



**Agriculture  
and Markets**

# **Community Gardens Task Force 2023 Report**



# 1 CONTENTS

---

2	New York’s Food System and the Role of Community Gardens .....	3
2.1	Benefits of Community Gardens .....	6
2.2	The number, nature, and geographic location of community gardens in New York State .....	8
3	Gathering Critical Input .....	10
3.1	Community Gardens Task Force .....	10
3.1.1	Community Gardens Task Force—Section 31-j of Agriculture and Markets (AGM) Law .....	10
3.1.2	Community Gardens Task Force Members .....	12
4	Community Gardens Task Force Findings .....	13
4.1	Current community gardens landscape across New York State .....	13
4.2	Funding Opportunity and Barriers for Community Gardens in New York State .....	16
4.3	Barriers to developing, maintaining and expanding community gardens .....	18
4.4	Embedding equity in community gardens .....	19
4.4.1	Increasing opportunities in food deserts .....	19
4.4.2	Increasing opportunities for seniors .....	19
5	Recommendations for the State .....	20
5.1	State-Wide Dashboard/ Hub .....	20
5.2	Capacity Building .....	20
5.2.1	Recommendations to Increase Coordination .....	20
5.2.2	Recommendations to Mitigate Grant-Related Barriers .....	21
5.2.3	Recommendations to Increase Staffing Opportunities .....	21
<b>5.3</b>	<b>GLOSSARY OF TERMS</b> .....	<b>22</b>
5.4	Additional Resources .....	23

## 2 NEW YORK'S FOOD SYSTEM AND THE ROLE OF COMMUNITY GARDENS

---

Community gardens have a deep history of mitigating gaps in the United States' food system, particularly during times of war, famine, and poverty (Figure 1). Today, they continue to serve as a promising solution for improving the resiliency of our agri-food value chain.

The first recorded community gardens in the U.S. were on vacant lots in Detroit, Michigan, during the economic recession of the 1890s. By the early 1900s, reformists began to realize the benefits of these gardens and started a movement in schools to help children learn about agriculture and healthy eating. In 1917, the U.S. National War Garden Commission funded 'liberty gardens' in response to growing hunger in the face of World War I. After the war, however, government support for community gardens dwindled, but subsistence gardening in cities remained a popular solution to hunger during the Great Depression. By the early 1940's, the U.S. National War Garden Commission again started a campaign called 'victory gardens' during World War II before support faded again. By the 1970's, people again began to recognize the benefits of community gardens for improving nutrition security and stewarding the natural environment, marking the beginning of a movement still prevalent today.<sup>1</sup>

In recent years, Community Gardens have once again become popular in the face of the COVID-19 pandemic, which exposed the lack of resiliency in our agri-food value chain and left many people nutritionally insecure. While emergency food assistance organizations such as food banks and food pantries feed many, including nearly 1.4 million people every year in New York City alone, they are a temporary solution.<sup>2</sup> In New York State, 10.5 percent of households experience food insecurity, highlighting the need for longer term solutions such as supporting and expanding local agriculture to mitigate the need for emergency relief. In many situations, community gardens can supplement emergency food while providing additional community benefits that transcend food production.

New York State currently supports sustainable food systems through the SNAP-ed Community Growers Grant Program, which has awarded one million dollars to 23 grantees across New York State in 2022. Throughout the past few years, New York State has awarded several rounds of grants focused on enhancing community gardens, including technical assistance grants that allow Cornell Cooperative Extension, Grow NYC, and other partners to assist local growers. The \$800,000 Urban Farms and

---

<sup>1</sup> Cialdella, Joe, no date, "Grown from the Past: A Short History of Community Gardening in the United States." *Smithsonian Gardens: Community of Gardens*, [communityofgardens.si.edu/exhibits/show/historycommunitygardens/intro](http://communityofgardens.si.edu/exhibits/show/historycommunitygardens/intro). Accessed 4 Oct. 2022.

<sup>2</sup> Gallanter, Melissa, 3 March 2020, "NYC by the Numbers: Food Pantries and Soup Kitchens." *Hunter College New York City Food Policy Center*, [www.nycfoodpolicy.org/nyc-by-the-numbers-food-insecure-households-pantries/#:~:text=NEARLY%2025%20MILLION%20VISITS%20TO,games%20across%20the%20country%20combined](http://www.nycfoodpolicy.org/nyc-by-the-numbers-food-insecure-households-pantries/#:~:text=NEARLY%2025%20MILLION%20VISITS%20TO,games%20across%20the%20country%20combined). Accessed 4 Oct. 2022.

Community Gardens Grant that was included in the New York State Fiscal Year 2023 Enacted Budget builds on the success of the Community Growers program.

Another program, Nourish New York, has shown immense success in addressing gaps in our food landscape throughout the pandemic and beyond. Nourish New York was signed into law permanently and funded at \$50 million annually during the 2023 fiscal year. This program funds food banks and other emergency food providers to purchase New York-produced food for those who need it most. Some community gardens are supplying local pantries through this program, showing how stakeholders can all work to build on these efforts together.

Furthermore, the Department of Agriculture and Markets began administering the 30% NYS Initiative for school lunch July 1, 2022. The program was previously housed at the State Education Department, and its transfer places a new emphasis on connecting farmers with schools as they work to access local food. Community gardeners and school food authorities have a nexus around education and building relationships. While community gardens usually can't supply the total amount of food needed to fuel school meal programs, they can supplement programs and make valuable connections via sustainable gardens that serve everyone.

## HISTORY OF COMMUNITY GARDENS IN THE US AND NEW YORK

1893	The first community gardens in the US were vacant lot gardens in Detroit Michigan during the economic recession.
1906	Urban reformers began to create school gardens for children.
1917	The National War Garden Commissioner called on citizens to plant 'liberty gardens' to meet the domestic need for food from WWI.
1930	Subsistence gardens in cities during the Great Depression were created in response to economic crisis.
1941	The government supported another national campaign during WWII known as 'victory gardens'
1960	Grassroots organizations built community gardens to promote environmental stewardship and revitalize urban neighborhoods affected by disinvestment.
1973	Green Guerillas lobbied 'seed bombs' packed with fertilizer, seed and water over fences around vacant lots where access was otherwise limited in New York City.
1974	NYC Office of Housing Preservation and Development approved a lease for the 'Bowery Houston Community Farm and Garden,' becoming the first community garden with an agreement in NYC.
1978	NYC initiated the GreenThumb program to support the growing community gardening movement. Today, under the jurisdiction of NYC Department of Parks and Recreation, GreenThumb sustains the largest network of community gardens in the country.

Figure 1. Timeline of Community Gardens in the US and New York.<sup>345</sup>

<sup>3</sup> Cialdella, Joe, no date, "Grown from the Past: A Short History of Community Gardening in the United States." *Smithsonian Gardens: Community of Gardens*, [communityofgardens.si.edu/exhibits/show/historycommunitygardens/intro](http://communityofgardens.si.edu/exhibits/show/historycommunitygardens/intro). Accessed 4 Oct. 2022.

<sup>4</sup> "History of the Community Garden Movement." *NYC Parks*.

[www.nycgovparks.org/about/history/community-gardens/movement](http://www.nycgovparks.org/about/history/community-gardens/movement). Accessed 25 Oct. 2022.

<sup>5</sup> Martinez, Carlos. "NYC Parks GreenThumb." Received 15 Dec. 2022.

## 2.1 BENEFITS OF COMMUNITY GARDENS

Recent qualitative and quantitative research has highlighted the vast benefits of community gardens, including improved health, food sovereignty, personal development, and environmental stewardship (Figure 2). A systematic literature review conducted by Lampert et al. in 2021 found that community gardeners had significantly better physical and mental health than their neighbors who did not participate in gardening activities.<sup>6</sup> A similar study revealed that participants of community gardens are more likely to consume more fruits and vegetables, regardless of geographic location or demographic,<sup>7</sup> making community gardens particularly important in low-income neighborhoods that otherwise lack access to fresh healthy foods. Community gardens offer a low-cost alternative to accessing foods that may otherwise be difficult to purchase due to distance or lack of transportation to markets, high cost of produce in stores, lack of variety of produce in stores, or lack of knowledge around healthy foods. The act of gardening is proven to facilitate interpersonal cohesion within a community, helping people to build relationships and improve social skills.<sup>8</sup>

The benefits of community gardens are especially evident in youth who gain skills development and social skills through gardening, improving their academic performance and long-term personal success, according to a 2010 study.<sup>9</sup> Draper and Freedman's "participants viewed the community garden as a way to successfully bring together people of different races and other people who would not normally socialize... [and] found that the multiple social processes (e.g., mutual trust, reciprocity) fostered during participation translated into situations outside of the community garden setting, and other studies found that the relationships formed led to a stronger overall sense of community."<sup>10</sup>

Additional research has suggested similar benefits are particularly impactful for older adults. Leisure gardening has been shown to maintain and/or promote the psychosocial and physical functioning of seniors. Similar to the benefits observed in youth populations, seniors' membership in communal gardening groups increases social interaction and collaboration in a population that may be more often socially isolated with more leisure

---

<sup>6</sup> Lampert, Tarsila, Costa, Joana, Osvaldo, Santos, Sousa, Joana, Ribeiro, Teresa, Freire, Elisabete, 6 Aug. 2021. "Evidence on the contribution of community gardens to promote physical and mental health and well-being of non-institutionalized individuals: A systematic review." *PLOS ONE*. <https://doi.org/10.1371/journal.pone.0255621>. Accessed 4 Oct. 2022.

<sup>7</sup> Draper, Carrie & Freedman, Darcy. 01 Dec. 2010. "Review and Analysis of the Benefits, Purposes, and Motivations Associated with Community Gardening in the United States." *Taylor & Francis online*. <https://doi.org/10.1080/10705422.2010.519682>. Accessed 4 Oct. 2022.

<sup>8</sup> Gray, Tonia, Tracey, Danielle, Truong, Son, Ward, Kumara, 07 Mar. 2022, "Community gardens as local learning environments in social housing contexts: participant perceptions of enhanced wellbeing and community connection." *Taylor & Francis online*. <https://doi.org/10.1080/13549839.2022.2048255>. Accessed 4 Oct. 2022.

<sup>9</sup> Draper, Carrie & Freedman, Darcy, 01 Dec. 2010. "Review and Analysis of the Benefits, Purposes, and Motivations Associated with Community Gardening in the United States." *Taylor & Francis Online*, <https://doi.org/10.1080/10705422.2010.519682>. Accessed 4 Oct. 2022.

<sup>10</sup> Draper, Carrie & Freedman, Darcy, 01 Dec. 2010. "Review and Analysis of the Benefits, Purposes, and Motivations Associated with Community Gardening in the United States." *Taylor & Francis Online*, <https://doi.org/10.1080/10705422.2010.519682>. Accessed 4 Oct. 2022.

hours available.<sup>11</sup> These undeniable increases in physical wellbeing, personal development, community building, and food sovereignty additionally boost access to healthy and culturally appropriate food, increasing food equity and improving the mental wellbeing of participants. Some communities have taken the benefits of community gardens a step further by successfully implementing gardens specific to healing and therapy as a component of rehabilitation programs for individuals with mental illnesses or learning disabilities.<sup>12</sup>

While these social benefits of community gardens are often the motivating factor in their development and expansion, their implementation has additional unintended benefits for the natural environment. Community gardens and urban green space reduce heat island effect, reduce stormwater runoff, provide habitats for wildlife, mitigate urban blight, and increase beautification. All of these address inequity by reducing environmental injustices such as increased pollution in under-resourced neighborhoods.

---

<sup>11</sup> Scott, Theresa L et al. "Positive aging benefits of home and community gardening activities: Older adults report enhanced self-esteem, productive endeavours, social engagement and exercise." *SAGE open medicine* vol. 8 2050312120901732. 22 Jan. 2020, doi:10.1177/2050312120901732

<sup>12</sup> Draper, Carrie & Freedman, Darcy, 01 Dec. 2010. "Review and Analysis of the Benefits, Purposes, and Motivations Associated with Community Gardening in the United States." *Taylor & Francis Online*, <https://doi.org/10.1080/10705422.2010.519682>. Accessed 4 Oct. 2022.



Figure 2. Diagram of the benefits of community gardens.

## 2.2 THE NUMBER, NATURE, AND GEOGRAPHIC LOCATION OF COMMUNITY GARDENS IN NEW YORK STATE

There are currently about 3,000 community gardens across New York State (Figure 3), including youth and school gardens, institutional gardens, therapeutic gardens, not-for-profit plot gardens, cooperative gardens, and entrepreneurial gardens. The highest concentration of community gardens in New York State is in the five boroughs of New York City, with nearly 2,000 community gardens. Large clusters of community gardens are additionally found in the urban areas of Buffalo, Rochester, Ithaca, and Albany. Emerging pockets of community gardens are similarly growing in Syracuse, Utica, Herkimer, and Newburgh.

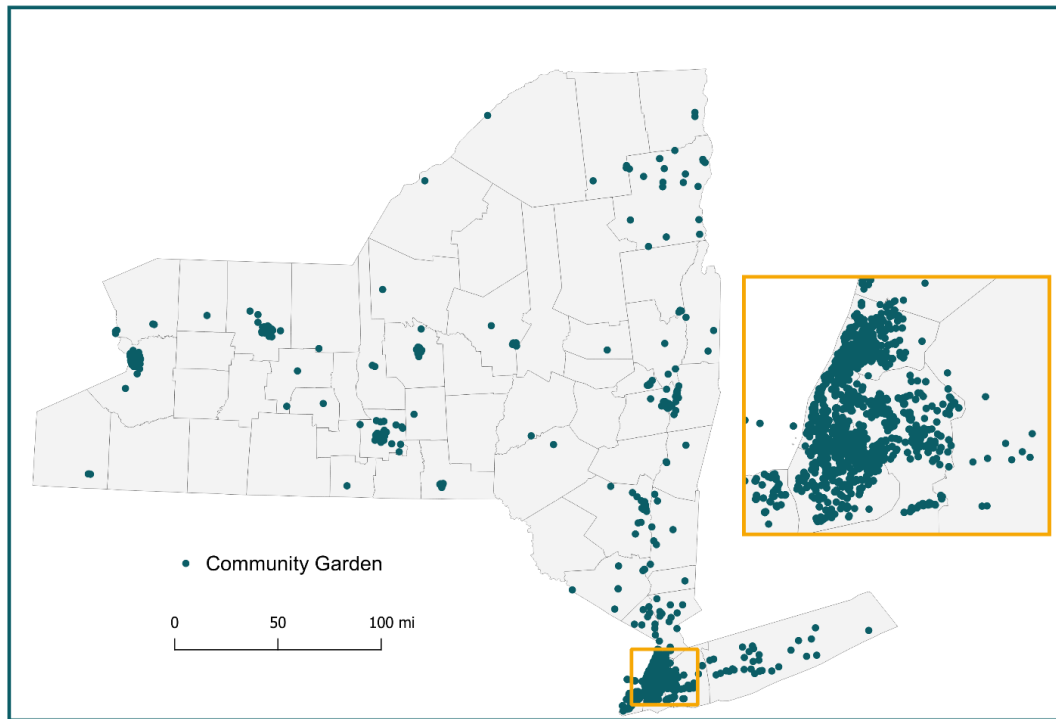


Figure 3. Geographic distribution of community gardens in New York State.

New York City community garden data was provided by the Map NYC project created by New York University (NYU) Stern through stakeholder engagement and data aggregation.<sup>13</sup> This data was collected through two rounds of surveys on all community gardens and urban agriculture sites across New York City. Gardens are self-identified; organizations can email NYU to have their community garden information added to the map. NYU is also planning to convene a series of workshops with the growing community when developing new versions of the map so researchers can best understand the food production landscape in New York City, including barriers and solutions. Additional statewide data was provided by the New York State Department of Health and Cornell University who worked in conjunction on the ‘Healthy Soils, Healthy Communities’ project, which combined new outreach with compiled information about known existing gardens.<sup>14</sup> Though maintenance on this project has been minimal, community gardens are able to add their information manually to a linked Google Sheet. However, it is important to note that this dataset likely reflects more than the current number of active community gardens because data is rarely removed following a garden closure and is more often updated when a new one begins. Going forward, a more proactive and streamlined method of

<sup>13</sup> “Welcome to M.A.P. NYC.” *M.A.P. NYC*, <https://mapnyc.herokuapp.com/>. Accessed 4 Oct. 2022.

<sup>14</sup> “NYS Community Garden Map - Healthy Soils, Healthy Communities.” *NYC Parks GreenThumb, NYS Department of Health, and Cornell University*, <http://compost.css.cornell.edu/communitygardenmap.html>. Accessed 4 Oct. 2022.

updating these statewide community garden databases will ensure accurate, up-to-date information regarding New York’s community garden landscape.

## **3 GATHERING CRITICAL INPUT**

---

### **3.1 COMMUNITY GARDENS TASK FORCE**

New York State’s Community Gardens Task Force is established in Section 31-j of the Agriculture and Markets Law, most recently updated in 2021. The Community Gardens Task Force convened twice in 2022 with representatives from State agencies and members that represent existing community gardens, municipalities, school districts, other special use districts, public authorities, and cooperative extension services.

The purpose of the Community Gardens Task Force is to identify and develop ways to encourage State agencies, municipalities, and private parties to establish and expand community gardens and the activities conducted by such gardens. Stakeholders were convened to study, evaluate and develop recommendations on how to encourage the expansion of community gardens in New York State.

The followings section is the text of the law.

#### **3.1.1 Community Gardens Task Force—Section 31-j of Agriculture and Markets (AGM) Law**

§ 31-j. Community gardens task force. 1. The commissioner shall convene a community gardens task force to identify and develop ways to encourage state agencies, municipalities and private parties to establish and expand community gardens and the activities conducted by such gardens.

2. The task force shall be chaired by the commissioner, or by such officer or employee of the department as shall be designated by the commissioner. The membership of the task force may include representation from appropriate state agencies and members that represent existing community gardens, counties, cities, towns, villages, school districts, other special use districts, public authorities and cooperative extension services. Membership of the task force shall include at least two representatives from organizations dedicated to the promotion, expansion or protection of community gardens.

3. The commissioner, may request the assistance of state agencies to carry out the work of the task force.

4. (a) The goals of the task force may include, but are not limited to, the study, evaluation and development of recommendations: (i) to encourage the establishment and expansion of community gardens by state agencies, municipal governments and private parties, (ii) to encourage cooperation between the activities and operations of community gardens and provision of donated food to local voluntary food assistance programs for the poor and disadvantaged, (iii) to increase the benefits that community gardens may provide to the local community in which they are located, (iv) to encourage cooperation with

community-based organizations to increase the opportunities for seniors, those aged sixty years of age or older, to participate in community gardens, (v) to encourage the expansion of the production of fresh fruits and vegetables in areas served by community gardens so that such fresh produce can be consumed locally to help encourage healthier life styles and wellness, and to help reduce the incidence of adult and childhood obesity, (vi) to develop after school programs that establish, maintain and expand community gardens, and (vii) to encourage the development and expansion of community gardens in food deserts as defined in section two hundred sixty of this chapter.

(b) In achieving the goals of the task force, the task force may consider recommendations that: (i) encourage the execution of conservation easements by state agencies, municipalities or private parties to establish or protect community gardens, (ii) encourage the creation of mechanisms to transfer development rights to protect community gardens or encourage the donation or lease of lands for community gardens, (iii) development of model zoning codes, local land use laws or other municipal policies that could encourage the establishment or retention of community gardens, and (iv) any other activity to achieve the goals deemed appropriate by the task force according to the provisions of this article.

5. The task force shall submit a report to the governor and the legislature on or before January first, two thousand twenty-three and on or before January first of each fifth year thereafter on the status of community gardens in New York state. Such report shall include:

- (a) the number, nature and geographic location of community gardens;
- (b) a description of the costs, benefits and impacts of community gardens;
- (c) an assessment of the successes, failures and barriers in developing, maintaining and expanding community gardens;
- (d) lists of funding sources available to develop and expand community gardens along with the requirements for obtaining the funding;
- (e) an assessment of the funding, requirements and barriers for double the number of existing community gardens;
- (f) a discussion of the goals outlined in subdivision four of this section and a description of the steps and projects undertaken to meet the goals for the task force as established in this section;
- (g) an action plan for doubling the number of community gardens in the state of New York;
- (h) recommendations for developing, maintaining and expanding community gardens in food deserts; and

- (i) any other recommendations or assessments the task force deems appropriate for the report.

Between report due dates, the commissioner shall maintain the necessary records and data required to satisfy such report requirements and to satisfy information requests received from the governor and the legislature between such report due dates.

### **3.1.2 Community Gardens Task Force Members**

The Community Gardens Task Force includes:

- Stephen Acquario, New York State Association of Counties
- Chris Anderson, New York Association of Towns
- Yolanda Bostic Williams, New York State Office of Parks, Recreation and Historic Preservation
- Lewis Clarke, New York State Department of Health
- Peter Dunleavy, New York State Department of Transportation
- Katharine Petronis, New York State Department of Environmental Conservation
- Andrew Barrett, Food Ed Hub/Coalition
- Mark Bordeau, Rural Health Network
- Aziz Dehkan, New York City Community Garden Coalition
- Allison DeHonney, Buffalo Go Green
- Yolanda Gonzalez, Cornell Cooperative Extension: NYC
- Iyeshima Harris, East New York Farms
- Mark Izeman, Natural Resources Defense Council
- Virginia Kasinki, Downing Park Urban Farm/ Newburgh Urban Farm and Food Initiative
- Amy Klein, Capital Roots
- Jeanette Koncikowski, Grassroot Gardens of Western New York
- Marilu Lopez-Fretts, American Community Garden Association
- Gerard Lordahl, Grow NYC
- Melissa MacKinnon, Schenectady Urban Farm
- Carlos Martinez, NYC Parks GreenThumb
- Qiana Mickie, New York City Office of Urban Agriculture
- Shannon Morris, Edible Schoolyard
- Gabrielle Mosquera, MPA, Teens for Food Justice
- Jonnell Robinson, Syracuse Grows
- Gregory Sandor, Cornell Cooperative Extension: Nassau
- Pamela Reese Smith, Community Gardens for Rochester
- Jake Tibbles, Thousand Islands Land Trust

#### **3.1.2.1 Steps to reach the goals of the Community Gardens Task Force**

To fulfill the statutory priorities and objectives, Commissioner Ball convened stakeholders from state agencies, existing community gardens, special use districts, public authorities, and cooperative extension services to develop recommendations that encourage the establishment and expansion of community gardens, encourage cooperation between agencies and encourage a healthier lifestyle that will particularly benefit seniors and

communities experiencing food insecurity. In preparation for this report, this task force convened on August 8, 2022, and again on October 14, 2022. This task force is subject to Open Meetings Law as outlined in Article 7 of the New York Public Officers Law and meetings were publicly available and recordings were posted on the AGM website along with minutes.

## 4 COMMUNITY GARDENS TASK FORCE FINDINGS

---

### 4.1 CURRENT COMMUNITY GARDENS LANDSCAPE ACROSS NEW YORK STATE

Urban agriculture can be defined as “the production, distribution, and marketing of food and other products within the geographical limits of a metropolitan area. This includes community and school gardens, backyard and rooftop plots, and non-traditional methods of caring for plants and animals within a constrained area.”<sup>15</sup> Within this definition lies the subcategory of community gardens, which are defined as “plots of land, usually in urban areas, that are rented by individuals or groups for private gardens or are for the benefit of the people caring for the garden,”<sup>16</sup> but the subjective nature of community gardens means that this one definition is not universal.

When the Community Garden Task Force members were asked to compare their lived experiences to these definitions, there was consensus that a community garden should not be limited to these terms. A community garden may include land used for sustenance, bartering and marketing which are economically relevant; a non-profit; free use of land for community growing; growing on public land; gardens designated for donations and food assistance; indoor growing and container gardens; school gardens; community gardens in suburbs and rural areas; and land that grows a variety of crops including flowers, herbs, and livestock. There are many models of community gardens in operation across New York State; at the root of them all is public accessibility and addressing community needs beyond just growing food. In many urban areas, access to public space is limited, so public community gardens are an important aspect to improved quality of life in addition to the other benefits listed here. Feedback from the Community Gardens Task Force as well as an extensive literature review has determined that the key benefits of community gardens can be organized into four categories: *health*, *environment*, *social*, and *food*, as summarized in Figure 2.

Health benefits of community gardens include, but are not limited to: increased physical activity, increased consumption of produce and improved dietary habits, and improved mental health. Environmental benefits include, but are not limited to: reduced heat island effect, decreased storm water run-off, natural habitats for native pollinators and other wildlife, and the beautification and blight improvement of communities in which they are

---

<sup>15</sup> “Urban Agriculture.” *National Agriculture Library*, [www.nal.usda.gov/farms-and-agricultural-production-systems/urban-agriculture](http://www.nal.usda.gov/farms-and-agricultural-production-systems/urban-agriculture). Accessed 17 Oct. 2022.

<sup>16</sup> “Community Garden Benefits, Types, History, Facts.” *Agri Farming*, [www.agrifarming.in/community-garden-benefits-types-history-facts](http://www.agrifarming.in/community-garden-benefits-types-history-facts). Accessed 17 Oct. 2022.

located. The main social benefits of community gardens are skill development and increased nutrition security and food sovereignty. Community gardens are frequently associated with youth development, leading to improved academic performance (Table 1). Additionally, community gardens have proven to increase intergenerational relationship building, boost social skills, and build a stronger sense of community.

Furthermore, community gardens offer increased nutrition security and food security, which is particularly pertinent in neighborhoods that are underrepresented in our current food landscape. Community gardens offer improved access to fresh healthy food, and they allow community members to grow food that may otherwise be expensive to buy in stores. They may also provide access to culturally relevant foods that are not widely available through traditional food access points in the community. Community gardens increase sovereignty and can alleviate strain on food assistance organizations, which have seen unprecedented need since the onset of COVID-19.

Table 1. "Interventions Involving School Gardens with Measured of Academic Outcomes." <sup>17</sup>

Study	Participants	Intervention/Design	Outcomes: Academic
Klemmer et al	Sample size: N=7 schools; N=647 students: 453 intervention in 27 classes, 194 control in 13 classes Age/grade: third to fifth grades Demographics: 47%male Ethnicity: not reported %FRPL: not reported	Design: post-test only, quasi-experimental Intervention: garden activities integrated into science curriculum, alongside traditional classroom lessons Control: traditional classroom teaching Measure: science achievement test	-Intervention students scored significantly higher science achievement test scores than control students -Effect of grade: intervention most effective for third- and fifth-grade boys, fifth-grade girls
Pigg et al	Sample size: N=1 school; N=196 students: 94 interventions, 102 controls Age/grade: third to fifth grades Demographics: Ethnicity: not reported %FRPL: not reported	Design: quasi-experimental, nonrandom group assignment; convenience sample Intervention: youth gardening curriculum taught by classroom teachers+ traditional classroom math, science Control: traditional classroom math, science; no gardening Measures: pre/post Texas Assessment of Knowledge and Skills math achievement test	-Gardening students: no improvement in math scores; no significant difference in science scores from nongardening -Fourth-grade gardening students higher science scores than nongardening -Fifth-grade controls, higher math, science scores
Smith and Motsenbocker	Sample size: N=3 schools (1 intervention, 1 control classroom per school); N=119 students: 62 interventions, 57 controls Age/grade: fifth grade Demographics: Ethnicity: majority African American %FRPL: not reported	Design: quasi-experimental, nonrandom group assignment Intervention: 14-week gardening curriculum (Junior Master Gardener; 2hours, 1x/week) Control: no gardening curriculum Measure: pre/post 40-question science achievement test	-Intervention students' scores higher at post-test, versus no difference in control students
Hollar et al	Sample size: N=5 schools (4 interventions, 1 control); N=1197 students (this is a subset of total cohort: those qualifying for FRPL; 974 intervention, 199 controls) Age/grade: 7.8years Demographics: 68%Hispanic 9% Black 15%White 8%Other 100%FRPL	Design: 2 school years, quasi-experimental, nonrandom Intervention: Nutrition: modifications to school meal and extended-day snack menus: more high-fiber items, fewer high-glycemic items, lower total, saturated, and trans fats Health curriculum: nutrition and healthy lifestyle management program for elementary-aged children and adults, using materials from USDA Team Nutrition and The Organ Wise Guys; FV gardens Physical activity: increased school-day physical activity opportunity: 10-15minutes/day desk-side physical activity program, matched with core academic areas; structured physical activity during recess, for example, a walking club Control: comparison school "as usual" Measures: Florida Comprehensive Achievement Test (FCAT) reading, math scores	-Significant improvement in FCAT math scores, +22.3 intervention versus -3.0 control (p=.001) -Trend for improvement in FCAT reading scores, +5.7 intervention versus -1.2 control (p=.08)
Hollar et al	Sample size: N=5 schools (4 interventions, 1 control); 3769 students (full cohort of study by Hollar et al40 above) Age/grade: 8years Demographics: 50%Hispanic 33%White 8% Black 8%Other 31%FRPL	Design: described above Intervention: described above Control: described above Measures: third grade FCAT reading, math scores	-Statistically significant improvements in academic test scores, especially among low-income Hispanic and White children, observed in intervention versus control participants

<sup>17</sup> Barrett, Claire & Yoder, Andrea & Schoeller, Dale. (2015). School Gardens Enhance Academic Performance and Dietary Outcomes in Children. The Journal of school health. 85. 508-18. 10.1111/josh.12278.

## **4.2 FUNDING OPPORTUNITY AND BARRIERS FOR COMMUNITY GARDENS IN NEW YORK STATE**

While grant funding is the most traditional funding stream for community gardens in New York, Community Garden Task Force members outlined limitations set by traditional grant opportunities, including restrictions to funding water access, soil testing, and staff. These limitations are problematic for community garden organizations given that their main expenses are often staffing, water, seeds, clean soil, materials to build raised beds, fencing, tools, and insurance. Because of restrictions set by grant opportunities, community gardens primarily rely on volunteers and donations to sustain operations.

Additionally, there was consensus among Task Force members that grants are difficult to obtain, particularly for smaller gardens located in low-income neighborhoods. Several members noted that they are unable to obtain city and federal grants for their garden since funding is often rewarded to larger operations in more affluent neighborhoods. Similarly, it is difficult for smaller entities to manage grant application deadlines with their growing season, due to confusion navigating the State's Grants Gateway interface, lack of time and resources to manage extensive applications, lack of time to meet with potential donors, and lack of staff with fundraising experience.

Table 1 outlines the available funding streams available to community gardens in New York State. The considerations listed are general, anticipated restrictions for each opportunity as expressed by Task Force members. These are not criteria specific to individual grants and each grant program must be evaluated for specific funding parameters and evaluated on an individual basis.

Table 2. Available Funding Streams for Community Gardens in New York State.

Type of Funding	Considerations	Resources
State	<ul style="list-style-type: none"> <li>➤ Minimum and maximum grant limits may be constraining for smaller entities</li> <li>➤ Grants Gateway is time consuming to navigate and requires robust documentation</li> <li>➤ May not cover operational costs</li> <li>➤ Many grants are reimbursable, but gardens don't have the cash up front</li> </ul>	<ul style="list-style-type: none"> <li>➤ New York State Department of Agriculture and Markets</li> <li>➤ Cornell Cooperative Extension<sup>18</sup></li> </ul>
National Organizations	<ul style="list-style-type: none"> <li>➤ May have matching requirements</li> <li>➤ May not cover operational costs</li> <li>➤ Land Trust Alliance has limited funding opportunities for community gardens</li> </ul>	<ul style="list-style-type: none"> <li>➤ American Public Gardens Association<sup>19</sup></li> <li>➤ Land Trust Alliance<sup>20</sup></li> </ul>
City	<ul style="list-style-type: none"> <li>➤ Grants may require proof of nonprofit status or a fiscal sponsor</li> <li>➤ May not cover operational costs</li> <li>➤ Many grants are reimbursable, but gardens don't have the cash up front</li> <li>➤ Depending on the structure (i.e., GreenThumb or municipal entities), priorities may be funded through budget allocations</li> </ul>	<ul style="list-style-type: none"> <li>➤ The City Gardens Club of New York City<sup>21</sup></li> <li>➤ 596 Acres: NYC Resources to Transform Vacant Lots<sup>22</sup></li> <li>➤ GrowNYC<sup>23</sup></li> <li>➤ Local governments</li> <li>➤ NYC Parks GreenThumb</li> <li>➤ Lunenfeld Beautification Grants<sup>24</sup></li> <li>➤ Buffalo-Niagara Gardening<sup>25</sup></li> </ul>
Philanthropy	<ul style="list-style-type: none"> <li>➤ Philanthropy is less likely to have restrictions, but the amount may be unpredictable or sporadic</li> </ul>	<ul style="list-style-type: none"> <li>➤ Specific to local donation channels and relevant stakeholders</li> </ul>
Membership Fees	<ul style="list-style-type: none"> <li>➤ May be difficult for gardens specific to low income and nutrition insecure communities</li> </ul>	<ul style="list-style-type: none"> <li>➤ Set internally by a community garden that wants to charge a fee to join their garden</li> </ul>

<sup>18</sup> "Grants and Loans for Groups." *Cornell Cooperative Extension: Chemung County*, chemung.cce.cornell.edu/agriculture/grants-and-loans-for-groups. Accessed 06 Oct. 2022.

<sup>19</sup> "Public Garden Funding Resources." *American Public Gardens Association*, www.publicgardens.org/public-garden-funding-resources. Accessed 4 Oct. 2022.

<sup>20</sup> "Save land. Strengthen communities. Create a healthier planet." *Land Trust Alliance*, landtrustalliance.org. Accessed 17 Oct. 2022.

<sup>21</sup> "Grants." *The City Gardens Club of New York City*, www.citygardensclubnyc.org/outreach-programs/grants/. Accessed 4 Oct. 2022.

<sup>22</sup> "NYC RESOURCES TO TRANSFORM VACANT LOTS." *596 Acres*, 596acres.org/nyc-resources-to-transform-vacant-lots/. Accessed 4 Oct. 2022.

<sup>23</sup> "Community Garden Assistance Request Form." *GrowNYC*, www.grownyc.org/gardens/help-my-garden. Accessed 6 Oct. 2022.

<sup>24</sup> "Lunenfeld Beautification Grants." *Gardens Buffalo Niagara*, www.gardensbuffaloniagara.com/lunenfeld-grants. Accessed 1 Dec. 2022.

<sup>25</sup> "Gardening grants available to community groups in Buffalo." *Buffalo-Niagara Gardening.com*, 2021, buffalo-niagaragardening.com/2021/02/02/gardening-grants-available-to-community-groups-in-buffalo/. Accessed 1 Dec. 2022.

### **4.3 BARRIERS TO DEVELOPING, MAINTAINING AND EXPANDING COMMUNITY GARDENS**

Community Gardens Task Force members consistently reported staffing as one of the most prominent barriers to developing, maintaining, and expanding community gardens. This is largely attributed to the lack of funding for staff and heavy reliance on volunteers, who may be inconsistent and overutilized. Additionally, the pool of volunteers is aging, and there is a pertinent need to attract younger members and encourage community buy-in, with increased training and support. A viable staffing model for community gardens may be a community-based employment opportunity for incarcerated and formerly incarcerated people. The New York City Community Garden Coalition provides a case study for this model as it has had great success including an entrepreneurial cooperative component in which incarcerated and formerly incarcerated farmers all grow the same species of pepper, which they can then aggregate to sell to Bronx Hot Sauce. This program provides an underrepresented population of people with a year-round income. Another successful staffing model reported by members was a center where newly established community gardens could receive training and partner with city employees and existing neighborhood initiatives to grow capacity.

In addition to staffing, nearly every community garden reported barriers in accessing clean soil, clean water, land, capital resources, and both technical and legal knowledge of support opportunities and regulations. Regulations on land create a further barrier for many community gardens, especially those smaller in size and scope. Plots given to community gardens are often poor in quality, lacking healthy soil and water, and may be sloped or even uncleared. With zoning restrictions, lack of funding, lack of staff, and no ownership over the land, there is minimal incentive for communities to invest in the land they are provided, despite the benefits its restoration would have. This lack of support from local government entities often stems from insufficient knowledge surrounding the benefits of community gardens and the perception that they are temporary operations that don't need to be protected. Task Force members with long established community gardens reported issues with their land being taken away from them for the development of private and/or municipal projects. There is an apparent need for better synergy between municipalities and community gardens to ensure their longevity.

This lack of coordination between entities also makes it difficult for many community garden organizations to fully understand and/or comply with legal agreements, regulations, and guidelines. Zoning for community gardens is particularly complicated if their primary purpose is recreation and community building rather than food production. Use and occupancy permitting, particularly in relation to traffic safety concerns, may inhibit the ability of the New York State Department of Transportation to implement opportunities. A government-funded community garden program such as NYC Parks GreenThumb serves as a viable, sustainable, replicable model for mitigating many of the aforementioned challenges by providing 10-year renewable land agreements between community garden groups and NYC (increased from four starting in 2023), requiring no insurance, and ensuring staffing support, free access to land and gardening resources (including but not limited to water, tools, lumber, soil, seeds, and plants).

## **4.4 EMBEDDING EQUITY IN COMMUNITY GARDENS**

Reducing barriers to funding, resources, equipment, land, and water is the best way to ensure that community gardens equitably impact communities that need them most. First and foremost, there needs to be better collaboration between all entities. Funders should encourage collaboration rather than creating competition for resources, which inequitably favors those who already have more resources. Task Force members expressed concern that grant funding often goes to better resourced organizations to alleviate food insecurity in better resourced communities. This often results from a strained relationship between funders and community members, where funders try to be a ‘savior’ rather than empowering communities to strive toward a more sustainable model. Instead, funders should act as fiscal sponsors so garden organizations can administer funds how they see fit. Seed funding, such as that facilitated by NYC Parks GreenThumb, serves as a successful equitable funding model. Additionally, to ensure year-round food access, funding for hoop houses and greenhouses is a viable way to extend the growing season. Food preservation workshops such as canning classes and freezing techniques allow continued access to healthy fresh food through the winter months.

### **4.4.1 Increasing opportunities in food deserts**

Community gardens located in food deserts may be maintained by gardeners who are low-income and have limited time to volunteer. It is important to expand gardens’ capacity by providing resources to continue the operation of existing gardens via strong zoning protections, greater use of conservation easements and land trusts, enhanced state environmental review requirements, and more robust open space and urban agriculture planning, before focusing on new gardens. Task Force members expressed the need for protection of land via zoning and conservation easements, an open space plan, county Soil and Water Conservation District funding opportunities for urban agriculture, and grant support to ensure ongoing access to resources and staff. Utilizing community gardens as food distribution sites (e.g., Community Supported Agriculture programs (CSAs)) and directing excess produce to food pantries would further connect community gardens to food insecure community members. Additional outreach to food insecure populations may include local social organizations and clubs such as cultural groups, chambers of commerce, etc.

### **4.4.2 Increasing opportunities for seniors**

People aged 60 and over are currently an underutilized asset to community gardens. Reducing barriers to their participation, as well as implementing intergenerational programming, can serve as a viable solution to the lack of staff of community gardens. To ensure accessibility of gardens for all community members, there must be access to transportation, sufficient health and safety protocols, accessible garden tools (i.e., long handled tools and raised beds), and better connection between senior and K-16 school programs.

## 5 RECOMMENDATIONS FOR THE STATE

---

### 5.1 STATE-WIDE DASHBOARD/ HUB

The Community Gardens Task Force recommends that New York State create a community gardens dashboard that includes the components listed below. This resource would be a central location for community gardens, organizations, community members, funders, and government entities/decisionmakers to share resources and knowledge about community gardens.

1. The dashboard should provide a central location for community gardens to input their data, which will populate a map that can be used to find community gardens and calculate social and environmental benefits of the garden landscape in New York State. For example, if every garden in the state provides data on the quantity and type of vegetables they grow, it can be used to calculate CO<sub>2</sub> sequestered and similar environmental metrics. Similarly, gardens can input qualitative data on the impact of their gardens such as stories from their members on how the garden has impacted people in their community. By expanding the narrative around community gardens and building trust between stakeholders, the map would be a viable resource for funders and government entities to incentivize investment opportunities and encourage the ongoing protection of such land. Incentivizing community gardens to update their information each year would ensure ongoing accuracy of the data.
2. The dashboard should include a page reserved for community gardens to engage in dialog and post resources relating to gardening techniques, to facilitate knowledge sharing between community gardens. This may include volunteer and staff opportunities; available community kitchens and chefs; recipes; knowledge on the types of vegetables grown and how to cook them; food preservation techniques; food pantries that would benefit from excess produce; compost opportunities; water resources; soil testing; and more.
3. The dashboard should include a page that outlines available entrepreneurial programs, for-profit ventures, cooperatives, community-based and collaborative initiatives where small gardens can work together to pool resources and build upon market share. The dashboard should also include all grant opportunities available for community gardens and resources to aid their application process.

### 5.2 CAPACITY BUILDING

#### 5.2.1 Recommendations to Increase Coordination

The Community Gardens Task Force recommends that New York State increases coordination between community gardens and governmental entities. Strategies to do so are listed below.

1. The State should encourage municipalities to protect garden lands from development by designating them critical environmental areas under state environmental review

law as well as safeguarding them through zoning and other legal mechanisms. Furthermore, the State should implement a Right to Farm (RTF) Law in urban areas.

2. The State should encourage the creation of land banks/trusts and support greater use of conservation easements, to protect urban agricultural land and community gardens.
3. The State should encourage memorandums of understanding between stakeholders to ensure long-term availability of resources, such as water.
4. The State should establish dedicated county/state contacts (potentially within the planning or health department) that can address needs of local community gardens.
5. The State should form and fund organizations that help gardeners to communicate, build cohorts, and earn skills certificates (e.g., Bronx Green-Up).

### **5.2.2 Recommendations to Mitigate Grant-Related Barriers**

The Community Gardens Task Force recommends that New York State mitigates grant-related and funding access barriers for community gardens by:

1. making grant funding more accessible by encouraging local government entities to provide grant training and support; and
2. reducing barriers to eligibility in grants and encouraging regranting by umbrella organizations to community gardens. Care should be taken in providing funds to umbrella organizations that are representative of the neighborhoods in which the gardens are located and allow for local control of the growing spaces;
3. incentivize organizations which receive funding to develop education and training for established and new growers to encourage adoption of best practices.

### **5.2.3 Recommendations to Increase Staffing Opportunities**

The Community Gardens Task Force recommends that New York State increase staffing opportunities by:

1. encouraging for-profit fundraising opportunities for community gardens to support competitive pay and fringe benefits for staff;
2. establishing inter-generational gardening opportunities that bridge the gap between the aging gardener population and interested youth, including accessible gardening for older adults and people with disabilities who want to volunteer but are currently unable; and
3. incorporating gardening into afterschool and summer youth employment programming as well as school curricula related to science, math, and nutrition.

## 5.3 GLOSSARY OF TERMS

Term	Definition
Agri-food value chain	"The production of a product in a manner that enhances its value [including]...a change in the physical state or form of the product." <sup>26</sup>
Community garden	"Usually located on publicly owned land or land trusts and managed by local resident volunteers. Community gardens mostly grow food, but some also grow flowers. Some community gardens provide space for community gatherings and events." <sup>27</sup>
Farm	"Any place that produced and sold—or normally would have produced and sold—at least \$1,000 of agricultural products during a given year." <sup>28</sup>
Food desert	"A food desert census tract is defined as a low-income tract where a substantial number or substantial share of residents does not have easy access to a supermarket or large grocery store." <sup>29</sup>
Food sovereignty	"The right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems." <sup>30</sup>
Heat Island Effect	"Heat islands are urbanized areas that experience higher temperatures than outlying areas. Structures such as buildings, roads, and other infrastructure absorb and re-emit the sun's heat more than natural landscapes such as forests and water bodies." <sup>31</sup>
Nutritionally insecure	"Household-level economic and social condition of limited or uncertain access to adequate food." <sup>32</sup> This term is more relevant 'food insecure' because although a person may have access to food, they may not have access to healthy fresh foods that provide necessary nutritional value.
Urban agriculture	"The production, distribution, and marketing of food and other products within the geographical limits of a metropolitan area. This includes community and school gardens, backyard and rooftop plots, and non-traditional methods of caring for plants and animals within a constrained area." <sup>33</sup>

<sup>26</sup> "Value Added Food." *University of California Agriculture and Natural Resources*, No Date, [ucanr.edu/sites/CESonomaAgOmbuds/Value\\_Add\\_Products/#:~:text=USDA's%20Value%2Dadded%20Ag%20Definition,such%20as%20organically%20produced%20products](http://ucanr.edu/sites/CESonomaAgOmbuds/Value_Add_Products/#:~:text=USDA's%20Value%2Dadded%20Ag%20Definition,such%20as%20organically%20produced%20products)). Accessed 12 Sept. 2022.

<sup>27</sup> "Urban Agriculture." *National Agriculture Library*, [www.nal.usda.gov/farms-and-agricultural-production-systems/urban-agriculture](http://www.nal.usda.gov/farms-and-agricultural-production-systems/urban-agriculture). Accessed 17 Oct. 2022.

<sup>28</sup> "Farm Structure and Contracting," *Economic Resource Service U.S. Department of Agriculture*. [www.ers.usda.gov/topics/farm-economy/farm-structure-and-organization/farm-structure-and-contracting/#:~:text=USDA%20defines%20a%20farm%20as,sell%20at%20least%20that%20amount](http://www.ers.usda.gov/topics/farm-economy/farm-structure-and-organization/farm-structure-and-contracting/#:~:text=USDA%20defines%20a%20farm%20as,sell%20at%20least%20that%20amount). Accessed 24 Oct. 2022.

<sup>29</sup> Wright, Ann, "Interactive Web Tool Maps Food Deserts, Provides Key Data." *U.S. Department of Agriculture*. 30 Apr. 2021. [www.usda.gov/media/blog/2011/05/03/interactive-web-tool-maps-food-deserts-provides-key-data#:~:text=In%20the%20Food%20Desert%20Locator,supermarket%20or%20large%20grocery%20store](http://www.usda.gov/media/blog/2011/05/03/interactive-web-tool-maps-food-deserts-provides-key-data#:~:text=In%20the%20Food%20Desert%20Locator,supermarket%20or%20large%20grocery%20store). Accessed 30 Sept. 2022.

<sup>30</sup> "Tribal Food Sovereignty and Climate Change Preparedness of Tribal Agriculture," 2019, *Climate Hubs U.S. Department of Agriculture*. [www.climatehubs.usda.gov/hubs/southwest/news/tribal-food-sovereignty-and-climate-change-preparedness-tribal-agriculture/#:~:text=Food%20sovereignty%20is%20%E2%80%9Cthe%20right,resilient%20agriculture%20in%20their%20communities%2C](http://www.climatehubs.usda.gov/hubs/southwest/news/tribal-food-sovereignty-and-climate-change-preparedness-tribal-agriculture/#:~:text=Food%20sovereignty%20is%20%E2%80%9Cthe%20right,resilient%20agriculture%20in%20their%20communities%2C). Accessed 24 Oct. 2022.

<sup>31</sup> "Heat Island Effect," 2022, *United States Environmental Protection Agency*. <https://www.epa.gov/heatislands#:~:text=Heat%20islands%20are%20urbanized%20areas,as%20forests%20and%20water%20bodies>.

<sup>32</sup> "Definitions of Food Security," 2022, [www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-u-s/definitions-of-food-security/%23:~:text=3DFood%2520insecurity%25E2%2580%2594the%2520condition%2520assessed,may%2520result%2520from%2520food%2520insecurity&sa=D&source=docs&ust=1664547794326240&usg=AOvVaw0QQp0--Tb8kKOeURZ6Y8\\_x](http://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-u-s/definitions-of-food-security/%23:~:text=3DFood%2520insecurity%25E2%2580%2594the%2520condition%2520assessed,may%2520result%2520from%2520food%2520insecurity&sa=D&source=docs&ust=1664547794326240&usg=AOvVaw0QQp0--Tb8kKOeURZ6Y8_x). Accessed 30 Sept. 2022.

<sup>33</sup> "Urban Agriculture." *National Agriculture Library*, [www.nal.usda.gov/farms-and-agricultural-production-systems/urban-agriculture](http://www.nal.usda.gov/farms-and-agricultural-production-systems/urban-agriculture). Accessed 17 Oct. 2022.

## 5.4 ADDITIONAL RESOURCES

- USDA guide to start a “People’s Garden” <sup>34</sup>
- USDA Urban Agriculture Information and Resources <sup>35</sup>
- Ground Rules: A Legal Toolkit for Community Gardens <sup>36</sup>
- The Five Borough Farm Data Collection Toolkit <sup>37</sup>
- Cornell’s Healthy Soils, Healthy Communities Program <sup>38</sup>
- Brownfields and Urban Agriculture Resources <sup>39</sup>
- Laws Related to Community Gardens in New York State <sup>40</sup>

---

<sup>34</sup> “The People’s Garden.” *U.S. Department of Agriculture*. [www.usda.gov/peoples-garden](http://www.usda.gov/peoples-garden). Accessed 24 Oct. 2022.

<sup>35</sup> “USDA and Urban Farming.” *U.S. Department of Agriculture*. [www.nal.usda.gov/farms-and-agricultural-production-systems/urban-agriculture](http://www.nal.usda.gov/farms-and-agricultural-production-systems/urban-agriculture). Accessed 24 Oct. 2022.

<sup>36</sup> “Ground Rules: A legal toolkit for community gardens.” *ChangeLab Solutions*. [www.changelabsolutions.org/product/ground-rules](http://www.changelabsolutions.org/product/ground-rules). Accessed 24 Oct. 2022.

<sup>37</sup> “Data Collection Toolkit.” *Farming Concrete*. [farmingconcrete.org/barn/data-collection-toolkit/](http://farmingconcrete.org/barn/data-collection-toolkit/). Accessed 24 Oct. 2022.

<sup>38</sup> “Healthy Soils, Healthy Communities.” *Cornell: College of Agriculture and Life Sciences*. [blogs.cornell.edu/healthysoils/](http://blogs.cornell.edu/healthysoils/). Accessed 24 Oct. 2022.

<sup>39</sup> “Resources around Brownfields and Urban Agriculture.” *United States Environmental Protection Agency*. [www.epa.gov/brownfields/resources-about-brownfields-and-urban-agriculture](http://www.epa.gov/brownfields/resources-about-brownfields-and-urban-agriculture). Accessed 24 Oct. 2022.

<sup>40</sup> “Legislation.” *New York State Senate*. [www.nysenate.gov/legislation/laws/AGM/A2-C](http://www.nysenate.gov/legislation/laws/AGM/A2-C). Accessed 24 Oct. 2022.