

NEIGHBORHOOD GARDENS TRUST

Priority Acquisition Plan



Prepared by Reinvestment Fund's Policy Solutions Group and LRSLAstudio, Inc.

March 2016

THANK YOU

This project was financed in part by a grant from the Community Conservation Partnerships Program, Keystone Recreation, Park and Conservation Fund, under the administration of the Pennsylvania Department of Conservation and Natural Resources, Bureau of Recreation and Conservation.

Additionally, this study would not have been possible without the support of:

Pennsylvania Horticultural Society
Public Interest Law Center of Philadelphia, Garden Justice Legal Initiative
African American Collaborative Obesity Research Network, ESHE Community Pilot

Neighborhood Gardens Trust Board of Trustees

Amy Laura Cahn, Public Interest Law Center of Philadelphia*
Phoebe Coles, Community Marketing Solutions
J.J. Cutler, Futurestep Korn Ferry
Joanne Dahme, Philadelphia Water Department*
Gregory Duffy, Duane Morris, LLP*
Alison Hastings, Delaware Valley Regional Planning Commission
Bob Jobin, Bouvier Community Garden
Suku John, East Park Revitalization Alliance
Margaret McCarvill, NGT Board President, MMM Consulting*
Deborah McColloch, Philadelphia Office of Housing and Community Development
Julianne Schrader Ortega, Pennsylvania Horticultural Society*
Carla Puppini, Bel Arbor Community Garden
Joe Revlock, Summer-Winter Community Garden
Viery Ricketts-Thomas, Glenwood Green Acres
Judith Smeltzer
Janice Trapp, Aspen Farms
Peter Williamson, NGT Board Vice President/Treasurer, Natural Lands Trust*

NGT Staff

Jenny Greenberg, Executive Director*
Sam Applefield, Intern

PHS Staff

Jeff Barg, Associate Director, Planning and External Policy Relations*
Eileen Gallagher, Associate Director, Community Gardens*
Amber Knee, Program Manager, Philadelphia LandCare
Sally McCabe, Associate Director, Community Education
Lisa Mosca, Associate Director, City Harvest
Ayse Unver, Manager of Planning and Policy*

**Members of the Working Group*

Study Committee Participants

Elisa Ruse Esposito, Philadelphia Department of Parks and Recreation, FarmPhilly Program
Rose Gray, Asociación Puertorriqueños en Marcha
Nicole Hostettler, Philadelphia Water Department
Tom Holroyd, Office of Philadelphia City Councilman Bobby Henon
Sharon Humble, Linebarger, Goggan, Blair, and Sampson, LLP
Jametta James, Philadelphia City Planning Commission
Deborah McColloch, Philadelphia Office of Housing and Community Development
Sean McMonagle, Office of Philadelphia City Councilman Mark Squilla
Christian Przybylek, Nationalities Service Center
Romano Reynolds, Office of Philadelphia City Councilwoman Marian B. Tasco
Antonio Romero, Asociación Puertorriqueños en Marcha
Sandy Salzman, New Kensington Community Development Corporation
Sarah Wu, Philadelphia Mayor's Office for Sustainability

Philadelphia Association of Community Development Corporations

Rose Gray, Board President
Pamela Bridgeforth, Director of Programs



REINVESTMENT FUND

Research for this report was conducted by Reinvestment Fund's Policy Solutions group. Reinvestment Fund is a catalyst for change in low-income communities. We integrate data, policy and strategic investments to improve the quality of life in low-income neighborhoods. Using analytical and financial tools, we bring high-quality grocery stores, affordable housing, schools and health centers to the communities that need better access—creating anchors that attract investment over the long-term and help families lead healthier, more productive lives. Since 1985, Reinvestment Fund has invested \$1.6 billion in communities.

Combining disciplined data and policy analysis with capital investment can address entrenched problems in low-income neighborhoods, including inequitable access to adequate affordable housing, childcare, and healthy food. Our practitioner-centered solutions provide investors, philanthropists, and policymakers with information they can leverage to drive capital and resources toward building neighborhoods where families can thrive.



LRSLAstudio, inc. is a women-owned firm practicing landscape architecture and environmental planning. Founded in 1991, the firm has successfully designed and executed projects that range in scope from comprehensive master planning, to the creation of intimate landscapes and the detail design of site elements. We are committed to providing imaginative, practical, and sustainable designs to achieve our client's objectives. We take a holistic view of the site and context our projects inhabit and work to understand the geological, hydrological and vegetative conditions as well as the human needs of each site. Our designs respond to the meaning and purpose a place has to the user along with the visual and physical cues of the environment. We believe that sustainability is the essence of the practice of landscape architecture.

CONTENTS

1.	From the Neighborhood Gardens Trust	2
2.	Executive Summary	4
3.	Developing the Priority Acquisition Plan	10
	Neighborhood Gardens Trust: History and Background	10
	Preparing the Priority Acquisition Plan	14
	Supplementing the Target Area List	20
	Public Outreach and Focus Groups	23
4.	Assessing Existing Community Gardens	26
	Essential Components	28
	Amenity Components	29
	Safety and Comfort Components	29
	Maintenance Is Imperative	31
	Prioritizing Future Investments	31
5.	Acquisition Budget	32
6.	Findings	34
	Identifying Priority Acquisitions	34
	Focus Group Feedback	36
	Evaluating Existing Gardens	38
	Acquiring and Preserving New Gardens	39
7.	Lessons Learned	40
	Building and Maintaining a Database of Gardens	40
	NGT’s Strong Reputation	41
	Public Benefits Beyond Garden Boundaries	42
	Reframing Garden Benefits	43
8.	NGT’s Recommendations for Gardens That Are Not “Preservation-Ready”	44
	Cultivating Future NGT Member Gardens	44
	Sustaining Gardens Over the Long-Term	46
	Building Community Support	47
	Improving Conditions Around Gardens	47
	Appendix A: Mapping Evaluation Factors	48
	Appendix B: NGT’s Capacity Assessment Form	54
	Appendix C: Components of a Community Garden	56
	Appendix D: Assessments of Existing Community Gardens	68
	Appendix E: Contacts	69

1 FROM THE NEIGHBORHOOD GARDENS TRUST

Incorporated in 1986, and previously known as the Neighborhood Gardens Association, the Neighborhood Gardens Trust (NGT) was founded to proactively protect and preserve long-standing community gardens and shared open spaces across Philadelphia.

NGT has worked with gardeners and community groups to preserve 35 community gardens to date, ranging from 3.7 acres to single house lots. From tranquil spots filled with flowers and trees to bountiful vegetable gardens that produce healthy food for families in need, NGT preserves urban land for the benefit of Philadelphia's communities and environment.

For decades, through the cooperative efforts of city residents, hundreds of acres of neglected vacant land have been transformed into beautiful, well-tended community gardens. In many cases, these gardens occupy land that is owned by the City or by private, tax-delinquent owners. The gardeners lack legal access and have no assurance for the future of the spaces into which they invest so much.

There has never been greater opportunity and readiness in Philadelphia for an urban land trust like NGT to help gardeners protect and preserve these open spaces. A confluence of external factors—the recent creation of the Philadelphia Land Bank, a rising interest in urban agriculture, awareness of food justice issues and growing real estate market pressures in many Philadelphia neighborhoods—make now the time for NGT to scale and accelerate its land preservation work.



Aspen Farms Community Garden in West Philadelphia (an NGT-preserved garden)



Warrington Community Garden in West Philadelphia (an NGT-preserved garden)

In 2011, NGT developed a formal affiliation with the Pennsylvania Horticultural Society and developed a new strategic plan in order to build a high-capacity, well-resourced land trust that can partner with City agencies, community-based organizations and private citizens to preserve community gardens at scale.

In 2014, the Neighborhood Gardens Trust secured a grant from the Pennsylvania Department of Conservation and Natural Resources to develop a property acquisition study to strategically identify and prioritize gardens for preservation to meet NGT's ambitious land preservation goals in a way that provides maximum benefit for the city and its residents.

NGT is pleased to present that study here. We look forward to working with the Commonwealth of Pennsylvania, City of Philadelphia, local partners and community gardeners to protect many additional community gardens as essential elements of a healthy and sustainable Philadelphia.

Sincerely,

Margaret McCarvill
Board President

Jenny Greenberg
Executive Director

2 EXECUTIVE SUMMARY

For more information on the Neighborhood Gardens Trust, visit www.ngtrust.org.

With funding from the Pennsylvania Department of Conservation and Natural Resources, the Neighborhood Gardens Trust (NGT) contracted with Reinvestment Fund’s Policy Solutions group (Reinvestment Fund) and LRSLAstudio, Inc. (LRSLA) to devise a plan for community garden and open space preservation. Reinvestment Fund/LRSLA (the research team) set out to:

1. Establish criteria for acquiring community gardens and community-managed open space;
2. Assess future demand for community gardens and community-managed open space;
3. Recommend gardens for priority acquisition; and
4. Identify the types of resources needed for, and the challenges related to, the acquisition and stewardship of gardens.

Developing the Priority Acquisition Plan

Two groups guided the research team and provided feedback throughout: a *study committee* comprised of a range of open space and vacant land stakeholders and a *working group* comprised of NGT board members and staff and Pennsylvania Horticultural Society (PHS) staff. The research team first asked both the study committee and the working group to identify which policy issues were most important for selecting target areas in Philadelphia. The resulting list includes indicators that represent the priority policy issues raised in NGT’s strategic plan.



Tulip Street Community Garden in Kensington (an NGT-preserved garden)



Summer-Winter Community Garden in West Philadelphia (an NGT-preserved garden)

Collectively, the groups narrowed the priority indicators to:

- Areas with limited access to supermarkets;
- Areas with a lack of walkable access to green space;
- Areas experiencing rapid change in real estate values;
- Areas with concentrations of low- and moderate-income households; and
- Areas with high concentrations of vacant land.

Next, the research team identified where community gardens are located in or near areas affected by the priority indicators. To do this, the research team assembled garden location data from various databases of known gardens and datasets that show which areas of Philadelphia are experiencing each of the priority policy issues. They then created maps of Philadelphia with the locations of community gardens and open space displayed over areas where two or more of the priority indicators overlap.

Based on these analyses, five target areas were selected for priority acquisitions:

- West Oak Lane / East Germantown;
- Tioga / Hunting Park / Fairhill;
- Kensington;
- Mantua / Belmont; and
- South Philadelphia (both east and west of Broad Street).



Hicks Street Garden in South Philadelphia (an NGT-preserved garden)

NGT staff then validated the garden data based on NGT and PHS staff knowledge, datasets noting whether a site is used for a purpose other than gardening and a “windshield survey” (i.e., driving to and observing each site). Beginning with 328 possible gardens in the target areas, NGT culled the list down to 73 maintained, active gardens. In the process, NGT staff removed inactive gardens, gardens that serve as side yards, and gardens owned by institutions unlikely to need preservation through NGT.

At the same time, NGT continued to work with three categories of gardens (both inside and outside the target areas) that are acquisition priorities for the organization:

- Gardens with only part of their land secured by NGT;
- “Preservation-ready” gardens with existing applications to NGT; and
- At-risk City Harvest gardens providing fresh food to local food pantries.

In total, 28 gardens were identified for priority acquisition, 17 of them in target areas.

Public Outreach and Focus Groups

The research team also conducted focus groups with gardeners and community development corporation (CDC) staff members. The focus groups provided an opportunity to hear where gardeners’ and CDCs’ perceptions of gardens align and where they differ, as well as what issues to consider to ensure gardens gain support in the future. These groups agreed that (1) gardens transform land and perceptions of an area, (2) gardens may lead to redevelopment of nearby vacant lots, (3) gardens need to be secured, (4) NGT should have a succession plan or exit strategy in place in the

event that garden membership declines below a sustainable level, and (5) community support is important to assist with fundraising, land use issues, and dispute resolution between businesses and residents.

The groups expressed differing opinions about the importance of exterior maintenance, how gardens benefit their communities, and the resources required to establish gardens. Gardeners tended to focus on the conditions and activities that take place within their gardens and often had the greatest awareness of the benefits that gardens bring to their communities. While focus group feedback revealed that CDC staff value these community spaces as well, they often placed heavier importance on exterior appearances than gardeners. By investing in elements like fencing and plantings, NGT can help to improve gardens' outward-facing perimeter conditions in conjunction with revitalization efforts in the communities beyond.

NGT can also garner community and political support by framing its investments as part of broader neighborhood and citywide strategies, including the Philadelphia Land Bank's Strategic Plan and the Philadelphia Water Department's *Green City, Clean Waters*. Where these plans and NGT's priorities align, resources may become available to support garden acquisitions or capital improvements. Understanding outside groups' perceptions of community gardens can guide NGT in implementing strategic improvements to ensure support by neighborhoods, the City and others.

Assessing Existing Community Gardens

In preparing this plan, LRSLA conducted site assessments to evaluate gardens' essential components, amenity components and conditions contributing to safety and comfort. These assessments identify the needs of individual community gardens,

These assessments are described in Chapter 4 on page 26.



Bel Arbor Community Garden in South Philadelphia (an NGT-preserved garden)

provide a comparative ranking of gardens, and indicate overall trends across gardens. NGT can use these factors to plan community garden acquisitions, to estimate and prioritize investments and to gauge and improve the long-term viability of gardens.

Acquisition Budget

Using LRSLA's site assessments, the research team projected the costs of acquisition and capital improvements for two sample gardens. These budgets include acquisition costs like settlement, legal fees, insurance, and administration and overhead, as well as capital costs for essential, amenity and safety/comfort garden components. Costs for the Moore Street Community Garden, which covers only two lots, were projected at approximately \$26,000, while costs for the larger seven-lot Five Loaves Two Fishes Community Garden were projected at \$42,500. The budget template developed for this report can be used for additional gardens, the costs for which will vary according to the gardens' size and capital needs.

Conclusions and Lessons Learned

This report provides a roadmap to direct NGT's focus over the next few years. During the creation of this plan, LRSLA developed a template for assessing garden conditions to inform decisions about a garden's readiness for preservation by NGT. Future applications to NGT can also be evaluated using these tools. In conjunction with the acquisition budget template, these tools will allow NGT to establish fundraising goals based on projected costs for future acquisitions and capital investments.

In addition to focusing on priority acquisitions and their capital needs, NGT identified active gardens that are not yet "preservation-ready" and proposed strategies for



Bodine Street Community Garden in South Philadelphia (an NGT-preserved garden)



Chester Avenue Community Garden in West Philadelphia (an NGT-preserved garden)

advancing their growth. For new gardens, these strategies include providing technical assistance on best practices for recruiting and organizing gardeners, establishing garden rules and bylaws, testing soil and accessing water and other essential supplies and materials. Assisting with interim legal land access is also critical for allowing newer gardens the stability they need to blossom and flourish. More established gardens, some with limited and/or aging membership, can benefit from strategies to recruit new members and plan smooth transitions from one generation to the next. Both types of gardens may need help building community support and improving the physical and social conditions surrounding them.

These proposed strategies to build gardens' organizational capacity are important for helping developing gardens become stable, sustainable, and ready for NGT preservation in the future. Accordingly, NGT and its partners should continue to develop strategies for building community support, cultivating the next generation of gardeners, and providing much-needed technical support to ensure that these vital gardens reach their fullest potential.

Finally, the research findings affirmed the important contributions that community gardens make toward improving public health, enhancing the urban environment and building social capital in distressed and transitional markets. Based on the information gathered and validated in this process, NGT can emphasize gardens' public benefits to funders looking for ways to address pressing public policy concerns like access to healthy food and open space, as well as watershed restoration.

With these new tools and insights, NGT will continue in its mission of preserving community gardens and open space to enhance the quality of life in Philadelphia's neighborhoods.

3 DEVELOPING THE PRIORITY ACQUISITION PLAN

Introduction

In 2013, the Neighborhood Gardens Association reimagined its role in acquiring and preserving open space in Philadelphia and rebranded itself the Neighborhood Gardens Trust (NGT). Responding to increasing community need for secure, long-term use of land and growing public interest in urban gardening, NGT created a strategic plan for 2013–2016 with a new mission, set of strategies, criteria for selecting properties for acquisition, and goals for preserving community gardens and open space. This strategic plan envisioned NGT as filling a pivotal and critical role: greatly increasing the number of permanently protected, community-managed open spaces through rapidly expanding the holdings of the Trust.

NGT also became an affiliate of the Pennsylvania Horticultural Society (PHS). This collaborative partnership ensures that established, flourishing gardens have pathways to and resources for permanent preservation. NGT secures title, insurance and tax-exempt status for gardens and, together with PHS, provides technical and financial resources to support garden maintenance.

In 2014 NGT received a grant from Pennsylvania’s Department of Conservation and Natural Resources’ (DCNR) Community Conservation Partnership Program to fund this Priority Acquisition Plan. After a competitive request for proposals process, NGT selected Reinvestment Fund’s Policy Solutions group (Reinvestment Fund) and LRSLAstudio, Inc. (LRSLA) to facilitate plan creation through a mixed methods research approach. This approach included spatial data analysis, stakeholder engagement and inspections of community gardens and open space. Building from NGT’s strategic plan, this Priority Acquisition Plan details how NGT will acquire gardens with demonstrated long-term viability and how it will identify the needs that must be addressed to help new gardens become ready for preservation.

Specifically, this plan:

1. Establishes criteria for acquiring community gardens and open space;
2. Assesses future demand for community gardens and open space;
3. Recommends gardens for priority acquisition; and
4. Identifies the types of resources needed for, and the challenges related to, the acquisition and stewardship of gardens.

Neighborhood Gardens Trust: History and Background

Amid decades of industrial decline and population loss, a burgeoning community gardening movement emerged in the city of Philadelphia in the 1970s. Under the leadership of the PHS Philadelphia Green Program and Penn State Extension’s Urban Gardening Program, and with funding from federal and state governments and



Viola Street Community Garden in West Philadelphia (a prospective NGT garden)

Philadelphia's philanthropic community, there was a concerted effort to transform and green excess vacant land to support the surrounding communities. These organizations helped community gardeners gain access to land and provided both materials and technical assistance to build a network of gardens and gardeners in neighborhoods of all income levels and with various levels of vacancy and blight throughout the city.¹

The Neighborhood Gardens Association (NGA) was born from these efforts and was incorporated in 1986 to secure deeds and long-term leases for community gardens, which are often started on land owned by the City or by private owners who have abandoned it and stopped paying taxes. Between 1986 and 2011, NGA successfully secured land tenure for 30 gardens, ensuring they would never be developed (Map 1).

Gardeners have faced challenges to sustaining those spaces over time. The number of community gardens in Philadelphia declined from 1996 to 2008 as both government and foundation support was withdrawn. However, interest in community gardening has resurged in the past decade due to an influx of new residents (both young people and immigrants from nations with rich farming traditions.) Despite more limited support, community gardeners are emerging.

Additionally, public interest in preserving urban green space has grown as a body of research has shown the multifaceted benefits such spaces bring to residents, including: access to fresh, healthy and affordable foods; increased social connections and social capital²; better health outcomes³; and mitigation of air and water pollution.⁴ Development pressure in and around the neighborhoods proximate to Center City Philadelphia has also created concern that development could reduce or eliminate

¹ See e.g. Lawson, Laura J. *City Bountiful: A Century of Community Gardening in America*. (2005) University of California Press.

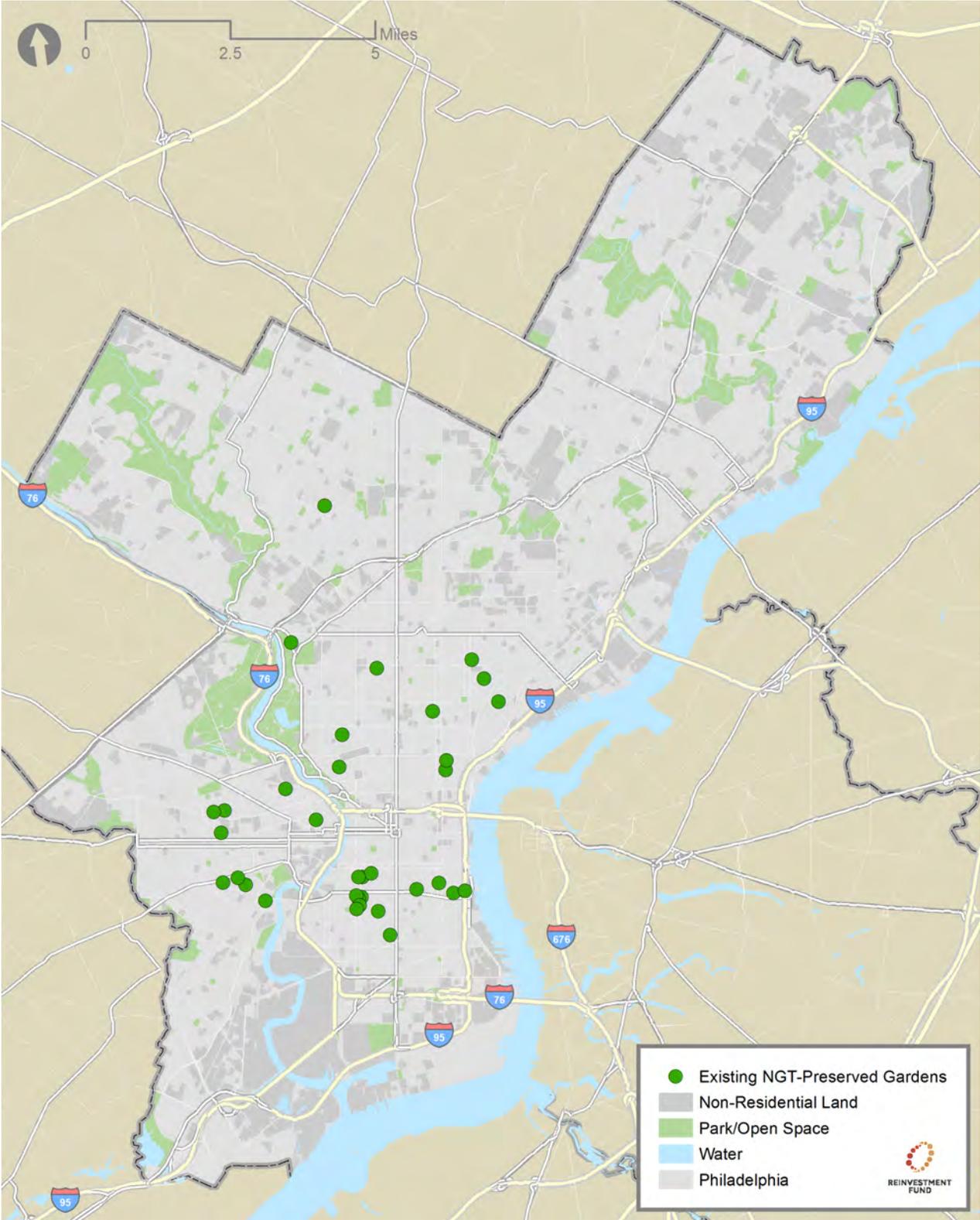
² See Krause, N., and B.A. Shaw. 2000. *Giving Social Support to Others, Socioeconomic Status, and Changes in Self-Esteem in Late Life*. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences* 55, 6: S323. University of California Press.

³ See Grahm, P., and U.K. Stigsdotter. 2010. *The Relation Between Perceived Sensory Dimensions of Urban Green Space and Stress Restoration*. *Landscape and Urban Planning* 94, 3-4: 264-275.

⁴ See Dadvand, Payam, et al. 2015. *Green Spaces and Cognitive Development in Primary School-children*. *National Academy of Sciences*, 112, 26.

Map 1:

EXISTING NGT-PRESERVED GARDENS



existing gardens and open space and the benefits they create for their communities.⁵

Land use policies in Philadelphia have historically challenged gardeners by providing no guarantee of long-term access to land. For City-owned land, gardeners can only secure year-to-year revocable license agreements which are conditional on their ability to afford garden insurance. Further, gardeners often cannot locate the owners of privately-owned land, which is also often encumbered with tax liens. The challenge of acquiring unused land and returning it to productive use has led to the creation of the Philadelphia Land Bank. This new City agency was created to streamline the reuse of vacant land and has set forth the strategic goal of reinforcing open space initiatives and urban agriculture.⁶

The resurgence of interest in community gardening, the anticipated creation of the Land Bank, and growing real estate market pressures in parts of Philadelphia opened a need and opportunity for NGA to scale up its efforts to acquire community gardens with insecure land tenure. However, as a small, stand-alone non-profit, NGA lacked capacity to meet this demand. The reimagining of NGA as NGT came out of the need to scale the organization to be commensurate with the growth of Philadelphia's flourishing open space and urban agriculture movement. NGA first laid the foundation for an organization with a broader scope by affiliating with PHS in 2011. This affiliation brought organizational benefits, such as shared office space, in-kind administrative assistance, technical support and institutional knowledge from PHS staff experienced in developing community gardens throughout Philadelphia. A new Board of Directors was formed to govern NGT as it began to navigate the legal and policy landscape of vacant land acquisition.

In 2013, the new NGT undertook a strategic planning process to address the challenges and opportunities facing Philadelphia's community gardens. Recognizing the evidence that community gardens can positively impact the lives of area residents, NGT committed to prioritizing gardens in low- and moderate-income neighborhoods; neighborhoods without walkable access to green space; neighborhoods lacking sufficient access to fresh and healthy food; and neighborhoods experiencing development pressure that makes preserving open space more expensive and difficult.

The strategic plan also set ambitious goals for preservation and fundraising in future years. To guide its preservation goals, NGT created a new acquisition process including a new application format, pipeline and eligibility criteria for acquisition. For a garden to be eligible, it must be active for at least three years; involve a significant number of community gardeners and therefore not be dependent on one or two key people to stay active; secure support from the district councilperson to preserve the property; and have clear rules or bylaws and ties to civic associations or local institutions.

⁵ See e.g. Vitiello, Domenic and Michael Nairn, 2005. *Community Gardening in Philadelphia; 2008 Harvest Report*. (2009) University of Pennsylvania, *Planning and Urban Studies*; and Hess, David J., *Case Studies of Community Gardens and Urban Agriculture: Philadelphia*. Available at: http://community-wealth.org/sites/clone.community-wealth.org/files/downloads/paper-hess_0.pdf.

⁶ For more information, see <http://www.philadelphialandbank.org/about/strategic-plan/> at 96.

CDCs or community development corporations are community-based organizations that work to advance their neighborhoods through a range of activities, including neighborhood planning, affordable housing development, commercial corridor promotion, and social service provision. CDCs also cultivate social capital through neighborhood organizing and providing a space for community groups to meet.

Preparing the Priority Acquisition Plan

The research team's first task was to identify the universe of potential community gardens and open spaces in Philadelphia and determine which ones are located in areas aligned with NGT's priority concerns. NGT provided Reinvestment Fund with a list of garden addresses that PHS had been collecting on an ongoing basis but had not field verified in several years. The Garden Justice Legal Initiative furnished more recent gardens data it had collected through its online *Grounded in Philly* tool, which allows for crowdsourced data collection, mapping and validation.⁷ Reinvestment Fund combined these lists, cleaned and geocoded the addresses and then matched the gardens to parcel data from the Philadelphia Department of Records.

⁷ For the Garden Justice Legal Initiative's online mapping tool, visit www.groundedinphilly.org.

NGT and Reinvestment Fund then sought input from community stakeholders on the datasets that should influence where NGT should prioritize acquisition. NGT invited a diverse group of community garden and open space stakeholders to participate in a *study committee* that met three times during the creation of this Priority Acquisition Plan to provide feedback on critical study decisions. The study committee was comprised of Philadelphia City Council staff, representatives from CDCs, and staff from the City's Water, Housing and Planning departments, among others. At its first meeting, the study committee viewed and scored 15 datasets (many of them measures of priority issues from NGT's Strategic Plan) on the importance of each dataset to identify either: (a) areas of Philadelphia that NGT should target for priority garden acquisition or preservation or (b) parcels within those target areas that NGT should prioritize for acquisition or preservation (Figure 1).

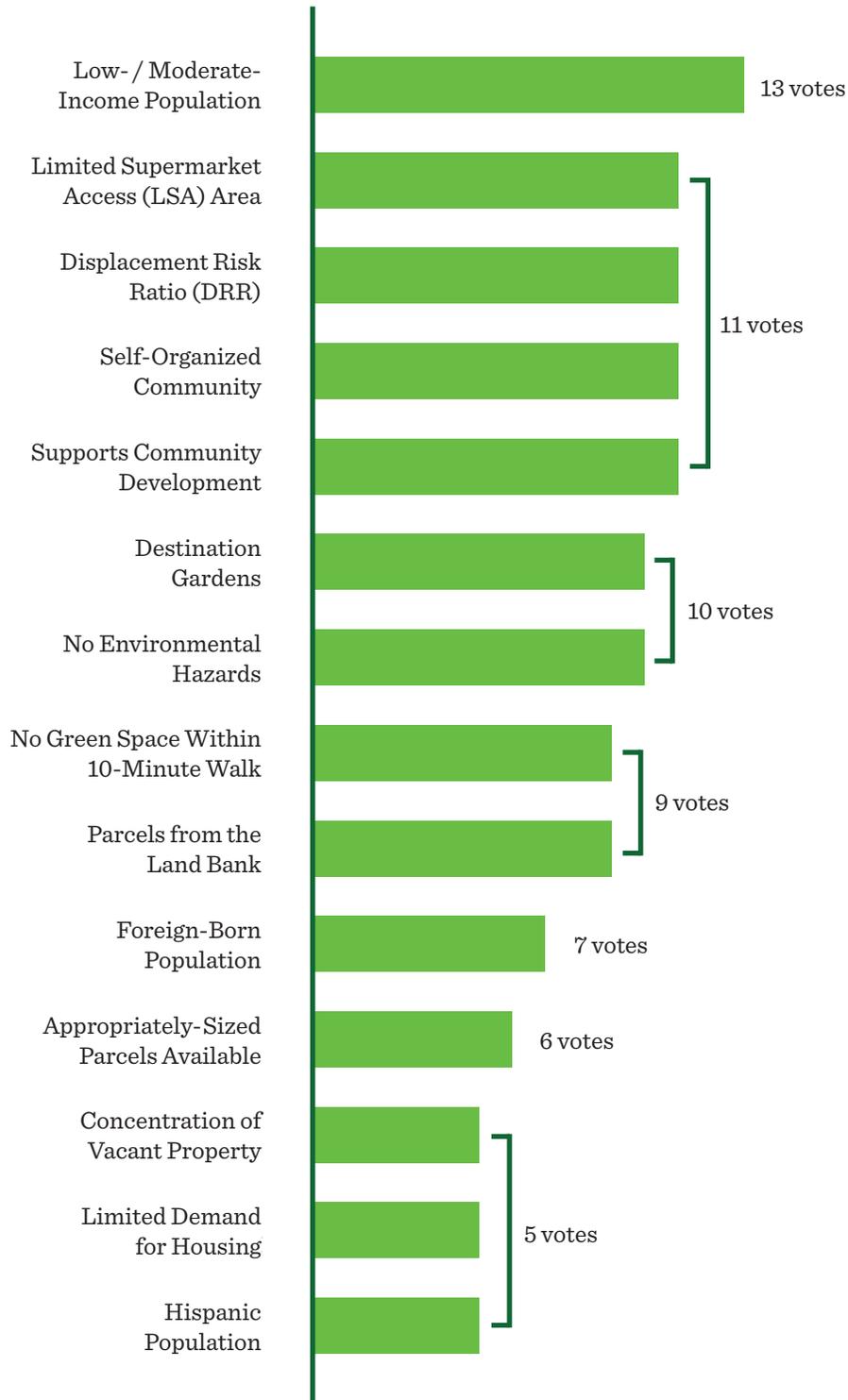
In addition to the study committee, a *working group* of NGT's Board members met frequently throughout the creation of this Priority Acquisition Plan to review the progress of the plan and direct the research team. The working group reviewed the results of the study committee discussion and recommended using the below list of indicators to identify areas for priority acquisition:

For maps of these datasets, see Appendix A.

- Reinvestment Fund's 2014 measure of *Limited Supermarket Access (LSA)* areas where residents must travel longer distances to reach supermarkets compared to the benchmark (average) distances traveled by residents of well-served areas. Comparison areas are grouped based on similar values for population density and rates of car ownership.
- The Philadelphia City Planning Commission's *Measure of Walkable Access to Green Space*, which indicates whether an area is within a 15-minute walk of a park or other green space.
- Reinvestment Fund's *Displacement Risk Ratio (DRR)*, which indicates where market pressure has fundamentally changed the affordability of residential real estate since the 2000 Census. Households living in block groups with a DRR of 2.0 or higher in 2013–2014 would have to pay more than four and a half times their yearly income to buy back into their neighborhoods, an amount considered unaffordable in housing finance.

Figure 1:

GARDEN EVALUATION DATASETS VOTED IMPORTANT OR VERY IMPORTANT



- **Low- and moderate-income block groups** as identified by the 2009–2013 American Community Survey (ACS) . Low-income households were defined as those with income at or below 80% of the area median income (AMI).
- **Concentrations of vacant land** (i.e., block groups in which 15% or more of the housing units were vacant) from Philadelphia Department of Licenses and Inspections’ vacant properties database, last updated August 2013.

These indicators were examined spatially to identify areas where multiple indicators overlap and assess the number of gardens and open spaces located near those areas of overlap. The working group then selected the following neighborhoods with overlapping priority indicators and a density of community gardens as target areas: South Philadelphia (east and west of Broad Street); Kensington; Mantua / Belmont; West Oak Lane / East Germantown; and Tioga / Fairhill / Hunting Park (Map 2).

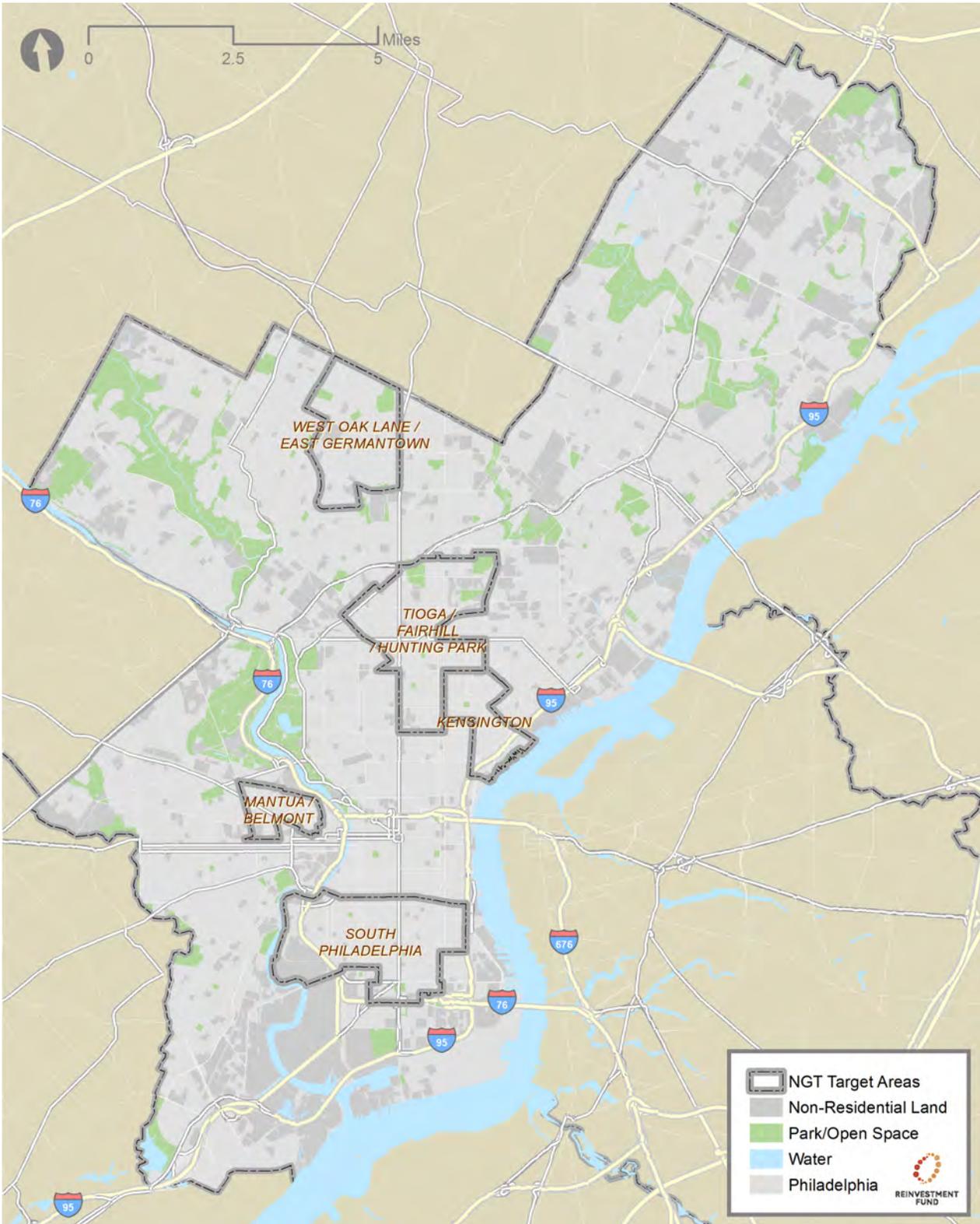
Figure 2 below shows the indicators present in each area. Three of the five target areas the working group selected exhibit all of the priority indicators: a lack of walkable green space, limited supermarket access, high development pressure, a large percentage of low- and moderate-income households, and an excess of vacant land. West Oak Lane/East Germantown was chosen because of a lack of walkable access to green space, limited supermarket access, a large percentage of low- and moderate-income households, and an excess of vacant land. The Kensington area was selected for its lack of walkable green space, development pressure, a large percentage of low- and moderate-income households, and an excess of vacant land.

Figure 2:

NGT PRIORITY FACTORS IN TARGET AREAS

	Little Walkable Greenspace	Limited Supermarket Access	High Development Pressure	Residents Low- or Moderate-Income	Excess of Vacant Land
South Philadelphia				90.1%	
West Oak Lane / East Germantown				82.8%	
Kensington				69.1%	
Mantua / Belmont				78.7%	
Tioga / Fairhill / Hunting Park				68.3%	

Map 2:
NGT SELECTED TARGET AREAS



PHS Philadelphia LandCare cleans, greens and stabilizes vacant lots to help return them to productive use. So far it has installed and maintained interim landscape treatments for over 7,000 parcels covering nearly 11 million square feet in key transitional neighborhoods, in turn developing more than 850 properties for new housing and business. For more information, visit <http://phsonline.org/greening/landcare-program>.

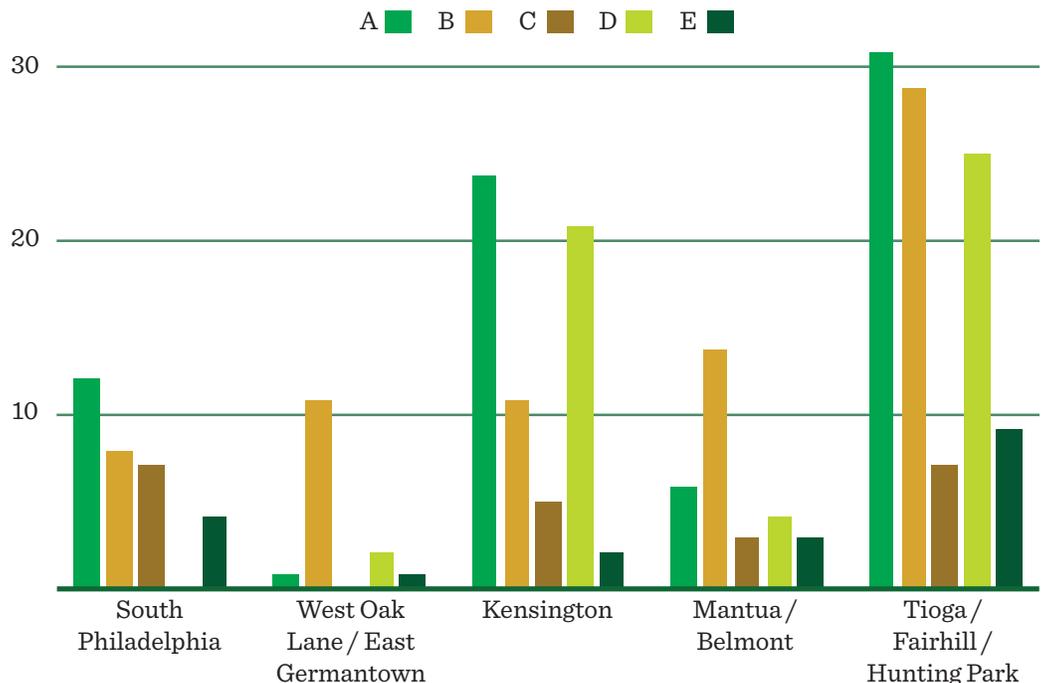
⁸ This work was generously funded by the African American Collaborative Obesity Research Network ESHE Community Pilot.

Garden data for the selected target areas was then further refined and field validated by NGT staff. Reinvestment Fund spatially matched the location of all gardens and open spaces in the initial dataset to the target areas, then removed any gardens that are maintained by the PHS Philadelphia LandCare program (and are therefore vacant). PHS Garden Program staff members reviewed the 328 cleaned and matched gardens and removed those they knew had declined or otherwise ceased to operate as gardens. NGT staff then conducted a “windshield survey” of the 242 remaining gardens in the target areas⁸ using the following classification system to denote the current status of surveyed gardens:

- A:** Maintained, active spaces (73 gardens)
- B:** Inactive gardens / abandoned lots (74 gardens)
- C:** Former gardens where buildings stand today (22 gardens)
- D:** Gardens that are part of side yards (52 gardens)
- E:** Gardens owned by entities unlikely to need land preservation through NGT (e.g. churches, universities, other nonprofits) (21 gardens)

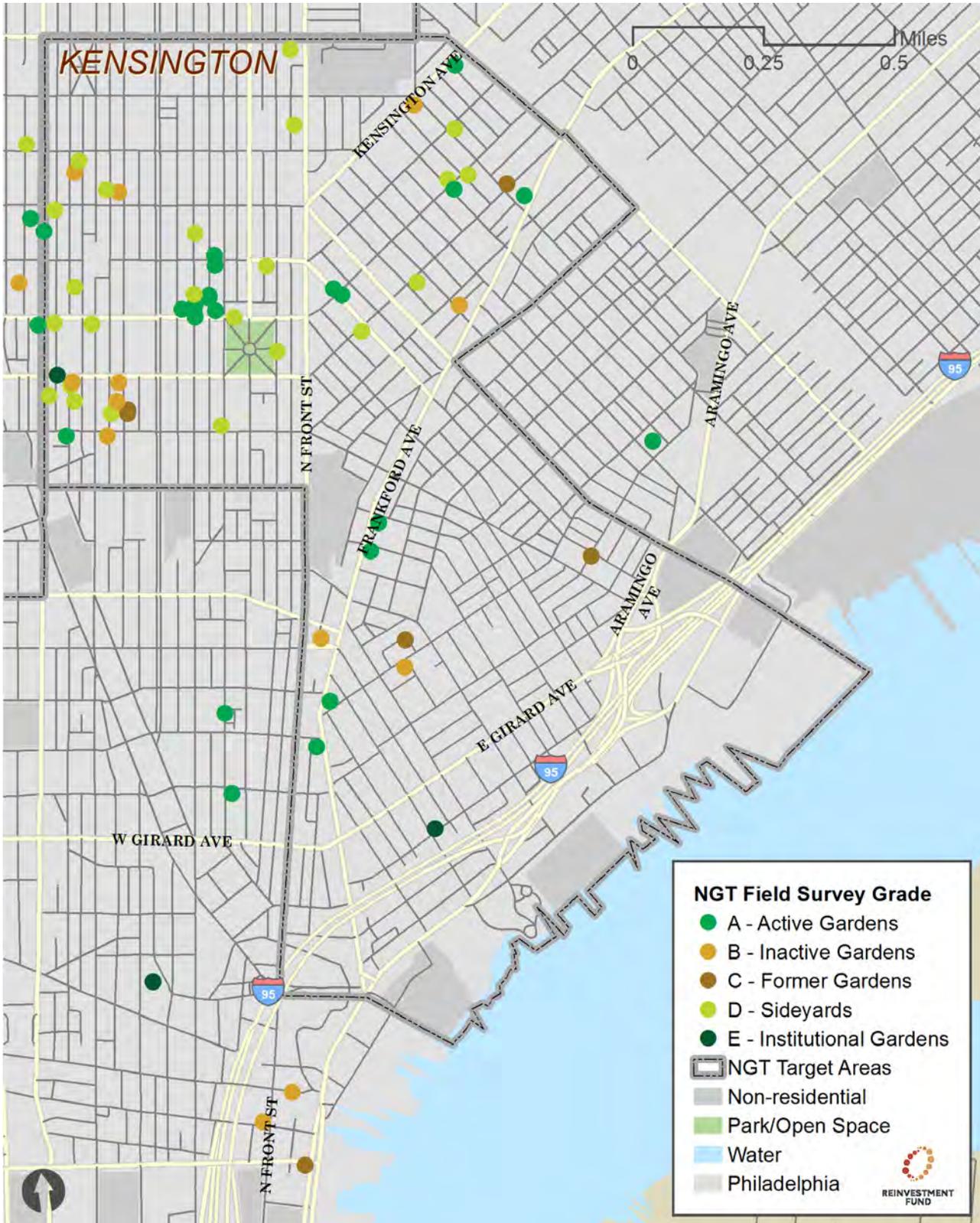
Figure 3 shows the number of gardens by classification in each target area, and Map 3 displays the results of the windshield survey in the Kensington target area.

Figure 3:
NGT GARDEN CLASSIFICATIONS BY TARGET AREA



Map 3:

WINDSHIELD SURVEY RESULTS IN THE KENSINGTON TARGET AREA



RCOs or registered community organizations inform neighbors of local zoning decisions that require zoning variances and convene groups of neighbors to give input about the requested variances.

PHS Philadelphia City Harvest empowers urban gardeners to share the fruits of their labor with families in need. The program is creating an infrastructure of agricultural supply and education centers, as well as expanding fresh food production, distribution and consumption in Philadelphia's neighborhoods, thereby creating a healthier future for thousands of city residents. For more information, visit <http://phsonline.org/programs/city-harvest>

Having identified 73 active community gardens, NGT staff conducted extensive outreach to relevant organizations, such as registered community organizations (RCOs) and CDCs. After months of intense networking, NGT found contact information for all but seven gardens. They then met with representatives from each garden to learn more about the garden's ownership, history, capacity and interest in acquiring the land. This process assessed whether the spaces were NGT "preservation-ready" based on previously developed criteria, including: a sustainable number of committed gardeners (so the garden is not dependent on one or two individuals for ongoing stewardship); active use of the land for three years; and the existence of organizational structures.

Supplementing the Target Area List

In addition to the target area approach outlined above, NGT's concurrent acquisition priorities include three additional categories of gardens. Sixteen gardens, some in the identified target areas and some outside them, were added to NGT's acquisition pipeline using these additional criteria:

- **Completion of Existing Gardens:** At some existing NGT gardens, only some of the parcels are owned by NGT; the other parcels are within the gardens but have not yet been permanently secured. NGT aims to preserve all properties within the garden footprint. Three of these gardens are inside the target areas, and six of these gardens are outside the target areas.
- **Pending Applications:** Prior to this planning process, NGT had already received some applications for support, including five applications from gardens inside the target areas and ten from gardens outside the target areas. NGT will continue to pursue acquisition of these gardens.
- **At-Risk PHS City Harvest Gardens:** These are high-functioning gardens that provide fresh produce to Philadelphia food pantries. There are six preservation-ready, at-risk City Harvest gardens, five of them in target areas.⁹

⁹ Note that one of these had previously applied to NGT and is therefore included in the Pending Applications category as well.

Map 4 displays the results of NGT's outreach to active community gardens identified in the target areas as well as to NGT-identified priority gardens outside the target areas. Gardens shaded light green (acquisition ready) and dark green (gardens to complete) are priorities for preservation. NGT staff determined that gardens displayed in blue (limited numbers of gardeners or

Map 4:
STATUS OF ACTIVE COMMUNITY GARDENS

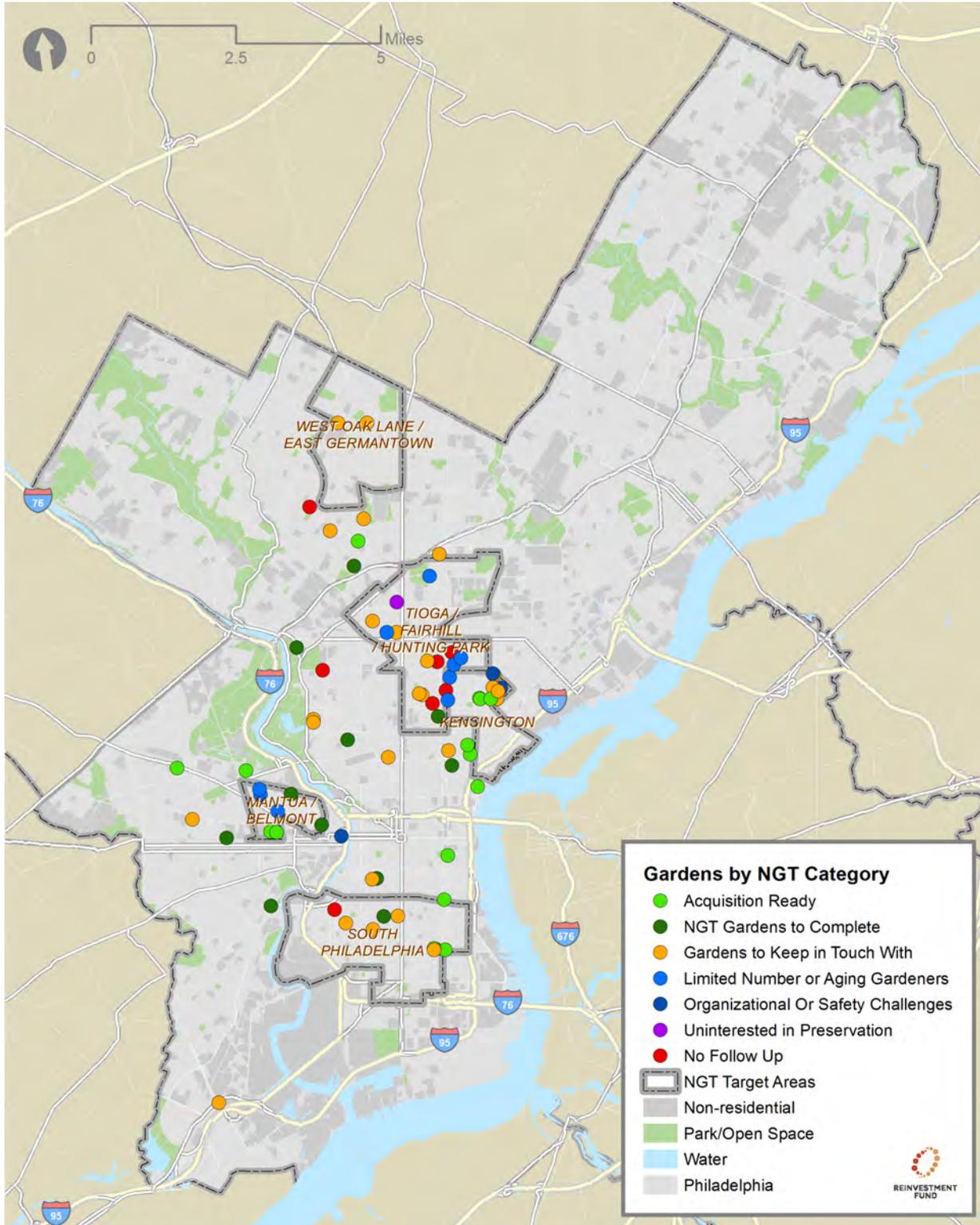
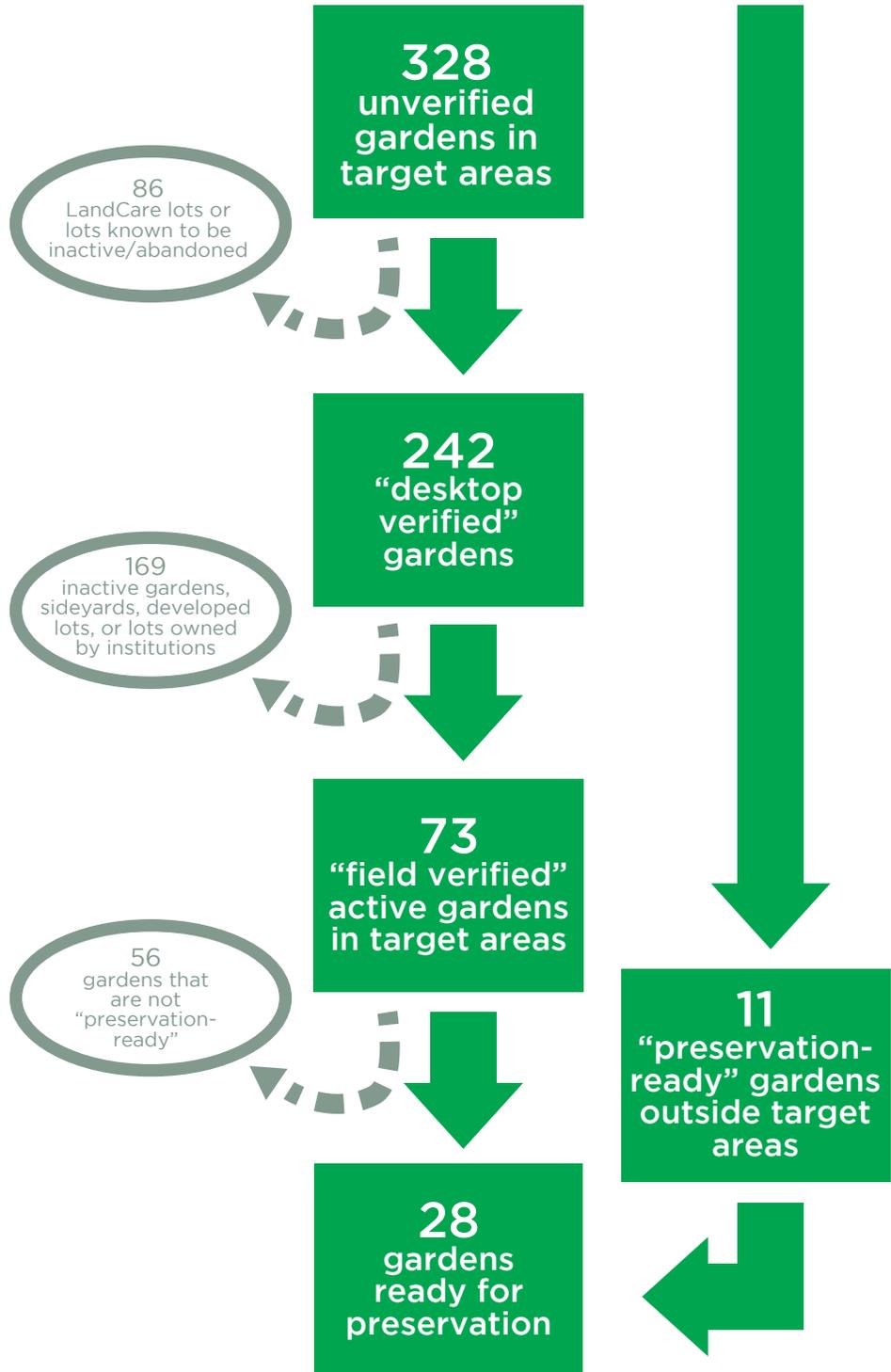


Figure 4:
ENUMERATING “PRESERVATION-READY” GARDENS



aging gardeners and organizational and safety challenges) are not currently ready for preservation. Gardens in orange (gardens to keep in touch with) either are growing but not yet ready for preservation or some of their gardeners are interested in NGT preservation but they have not yet decided as a group. These gardens make up a “pipeline” of potential future NGT acquisitions. Finally, gardens in red (no follow up) did not respond to NGT outreach, and one garden in purple (uninterested in preservation) decided it did not want preservation in the Trust.

Public Outreach and Focus Groups

In addition to seeking input from the study committee and working group, NGT and Reinvestment Fund gathered additional information from other stakeholders about how community gardens and open spaces interact with their neighborhoods, what land use and security issues gardens encounter and whether there are opportunities to leverage resources by partnering with other entities. Reinvestment Fund conducted two focus groups (described below), and NGT participated in three Vacant Land Information Sessions sponsored by the Garden Justice Legal Initiative to gather additional input. Additionally, NGT organized a public meeting to inform the public about the plan creation process and results, to gather input and to promote awareness of NGT’s activities.

NGT and Reinvestment Fund also met with the Philadelphia Water Department (PWD) to explore how NGT’s preservation work could support PWD’s green stormwater management work,¹⁰ including how to evaluate the potential for green stormwater interventions in NGT-preserved spaces or pipeline gardens. PWD is installing green stormwater infrastructure to prevent runoff from draining into the combined sewer system. Long-term site control is vital because of the cost and nature of these interventions. As a community land trust, NGT can provide PWD with site protection in perpetuity. As a result of the meetings with PWD, this work leveraged a \$90,000 study that conducted drainage analyses on the same list of gardens that NGT evaluated. These analyses identified sites where NGT and PWD might partner on projects.

The study committee recommended that NGT conduct a focus group to seek input from CDCs to understand their perceptions of neighborhood gardens and assess their willingness to partner with NGT on preserving gardens throughout the city. In addition, the research team met with existing gardeners to ensure that this plan’s priorities were aligned with gardeners’.

¹⁰ For a description of this work, see PWD’s *Green City, Clean Waters* at http://www.phillywatersheds.org/doc/GCCW_AmendedJune2011_LOWRES-web.pdf

The CDC focus group was comprised of nine representatives of Philadelphia CDCs and two staff from the Philadelphia Association of Community Development Corporations. Most CDC representatives agreed that gardens and other open space are positive additions to their communities, with the potential to transform land and perceptions of the surrounding area. As a result, however, garden stability may be threatened by market pressure. CDC representatives perceived that the existing gardens in their neighborhoods are usually semi-private with locked gates to which residents have keys and thought that gardens were mostly used for individual food production. Multiple CDC representatives expressed that even when garden spaces are fenced and locked for safety, they still are valuable community amenities if the garden exteriors are well-maintained and the sites are secure.

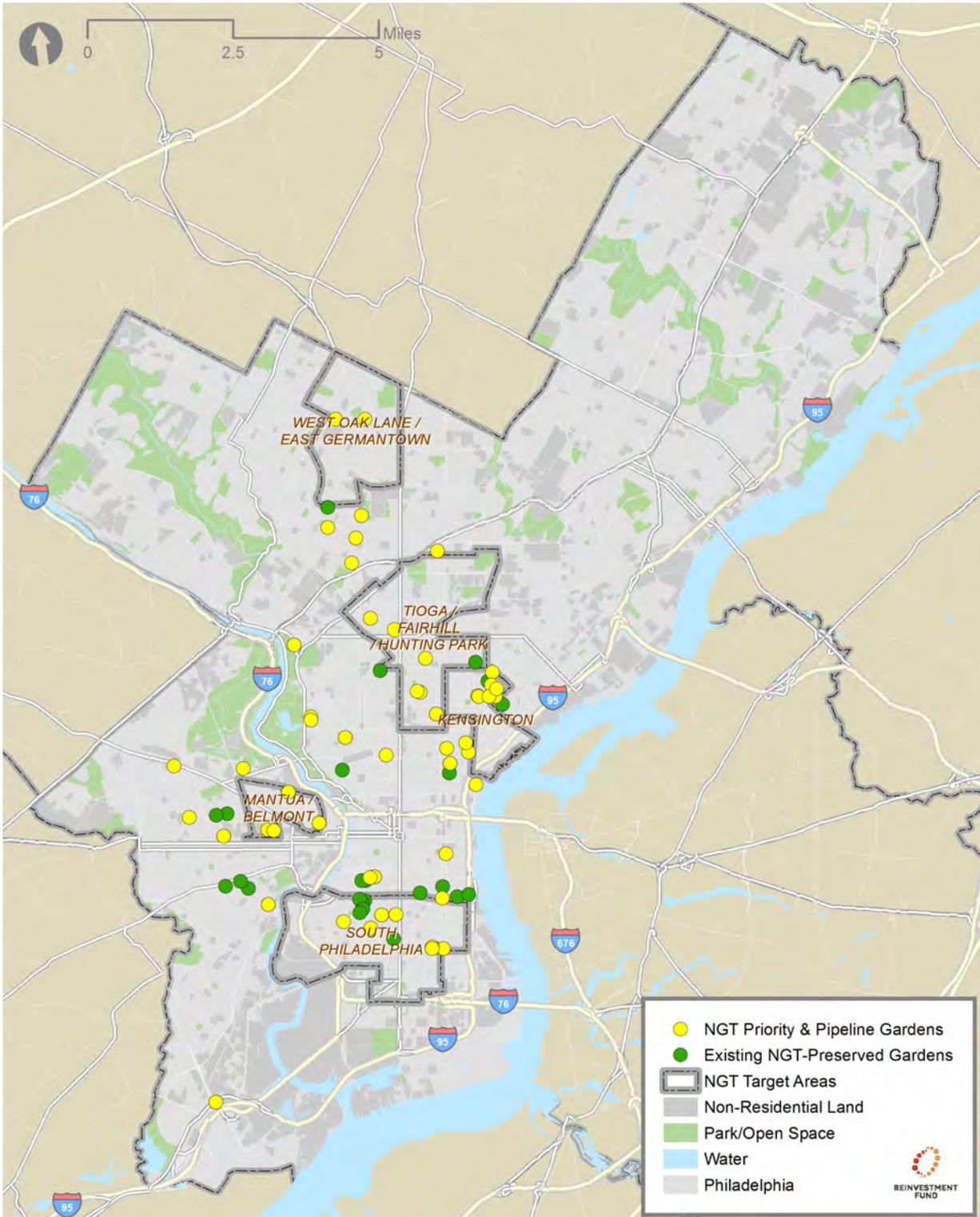
CDC representatives saw funding, ongoing maintenance, community expectations and neighborhood crime as challenges to establishing new community gardens. Community support is a particularly important acquisition criteria because it can assist with fundraising, land use issues, and dispute resolution between neighborhood businesses and residents. CDC representatives stressed that gardens must be secure to ensure that gardeners' investments are protected and that gardens do not attract crime. Representatives expressed concerns about the perimeter conditions of gardens, specifically sidewalk conditions and the investment in and maintenance of shared communal space. They also felt that NGT should have an exit strategy or succession plan in the event the number of active gardeners declines below a sustainable level.

The gardeners focus group expressed that gardens contribute a wide variety of amenities to their communities, including food production, flower production for sale or personal use, event space, and space for other community programs like youth camps. Gardeners feel that gardens' central role is to provide access to green and open space where it might otherwise not exist. The gardeners were less concerned with the exterior appearance of the gardens than the CDC representatives.

Although there are many areas of overlap between these groups, it is clear there are sometimes differing perspectives on the use, perceptions and value of gardens to their communities. Bridging this gap is one challenge NGT will continue to negotiate.

Map 5:

PRIORITY, PIPELINE AND EXISTING NGT GARDENS



4 ASSESSING EXISTING COMMUNITY GARDENS

In order to more rigorously understand what characteristics advance the long-term sustainability of community gardens, site assessments were conducted for a sample of 19 existing community gardens selected by NGT. Focus group discussions with CDCs and gardeners indicated that gardens have two primary functions. Internally, gardens provide space for food and flower production, recreation, and community meeting space (among other benefits). Externally, gardens are productive uses of vacant land and are assets for the surrounding communities. With many of these gardens based in neighborhoods experiencing a range of conditions from dense vacancy to acute market pressure, potential threats to sustained and preserved garden use include giving way to neglect or conversely to development. The goal of these assessments therefore was to provide NGT with a framework for evaluating the vibrancy of gardens, both internally and externally, and for thinking about investments in gardens that can promote their vibrancy over the long-term.

LRSLA's assessments evaluated the 19 gardens with regard to how well they serve as community spaces that are part of the civic fabric of their neighborhoods. The field work was structured upon a series of criteria used as a basis in assessing the multiple facets of a community garden space. Site assessments were conducted to evaluate the gardens' essential components, amenity components, and conditions contributing to safety and risk. These factors can then be used in planning community garden acquisitions, investment requirements and prioritization, and to gauge and improve long-term viability.



Seedy Acres in Northern Liberties (an NGT-preserved garden)

The primary physical components of a garden were evaluated to understand how the garden grows crops and provides a secure environment for its gardeners. Gardens can provide a harvest with few resources—simple hand tools, access to sun, water and fertile soil. Providing safety and comfort, particularly in areas with greater vacancy and crime density, requires additional resources such as fencing, lighting, signage and storage. Beyond the practical needs, the condition and maintenance of the various physical components were evaluated, along with the general care of the 'public' areas inside and outside of the garden.

The site assessment criteria developed by NGT and the study team was incorporated into a site assessment worksheet (see Figure 5). Along with a photographic inventory, the worksheet provides a model that can be used by NGT for future evaluations.

Figure 5:

GARDEN SITE ASSESSMENT WORKSHEET

ITEM		VALUATION / NOTES	\$ NEED
Essential Garden Components	GARDEN PLOTS	Quantity: Size/Type: (note in-ground or raised; note raised bed material) Expansion potential: [Poor 1 2 3 4 5 Excellent]	
	FENCE	Type: Condition: [Poor 1 2 3 4 5 Excellent] Delivery Gate Access: <input type="checkbox"/> Yes <input type="checkbox"/> No (10' wide min. required for delivery)	
	WATER ACCESS	<input type="checkbox"/> Yes <input type="checkbox"/> No (note type - hydrant, rain barrel, cistern, piped, etc.)	
	TOOL STORAGE	<input type="checkbox"/> Yes <input type="checkbox"/> No (note type - lock-box, shed, etc.)	
	WORK BENCH / HARVEST TABLE	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	COMPOST AREA	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	SIGNAGE	<input type="checkbox"/> Yes <input type="checkbox"/> No (note type, condition, name of garden and general content)	
	BULLETIN BOARD	<input type="checkbox"/> Yes <input type="checkbox"/> No (note type, condition and general content)	
Amenity Components	COMMON AREA / FURNISHINGS	<input type="checkbox"/> Yes <input type="checkbox"/> No (note type and condition)	
	ARTWORK	<input type="checkbox"/> Yes <input type="checkbox"/> No (note type and condition - i.e. murals, mosaics, sculpture, etc.)	
	TREE SPECIES	Interior: <input type="checkbox"/> Yes <input type="checkbox"/> No Exterior: <input type="checkbox"/> Yes <input type="checkbox"/> No (note type and condition)	
	BORDER / ORNAMENTAL PLANTING	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	OTHER STRUCTURES	<input type="checkbox"/> Yes <input type="checkbox"/> No (note type and condition - i.e. gazebo, pergola, sculpture, etc.)	
	POTENTIAL TO HOST GREEN STORMWATER INFRASTRUCTURE	[Poor 1 2 3 4 5 Excellent]	
Additional	SIDEWALK CONDITION	[Poor 1 2 3 4 5 Excellent] (note specifics - i.e. heaving, spalling, etc.)	
	NEIGHBORING BUILDING WALL	<input type="checkbox"/> Yes <input type="checkbox"/> No (note residential, commercial, etc.; note type and condition)	
	DEVELOPMENT PRESSURE	<input type="checkbox"/> Yes <input type="checkbox"/> No (note type - i.e. residential, commercial, etc.)	
OVERALL SAFETY/RISK SCORE (0 Poor - 40 Excellent)			xx
Safety / Risk	INTERIOR MAINTENANCE	[Poor 1 2 3 4 5 Excellent]	x
	EXTERIOR MAINTENANCE	[Poor 1 2 3 4 5 Excellent] (note specifics - i.e. trash, graffiti, etc.)	x
	FENCE CONDITION	[Poor 1 2 3 4 5 Excellent]	x
	LOCKED GATE	<input type="checkbox"/> Yes (5) <input type="checkbox"/> No (0)	x
	LIGHTING	<input type="checkbox"/> Yes <input type="checkbox"/> No (note type and source - i.e. bldg.-mounted flood, solar, etc.) [Poor 1 2 3 4 5 Excellent]	x
	CRIME INDEX (Trulia Crime Map)	[High 1 2 3 4 5 Low]	x
	SURROUNDING VACANCY	[High 1 2 3 4 5 Low]	x
	SITE LINES	[Poor 1 2 3 4 5 Excellent]	x

Essential Components

Community gardens have some essential needs to support cooperative and productive food and flower cultivation. These needs are:

- Garden plots
- Fencing
- Water access
- Tool storage
- Work benches/Harvest tables
- Compost areas
- Signage
- Bulletin boards

For each garden evaluated, these items were indicated as being present or not, with additional information on type, size, condition and content where applicable. The lack of such components, or those in need of repair or replacement, should be considered priority items for investment so that gardens may function in their most basic sense. More detail on each component and how it relates to garden sustainability is available in Appendix C.

Several essential garden components stood out as lacking or otherwise in need of attention. Only 30-35% of gardens have workbenches or on-site compost. Water for approximately half the gardens appears to be from nearby hydrants; further verification is required to ensure that gardens comply with City requirements for permitting and backflow preventers. Investment in these items will help gardens to operate more effectively. Signage is not present at nearly one-third of the garden sites and is in average or worse condition in the remaining two-thirds of the gardens. Bulletin boards are not present at nearly two-thirds of garden sites. Investing in robust signage can help to create garden identity and facilitate communication between gardeners (and between gardeners and non-gardeners), thus potentially improving gardeners' sense of ownership of, and pride for, their gardens.



Raised beds at the Saint Bernard Community Garden in West Philadelphia (an NGT-preserved garden)



Welded wire fence at the Five Loaves Two Fishes Community Garden in West Philadelphia (a prospective NGT garden)



Custom tile sign of the Bodine Street Community Garden in South Philadelphia (an NGT-preserved garden)



A homeowner provides lighting to the House of Grace Community Garden in Kensington (a prospective NGT-preserved garden)

Amenity Components

More than just convenience items, amenity components contribute to gardens' sustained success. These components include:

- Common areas/Site furnishings
- Trees
- Artwork
- Ornamental border plantings
- Other structures (e.g., gazebos, pergolas, etc.)
- Potential to host green stormwater infrastructure

These components elevate community gardens to a greater civic function, making the case for investments that help ensure gardens' success and long-term preservation. Space to host social engagements and programming allows gardens to extend their seasonal use and user base. Art provides opportunities to express local interests and culture and can be a point of pride for neighborhoods. Integrating green stormwater infrastructure expands gardens' roles in environmental stewardship, making them a critical part of the city's utility infrastructure and advancing the case for investments that help ensure gardens' success and long-term preservation.

Ornamental border plantings and trees are the two amenity components with the greatest potential for improvement. Ornamental border plantings are present at about 80% of garden sites; however two-thirds of those need a fair amount of maintenance, as they currently do not make a favorable impression on the adjacent neighborhood.

Safety and Comfort Components

The safety that a community garden provides to its members is a primary factor in its long-term viability. Through the site assessment criteria, several factors were noted to contribute the sense of safety and comfort. These factors and a few additional ones were

used to gauge how community gardens fared in this category. A combination of physical and environmental factors, along with assessed maintenance conditions, contributed to a scoring system used to determine gardens' safety and user comfort. The criteria used to determine safety and comfort were:

- Interior maintenance
- Exterior maintenance
- Fence condition
- Locked gate(s)
- Lighting
- Crime index (Trulia crime map)
- Surrounding vacancy
- Sight lines

Safety and comfort components contribute to securing the gardens' assets and providing a comfortable environment in which members can work or socialize. Lighting was observed at only one-third of the sample set of gardens. Even where present, the lighting appears to be inadequate to provide a sense of safety for gardeners performing evening gardening tasks. However, gardeners can remain safe without the added expense of lighting by limiting garden activities to the daytime.

The condition of public sidewalks outside the assessed gardens presents a significant opportunity for improvement. Approximately 55% of the gardens have adjacent public sidewalks in below-average condition and require significant repairs or replacement in full. Half of the gardens provide opportunities to improve sight lines into and out of the sites, which can be accomplished with minimal investment in pruning and maintenance of vegetation. Addressing these and other maintenance issues will help to ensure gardeners' safety and comfort.



Rain barrels at the Grays Ferry Community Garden in West Philadelphia (an NGT-preserved garden)



Piped, potable water at the Bodine Street Community Garden in South Philadelphia (an NGT-preserved garden)



The fine work of a member of the Holly Street Community Garden in West Philadelphia (a prospective NGT garden)

Maintenance Is Imperative

The maintenance practices of public space, whether it be a civic plaza or member-based garden with public programming, are essential to gardens' success and require both financial and sweat equity. Utilizing best practices in materials and management can help alleviate recurring costs associated with maintenance, although a more substantial initial investment may be required to do so. The care shown to a garden space influences its perception in the public eye, and CDCs and other potential stakeholders care deeply about the appearance of community garden spaces. The perception of such spaces as either asset or eyesore can determine the fate of partnership opportunities that may be advantageous for NGT as it seeks to grow and sustain its portfolio.

Prioritizing Future Investments

The evaluations of community gardens will help NGT in its strategic planning of potential garden acquisitions, understanding where investment might be needed in order to provide community garden spaces that are poised for long-term sustainability and success. Although only a limited sample of gardens was reviewed in the course of completing this report, NGT can use this model to assess additional garden spaces throughout the city.

The data collected can be used to identify needs of individual community gardens, comparative ranking of gardens, as well as overall trends among groups of gardens (refer to Site Assessment Tables in Appendix D).

5 ACQUISITION BUDGET

The following budgets, based on LRSLA’s site assessments, PHS’s recommended best practices and feedback from NGT, are examples of the costs that NGT should anticipate when adding gardens to its portfolio. They consider a variety of costs, including land acquisition and construction of essential, amenity and safety/comfort components. NGT can use these examples to frame their discussions with funders and gardeners.

Figure 6:
EXAMPLE GARDEN ACQUISITION BUDGETS

Moore Street Community Garden (2048 sq ft.)		
Acquisition Costs	Status	Cost
Settlement Costs: \$ 1,000 per parcel x 2 parcels	Required	\$ 2,000.00
Legal Fees: 5 x \$300-\$1500	Required	\$ 1,500.00
Insurance: \$.50 per acre annually	Required	\$ 0.02
Survey: \$1,500	Conditional*	\$ -
Appraisal: \$300	Conditional*	\$ -
Overhead and Administrative: \$85/hr. x 20 = \$1,700**	Required	\$ 1,700.00
	Total Acquisition Costs:	\$ 5,200.02
Capital Construction Costs	Status	Cost
Water access thru hydrant:		
<i>L&I Permit & backflow preventer \$250 + Hoses & Nozzles \$75</i>	<i>Recommended</i>	<i>\$ 325.00</i>
<i>Water Barrels at \$10-\$25 per barrel</i>	<i>6 existing barrels assumed fed by hydrant</i>	<i>\$ -</i>
<i>Install a waterline from street to a central pumping station in the garden; approximately \$7,000 per garden</i>	<i>Recommended</i>	<i>\$ 7,000.00</i>
Fencing: cost varies based on garden perimeter and materials used; estimate is based on Jerith's "Patriot" fence with double swing gate.	Existing fence requires repairs and gate	\$ 5,400.00
Garden Plots: includes cost for constructing of raised beds; approximately \$75 per bed	Existing wood raised beds in fair condition. Little to no room for additional beds.	\$ -
Soil Testing: ranges from \$15-\$60 per test	Estimate 3 tests at \$15 per test	\$ 45.00
Storage Shed: average cost of \$3,000 for installation & assembly.	Recommended	\$ 2,500.00
Soil for raised beds: \$650 delivered 20 cu yards.	No new beds required	
Basic equipment for gardening and maintenance, approximately \$550	No storage observed, tools on sidewalk	\$ 550.00
Picnic Table and Bench: estimated at \$1000	Recommended	\$ 1,000.00
Bulletin Board: estimated at \$500	Recommended, signage in poor condition. Consider a sign/bulletin board.	\$ 500.00
	Total Capital Costs:	\$ 17,320.00
	<i>Construction Mgmt. - 20% of capital costs</i>	<i>\$ 3,464.00</i>
	Total Acquisition and Capital Costs:	\$ 25,984.02

*These cost are dependent upon funder requirements. If lots are acquired from the City these may be unnecessary costs.

**Fees are significantly reduced, by NGT's membership to the National Land Trust. These annual dues are \$1,325 per year. The dues are incorporated into overhead and administrative costs.

Below are two examples of gardens of different sizes and with different capital needs. Acquisition costs are similar (because they vary mainly according to the size of the garden). The gardens have different capital needs however, and therefore NGT and these gardens can plan when and how to invest in these gardens based on LRSLA's site assessments and this tool.

5 Loaves and 2 Fishes Community Garden (5850 sq ft.)

<i>Acquisition Costs</i>	<i>Status</i>	<i>Cost</i>
Settlement Costs: \$ 1,000 per parcel x 7 parcels	Required	\$ 7,000.00
Legal Fees: 5 x \$300 = \$1500	Required	\$ 1,500.00
Insurance: \$.50 per acre annually	Required	\$ 0.07
Survey: \$1,500	Conditional*	\$ -
Appraisal: \$300	Conditional*	\$ -
Overhead and Administrative: \$85/hr. x 20 = \$1,700**	Required	\$ 1,700.00
Total Acquisition Costs:		\$ 10,200.07

<i>Capital Construction Costs</i>	<i>Status</i>	<i>Cost</i>
Water access thru hydrant:		
<i>L&I Permit & backflow preventer \$250 + Hoses & Nozzles \$75</i>	<i>Recommended</i>	<i>\$ 325.00</i>
<i>Water Barrels at \$10-\$25 per barrel</i>	<i>8 existing barrels assumed fed by hydrant</i>	<i>\$ -</i>
<i>Install a waterline from street to a central pumping station in the garden; approximately \$7,000 per garden</i>	<i>Recommended</i>	<i>\$ 7,000.00</i>
Fencing: cost varies based on garden perimeter and materials used; estimate is based on Jerith's "Patriot" fence with double swing gate.	Existing fence requires replacement	\$ 16,300.00
Garden Plots: includes cost for constructing of raised beds; approximately \$75 per bed	Can accommodate approximately 20 additional 4'x8' plots	\$ 1,500.00
Soil Testing: ranges from \$15-\$60 per test	Conduct 5 tests at \$15 per test	\$ 75.00
Storage Shed: average cost of \$3,000 for installation & assembly.	Existing structure appears sufficient	\$ -
Soil for raised beds: \$650 delivered 20 cu yards.	Recommended	\$ 650.00
Basic equipment for gardening and maintenance, approximately \$550	Unknown	\$ 550.00
Picnic Table and Bench: estimated at \$1000	2 existing tables w/ benches	\$ -
Bulletin Board: estimated at \$500	None observed. Consider a sign/bulletin board.	\$ 500.00

*These cost are dependent upon funder requirements. If lots are acquired from the City these may be unnecessary costs.

**Fees are significantly reduced, by NGT's membership to the National Land Trust. These annual dues are \$1,325 per year. The dues are incorporated into overhead and administrative costs.

Total Capital Costs:	\$	26,900.00
Construction Mgmt. - 20% of capital costs	\$	5,380.00
Total Acquisition and Capital Costs:	\$	42,480.07

6 FINDINGS

This study produced four distinct sets of findings: a list of active community gardens in the identified target areas, as well as critical gardens outside the target areas; insights from the CDC and gardeners focus groups; data from the LRSLA garden assessments; and cost estimates for garden acquisitions and capital improvements.

Identifying Priority Acquisitions

In completing this study, NGT and the research team had a two-pronged approach of identifying community gardens in identified target areas, as well as calling out critical spaces outside the target areas. The final list of acquisition priorities included:

- Active community gardens in target areas;
- Gardens throughout the city with part of their land secured by NGT but with additional parcels needed to complete the sites;
- Preservation-ready gardens throughout the city that had previously applied to NGT for preservation; and
- City Harvest gardens throughout the city, which provide fresh food to Philadelphia communities, that are in danger of losing access to their land .



Bel Arbor Community Garden in South Philadelphia (an NGT-preserved garden)



Glenwood Green Acres Community Garden in North Philadelphia (an NGT-preserved garden)

Together, these processes identified 28 gardens for acquisition: These include:

- 14 preservation-ready gardens in target areas, all of which have now applied to NGT for preservation;
- Five preservation-ready gardens outside the target areas, all of which have now applied to NGT;
- Three existing NGT gardens in target areas to complete; and
- Six existing NGT gardens outside the target areas to complete.

NGT also found 34 active gardens that are not yet ready for acquisition and that need additional support. This list includes:

- 15 still-developing gardens in target areas, five of which have applied to NGT;
- Seven still-developing gardens outside the target areas, three of which have applied to NGT;
- Nine gardens in target areas with aging or limited membership, two of which had applied to NGT but were rejected due to lack of capacity; and
- Three gardens in target areas with safety or organizational challenges, one of which had applied to NGT.



Strawberry Mansion Green Resource Center in North Philadelphia (an NGT-preserved garden)

These gardens will inform NGT’s future acquisition approach and pipeline. In Chapter 8, NGT describes these gardens’ needs and the tactics that could be employed to make these gardens preservation-ready in the future.

Focus Group Feedback

The CDC and gardener focus groups provided an opportunity to hear how different stakeholders perceive community gardens. Understanding the similarities and differences between these groups will allow NGT to better bridge these worlds and strategically align resources to build support for gardens in the future. The information gleaned from the CDC focus group is also a good starting point for understanding the perceptions of community members, City staff, City Council and other groups that have influence over the continued existence of gardens.

CDCs and gardeners *align* in thinking that:

- Gardens transform land and perceptions of the neighborhood;
- Gardens may lead to redevelopment of lots;
- Gardens need to be secured;
- Gardeners need to live close to the site;
- Community support is important to assist with fundraising, land use issues and dispute resolution between businesses and residents; and
- NGT needs to have an exit strategy or succession plan in the event the number of active gardeners declines below a sustainable level.

The groups *differ* in perspectives on:

- The importance of the exterior maintenance of the gardens;
- The uses of garden spaces and their benefits to the community; and
- The resources required to establish gardens.

It is perhaps not surprising that those who actively participate in the fundraising, cultivation and maintenance of garden spaces have a more nuanced understanding of their benefits and positive impacts, but this does not provide a complete picture. While gardeners generally focus their investments and time on the interior of garden spaces, CDCs feel that an attractive exterior appearance is equally important to the vitality of garden spaces and their effects on their neighborhoods. This is a key insight for NGT and can provide guidance for alignment of garden resources with the needs of the greater community. Understanding the outside groups' perceptions of community gardens can guide NGT in making strategic physical improvements to ensure support by CDCs and others.

In addition, there are opportunities to align gardens with neighborhood and citywide strategies, including the Land Bank's Strategic Plan and PWD's *Green City, Clean Waters*. Where NGT's priorities align with these City priorities, resources may become available to support acquisitions or make capital improvements.



Chester Avenue Community Garden in West Philadelphia (an NGT-preserved garden)

Evaluating Existing Gardens

LRSLA visually inspected 19 gardens to assess the presence and quality of their essential, amenity and safety and comfort components. Component quality was evaluated on a scale of one to five, with one indicating low-quality insufficient to meet gardeners' needs and five indicating high-quality. These evaluations will help NGT plan acquisitions and understand where investment is needed to ensure gardens are poised for long-term sustainability and success. LRSLA's findings from the 19 gardens surveyed are summarized below; the full results can be found in Appendix D.

Essential Components:

- 65% contained on-site compost
- 38% contained a workbench
- 95% included a locked gate
- 47% included a bulletin board
- 68% contained tool storage
- 79% had on-site water access through piping or rain barrels
- The average score for fence condition was 3.45 out of 5
- The average score for gate condition was also 3.45 out of 5
- The average score for water access was 2.86 out of 5

Amenity Components:

- 84% included a common area
- 79% included furnishings
- 87% included artwork
- 84% included trees
- 89% included some level of border planting



Tulip Street Community Garden in Kensington (an NGT-preserved garden)



Saint Bernard Community Garden in West Philadelphia (an existing NGT-preserved garden)

Safety and Comfort Components:

- 37% included lighting
- The average interior maintenance score was 3.95 out of 5
- The average exterior maintenance score was 3.36 out of 5
- The average sidewalk condition was 2.63 out of 5

Each category of components has a different level of importance, but they all contribute to garden vitality. Investment in essential components ensures that gardens can effectively produce food and flowers. More than just convenience items, amenity components also contribute to gardens' success. Ornamental border plantings and trees were the two amenity components with the greatest potential for improvement, and investment in these components aligns with the CDC comments about garden exteriors noted above. Safety and comfort components help secure garden assets and provide a comfortable environment for members to work and socialize.

Acquiring and Preserving New Gardens

NGT and the research team calculated approximate costs to acquire and make modest capital investments in two case study gardens, the two-lot Moore Street Community Garden in South Philadelphia and the seven-lot Five Loaves Two Fishes Garden in West Philadelphia. Using NGT's guidelines of average garden costs, the research team projected that the gardens require approximately \$26,000 to \$42,500 in one-time capital investments and upfront service and staffing expenditures to ensure that these gardens are vibrant, well-equipped and safe for gardeners.

7 LESSONS LEARNED

In developing the Priority Acquisition Plan, several lessons emerged as important to understand the state of community gardening in Philadelphia today and the opportunities to expand the role of community gardening in public policy discussions in the future. These lessons came from discussions with gardeners, CDC staff, and the Study Committee. NGT and its partners can apply these lessons to enhance their work at the intersection of several issues of public concern, including how to support gardens and gardeners, as well as how to use data and research to identify the beneficial impacts of community gardens for the city. NGT can also use this information to approach new funders with a compelling case for aligning resources to support a robust community gardening and urban agriculture movement in Philadelphia.

Building and Maintaining a Database of Gardens

Building and maintaining a database of known active community gardens and open spaces is critical to the ongoing garden movement in Philadelphia. The research team's primary challenge on this project was securing and validating data on the existence and location of active community gardens and open space. Beginning with multiple databases, Reinvestment Fund created a unique list of possible garden locations and joined those to assorted Department of Records' parcels. This combined database was used to select target areas.

NGT staff created a tool for field verification of gardens located within the target areas. During field verification, NGT staff collected data on existing, functioning gardens, including the age, condition, organizational structure, stability, number of parcels and resident engagement for each garden. This tool can be used to assess all gardens and document changes over time. Since this study assessed only gardens within the target areas, the status of gardens in other parts of the city is still unknown.



Warrington Community Garden in West Philadelphia (an NGT-preserved garden)



Mantua Urban Peace Garden in West Philadelphia (an NGT-preserved garden)

Without a plan for completing the field verification, as well as for ongoing maintenance and support, the newly created database will quickly become stale. NGT will work with its partners to: (a) devise a system for gardeners to register and update the status of their properties annually and (b) identify an organization to maintain the database. The database can serve multiple purposes: distributing information on existing resources, sharing communal knowledge among gardeners, and assessing the gap between the supply of garden beds and demand for garden space throughout the city.

One challenge with building a citywide database of existing gardens is uncertain land tenure. Gardens that do not have legal ownership of the land they use may be hesitant to join a database because of fear that doing so would bring attention that jeopardizes their gardens. NGT can play a vital role in helping gardeners gain legal access to the land they use.

NGT's Strong Reputation

NGT is well-established and known by gardeners seeking to preserve gardens in Philadelphia. As noted above, the research team and NGT staff expended significant resources to gather data on gardens in Philadelphia. Through the planning process, Reinvestment Fund sought to identify the location of new gardens and to include these gardens with NGT's existing pipeline for the acquisition list. Once the various lists were merged, sorted and field-inspected, NGT found few gardens meeting its application criteria that were not already in the acquisition pipeline. This affirmed that NGT has established name recognition among active gardeners and civic groups, who know to seek out NGT when their gardens are established enough to think about long-term preservation.



Emerald Street Community Farm in Kensington (a prospective NGT garden)

Public Benefits Beyond Garden Boundaries

Reinvestment Fund’s literature review found that community gardens and open space can increase food access, improve gardeners’ physical and mental health, increase property values, reduce crime and improve residents’ perceptions of their neighborhoods. Philadelphia’s community gardens have long produced more food than gardeners consume. PHS estimates that “City Harvest gardeners grow and donate more than 55,000 pounds of produce each year, helping to feed over 1,200 families per week during the growing season, including residents of neighborhoods with some of the highest rates of poverty and food insecurity in the region”.

The *Community Gardening in Philadelphia 2008 Harvest Report* affirms the economic impact and contributions of gardens:

- “Overall, we estimate that community and squatter gardens in Philadelphia produced some \$4.9 million worth of summer vegetables (a figure that does not include spring and fall plantings or the harvest from fruit trees and berry bushes)” (p.4).
- “In low-wealth communities, we found gardening is a strategy that many people employ to cope with poverty and its attendant health and social problems. Gardening is labor intensive, but not capital intensive, mainly involving investment of labor and improvement of the soil. It is one of many ways that people work to address the food needs and wants of their families and neighbors, an important part of building healthier, more resilient cities and communities” (p. 61).

Additionally, focus group participants indicated that community gardens serve as safe venues for out-of-school programing for children, community social events, and spaces for new

immigrants to grow traditional or customary foods. With so many different people and groups benefiting from community gardens, there are many opportunities for gardeners to partner with others to help with fundraising.

Reframing Garden Benefits

Traditionally NGT and PHS sought funding for gardening as a community development investment, but these resources are extremely limited in the current environment. Through this process, the research team heard from a variety of stakeholder groups that NGT's mission to preserve garden spaces is a critical need in Philadelphia. Funding in the past supported the acquisition of land, property improvements, supplies and organizational development activities. These fundamental needs still exist today.

Growing public interest in food access, immigration services, and the value of green spaces creates opportunities to approach new funders with a compelling narrative and data to support this position. For example, advocates can emphasize community gardens as:

- Vital sources of locally-produced food, in alignment with national hunger-free and healthy eating initiatives;
- Means of helping immigrants assimilate, in alignment with Philadelphia's interest in helping the city's growing foreign-born population acclimate to the city;
- Mechanisms for supporting neighborhood cohesion in areas experiencing market pressure, in alignment with equitable development strategies;
- Part of community-building in areas not ready for CDCs to develop new housing; and
- Locations for PWD green stormwater infrastructure, in alignment with the Department's long-term investments in urban wet weather pollution mitigation.



Southwark/Queen Village Community Garden in South Philadelphia (an NGT-preserved garden)



NGT'S RECOMMENDATIONS FOR GARDENS THAT ARE NOT "PRESERVATION-READY"

One key study finding is that there are a significant number of active community gardens that fall within target areas, but which are not currently “preservation-ready”. NGT staff visited and met with gardeners at each of these gardens to assess its organizational capacity and the likelihood that the garden would continue to be active in the long-term. NGT considered a series of factors including: how long the garden has been active, the number and experience level of active gardeners, whether the garden has established relationships with community organizations, and whether the garden has established garden rules or bylaws. (See Appendix D.)

Several themes emerged from these discussions that highlight the challenges some gardens face which concern NGT about their sustainability for the future. In order to move towards permanent preservation, garden support and capacity building efforts should be built around these needs to help gardens within target areas to become “preservation-ready”. The following section sets forth four themes that emerged through the study and broad recommendations to begin addressing these challenges through referrals, program development, and policy change.

NGT is only one of many partners in Philadelphia. Additional planning work is needed that engages gardeners, organizations and City agencies in Philadelphia that support community gardens to develop strategies and tactics to address the needs community gardens face at different stages of their life cycle.

Cultivating Future NGT Member Gardens

There are community gardens in the planning or start up phase that show strong potential to become stable, long-term growing spaces, but these gardens need a



seasoning period before they will be candidates for NGT preservation. New gardens have a variety of needs which include interim legal land access, insurance, technical assistance on best practices for recruiting and organizing gardeners, establishing garden rules/bylaws, soil testing, and access to water as well as supplies and materials including tools, soil, compost and wood for raised beds.

Organizations and resources exist in Philadelphia to meet some of these needs including the PHS's Garden Tenders and City Harvest Programs, the Public Interest Law Center's Garden Justice Legal Initiative (GJLI), Philadelphia Department of Parks and Recreation's FarmPhilly Program, and the Penn State Extension Master Gardener program. The GJLI Grounded in Philly website and recently published Vacant Land Toolkit provide resource guides. These organizations should be engaged in future planning in order to identify gaps and collaboratively develop and expand their programming. Some of this work is underway through the efforts of the Mayor's Food Policy Advisory Council Urban Agriculture subcommittee.

There is a need for an outreach and referral program that proactively assesses the needs of new gardens and connects them to existing resources and well as guiding them to seek additional support and resources through their district City Council representatives, civic associations, RCOs, churches and schools. This program could also maintain an active list of available community garden plots citywide and connect people looking for growing space.

There is another set of challenges that will require City policy changes, especially in the area of interim land access. In order to complete a seasoning period before approaching NGT for permanent preservation, gardens on City-owned land need



Mantua Urban Peace Garden in West Philadelphia (an NGT-preserved garden)



Glenwood Green Acres Community Garden in North Philadelphia (an NGT-preserved garden)

more secure tenure than that provided by the existing one-year revocable license agreements. Private tax-delinquent land that is occupied by community gardens should be acquired by the Philadelphia Land Bank through tax foreclosure. A standard lease form should be used by the Land Bank and other City agencies with insurance requirements that are affordable for community gardeners. The current requirements make insurance and therefore legal access unattainable for many gardeners.

Additional policy and program development within the city can address challenges that gardens face including the need for a stormwater billing exemption for community gardens, low cost water access, as well as access to compost and lumber. There are many examples of well-developed programs including P-Patch in Seattle and Green Thumb NYC that can be drawn upon for models.

Sustaining Gardens Over the Long-Term

There are longstanding gardens with only a limited number of gardeners who have been active for decades and are elderly. These gardens raise concerns about long-term sustainability and require focus on succession.

There is a need for a new program that focuses on succession and sustainability by facilitating connections between gardeners seeking plots and gardens that need additional hands. This program would support gardener recruitment and could help organize and promote workshops and volunteer days that bring elder gardeners

together with newcomers and would support the transfer of knowledge. This program would also help to bridge perceived boundaries of race, ethnicity, and socioeconomic status that exist in some cases between long-term gardeners and newer residents in changing communities. Integrating new gardeners may require garden reorganization.

Building Community Support

Some gardens were started and are driven by local institutions or nonprofit organizations. These gardens often have access to more resources but do not always develop strong leadership and ownership by local community gardeners. This raises concerns about long-term sustainability in the event the lead organization shifts focus or loses funding. Organizationally-sponsored gardens can benefit from programmatic support to transition to a more grassroots, resident-driven community gardening model. Best practices around gardener recruitment and training, as well as garden organization and governance can help these gardens transition to a model that is not dependent solely upon a single key stakeholder.

Improving Conditions Around Gardens

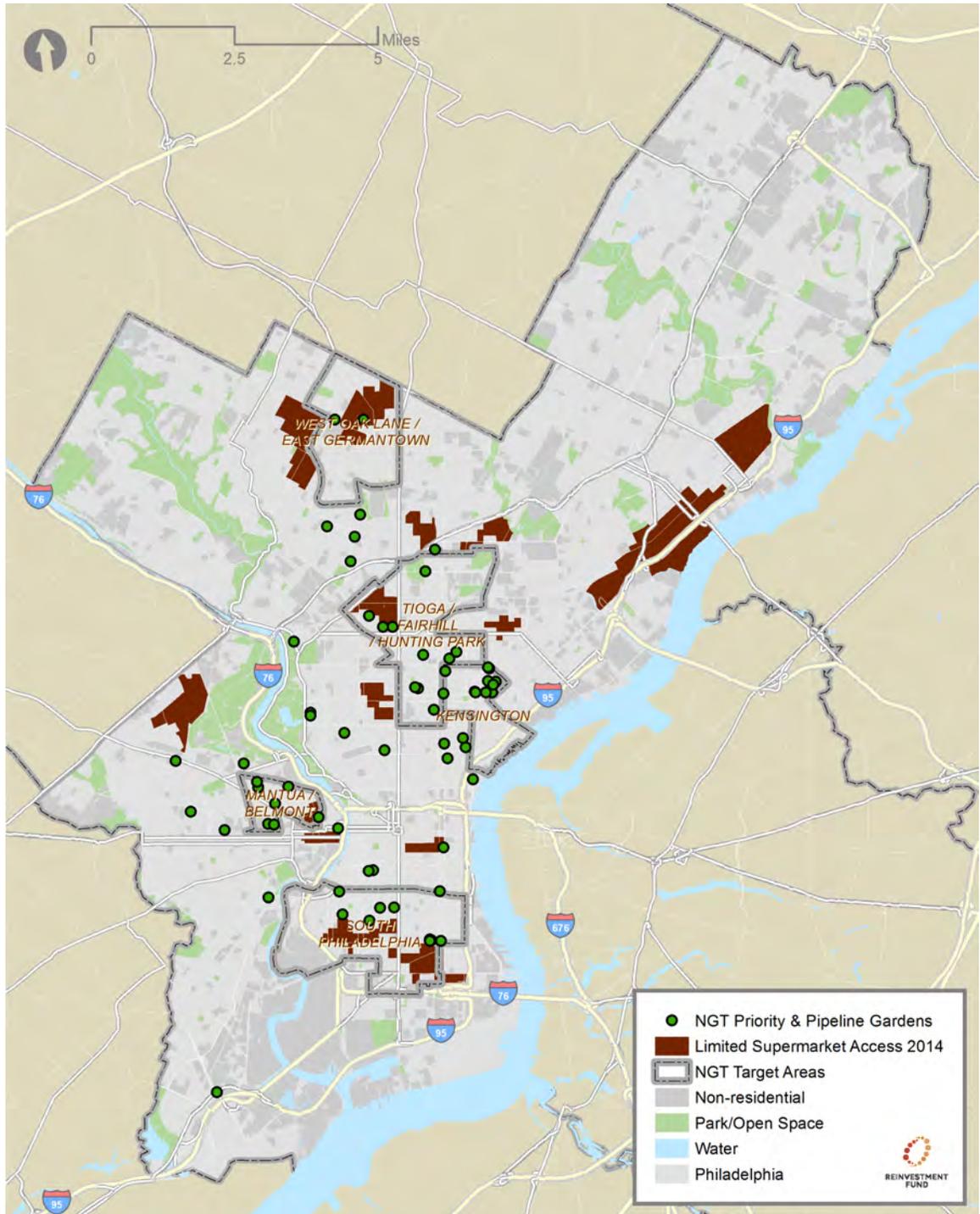
There are gardens located in areas of the city where homelessness, drug activity, and prostitution negatively impact real or perceived public safety within the garden and in the surrounding area. This can serve as a deterrent to community involvement. These gardens will require a coordinated approach in which gardeners work with district council members, law enforcement, civic associations, RCOs and service providers to address these challenging issues. Physical improvements at the gardens including clear sight lines, lighting, and fencing can also help address these problems.



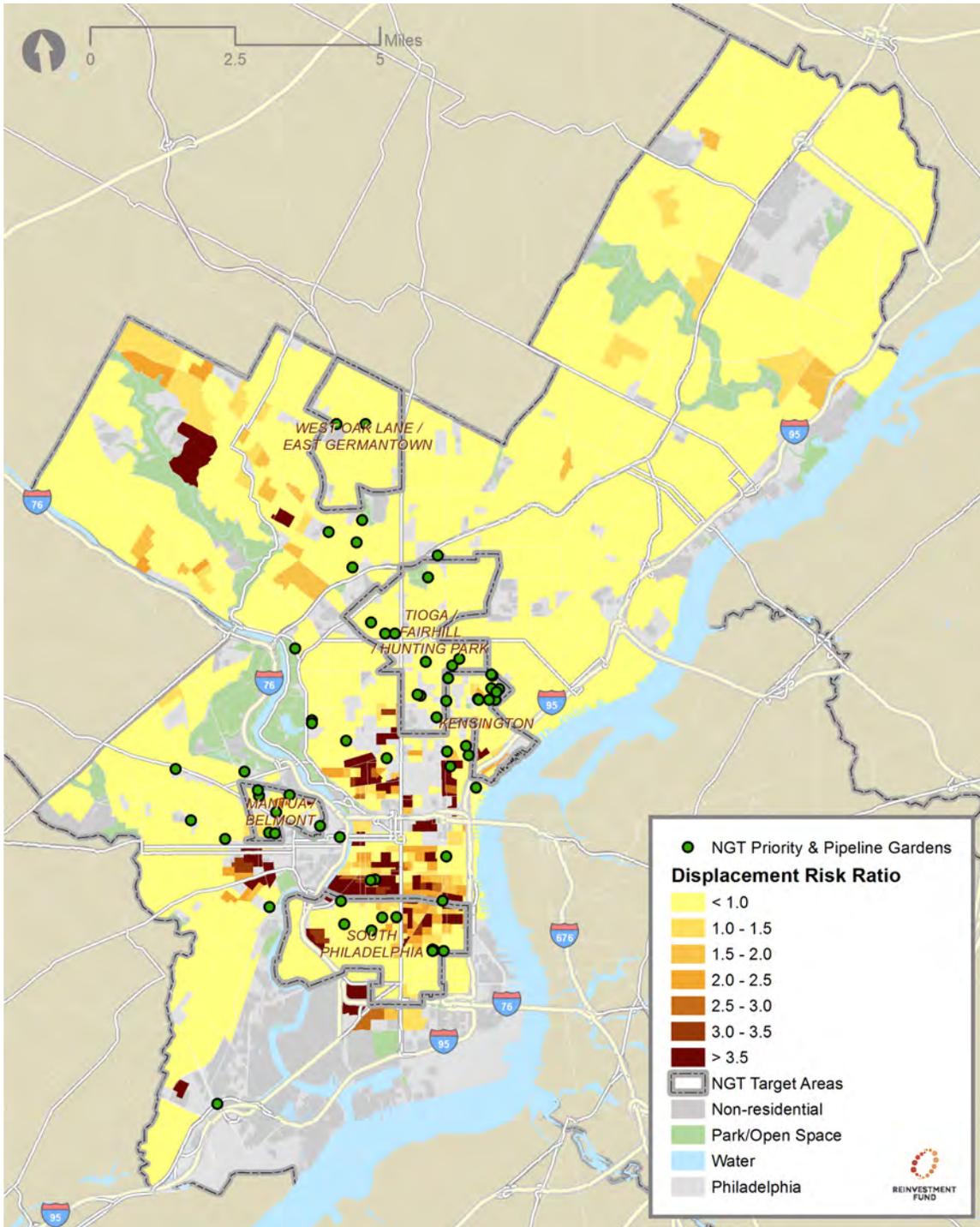
North Street Community Garden in Greater Center City (an NGT-preserved garden)

APPENDIX A: MAPPING EVALUATION FACTORS

Map A1:
LIMITED SUPERMARKET ACCESS
AREAS AND COMMUNITY GARDENS

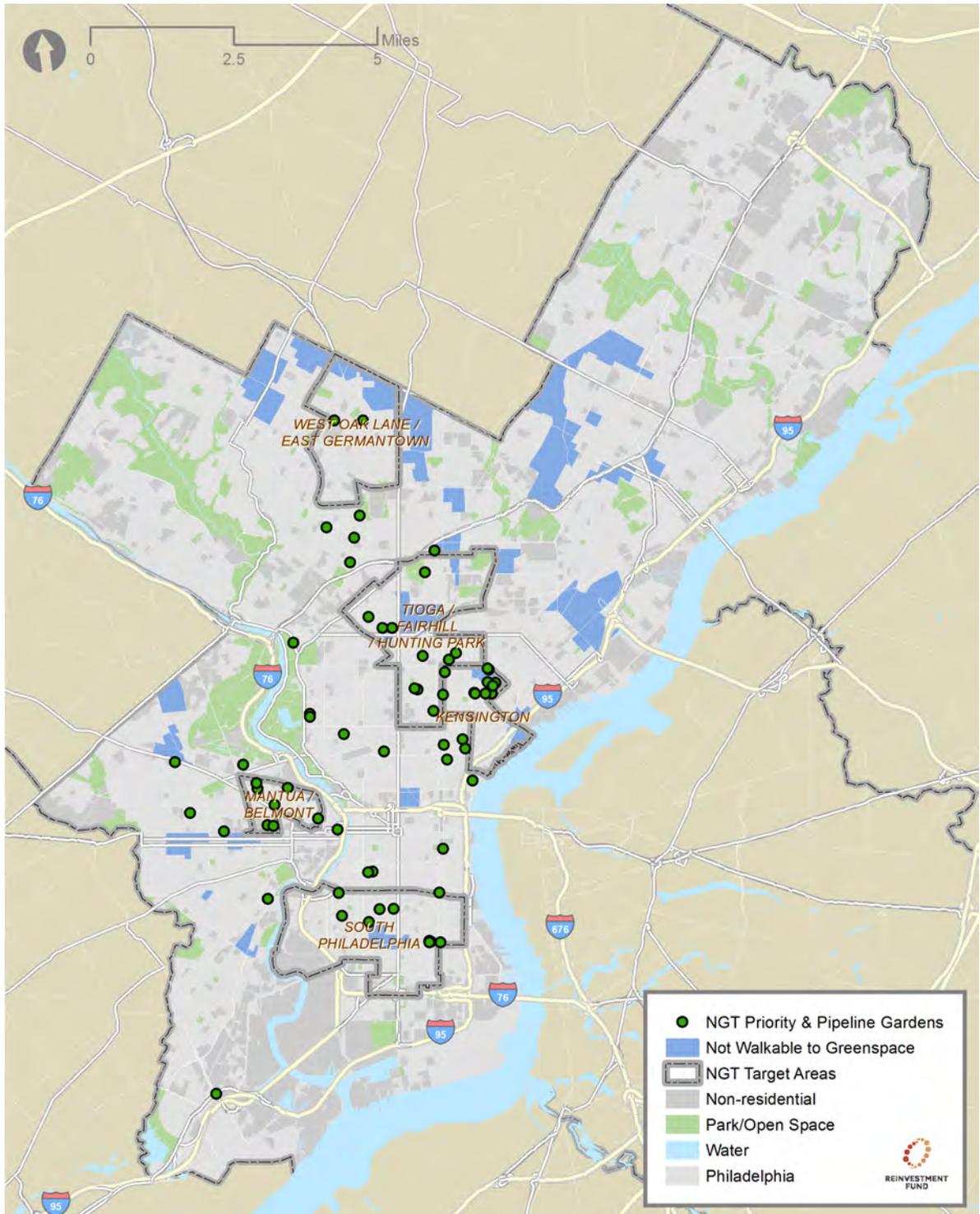


Map A2:
**DEVELOPMENT PRESSURE
AND COMMUNITY GARDENS**

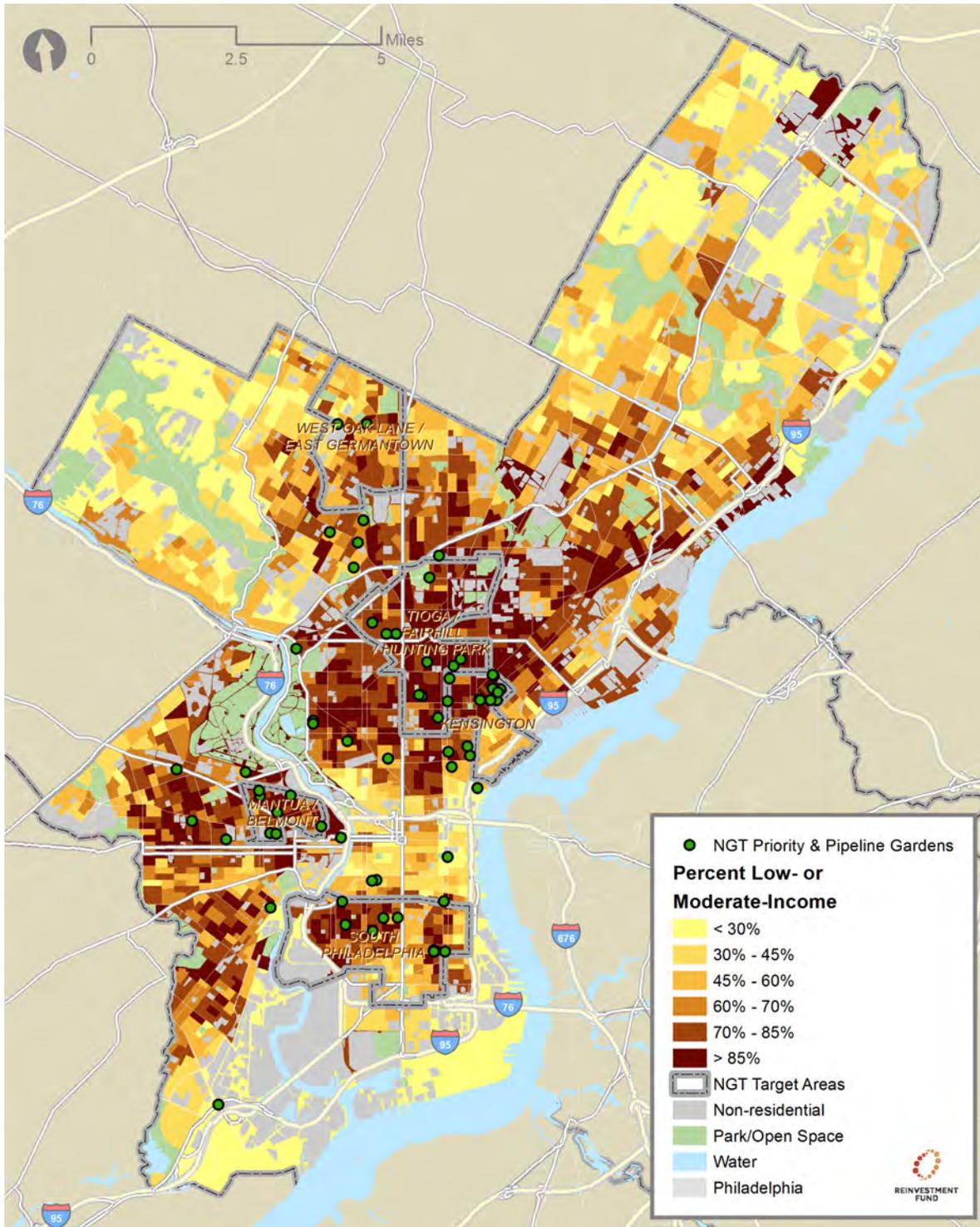


Map A3:

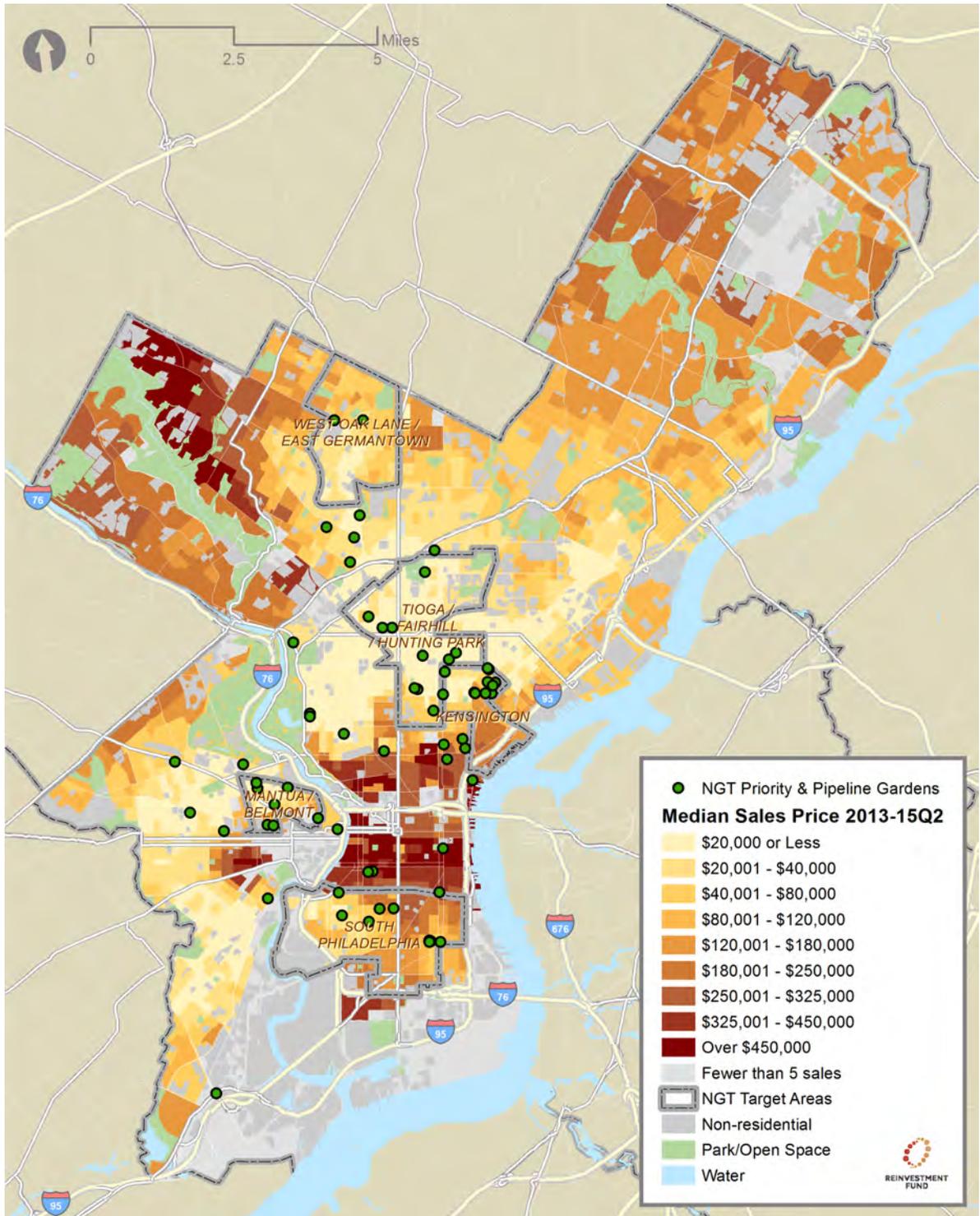
WALKABLE ACCESS TO GREENSPACE AND COMMUNITY GARDENS



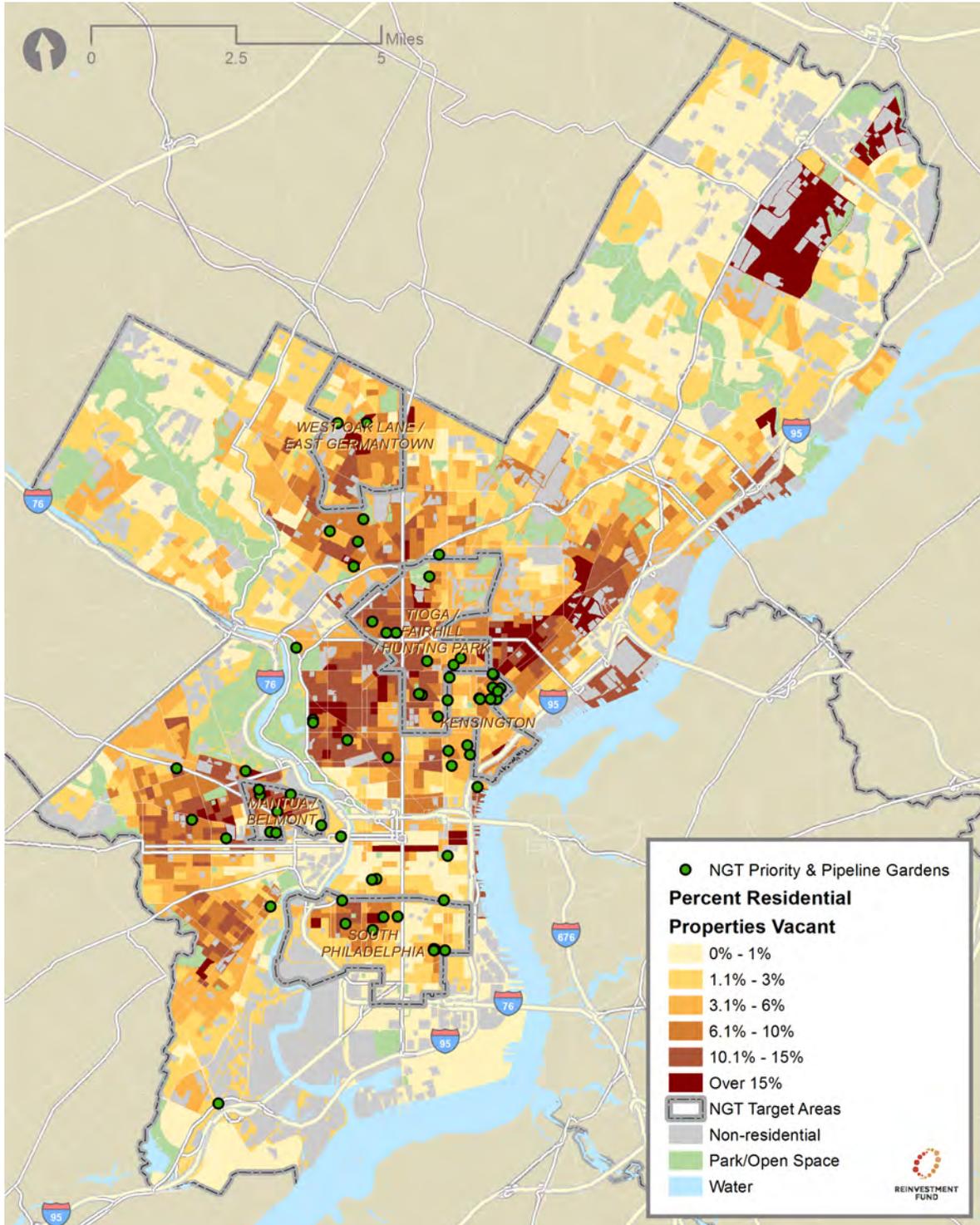
Map A4:
LOW- AND MODERATE-INCOME HOUSEHOLDS
AND COMMUNITY GARDENS



Map A5:
**MEDIAN HOME SALES PRICES
AND COMMUNITY GARDENS**



Map A6:
**VACANT RESIDENTIAL LAND
AND COMMUNITY GARDENS**



APPENDIX B: NGT CAPACITY ASSESSMENT FORM



Neighborhood
Gardens
Trust

100 North 20th Street
Philadelphia PA 19103

215.988.8800
NGT@pennhort.org
www.ngtrust.org

The Neighborhood Gardens Trust (NGT) is a nonprofit land trust that preserves community gardens and shared open spaces to enhance quality of life in Philadelphia's neighborhoods.

Many community gardens were created on land that is owned by the city or was abandoned by owners who stopped paying taxes. NGT works with gardeners to preserve their gardens by securing ownership or long-term leases so that these spaces cannot be sold or developed. NGT provides benefits to NGT gardens by holding title or a lease to the land and by providing insurance coverage, as well as access to a network of supportive NGT gardeners, gardening expertise from the Pennsylvania Horticultural Society (PHS), and a limited amount of funding for maintenance and improvements.

NGT has protected 35 gardens and seeks to preserve 100 in the next few years. We are doing a Garden Acquisition Study to identify gardens that should be prioritized for preservation in the near future. If you are interested in the possibility of NGT helping to preserve your garden, please complete the following:

- 1) Name of Garden: _____
- 2) Address of Garden: _____
- 3) Primary Contact Person: _____
- 4) Address of Primary Contact Person: _____
- 5) Phone number for Primary Contact: _____
- 6) How is your garden currently used?
 Growing vegetables
 Growing flowers
 Open space for sitting and other activities
 No gardening occurs at this site
 Play space
- Other: _____
- 7) When was your garden first established? _____
- 8) How many individuals garden at the site? _____
- 9) How many gardeners live in the immediate neighborhood? _____

10) What is the estimated average number of years that individuals garden at the site?

11) Is your site at capacity? _____

12) Do you have a waiting list? _____

13) Do written bylaws/rules exist for the garden? _____

14) If an individual wants to join the garden, what is the process for applying and joining?

15) Does the garden hold regular meetings for its members?

16) Please describe the ways in which the surrounding neighborhood is included within garden activities (if at all).

17) Describe any ways in which the garden provides benefits to the local neighborhood.

18) Is the garden affiliated or partnered with other organizations, civic association, schools, churches (e.g., Penn State, PHS, local schools, churches etc).

19) Describe any efforts that you have made in the past to try to preserve your garden through acquisition, a lease, or some other means.

APPENDIX C: COMPONENTS OF A COMMUNITY GARDEN

As described in Chapter 4, LRSLA evaluated a sample of 19 existing NGT community gardens with regard to their mix of essential garden components, amenity components, and safety and comfort components. Each of the components in these categories is described in detail below. NGT can use the evaluations of these components, and future evaluations, to strategically plan community garden acquisitions and investments, with a focus on gauging and improving long-term viability.

Essential Components

A garden's essential components are those that enable the garden to fulfill its fundamental purpose of growing crops. In order for a garden to be successful, these components must be present, of appropriate type and size, and in good working order. Gardens that lack these components, or gardens where these components are in need of repair or replacement, should be considered priorities for investment so that these gardens may function in their most basic sense.

Garden Plots

Garden plots were seen in various configurations, largely reflecting how gardens were used. Some were organized with more traditional in-ground agricultural rows for larger scale productions, and others with smaller raised bed plots conducive to providing a greater number of garden plots for individuals or single households.

Most raised beds were created using lumber, often standard dimensional softwood lumber (such as Yellow or White Pine, Fir or Hem-Fir species) stood on edge. Although cost effective, these low-density softwoods do not hold up well in constant contact with soil and moisture. Cedar or Redwood is an exception, as these are softwoods with



Raised beds at the Saint Bernard Community Garden in West Philadelphia (an NGT-preserved garden)



Welded wire fence of Five Loaves Two Fishes Community Garden in West Philadelphia (a prospective NGT-preserved garden) showing signs of wear

natural oils that provide resistance to rot and insect damage. However, Cedar can be very expensive. Hardwoods (such as Oak, Maple or Mahogany) will generally provide a greater life span than softwoods due to their higher density, but cost up to ten times more than commonly available softwoods.

A cost effective alternative to lumber, concrete masonry units (CMU) provides an extremely durable eight inch high wall for less than \$2 per unit. CMU used for gardening should be free of fly ash, which is sometimes used in the manufacture of the units and which can contain heavy metals that can compromise the soil quality so important to safe community gardening.

Fences

Fences play the pragmatic role of securing the garden and were observed along the perimeter of all gardens in the assessment. They varied in style from a more robust chainlink fence to the often short-lived welded wire poultry fencing attached to wood 4x4 posts. Neither provide an especially high level of security, but they demarcate the garden's boundary and indicate an area that is off-limits. A delivery gate in the fence is key for soil delivery.

Chainlink fence provides a rather durable perimeter and low level of on-going maintenance, whereas the much thinner gauge welded-wire poultry fencing is susceptible to bending and breakage. As a visual comparison, the light appearance of the welded-wire mesh is appealing as the fencing itself tends to disappear at a distance. A better solution may be to employ the use of more robust welded-wire fencing with metal posts that withstand the abuse of urban areas. Jerith, a manufacturer of such fencing makes the "Patriot" series fence that is available in four and six gauge wire



Chainlink fence of the Viola Street Community Garden in West Philadelphia (a prospective NGT garden)



Jerith's (mfr.) "Patriot" fence, a commercial grade wire mesh fencing

(poultry fencing ranges generally from 14 to 19 gauge), tubular steel posts, all galvanized steel with a black powder coat finish. The manufacturer backs the product with an eight year warranty and touts it as being comparable to the price of chainlink.

Water Access

Water access is a critical component of every garden. Rain barrels were the most commonly observed water storage device, although nearly all source water comes from nearby hydrants that are tapped to periodically fill the barrels. Although there is a process in place to gain legal permission (through City permitting and installation of a backflow preventer) to use this source, it is unknown whether gardens currently comply. For the most part, there is not enough roof area on site to provide the necessary amount of water. It might be possible to gain permission to harvest neighboring roof runoff, however such practices are not encouraged without proper filtration, which may require a lengthy negotiation process.

Piped water can be a boon for community gardening but comes with great expense. Tapping the city's public water line requires permitting, excavation, a backflow preventer, meter, piping and the labor needed to install these items. Costs can run well above \$5,000 to have a potable water source provided in the garden, and gardeners would have to pay a monthly water bill as well.

Tool Storage

Tool storage is necessary in securing items and was observed in a variety of forms. Some gardens employed prefabricated plastic or metal structures, while some fortunate sites were the benefactor of beautifully crafted, custom-built structures. There is no standard shed structure. At a minimum, sites should employ a lock-box to secure tools. Avoiding



Rain barrels at the Grays Ferry Community Garden in West Philadelphia (a prospective NGT garden)



Piped, potable water at the Bodine Street Community Garden in South Philadelphia (an NGT-preserved garden)



A re-purposed vendor structure used for tool storage and a picnic table used as a work bench at Five Loaves Two Fish Community Garden

plastic sheds is recommended, as these tend to warp and crack with time. Resourceful gardens were able to re-purpose structures, such as the metal vendor structure with roll-top doors used by Five Loaves Two Fish Community Garden. Repurposed vendor structures or metal shipping containers can provide extremely durable secure storage facilities that also add character to the garden spaces.

Work Benches

Work benches provide areas for harvesting and potting, and nothing fancy is needed. A picnic bench top can suffice and also provide use beyond seasonal work.

Compost

Compost enhances the quality of soils, improving structure, texture, nutrient capacity and water retention capacity. Gardeners benefit through increased yields and improved soil safety for urban gardens. However, although some gardens have compost delivered, many do not have a designated area to compost materials on site. Gardeners could easily establish on-site composting in an area of ten to twenty square feet with just a pitch fork for turning the pile. Turning bins can be purchased, but composting on bare ground encourages additional microbial activity. Compost piles should be located on well-drained ground with partial sun exposure to avoid drying out the pile too quickly.

Education can help gardeners understand the materials and practices involved in proper in healthy compost systems. Local agricultural cooperative extensions are excellent resources for such information and are offered through Penn State University, Rutgers University and other institutions with agricultural departments.



This sign at the Moore Street Community Garden in South Philadelphia (an NGT-preserved garden) tells a sad story



Custom tile sign at the Bodine Street Community Garden in South Philadelphia (an NGT-preserved garden)

Signage

Signage provides identity, conveys ownership, and provides a first-impression for community members and passersby. All too often signage was lacking or in disrepair. This can convey the wrong message about the state of the garden and the pride of the gardeners themselves. Signs should be robust and maintained along with other garden components. There is no single solution for signage. Gardens should be creative and utilize the talents of their members to create something that is unique to the site. Materials should be robust with goal of creating a permanent fixture.

Since NGT acquires and preserves permanent community garden spaces, signage is subject to the City of Philadelphia Zoning Code (Chapter 14-900). Zoning permits are required to erect signs, with specific requirements predicated on the land use type.

Bulletin Boards

Bulletin Boards can be an effective way to communicate between garden members and/or the community. As with signage, bulletin boards should be well constructed and well maintained. Some existing bulletin boards were observed to be located in or near tool storage areas, with others along the public sidewalk.

It may be appropriate to have two bulletin boards, one within the garden parcel for communications among garden members, and another that could be part of the garden signage that communicates with the community. If it is part of the garden signage or otherwise displayed in public view, it may be subject to the same code and permit requirements mentioned earlier.

Amenity Components

Common areas, artwork, trees, ornamental plantings, and green stormwater infrastructure are optional components of a community garden, but they nonetheless contribute to a garden's success by making the garden a more inviting place to spend time. As with a garden's essential components, proper maintenance of its amenity components is critical to their making the garden more successful.

Common Areas

Common areas can expand a community garden's role as a true community amenity by providing flexible use space to host additional programming or social gathering. Where such spaces are not present, it could be beneficial to locate community space along the public right-of-way as to further reinforce the notion of a public space that engages the adjacent community. Of course, space is sometimes limited and needs to be carefully weighed with the need for garden plots and other essential elements for food production.

Artwork

Artwork is seen at many community gardens and often is reflective of the local community, its history and values. Murals are by far the dominant form of artwork present in the gardens. This comes as no surprise in Philadelphia, since there is a surplus of vacant land and adjacent building facades. Custom-crafted fences, signs, furnishings, birdhouses were also present in the garden plots. These artistic endeavors are typically the work of the community gardeners themselves and should be encouraged to provide identity and a sense of pride in these spaces.



A custom crafted birdhouse at the Emerald Street Urban Farm



The highly amenitized common area of Southwark Community Garden in South Philadelphia (an NGT-preserved garden)



Trees at Emma's Court Community Garden in Kensington (a prospective NGT garden) provide pleasant shade



Low-branched trees at House of Grace Community Garden in Kensington (a prospective NGT garden) limit visibility

Ornamental Plantings

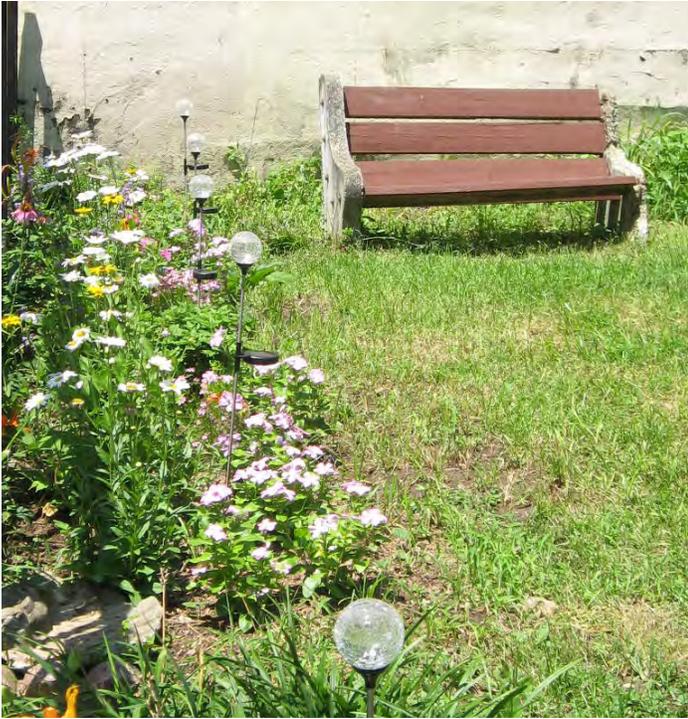
Ornamental plantings can provide or improve curb appeal for community gardens, but the extent of such plantings should be carefully weighed with the amount of maintenance required to keep such plantings healthy and vibrant.

The curb appeal of the gardens is a significant factor in their perception of being either a community asset or a community eyesore. This sentiment was expressed by the CDCs that participated in focus group studies during the course of this study. It is of utmost importance that community gardens be presentable spaces that CDCs will support as providing added value to the neighborhoods in which they might invest.

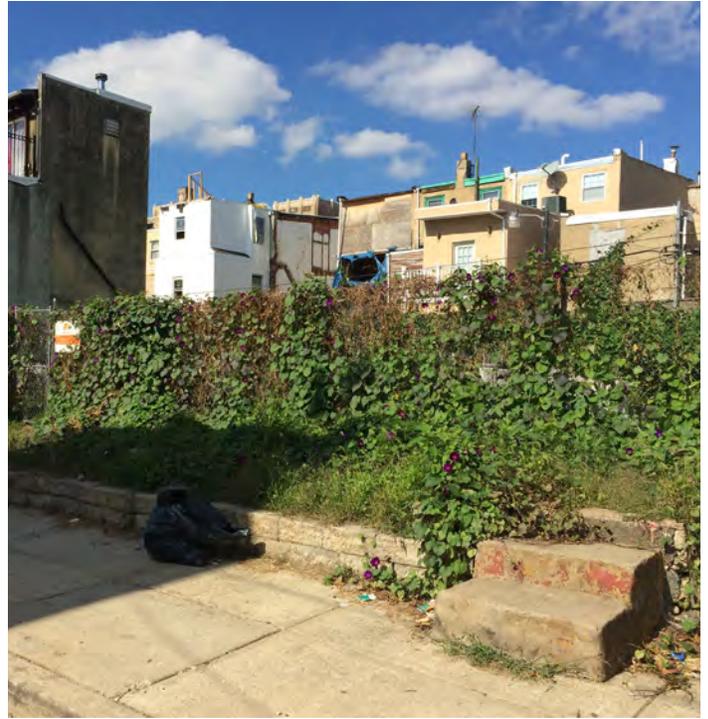
Green Stormwater Infrastructure

A site's potential to host green stormwater infrastructure (GSI) reflects an opportunity for partnership between the Philadelphia Water Department (PWD) and NGT. Community gardens could play host to stormwater management practices that help alleviate the burden on Philadelphia's aging stormsewers, thus improving the quality of local waterways by reducing the occurrences of storm surges that put raw sewage and other pollutants into our rivers.

PWD is under mandate to the Pennsylvania Department of Environmental Protection to implement such GSI under its Green City, Clean Waters plan. As a result, Philadelphia Water may be able to leverage partnership in parcel acquisitions associated with existing or new community garden prospects.



Ornamental plantings at the Federal Street Garden (an NGT-preserved garden) provide curb appeal.



Unmaintained plantings at the Growing Home Community Garden in South Philadelphia (a prospective NGT garden)

Safety and Comfort Components

The safety that a community garden provides to its members and assets is a primary factor in its long-term viability. A combination of physical and environmental factors, along with maintenance, contributes to a garden's safety and user comfort.

Maintenance

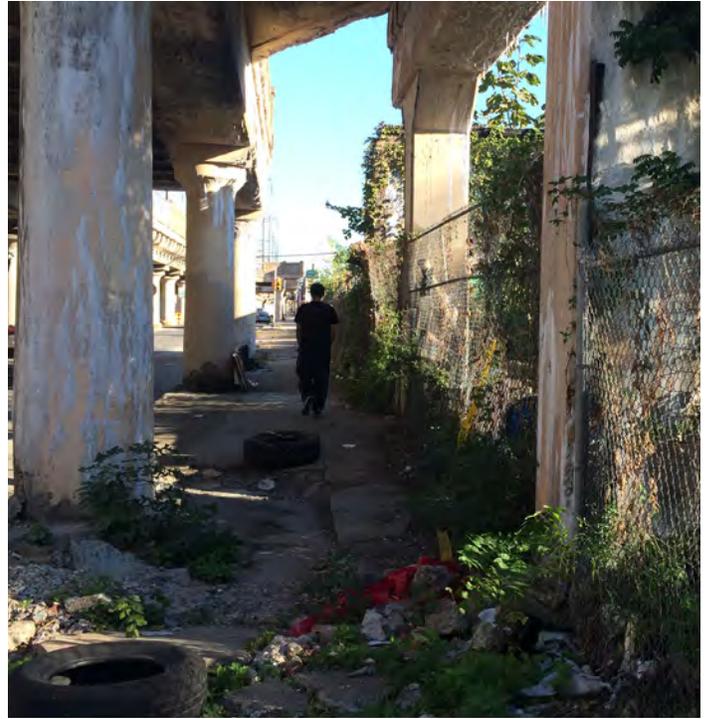
Maintenance of community gardens, both within the parcel and along its public edges, is critical to ensuring the long-term success of gardens. Well-kept spaces are those for which gardeners can take pride, providing incentives for gardens to be kept in good condition. The appearance from outside the garden can be, as mentioned earlier, a determinate factor in its perception as a place of added value or one that detracts from the quality of a neighborhood's fabric. Appearances can also play a role in deterring vandalism and other crimes by conveying a sense of ownership and care for a space.

The function of gardens largely depends on a relatively well-maintained space, as many utilize all available land. It may be a challenge to ensure the maintenance of public sidewalks, but it seems imperative that NGT provide support and resources to promote stewardship of both the interior and exterior of its community gardens.

Maintaining a garden's fence plays a particularly important role in securing the garden and conveying a sense of ownership. Although locked gates contribute to security, they are only as effective as the overall condition of the fence. Locked gates with fences in



Scattered tools, litter, and a degraded sidewalk at the otherwise successful Moore Street Community Garden (an NGT-preserved garden)



The exterior conditions at the 25th and Tasker Community Garden in South Philadelphia (a prospective NGT garden) attract littering and vandalism.

disrepair provide opportunities for persons to enter the garden at locations of damage. Gate construction must be robust, since gates take more abuse. Tensioning cables can be used to allow periodic adjustment should the gate start to sag over time.

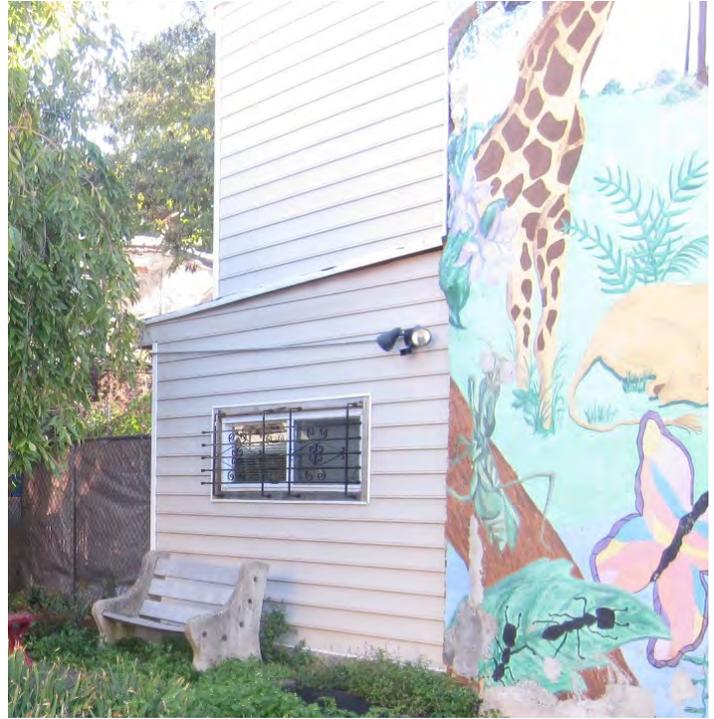
Lighting

Lighting was generally observed as the item most lacking in the gardens, and can have significant impact on the perceived safety and comfort level of users within the garden. Perhaps it should be considered an “essential” component, particularly in areas where safety and comfort are questionable. A few gardens are fortunate to have floodlights provided by neighboring homeowners (assumed to also be a garden member), but this is not an option for many gardens. Solar-powered pathway lights were present at a few gardens as well, but this type of lighting (available at retail stores) generally does not provide adequate levels of ambient light.

Light levels can be relatively low and still be effective. In fact, light levels that are too high can create areas of great contrast, obscuring visibility of areas in shadow. As an example, think of standing inside a brightly lit room in your home and peering out the window to an unlit landscape. Visibility is very low until you turn off the indoor lighting and realize that you are now able to see much more with low levels of ambient light from street lamps, the moon or other building lights. Light can also be a nuisance for neighbors if it spills into their windows, but this can be controlled with proper lighting fixture selection that use directional light, louvers or shields that prevent light spill.



*First Light Technologies (mfr.)
"IPL Series Solar LED Luminaire"*



*A homeowner provides lighting to the House of Grace
Community Garden in Kensington (a prospective NGT garden)*

Properly designed, commercial-grade lighting faces a challenges in terms of the required capital investment. However, cost-effective options are becoming available. Improved technologies in solar-power and LED lighting have made for competitively priced, robust commercial-grade lighting. Products such as First Light Technologies' "IPL Series Solar LED Luminaire" provides a self-contained, highly efficient pole light source in a robust, commercial quality product. It is even available with an auger style foundation to eliminate need for costly excavation and concrete work.

Site Lines

Site lines into and out of a space have a significant effect on feelings of comfort and security. At many community gardens, Morning Glories were planted along fences, creating a nearly solid wall of green. Such plantings should be avoided, since they reduce site lines. Gardeners should also ensure that trees and border plantings are maintained to avoid creating obstructed views.

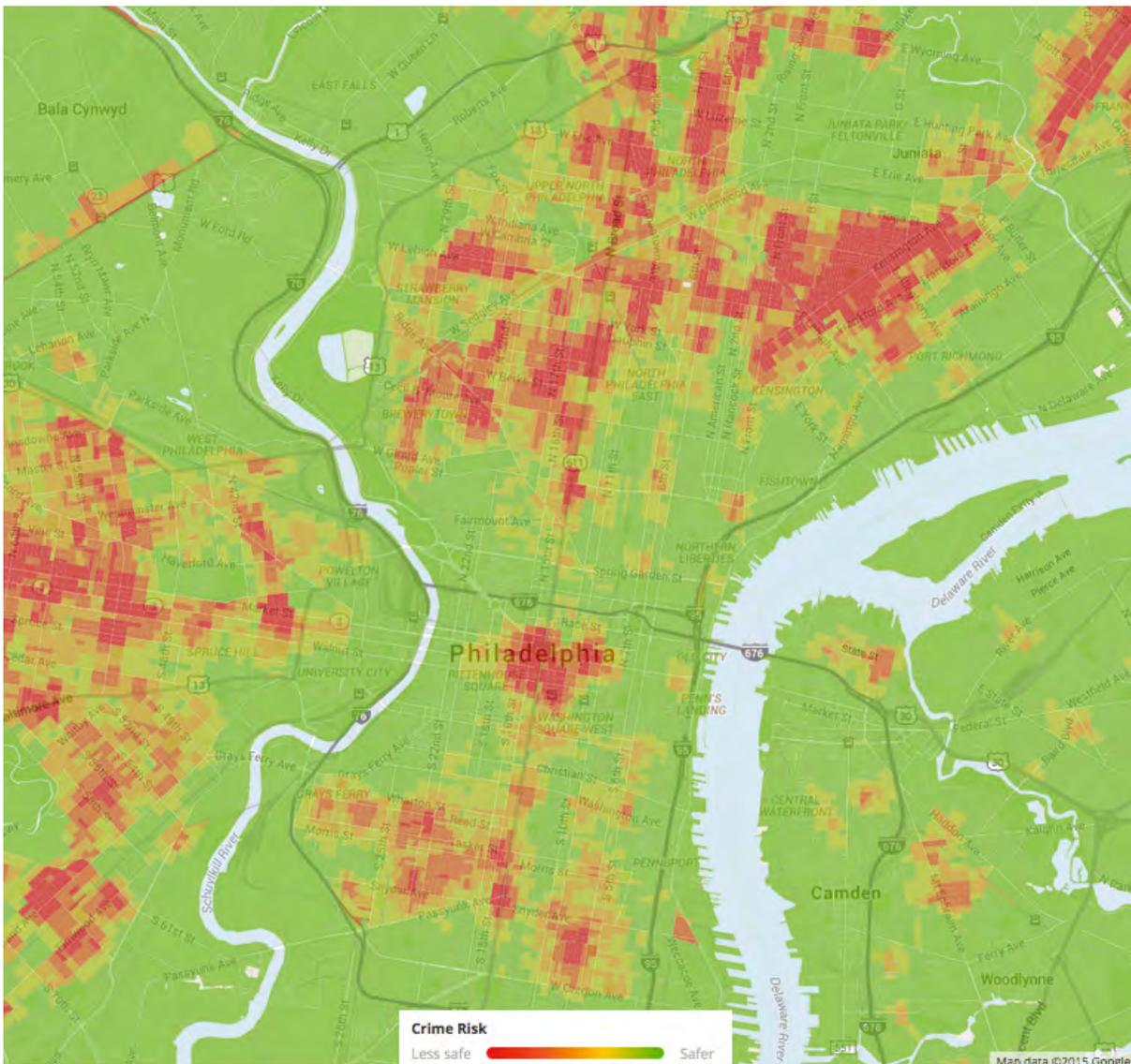
Vacancy

Although vacancy provides opportunities for garden spaces, it may also attract vandalism and crime. Additionally, fewer "eyes on the street" can also create a sense of uneasiness in communities. Since such issues must often be addressed through policies that are beyond the control of individuals, gardeners should focus on factors under their control such as interior and exterior maintenance, lighting, and site lines.

Crime

A well-kept, active garden that engages the broader community is less likely to promote crime. It is possible that such spaces can even begin to spark change in areas that struggle with crime.

The Trulia Crime Map of Philadelphia, an aggregated data source of geolocated crime incidents, was used to plot crime density on a block-by-block basis. The crime density of the area surrounding a garden may influence how NGT prioritizes investments aimed at improving safety and comfort of gardens. Recommendations in this report regarding maintenance, lighting, and site lines will also help create gardens that are active, community spaces, therefore, reducing their potential for criminal activity.



The Trulia Crime Map is a “heat map”-style representation of crime density on a block-by-block scale. Trulia aggregates crime incidents from the last 12 months collected by SpotCrimes.com and CrimeReports.com from publicly available records.

APPENDIX D: ASSESSMENT OF EXISTING GARDENS

Figure D1.

ASSESSMENT OF GARDENS' ESSENTIAL COMPONENTS

	FENCE CONDITION	DELIVERY GATE ACCESS (Y=5, N=0)	DELIVERY GATE DURABILITY	LOCKED GATE (Y=5, N=0)	GATE CONDITION	WATER ACCESS (P=Irrigated, N=Rainwater, N=0)	WATER ACCESS	TOOL STORAGE (Y=5, N=0)	TOOL STORAGE DURABILITY	WORK BENCH (Y=5, N=0)	COMPOST	COMPOST DURABILITY	SIGNAGE DURABILITY	BULLETIN BOARD (Y=5, N=0)	BULLETIN BOARD DURABILITY	SCORE	RANK	
Mill Creek Farm	5	5	5	5	5	5	R	4	5	4	5		0	3	Y	0	46	6
Holly Street Community Garden	3	5	5	5	3	3	P	3	5	5	0	Y	5	4	N	0	43	7
Viola Street Community Garden	4	0	0	5	4	3	R	3	5	2	0	Y	5	3	N	0	31	13
Five Loaves Two Fish	2	5	5	5	2	3	R	3	5	5	0		0	2	N	0	34	10
Wiota Street Community Garden	3	5	2	5	3	2	R	2	5	2	5	Y	5	5	Y	5	47	5
25th and Tasker (east side)	4	5	5	5	4	3	R	3	0	0	0		0	0	Y	5	31	13
*Southwark Community Garden	4	5	5	5	4	5	Y	5	5	4	5	Y	3	5	Y	5	55	1
Mercy Emily Edible Park	3	0	0	5	3	3	R	3	0	0	5		0	1	N	0	20	17
Growing Home Community Garden 522, 528, 532-6 Mercy St	4	0	0	5	4	3	R	3	0	0	0		0	0	N	0	16	20
Growing Home Community Garden 711-13, 717-21 Emily St	4	0	0	5	4	3	R	3	0	0	0		0	2	N	0	18	19
Growing Home Community Garden 726-742 Emily St	1	5	5	5	1	3	R	3	5	3	0		0	2	N	0	30	14
United Communities	3	0	0	5	3	0	N	0	0	0	0	N	0	0	N	0	11	22
Ralphs Brooks Park Community Garden	5	5	5	0	5	4	R	4	5	3	0	N	0	3	Y	5	40	9
Moore Street Community Garden	3	5	5	5	3	3	R	3	0	0	0	Y	5	3	N	0	32	11
*Bodine Street Community Garden	5	0	0	5	5	5	R	5	5	2	0	Y	5	5	Y	5	42	8
Pemberton Street Sitting Garden	4	0	0	5	4	0	N	0	0	0	0	N	0	0	N	0	13	21
Collins Smith Barrick Playgarden	1	0	0	5	1	0	N	0	5	4	0	N	0	4	Y	5	25	15
House of Grace (Garden)	2	5	5	5	2	3	P	3	0	0	0		0	0	N	0	22	16
House of Grace (Open Space)	2	5	5	5	2	0	N	0	0	0	0	N	0	0	N	0	19	18
Emma's Court Community Garden	4	5	5	5	4	5	Y	5	5	4	5		0	3	Y	5	50	4
Emerald Street Urban Farm	5	5	5	5	5	3	R	3	5	3	5	Y	5	3	Y	5	54	2
*Seedy Acres	5	5	5	5	5	5	P	5	5	4	5	Y	5	2	N	0	51	3

Figure D2.

ASSESSMENT OF GARDENS' AMENITY COMPONENTS

	COMMON AREA (Y=5, N=0)	FURNISHINGS (Y=5, N=0)	ARTWORK (Y=5, N=0)	STREET TREES MAINTAINED	BORDER PLANTING (0=None or Poor)	SCORE	RANK	
Mill Creek Farm	5	5	5	5	1	4	25	6
Holly Street Community Garden	5	5	5	5	5	5	30	2
Viola Street Community Garden	0	5	5	0	3	3	16	17
Five Loaves Two Fish	5	5	0	5	1	2	18	16
Wiota Street Community Garden	5	5	0	5	4	0	19	13
25th and Tasker (east side)	5	5	5	5	1	3	24	8
*Southwark Community Garden	5	5	5	5	5	5	30	2
Mercy Emily Edible Park	5	0	0	0	3	1	9	19
Growing Home Community Garden 522, 528, 532-6 Mercy St	0	0	0	5	3	0	8	21
Growing Home Community Garden 711-13, 717-21 Emily St	0	0	0	5	3	1	9	19
Growing Home Community Garden 726-742 Emily St	5	5	5	5	3	1	24	8
United Communities	0	0	0	5	1	1	7	22
Ralphs Brooks Park Community Garden	5	0	5	5	3	5	23	10
Moore Street Community Garden	0	0	0	5	1	3	9	19
*Bodine Street Community Garden	5	5	5	5	4	5	29	3
Pemberton Street Sitting Garden	5	5	0	5	1	3	19	13
Collins Smith Barrick Playgarden	5	5	5	0	1	3	19	13
House of Grace (Garden)	0	5	5	5	3	3	21	11
House of Grace (Open Space)	5	5	0	5	3	0	18	16
Emma's Court Community Garden	5	5	5	5	4	0	24	8
Emerald Street Urban Farm	5	5	5	5	1	4	25	6
*Seedy Acres	5	5	5	5	4	2	26	4

Figure D3.

ASSESSMENT OF GARDENS' SAFETY/COMFORT COMPONENTS

	INTERIOR MAINTENANCE	EXTERIOR MAINTENANCE	FENCE CONDITION	LOCKED GATE (Y=5, N=0)	LIGHTING (Y=5, N=0)	LIGHTING LEVEL	REPORTED BURGE (Touza Crime Map)	VACANCY (PoliceMap)	SEWERAGE CONDITION	CRACKS/SPALLS	SCORE	RANK
Mill Creek Farm	5	5	5	5	5	3	2	5	4	3	42	2
Holly Street Community Garden	5	5	3	5	5	2	5	1	4	1	36	6
Viola Street Community Garden	2	4	4	5	0	0	5	1	3	1	25	16
Five Loaves Two Fish	5	2	2	5	0	0	3	1	1	5	24	18
Wiota Street Community Garden	5	4	3	5	0	0	1	3	3	5	29	11
25th and Tasker (east side)	4	1	4	5	0	0	3	1	1	4	23	19
*Southwark Community Garden	5	5	4	5	5	2	4	4	1	4	39	3
Mercy Emily Edible Park	0	1	3	5	5	1	3	2	4	1	25	16
Growing Home Community Garden 522, 528, 532-6 Mercy St	2	1	4	5	0	0	3	2	1	1	19	22
Growing Home Community Garden 711-13, 717-21 Emily St	4	3	4	5	0	0	3	3	2	1	25	16
Growing Home Community Garden 726-742 Emily St	5	5	1	5	0	0	3	1	4	4	28	13
United Communities	4	4	3	5	0	0	3	3	2	5	29	11
Ralphs Brooks Park Community Garden	5	5	5	0	0	0	2	1	5	5	28	13
Moore Street Community Garden	5	1	3	5	5	3	3	2	1	5	33	8
*Bodine Street Community Garden	4	5	5	5	5	3	5	5	4	1	42	2
Pemberton Street Sitting Garden	4	5	4	5	0	0	5	5	5	5	38	4
Collins Smith Barrick Playgarden	2	2	1	5	0	0	4	4	1	3	22	20
House of Grace (Garden)	3	1	2	5	5	2	1	4	1	2	26	14
House of Grace (Open Space)	3	1	2	5	0	0	1	4	1	2	19	22
Emma's Court Community Garden	5	4	4	5	0	0	5	2	2	4	31	9
Emerald Street Urban Farm	5	5	5	5	0	0	1	4	4	5	34	7
*Seedy Acres	5	5	5	5	0	0	5	4	4	3	36	6

APPENDIX E: CONTACTS

NGT and PHS staff met with the following groups and individuals and could not have completed this report without their knowledge, support, and the generous donation of their time:

The community gardeners who attended the gardener focus group:

Chris Carrington, South Street Community Garden
 Virginia Geshan, South Street Community Garden
 Andrea Gottachalk, Hicks Street Community Garden
 Bob Jobin, Bouvier Community Garden
 Victoria Mehl, Hansberry Garden and Nature Center
 Joyce Smith, Viola Street Community Garden
 Randy Smith, Viola Street Community Garden
 Lisa Swiatek, Pemberton Community Garden
 John Ventre, Southwark/Queen Village Community Garden
 Mary Ward-Bucher, Hicks Street Community Garden

The Community Development Corporation representatives who attended the CDC focus group:

Jesse Blitzstein, The Enterprise Center CDC
 Pam Bridgeforth, Pennsylvania Association of Community Development Corporations (PACDC)
 Rose Gray, Asociación de Puertorriqueños en Marcha (APM)
 Philip Green, North 5th Street Project
 Awilda Ocasio, Impact Services
 Cathy Manderfield, Rebuilding Together Philadelphia
 Phyllis Martino, Impact Services
 Stefanie Selden, Rebuilding Together Philadelphia
 Gina Snyder, East Falls Development Corporation
 Verna Tyner, Tioga United
 Steph Wall, People's Emergency Center

Individuals who discussed their gardens and explored their neighborhoods with us:

Bri Barton, Fairhill Burial Grounds
 Andrew Goodman, New Kensington CDC (NKCDC)
 Hannah Goodno, Congreso
 Olivia Holdsworth, Congreso
 Catalina Hunter, community member
 Lisa Maiello, South Kensington Community Partners
 Jessica Mammarella, community member
 Sandy Salzman, New Kensington CDC (NKCDC)
 Majeedah Rashid, Nicetown CDC
 Sister Betty Scanlon, Community Center at Visitation
 Jane Takahashi, R.E.A.C.H. Philadelphia
 John Wilson, Nicetown CDC
 Curtis Wright, Vocacio Prep School

