providing training on how to proactively engage with visitors.

In my opinion, the issue of staffing may actually be the most important issue to consider moving forward with creating a garden commons network. Staff affects how the community is able to engage and interact with the space, how PHS can demonstrate their commitment to the space, how spaces can be physically maintained, and how the garden's design will grow and evolve over time. I will go into more detail in the recommendations below, but it is important to stress here that staffing is actually a central theme that is interconnected with many of the topics discussed throughout this paper, even though I chose to put it here under operations.

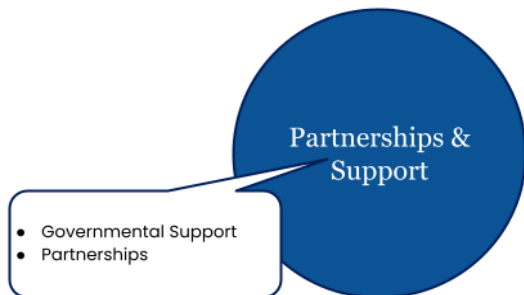
#### **Recommendations #4: Operations**

- **Create formalized agreements for all spaces:** The Pennsylvania Horticultural Society currently maintains some spaces on public property with varying degrees of formalized and non-formalized agreements. As the organization looks to increase the number of spaces under its care, it should explore ways to formalize agreements about who is responsible for different aspects of the space, and how decisions will be made going forward.
- **Hire horticultural professionals to maintain a specific subsection of the garden commons network (zone maintenance):** Having specific staff assigned to each location will help ensure consistency of care and attention across the network. Furthermore, having a familiar person working in the space regularly will help build trust and connections with the surrounding community. This person should be empowered to work as both the steward of the physical space and of the cultural context. I would recommend that PHS could include outreach as part of the formal job description for these positions and provide training for newly hired staff on how to engage with visitors and community members. Gardeners in these positions could also be empowered to actively post on social media channels and autonomously make small to moderate changes to their gardens as they deem appropriate.

- **Develop a unified communication plan across all locations:** There is a need to be selective about how many messages are being presented to target audiences at any one time; therefore, creating a year-long communication plan for the garden commons network can help ensure that not too many messages are being actively shared simultaneously. This plan could include regularly occurring messaging needs (e.g., “don’t pick the flowers” signs going up each spring), as well as opportunities for more spontaneous site-specific messages (e.g., addressing upcoming projects happening in the space). It is important to coordinate these messages so that consistent information can be shared through both physical signs, personal interactions, and online platforms.
- **Create an ambassador program:** While staff hours may be limited and stretched across multiple locations, ambassadors can be used to actively engage patrons in a space whether or not PHS staff is present. While the role of volunteer docents is common in non-profit organizations, paid ambassador programs go even further to build a sustainable support network for a space. These ambassadors could be recruited from the surrounding community and be compensated with a small stipend for work in the garden. Their efforts could include basic garden maintenance, engaging with visitors using the space, making sure that trash and debris are removed quickly and regularly, or reporting any issues or concerns to the garden staff.

## **Key Theme #5 – Support & Partnerships**

*N.B. –The information presented below is from my own analysis, and is not a reflection of PHS’s opinion or attitude towards Philadelphia’s city government. All interviews were conducted and analyzed independent of PHS.*



Since PHS wants to create a garden commons network on publicly held land, they will need to work closely with city council and Philadelphia Parks and Recreation, along with a myriad of other external stakeholders. A common theme that emerged from my interviews though was that Philadelphia agencies are not always very forthcoming with support. Instead, local

organizations have had to turn to other entities, such as other non-profits, private individuals, and consulting groups to find the support needed for their success.

Most groups reported having generally pleasant relationships with Philadelphia Parks and Recreation but did not necessarily see them as equal partners. One Philadelphia-based interviewee, for example, discussed how their organization wanted to update the benches in the space. The organization researched options, identified their top choice, and then had to fundraise the money to purchase and install the benches. Philadelphia Parks and Recreation did not interfere with the process and approved the final design, but the interviewee stated that the department did not actively support them in any way.

*“We haven't received that in a number of years now.”*

*“We have to raise the money ourselves to do anything.”*

While in general the attitude of Philadelphia participants towards the city ranged from slightly positive to neutral, one interviewee felt that city council was actively preventing work from being completed on their site.

*“For a number of years [we met] off and on with City Council members to try to get [assistance] and for one reason or another, it was either just no, or they would act like they didn't remember discussing that subject with us before.”*

This group was requesting support from a city council member in order to expand their operations, but felt that their representative was uninterested in helping. This organization has continued to struggle with getting the support they want and has had to partner with other non-profit organizations in order to pursue different avenues of growth. Other

interviewees also reported working with other non-profits in the area, including PHS, to accomplish beautification projects in their space.

### **Recommendations #5 - Support & Partnerships**

- **Don't just build gardens, advocate for gardens:** The lack of involvement from city government poses both a challenge and an opportunity for PHS. As an organization, PHS has worked hard to develop strong relationships with elected officials and city government agencies already. While PHS will have to draw on these good relationships in order to create a garden commons network across the city, there is an opportunity to simultaneously help advocate for community-led gardens as well. PHS could investigate how to help individuals already working to create green space in their neighborhoods gain the necessary legal clearance to build and maintain gardens. These gardens could be integrated into PHS's garden commons, but led by community members rather than PHS staff. This recommendation could also be combined with the ambassador program described above.
- **Create a garden advisory committee:** This committee would create opportunities for PHS to engage other partners and leaders in the field and provide access to additional resources. The committee would not be responsible for the day-to-day operations of any of the gardens, but rather help generate and maintain the unified mission, messaging, and the overall quality of the PHS garden commons network. This committee could assist with perpetuating best practices across all sites and ensure that the message of PHS remains consistent even while adapting to the specifics of each site. As an example of how this can be achieved, I recommend looking at the Emerald Necklace Conservancy's Park Advisors program whose purpose "is to advocate for standards, policies, projects, and funding for the parks, and contribute to programming that supports the Conservancy's mission, as well as the missions of its public partners."<sup>36</sup>

## Conclusion

I completed a total of eight interview sessions in March and April with individuals actively working to develop and maintain public garden spaces across the US. While no government officials were interviewed during this process (as discussed above under limitations) and the number of interviews conducted was overall small, I was still able to synthesize a list of key themes and subsequent recommendations. The themes and

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<sup>36</sup> <https://www.emeraldnecklace.org/about-us/about-park-advisors/>



recommendations presented here work to highlight best practices and lessons learned from other organizations in Philadelphia and across the country, as well as recommendations on how PHS can innovate and work to champion a garden commons distributed across Philadelphia. While some recommendations may be easily addressed using PHS's existing expertise and skills, others may not be immediately actionable due to funding or timing constraints. The ultimate goal is for the information presented in this section to help guide PHS forward as they work to expand their network in an equitable and sustainable manner for years to come.

## Part IV: Conclusion

Over the past two decades, the United States population has been becoming increasingly urbanized, and that trend shows few signs of stopping. As more and more citizens live in urban settings, the ability to access green space becomes increasingly limited. To address this need over the past 30 years, the Pennsylvania Horticultural Society has been working to create and maintain beautiful green spaces across the greater Philadelphia region. Recently, though, PHS is looking to further its efforts in this space by formalizing its current network of green spaces and expanding it into an equitable network of gardens across Philadelphia. Their goal is to ensure all Philadelphians have access to not just park space, but rather to beautiful, aesthetically pleasing garden spaces. To assist PHS in its mission, this project set out to answer three major questions. First, how does access to green space, and specifically gardens, benefit urban residents? Next, what are the best practices currently in place to manage large networks of green spaces in urban centers? And finally, how can PHS utilize the information gained to advance their own objectives? These questions were answered through an extensive literature review process as well as a novel qualitative data collection.

The literature review worked to identify and highlight existing peer-reviewed scientific research showing the benefits of green spaces on an individual's well-being, as well as how green spaces can help build community and reduce crime in neighborhoods. This first part of the project also explored the issues of inequitable access to green space in urban centers and the need to actively promote new green spaces in historically underserved communities. Additionally, I worked to build an argument for how garden spaces provide even more benefits for communities and individuals.

The second two research questions were addressed through a series of eight interviews conducted with individuals not only in Philadelphia, but also in Chicago, New York City, Denver, and Boston. The information gathered through these interviews was then categorized into 5 major themes: Impact, Community input, Design, Operations, and Governmental Support & Partnerships. Within each theme, some best practices were highlighted where appropriate, and recommendations were provided on how PHS could integrate the lessons learned into their own practices moving forward. These recommendations were developed to assist PHS to create not just spaces of beauty, but rather cherished spaces where all feel welcomed and supported. Through these interviews, additional resources and organizations were also recommended to me, and while I did not directly reference them all, I have included a list of additional resources in Appendix C at the end of this document.

In this paper, I did not directly address the extensive work that PHS is already doing across the region to create and maintain gardens, promote food security, advocate for trees, and build stronger communities. However, being familiar with this work, I can confidently say that the organization already has the skills and resources to grow its efforts to expand its network of gardens if the organization chose to. Therefore my hope is that the information presented here encourages PHS to move forward confidently as they work to build, enhance, and advocate for a garden commons network in Philadelphia.

## Thank You

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## Appendix A: Templates

### A.1 Scheduling email template

**Email:** [ ]

**Subject:** Pennsylvania Horticultural Society Feasibility Study

Dear [ ],

My name is Josh Darfler. I am currently pursuing my Master's of Public Administration at the Fels Institute of Government at the University of Pennsylvania. I am currently working with the Pennsylvania Horticultural Society in Philadelphia to complete a feasibility study to create a network of public high-end horticultural gardens in areas of Philadelphia historically underserved and under-resourced. These gardens would be designed with and for the community and aim to promote and empower healthier communities. After working in the horticulture world for several years, I witnessed the power of gardens and greenspace on the health and wellbeing of those who are lucky to have access, and so I wanted to focus my MPA on finding ways to make gardens more accessible to all through progressive policies and partnerships.

*[Insert information about why I am interested in talking specifically to them - what expertise do they have, what experience or insight do I want to learn from them, honor their ability to contribute].* I was hoping you would be willing to meet with me over zoom sometime in the next couple of weeks for an informational interview. Please let me know at your earliest convenience if you would be willing to participate or if you have any questions at this time.

All the best,

Joshua

### A.2 Interview Script Opening

- **Thank you & welcome** - Thank you for taking the time to meet with me today. As mentioned in our email correspondence, I am currently completing my capstone project for my Masters of Public Administration at the Fels Institute of Government at Penn. For this project I am working with the Pennsylvania Horticultural Society, here in Philadelphia to help them conduct a feasibility study looking at creating a network of public high-end horticultural gardens in areas of Philadelphia historically underserved and under-resourced. These gardens would be designed with and for the community,

and aim to promote and empower healthier communities. After working in the horticulture world for several years, I witnessed the power of gardens and greenspace on the health and wellbeing of those who could access those, and so wanted to focus my MPA on finding ways to make gardens more accessible to all through progressive policies and partnerships. I also want to note that while I am collaborating with PHS on this project, my work and research is being done independently and I am not officially affiliated with them.

- **Purpose** - I had reached out to you because I see your organization as a role model institution that is already striving at providing access to greenspaces and gardens to a wide range of constituencies across your city. The questions I have today are aimed to help me learn more about your institutions and to help me build suggested best practices about managing such spaces. There are no right or wrong answers to these questions, and I thank you in advance for your honesty and insight.
- **Structure for Conversation** - I have asked for an hour of your time, however we may not need all of that time. While I have prepared questions ahead of time that I would like to ask, I encourage you to answer them as in depth or not as you wish, or feel free to share whatever thoughts come to mind. I also recognize that there can be a lot of similar, yet distinct terminology used in this space, so please do not hesitate to ask for clarification at any time.
- **Consent** - Due to the nature of these questions, your organization may be associated with your responses in the final documentation provided to PHS, however if there is anything that you would like to be kept confidential or anonymized please let me know - either in the moment or afterwards, whichever is more comfortable for you. Also I would like to ask your permission now to record this conversation, is that ok?
  - YES - start recording on zoom
  - NO - that is ok, are you still comfortable with me taking notes during this interview? I am happy to provide you a copy with my notes afterwards for review.
- **Continue** - Are there any questions or concerns before we continue?

### A.3 Interview Script Closing

Thank you again for taking the time to speak with me today. Before we conclude today I wanted to leave space to see if you had any questions for me, or if you think there is anything important that I did not ask about during our time together that I should consider moving forward?

If you think of any additional thoughts or questions, please do not hesitate to reach out to me at any time. You have my email, and my phone number is also in the signature of my



email. I am happy to communicate via text, phone, or email - whatever is most comfortable for you. I will be presenting my capstone project at the end of April and graduating in May. I will share the key findings of my research with you once complete, but if you are interested in any of my findings, I am happy to discuss more.

Once more, thank you for meeting with me today, and I hope you enjoy the rest of your day.

## Appendix B: Interview Questions

### B.1 Category A – Non-Philadelphia organizations

- Why were high-end horticultural installations chosen over other lower-cost alternatives?
  - In your words, why was your garden created and maintained over the years?
  - Research has shown that access to any greenspace is beneficial to those who live nearby, or interact with the space. In your opinion though, why is it important to maintain horticulturally intensive and/or biologically diverse garden areas inside the park.
- What are best practices for developing and maintaining a network of gardens across/within a city.
  - Why have you chosen to create multiple locations across the region?
    - How do you keep these spaces unified with branding, messaging, and aesthetic, while also adapting to the different conditions?
    - What are the most important lessons learned from acquiring additional locations and integrating them into your existing structure?
  - How do you maintain a continuous level of service and quality across a wide cross-section of your city?
    - How do you allocate staff & resources across the park?
    - Does your management of spaces change depending on which city district the area is in? If so, how?
  - how do you maintain high levels of horticultural excellence in an open space?
    - How do you communicate with visitors about allowable activities or important changes happening in your space?
    - How do you make decisions about what plants to add into the gardens and where?
- What are best practices for engaging with community members in public horticulture spaces?
  - How do you engage with high-frequency users of your space and ensure that their needs and voices are incorporated into decision making processes?
  - How do you engage with close-proximity neighbors of your space, with the understanding that they may be highly-impacted, but not necessarily frequent users. How do you ensure their needs and voices are incorporated into decision making processes?

## B.2 Category B - Philadelphia constituents

- How can gardens be used to activate currently existing park areas? & How do community members view aesthetic garden areas as a resource?
  - Tell me about your community and the green spaces there?
  - You are a known advocate for more green spaces in your community, why do you think this is an important cause to support?
  - Do you perceive a significant difference between parks and gardens? If yes, in your own works, why and how are they different?
  - What do you see as one of the largest obstacles towards creating more horticulturally intensive green spaces in your community? In Philadelphia?
  - Reflecting back on your own experience in this arena...
    - Tell me about a time when you felt most empowered to create meaningful green spaces in your community.
    - What outside entities enabled you to become empowered to create these spaces? What did they provide?

## B.3 Category C - Philadelphia Partners

- Why were high-end horticultural installations chosen over other lower-cost alternatives?
  - In your words, why was your garden created and maintained over the years?
  - Research has shown that access to any greenspace is beneficial to those who live nearby, or interact with the space. In your opinion though, why is it important to maintain?
- How can gardens be used to activate currently existing park areas? & What are best practices for engaging with community members in public horticulture spaces?
  - How do community members most frequently engage with your space? Do you want to change that in any way in the coming years?
  - How do you engage with high-frequency users of your space and ensure that their needs and voices are incorporated into decision making processes?
  - How do you engage with close-proximity neighbors of your space, with the understanding that they may be highly-impacted, but not necessarily frequent users. How do you ensure their needs and voices are incorporated into decision making processes?
- What are best practices for developing and maintaining a network of gardens across/within a city.
  - How do you communicate with visitors about allowable activities or important changes happening in your space?
  - How do you make decisions about where and how to develop new garden areas, or to renovate existing spaces?

- Does your management of spaces change depending on which city district the area is in? If so, how?

## Appendix C: Additional Organizations and Resources

Below are additional resources and organizations that were mentioned by individuals who I interviewed, or that I came across during my literature review, but were not directly referenced in the writing of this project.

- Denver Botanical Horticultural Outreach Program - <https://www.botanicgardens.org/our-impact/horticultural-outreach-programs>
- CORAL Lecture Series 7: Dr. Sarada Krishnan - Promoting Health and Wellbeing Through Horticulture - <https://www.youtube.com/watch?v=HUqk4wL9a0g>
- The Healing Power of Gardening at Craig Hospital - <https://craighospital.org/blog/the-healing-power-of-gardening-1>
- Central Park Climate Lab - <https://www.centralparknyc.org/the-central-park-climate-lab>
- Economic Benefits of Parks in New York City - <https://www.tpl.org/economic-benefits-nyc>
- Institute of Urban Agriculture (Boston, MA) - <https://iua.caas.cn/en/index.htm>
- NeighborSpace (Chicago, IL) - <http://neighbor-space.org/>
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