

**ROOTED IN THE COMMUNITY:  
TOOLS FOR ENGAGEMENT AT PUBLIC GARDENS**

by

Sara Levin Stevenson

A thesis submitted to the Faculty of the University of Delaware in partial fulfillment of the requirements for the degree of Master of Science in Public Horticulture

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## **ABSTRACT**

Public gardens are important cultural institutions in their communities but the audience walking through their gates may not reflect the diverse demographics of their local community. In order to remain relevant, public gardens must do more to become socially inclusive and intentionally reach a broader audience. Every public garden offers a different experience for its visitors but this research aimed to document how public gardens can learn from one another in developing engagement strategies. Primary objectives of this research were to document success stories in community engagement and to create a toolkit of best practices.

This research surveyed 18 public gardens and included interviews with selected staff from nine public horticulture institutions to identify how community engagement programs are best created and sustained. The interviews also provided specific examples of current programs that aim to reach a variety of underrepresented audiences.

Recommendations for community engagement initiatives were compiled based on key findings from interviews and survey results. Research indicated that successful programs stand on the foundation of making community engagement an institutional priority. Data emphasized the importance of having a clear understanding of the needs and interests of the local community. Additional findings identified the most valuable benefits of community engagement as increased public awareness and the ability to extend the institution's mission and messages to a broader audience. The most

common obstacle to this is funding but the research revealed a variety of ways to fund engagement efforts such as securing public and private grants and developing creative partnerships. Strategy for creating successful programming included a willingness to experiment and creativity in adapting current organizational capacities in order to attract new audiences.

## **Chapter 1**

### **INTRODUCTION**

Public gardens have the opportunity to better serve their communities through relevant programs and inclusive practices. As public institutions, they have the responsibility to be a resource for all demographics in their community (Low, 1942). Community engagement at public gardens can strengthen a community network and can improve the dialogue among community members. It is essential in reducing isolation for the institution and creating a nurturing environment (Torres, 2006). Engagement programs can also provide individuals with a relevant context to see the impact of plants and the environment on their own lives (Hoffman, 2010).

Public gardens currently tend to serve a narrow portion of the population. Their traditional orientation is inward, focusing on collections and research rather than connecting with the greater community (McCook, 2000). They must now strive to develop programming that connects to the wider public in order to find relevancy in their communities. This is best achieved by working directly with the community and by giving underrepresented audiences a voice in program development and execution.

Partnerships with local organizations can help public gardens reach new audiences more effectively (AAM, 2008). Public gardens must be willing to experiment and step out of their own comfort zone in order to find access points to underrepresented audiences (Baker, 2013). Socially inclusive programming allows a public garden to better share its resources with its community in an accessible way.

For the purpose of this thesis research, social inclusion refers to attracting diverse audiences, regardless of economic status, race, religion, and cultural and social identity (BGCI, 2010).

Barriers to community engagement vary greatly. On the programmatic level, they can include transportation issues and staff needs. The greatest barrier for the institution is usually consistent funding; for the public, it is often an apparent lack of relevant offerings (The Greater Philadelphia Cultural Alliance, 2009).

Nevertheless, community engagement can enrich an institution and can breathe new life and relevance into its collections. Engagement programs can help maintain a garden's relevance into the future and create a sense of sustained importance. Public gardens must adapt to find significance as 21<sup>st</sup> century cultural institutions (Corner, 2012). Change can be a slow process but it requires a dedicated effort from the entire institution, including all staff, volunteers, the leadership, and the board of directors, and it requires a shift in attitudes and behaviors (BGCI, 2010; AAM, 2008). The necessity and benefits of community engagement must be clearly articulated and understood by the entire organization.

Through surveys and recommendations from a variety of professionals, current successful community engagement programs were identified. Specifically, staff members of nine institutions were interviewed to illustrate the variety of current engagement offerings. The institutions selected represented a range of garden sizes, budgets, and geographic locations. This research aimed to discover:

1. how public gardens currently use creative strategies to reach audiences with underrepresented demographics;

2. steps taken to develop and sustain programs;
3. source of program funding;
4. common barriers to community engagement and how these programs overcome them; and
5. changes needed in the field of public horticulture to more successfully reach underrepresented audiences

This research also outlined effective programs and articulated their keys to success. A “toolkit” emerged that encouraged authentic and sustainable community engagement. Finally, interviews uncovered commonalities that these institutions could share when connecting with audiences who, through their own demographic characteristics, may have been underrepresented in past programmatic efforts.

## **Chapter 2**

### **LITERATURE REVIEW**

Public gardens are a source of education, research and conservation; they offer fresh air, physical exercise, and access to green space in an urban environment. They can also act as a catalyst for community building (Hatherly, 2006). By their nature, that is, being an outdoor institution, gardens are well suited to promote and educate on issues that are relevant to all outdoor public spaces, such as divorce from natural systems, pollution, water management, street tree management, land use, food deserts and food production. Gardens can demonstrate how important plants and people are to one another and gardens can extend this education to cover wider social and environmental issues (Botanic Gardens Conservation International, 2010).

Environmental issues aside, botanical gardens as public cultural institutions have a responsibility to support the interests of their communities (American Association of Museums, 2000). Community engagement efforts enable public gardens to become more accessible to the diverse public they serve.

Currently, public gardens, like many other cultural institutions tend to attract a homogeneous portion of the population: generally well educated, of limited racial diversity, and in the middle to upper economic class. Public gardens have also traditionally been rather cloistered places of research. They often work with groups that approach them rather than actively seeking opportunities for development or finding innovative ways to reach non-traditional audiences (Laney and Niehaus, 2008). Public gardens are reaching a narrow sector at a time when environmental education is more important than ever, especially in the urban setting. While public



gardens often advocate for environmental issues, these messages are not reaching the wider community (Laney and Niehaus, 2008).

Today, many cultural institutions are recognizing the need for social relevance and inclusion. They can create an inclusive community that is so often missing in today's society (AAM, 2008). Public gardens have made some strides, but they have yet to reach their full potential in becoming relevant and essential to their communities (BGCI, 2010; Gough and Accordino, 2011).

There is a general attitude that urbanization has desensitized the public to nature and environmental issues because people no longer directly see how plants are a part of their daily life (Hatherly, 2006). Public gardens are the ideal cultural institutions to highlight these issues. Community engagement programs can help spread an understanding of plants and the environment while promoting public gardens. The institution also benefits by gaining a deeper understanding of its own neighborhood and by becoming enriched and enlivened by the diversity of those living within their vicinity (AAM, 2008). Staff can see how plants shape the lives of people in their community and can move away from the "green ivory tower" to the large, complex, and diverse population (Kirby, 2005). For example, Longue Vue House and Garden in New Orleans, Louisiana has worked with a local neighborhood association since 2006 to support homeowners returning to the neighborhood post-Katrina. Longue Vue has offered their horticulture expertise and resources to help the neighborhood redesign their landscape after the disaster and to mitigate future flooding. Longue Vue actively participates in community meetings to get the public's input on designs, plantings, and project ideas for landscape revitalization. As a result of this collaboration, the neighborhood has been able to participate in its own redesign and community members have been shown the immediate relevance of horticulture in their lives (Schackai, 2013; Wolff and Reese, 2009).

Visitor studies help garden staff understand current and potential audiences in order to better engage them (Greater Philadelphia Cultural Alliance, 2010). Brooklyn Botanic Garden ran field research from 2012-2013 to determine how to increase

visitation of underrepresented audiences during their Free Days. Demographic information was first gathered through membership data, and zip codes with high visitation were eliminated. Research participants were targeted in nearby areas with low visitation. BBG worked with community leaders to identify willing study participants. Social anthropologists made home visits to hold interviews and accompanied the participants to the Garden on a Free Day to observe and survey their experience and to uncover barriers to participation. Findings will be compiled and used to better meet the needs of underrepresented audiences and encourage a broader audience on Free Days, for which they were originally intended (Campbell, 2011).

Meeting people where they are and with themes or topics that are of interest to them has the capacity to attract those who might never come to a public garden. Engagement provides the opportunity to teach these underrepresented audiences about the messages promoted at the garden and to create social change (Hatherly, 2006). A two-way dialogue is also created through this connection between the community and the garden, as is the development of mutual support and an exchange of ideas and inspiration. This connection has the potential to assist in urban renewal and to build social cohesion (Kirby, 2005; Hatherly, 2009).

There is increasing evidence that it is not enough to simply raise awareness in order to convince people to act. Messages in a format that is encouraging and that enables them to see personally relevant results in their own community, inspires change (BGCI, 2010). It is important that public gardens make underrepresented audiences feel welcome. This can be accomplished by focusing more on the perspective of broader audiences when developing programs. Underrepresented audiences should be brought into the discussion to ensure relevance and efficacy (Levin, 2009).

Developing community engagement efforts is neither quick nor easy (BGCI, 2010); there are many obstacles. Funding is the most significant obstacle but techniques such as capturing the benefits of community engagement will enable the institution to promote its programs and seek financial support. There is no one central

source of funding to motivate gardens to work with new audiences (BGCI, 2010). Gardens are also often “locationally challenged” and need a link to connect them with their communities (Fournier, 2005). Collaborations with local organizations can help public gardens escape this isolation (BGCI, 2010). Partnerships with established community organizations can also give the garden some authority in a given region. (Laney and Niehaus, 2008). However, targeting specific organizations and underrepresented socioeconomic groups is not always enough to create civic engagement. Instead, public gardens must co-create initiatives that support both the institution and the partner group or organization, therefore potentially giving up some control but better representing the needs and interests of the community (AAM, 2002).

Internal challenges may also hinder engagement so public gardens must practice “inreach” as well as outreach to ensure success in social inclusion (AAM, 2002). It is important to achieve diversity among the staff, board, and volunteers to ensure that a varied perspective is represented at the institution.

The value of community engagement must become a priority of the leadership of the institution, including the board of directors. Before creating the GATEways Project, UC Davis Arboretum staff, board members, and other stakeholders participated in a planning session to develop a shared vision for the future of the Arboretum and its place in the community and at the University. This ensured a collective effort in engaging the public.

Barriers for potential audiences include the lack of relevant programming, as well as admission fees, a shortage of time, and the absence of public transportation to and from the institution (Greater Philadelphia Cultural Alliance, 2009). Community dynamics have shifted and public gardens are competing with many other cultural and social organizations, as well as competing in general with a society that has come to rely on technology for a sense of community (Putnam, 2000; McCook, 2000). Public gardens must find creative ways to become relevant and essential in their communities, and change with the times (Greater Philadelphia Cultural Alliance, 2009).

One thing is certain: investment in engagement makes an impact and encourages pride in the community (Fournier, 2005). It also allows public gardens to fulfill their responsibility as public institutions (American Public Garden Association Vision Statement; AAM, 2008).

## **Chapter 3**

### **MATERIALS AND METHODS**

#### **Research Methods**

Both qualitative and quantitative methods were used in this research. Quantitative data was collected through an initial exploratory survey in December 2012 and a final survey in January 2013. Qualitative data was collected from in-depth interviews at nine public horticulture institutions. The researcher completed the University of Delaware Human Subject Research Board (HSRB) training in the fall of 2011 and all survey questions were approved by HSRB.

#### **Exploratory Survey**

This survey (Appendix B) was sent in advance of the first thesis committee meeting to gain information about where to pinpoint the thesis. Research findings identified potential participants for a follow-up survey and interviews. The survey was sent to the entire APGA email list containing 4,250 recipients, of which 629 participants started the survey and 433 completed it. 170 participants expressed willingness to participate in further interviews on the topic of community engagement.

#### **Final Survey**

A final survey was sent in January 2013 to a purposely-selected group of participants, as determined by the author upon the recommendation of the thesis committee and exploratory survey findings. Individuals from 29 institutions received the survey; about half of these held the position of Director of Education (52%). Other positions included Director or Assistant Director of the institution (17%), Director of Public Programs or Outreach Programs (17%), and a variety of other

education related positions (14%). The survey was sent to one participant per institution and 18 recipients participated. Representatives from five of the interviewed institutions participated in the survey. The participants and institutions were guaranteed confidentiality. The survey aimed to identify a common baseline for community engagement among institutions that have been seen as successful in the area of community engagement.

### **Interviews**

Interviews were held at nine different U.S. public horticulture institutions, which were selected based on recommendations from the thesis committee. Interviews highlighted a variety of programs that demonstrate each institution’s effort to engage with a broader and more diverse audience. To ensure a range of sites, three institutions were selected from three different budget categories: small (annual operating budget under \$600,000), medium (annual operating budget \$600,000 to \$2 million), and large (annual operating budget over \$2 million). Various projects and initiatives at each institution were discussed so interview questions varied slightly from one institution to another, depending on relevance. Interviews were conducted in person and over the phone. The number of staff interviewed at each institution ranged from one to seven staff members. Depending on the institution, one to two programs were discussed.

Delaware Center for Horticulture, Wilmington, Delaware	<ul style="list-style-type: none"> <li>• Pamela Sapko, Executive Director</li> <li>• Jen Bruhler, Director of Programs</li> </ul>
Longue Vue House and Garden, New Orleans, Louisiana	<ul style="list-style-type: none"> <li>• Joe Baker, Executive Director</li> <li>• Hilaire Schackai, Director of Community Initiatives and Education</li> <li>• Jen Gick Director of Development</li> <li>• Lydia Vaughn, Educator and Programs</li> </ul>

	<p>Coordinator</p> <ul style="list-style-type: none"> <li>• Jennifer Cohn, Educator and Programs Coordinator</li> <li>• Amy Graham, Head Gardener</li> <li>• Megan Roniger, Garden Staff</li> </ul>
Cheyenne Botanic Garden, Cheyenne, Wyoming	<ul style="list-style-type: none"> <li>• Shane Smith, Executive Director</li> </ul>
Tucson Botanical Garden, Tucson, Arizona	<ul style="list-style-type: none"> <li>• Juliet Niehaus, Director of Horticultural Therapy</li> <li>• Abby Moore, Director of Education</li> </ul>
Bartram's Garden Philadelphia, PA	<ul style="list-style-type: none"> <li>• Stephanie Phillips, Assistant Director</li> </ul>
University of California at Davis Arboretum, Davis, California	<ul style="list-style-type: none"> <li>• Kathleen Sokolofsky, Arboretum Director and Assistant Vice Chancellor</li> <li>• Carmia Feldman, Assistant Director</li> <li>• Margaret Kralove, Community Outreach Manager</li> </ul>
Brooklyn Botanic Garden, Brooklyn, New York	<ul style="list-style-type: none"> <li>• Robin Simmons, Director of GreenBridge</li> <li>• Samantha Campbell, Director of Marketing</li> <li>• Nina Browne, GreenBridge Program Manager</li> </ul>
Atlanta Botanical Garden, Atlanta, Georgia	<ul style="list-style-type: none"> <li>• Tracy McClendon, Vice President of Education</li> <li>• Heather Holmes, Public Programs Manager</li> <li>• Kathryn Masuda, School Programs and Outreach Manager</li> </ul>
Chicago Botanic Garden Glencoe, Illinois	<ul style="list-style-type: none"> <li>• Patsy Benveniste, Director of Education and Community Programs</li> </ul>

Table 3.1 Interview Institutions and Participants

## **Chapter 4**

### **RESULTS**

#### **Survey Results**

To establish a baseline for community engagement at public gardens, survey participants were asked to identify their top five key terms for creating a definition of community engagement (Figure 4.1). The overall top-five terms were education (89%), mission (74%), relevance (63%), connection (47%), and local efforts (47%). For the open answer “other” option, nine participants added their own terms for the definition, such as outreach and service (Figure 4.2).

A series of questions attempted to ascertain how public horticulture institutions get to know their current and potential target audiences. When asked how their institution collects data on visitor demographics, 30% used general visitor surveys and 20% used membership surveys (Figure 4.3). Survey responses indicated that 44% of respondents felt that they are reaching their target audience while 44% felt that they were not currently reaching their target audience (Figure 4.5). Over half of the participants (56%) felt that their institutions were targeting demographics that are representative of their greater community (Figure 4.6) and 77% of respondents felt it was an institutional priority to target the demographics of their greater community (33% strongly agreed and 44% agreed) (Figure 4.7). 67% of respondents indicated that their institution was currently in the process of targeting underrepresented demographics (Figure 4.8).



In order to attract a more diverse demographic, 67% of respondents participate in or co-host events created by a specific cultural organization; 61% hold special events that focus on audiences with underrepresented demographics; and 44% felt that sending outreach staff into the community helps to attract a more diverse demographic (Figure 4.9). The most common obstacles to attracting audiences from underrepresented demographics are the absence of effective partnerships with those audiences (44%) and the lack of public transportation to the institution itself (39% strongly agree and 17% agree) (Figure 4.11). Increased public awareness of the institution (56% strongly agree and 44% agree) and spreading the institution's messages to a wider audience were the two most popular benefits of attracting underrepresented demographics (Figure 4.13). The most common themes or topic areas for connecting with underrepresented audiences fall into several categories: community revitalization (32%), cultural connections (22%), youth education (22%), community connections (15%), and food (1%) (Figure 4.15). In terms of related funding, 72% either agree or strongly agree that their institution provides operating funds and resources to reach underrepresented audiences (61% agree, 11% strongly agree) (Figure 4.16). Private donations (61%) and private grants (56%) were the most common supplemental funding used to reach underrepresented audiences (Figure 4.17).

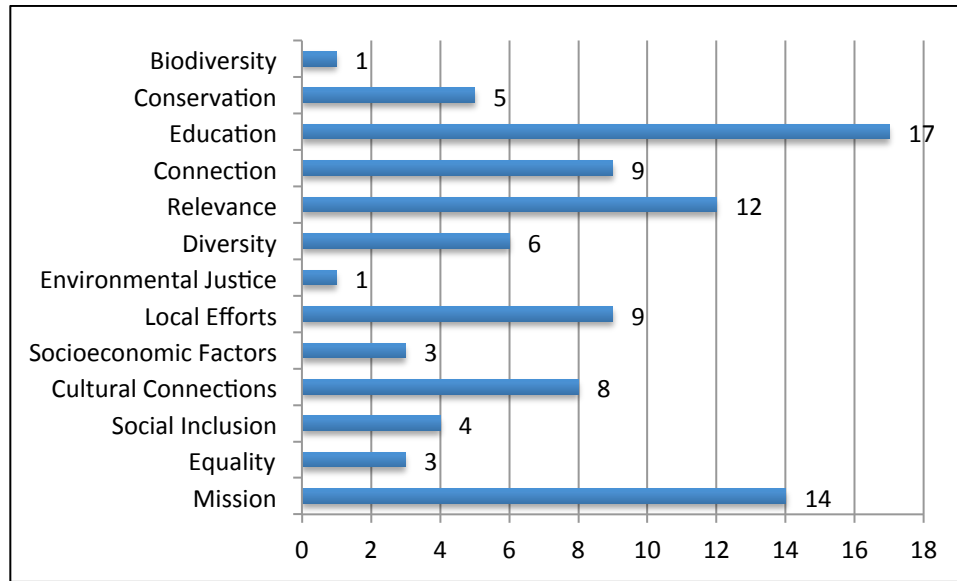


Figure 4.1 Which of the following terms or characteristics do you think important to include in a definition of community engagement at public gardens? Please select 5 terms only (N=19)

1. Service
2. Outreach (mentioned twice)
3. Fun
4. Entertainment
5. Drill in deeper to diversity: Age diversity, economic diversity. I'm not sure how to put this but sometimes people become engaged just because they stumble upon the Gardens looking for something different to do.
6. Citizen science
7. Sympathetically and productively involved, collaboration, reciprocal, partnership
8. Stakeholder
9. Stewardship
10. Service
11. Authenticity
12. Openness

Figure 4.2 Please list any terms missing from the list above that you think belong in a definition of community engagement at public gardens (N=9)

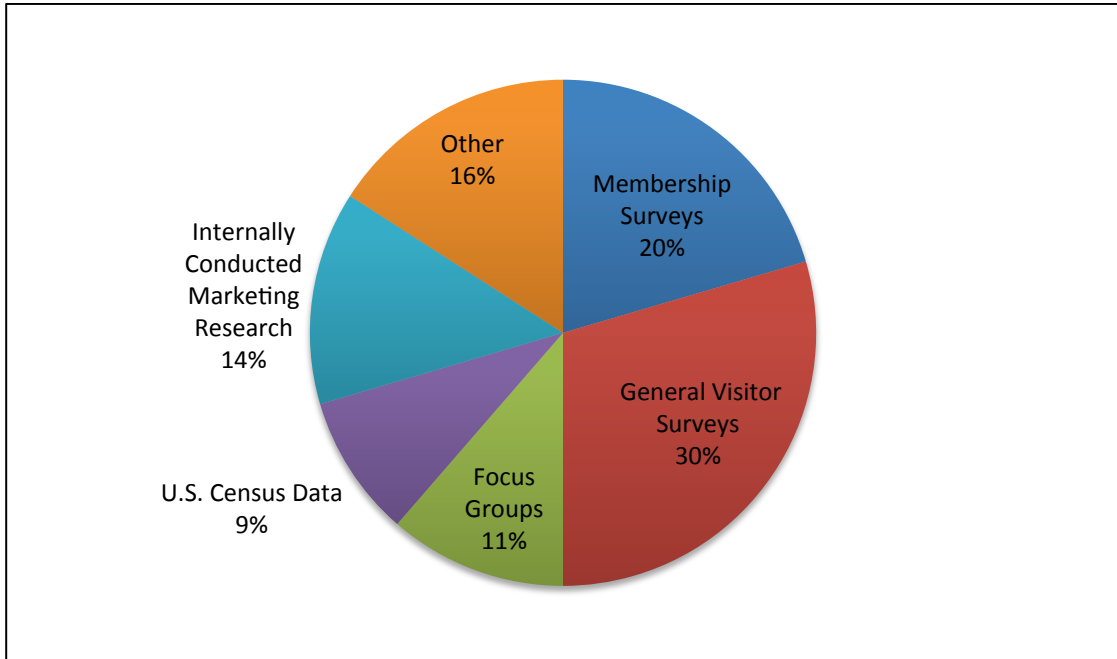


Figure 4.3 How does your institution currently determine the demographics of its visitors? Check all that apply (N=17)

1. Pew Research
2. Facebook Survey
3. We don't track
4. We are so small it is easy to just visually see our demographics
5. Informal observation
6. Zip code collection
7. Observation

Figure 4.4 How does your institution currently determine the demographics of its visitors? Check all that apply: Other (N=7)

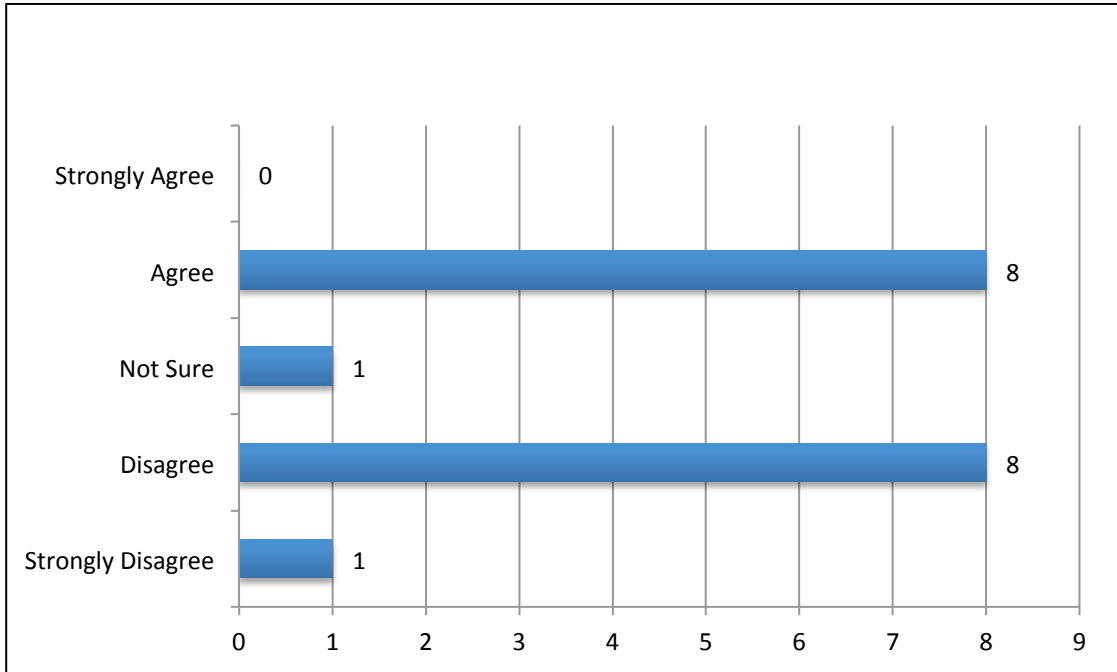


Figure 4.5 Is your current audience representative of the diversity you would like to reach (N=18)?

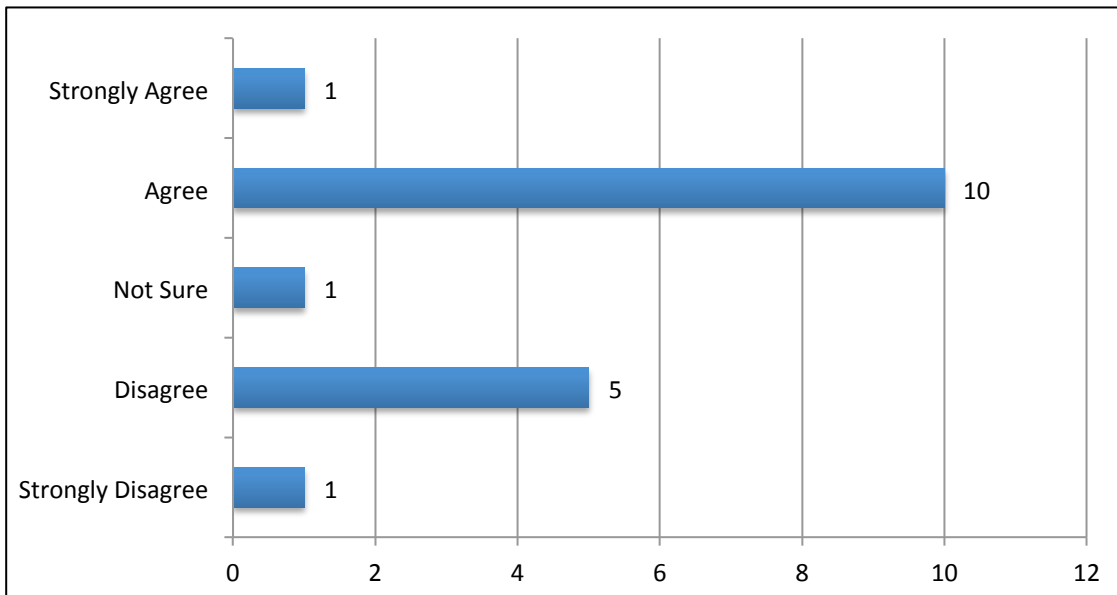


Figure 4.6 Does your institution's target audience reflect the demographics (gender, age, race, ethnicity, physical ability, income status) of your greater community (N=18)?

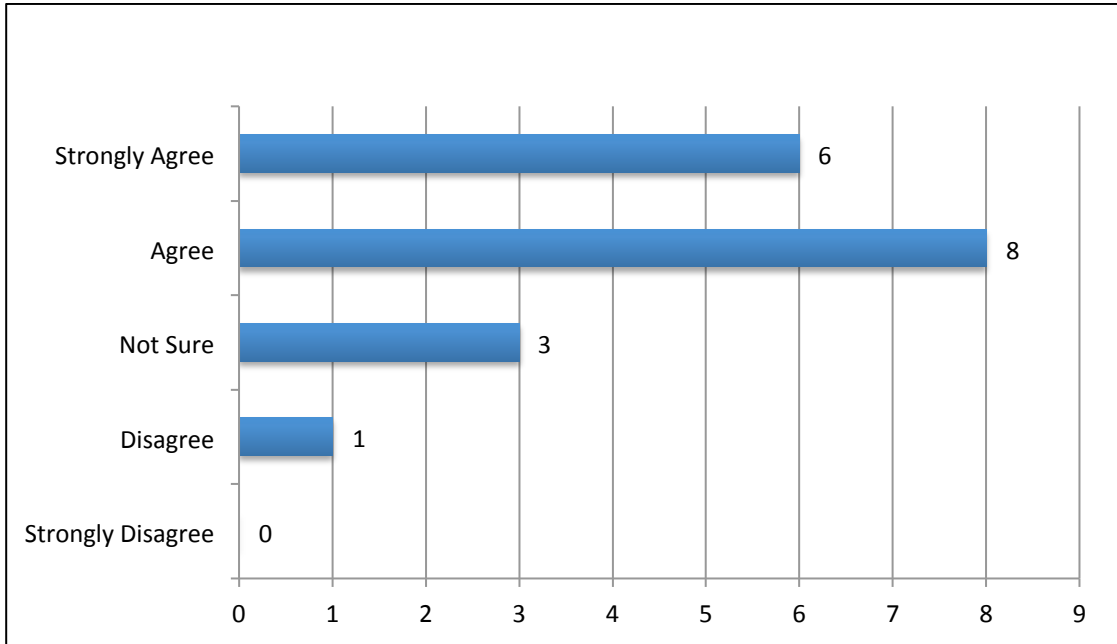


Figure 4.7 Is it an institutional priority that the demographics in your greater community be represented in your target audience (N=18)?

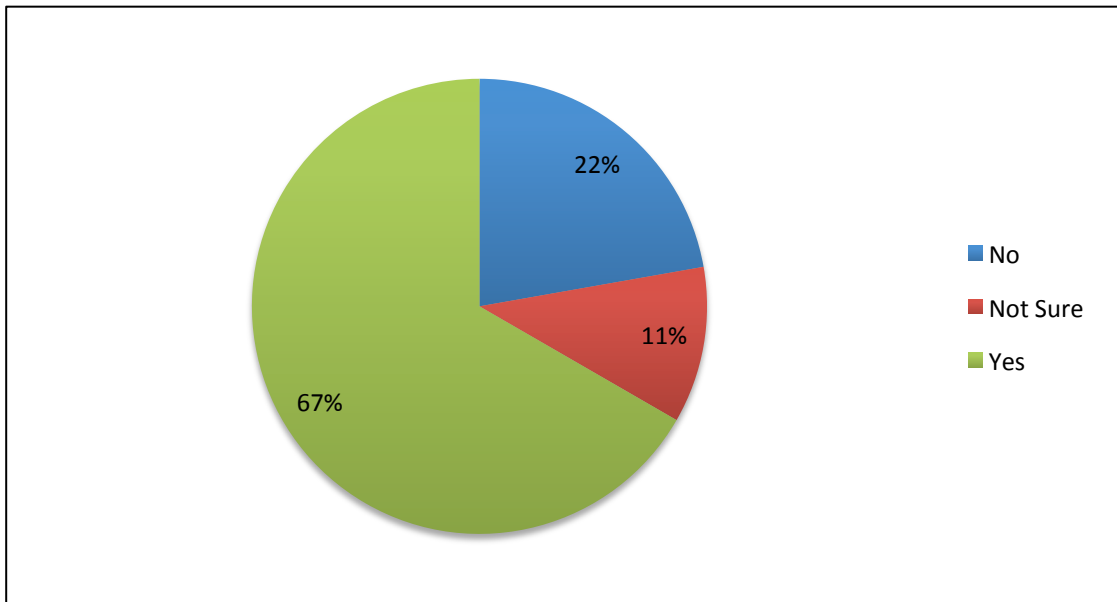


Figure 4.8 Are you actively targeting demographic groups in your community who do not visit regularly (N=18)?

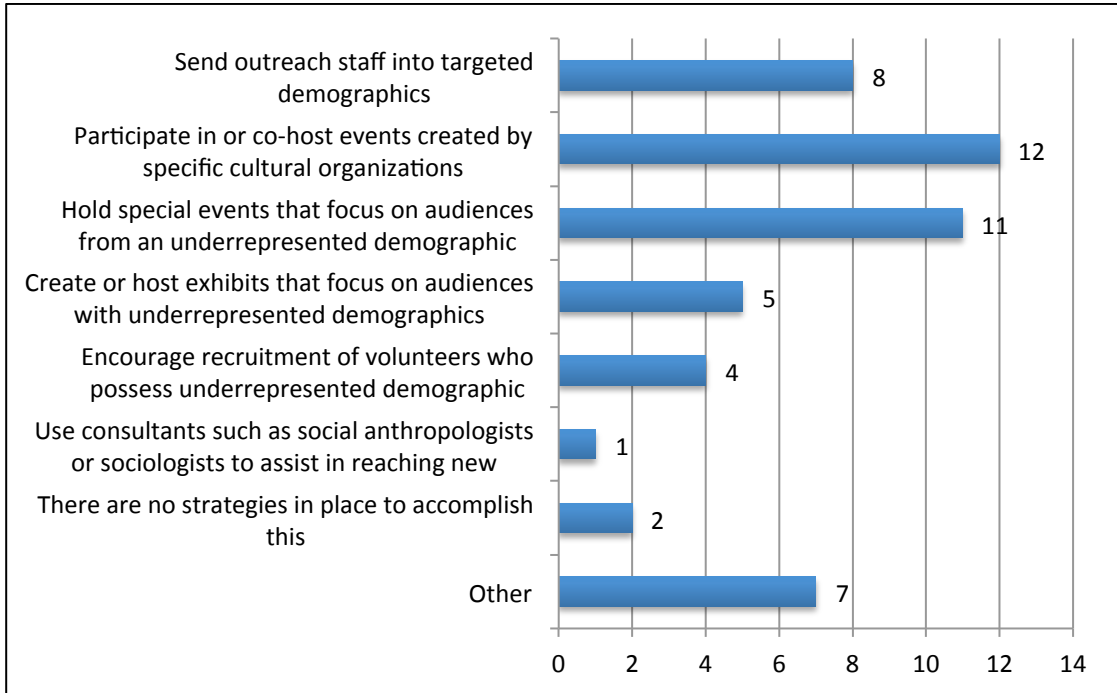


Figure 4.9 How does your institution attract a more diverse demographic (N=18)?

1. Minimal outreach
2. Offering Free Admission, Title I Scholarships, Participation in the Cultural Pass program
3. Encourage diverse hiring practices
4. Online outreach to reach out to younger audiences, and minority and ethnic
5. Marketing tactics
6. Work with education groups with focus in target groups
7. Offer free admission day; build relationships with cultural and family service agencies serving our targeted audiences.
8. Partner with organizations whose mission is to reach a more diverse demographic.

Figure 4.10 How does your institution attract a more diverse demographic? Select all that apply: Other (N=7)

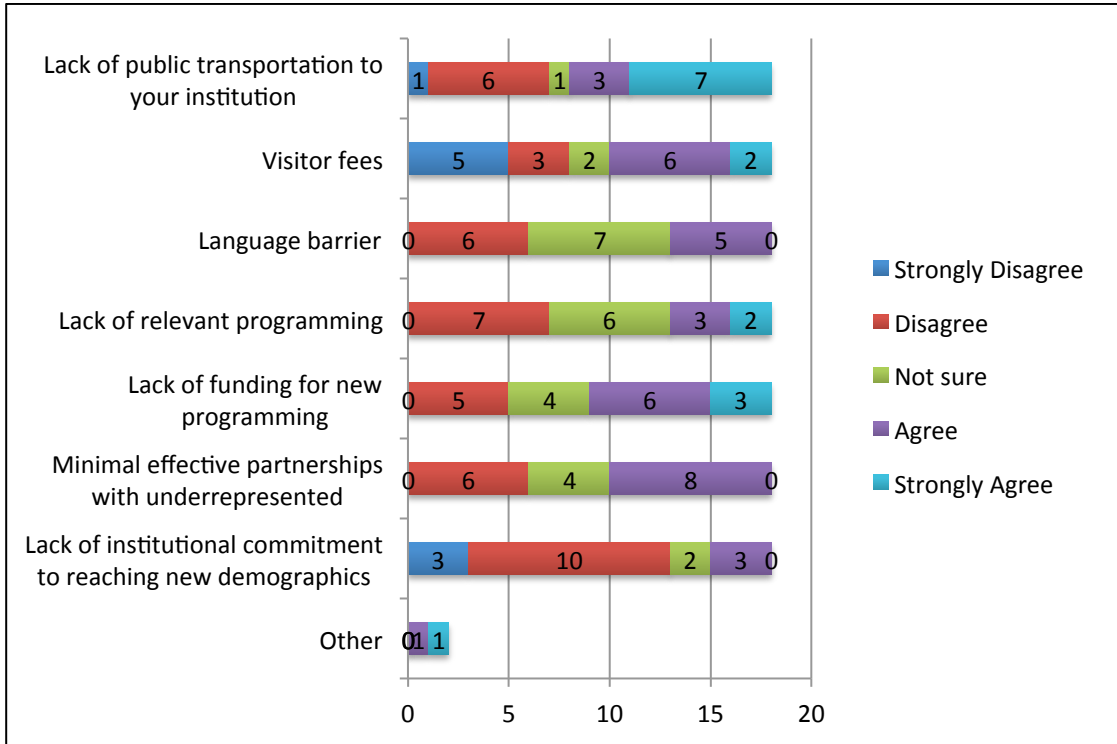


Figure 4.11 Please assess your institution's obstacles to attracting audiences with underrepresented demographics (N=18)

1. Varied definition of demographics
2. Location
3. Corporate sponsorship to support the effort.
4. Our staff is not very diverse, so community diversity is not reflected by our institutional profile.

Figure 4.12 Please assess your institution's obstacles to attracting audiences with underrepresented demographics: Other (N=4)

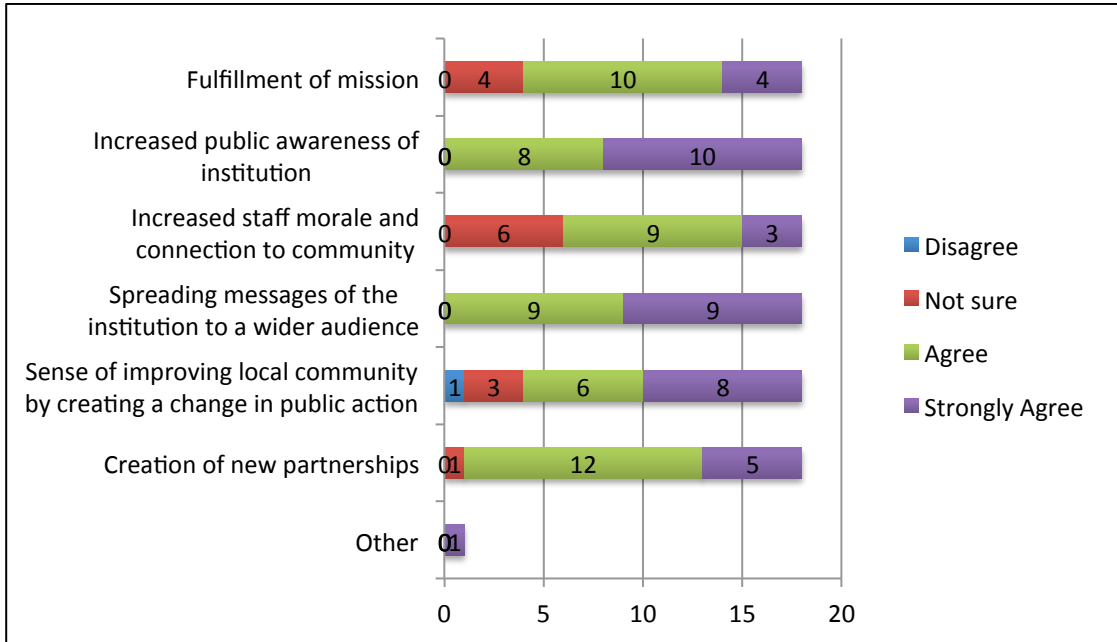


Figure 4.13 Please assess the benefits of attracting audiences to your institution who have underrepresented demographics (N=18)

1. Having a diverse voice in helping plan and create exhibits and programming

Figure 4.14 Please assess the benefits of attracting audiences to your institution who have underrepresented demographics: Other (N=1)

**Cultural Connections:**

- Dia de los Muertos event
- Host exhibits by artists with a local cultural connection
- Native ethnobotany themed interpretation
- Music
- Cultural family education
- International cuisine
- Global conservatory collection
- Cultural connections (e.g., Latin-American themed programming)
- Free festivals (each themed to the features of the site),

**Community Connections:**



Social gatherings for young professionals  
Work to recruit volunteers who are from underrepresented demographic  
Design all family programming to connect with all potential communities  
"Share the Garden" by offering admission benefits to partner agencies and organizations  
Recreation  
Art and science programs

**Community Revitalization:**

Improving the urban forest  
Urban agriculture (3)  
Weekly farmer's market  
Parks project  
Tree project  
Urban renewal  
Street tree care for public health  
Sustainability  
Community building  
Community garden  
Our mission is education; our passion is connecting people and plants to improve our community

**Youth Efforts:**

Fieldtrip and bus scholarships  
Specific funding for tittle one schools to visit the garden  
Science education for youth  
Construct a children's garden and operate it with dynamic programming  
Youth fitness  
Hands on plant science  
Relevant formal education objectives  
Urban children's garden  
Urban garden youth employment

**Food:**

Food and nutrition as related to gardening  
Food Production  
Relevant economic botany  
Food justice

Figure 4.15 Identify the top 3 common themes or topic areas your institution uses to connect with audiences who are currently underrepresented (N=17)

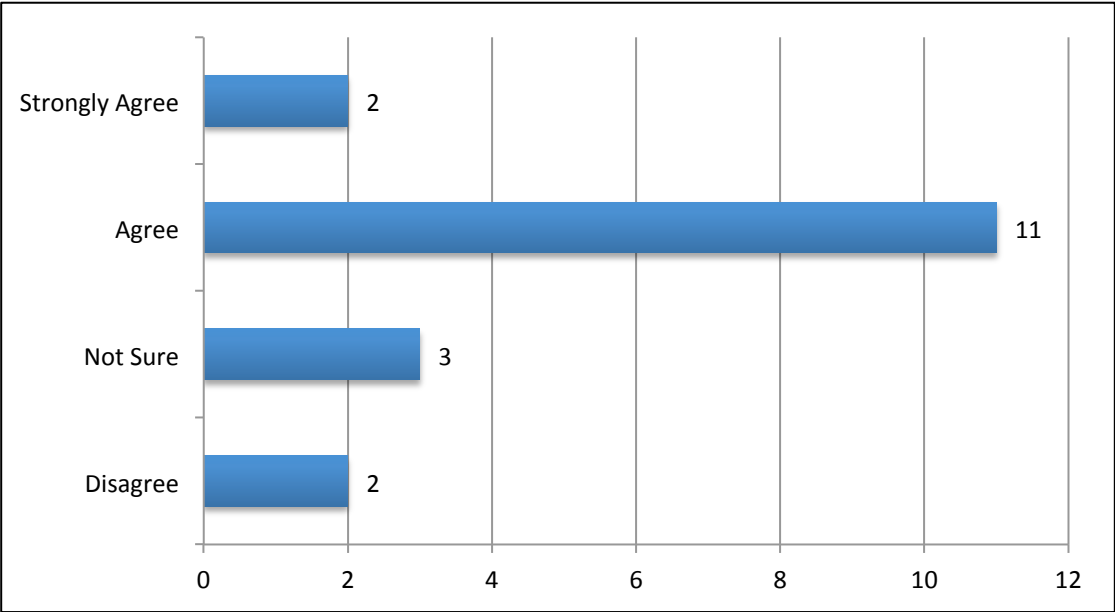


Figure 4.16 Does your institution provide operating funds and resources to reach audiences with underrepresented demographics (N=18)?

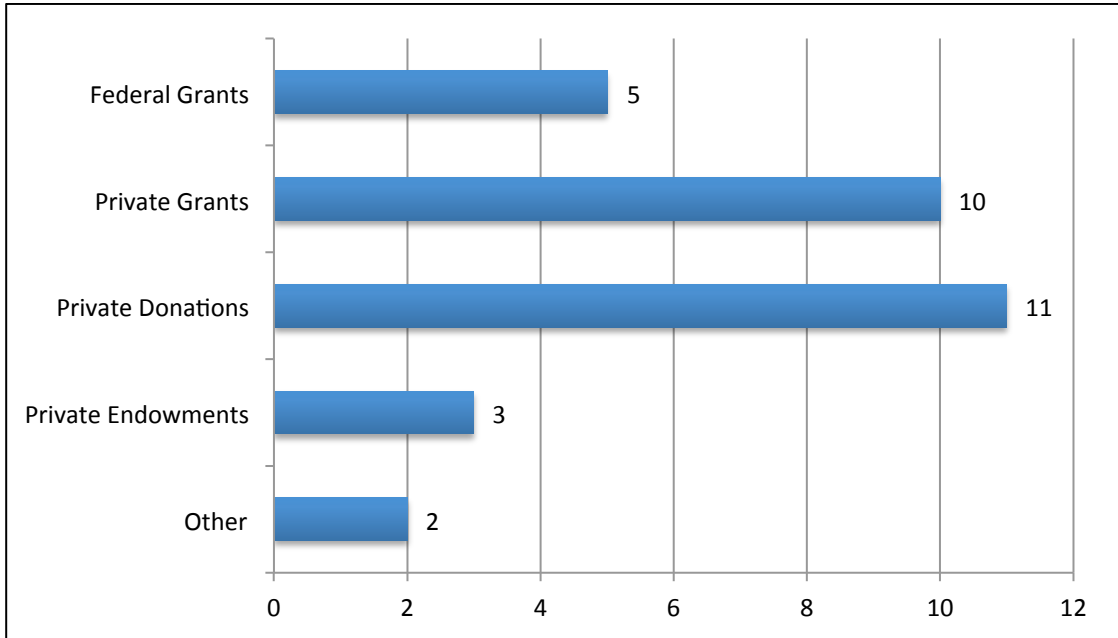


Figure 4.17 What supplementary funding does your institution use to fund programs aimed at reaching underrepresented audiences (N=16)?

1. Institutional funds
2. Institutional partnerships

Figure 4.18 What supplementary funding does your institution use to fund programs aimed at reaching underrepresented audiences: Other (N=2)

1. Columbus foundation
2. Scotts Miracle-Gro
3. JP Morgan Chase
4. Local hospital
5. City
6. School District if applicable
7. Food Bank
8. Chicago Wilderness
9. Regional Trees Initiative
10. Openlands
11. KiMa Foundation
12. Youthprise
13. Martin and Brown Foundation
14. NYC Department of Parks and Recreation
15. Institute of Museum and Library Services
16. Brooklyn Community Foundation
17. Individuals
18. Local Brew Pub
19. Local restaurants
20. Hispanic Chamber of Commerce
21. Richmond Redevelopment and Housing Authority
22. Richmond Public Schools
23. Philadelphia Parks and Recreation
24. University of Pennsylvania
25. Pennsylvania Horticultural Society
26. Art Center
27. Target
28. Our institution assists with funding efforts as a way to support our efforts to serve underrepresented audiences.

Figure 4.19 If your institution currently partners with an organization to assist with funding efforts to attract underrepresented audiences, please list the top 3 (N=11)

## **Interview Results**

### **Delaware Center for Horticulture**

The Delaware Center for Horticulture (DCH) was founded in 1977 by a group of volunteers dedicated to urban horticulture. Today, as its mission states, “DCH cultivates a greener community, inspiring appreciation and improvement of our environment through horticulture, education and conservation.” DCH programs are primarily held off-site, out in the community, and much of DCH’s work is done in response to community demand and need. For example, DCH will only facilitate the construction of a community garden if the request for one comes from a community group, thereby insuring a more sustainable future for the garden. DCH feels it is important to listen to the community in order to fully understand its specific needs. When recently redesigning a vacant lot, DCH surveyed the neighboring community to learn how they wanted to use the space, instead of bringing in their own design. The community wanted a green lawn with seating, and without gardens or ornamental plantings; by listening to the community and delivering the green space that they requested, DCH was able to provide a design that would be used and valued by the community. DCH also meets community members where they are by providing plant sales throughout the year. Rather than hosting an event at their headquarters, DCH hosts many small events at different community gardens in Wilmington, creating equal access to plants for all residents.

## Community Trees

Street tree planting, maintenance, and education have long been principal aspects of DCH programming, which promotes the importance of canopy cover in urban areas and the health and economic benefits of street trees.

In its efforts to install and care for street trees, DCH partners primarily with governmental and non-profit organizations. These include Trees for Wilmington, an initiative of the Mayor's office; the Public Works Water Department; Wilmington Greenways, which promotes open space and trails in Delaware; and Friends Groups of a variety of parks. These partnerships help bring in funding from grants and donations and are used to promote the Tree Steward program, which was created in response to a community request for formalized training.

Through the Tree Steward Program, community members are DCH's most important partners. Modeled in part after Pennsylvania Horticultural Society's Tree Tenders Program and New Jersey Tree Foundation's Tree Keepers, the Tree Stewards are community volunteers who participate in a daylong training and make a commitment to support street trees in Wilmington. The program empowers community members by providing education and support, which they can use to encourage tree planting and maintenance in their own neighborhoods. DCH has found that community support is greater when neighbors ask each other to get involved (Bruhler, 2012). Each Steward understands best what will motivate his or her own neighbors to act and can tailor messages about the value of street trees to the needs of a specific community.

Tree Stewards learn how to select appropriate trees, and how to plant and maintain them. They are educated on the benefits of street trees such as general

beautification, and economic and environmental value. They are also trained in grantsmanship to secure monies that can be used to purchase trees. Tree Stewards are tasked with canvassing their neighborhoods to offer a free tree to anyone who is interested. Tree plantings take place with the assistance of DCH, which allows the organization to build relationships and stay connected with a larger community network. DCH can also collect testimonials on the impact of street tree to use when applying for grants, such as, “the DCH is great. They helped us turn our school playground into a shady tree-lined one, with dedication, leadership, resources and instruction to keep our 44 trees flourishing.”

DCH enlists the greater community’s help to record the number of trees planted to help reach 20,000 new trees by 2020, an initiative started by DCH in 2010. DCH has an online tracker showing the growing number of trees and as of April 2013, 5,123 trees have been planted. DCH also participates in the regional effort to Plant One Million Trees, along with Pennsylvania, and New Jersey, creating a connection between Delaware residents and the greater mid-Atlantic region.

Community Trees is funded through municipal grants, state funds, US Forest Service grants, and local businesses such as tree companies who may offer to assist with the maintenance. Through this funding, DCH is able to follow up at least once on every tree planted and assist with some maintenance like a watering truck that is driven around the city. Thanks to DCH’s work on a local government level, a Wilmington Tree Commission is now in place and a professional urban arborist is now on the city staff to assist with initiatives like Community Trees.

## Longue Vue House and Gardens

Longue Vue House and Gardens is an eight-acre historic estate in New Orleans. It was the home of the Stern family whose philanthropic work in New Orleans was significant in creating equal access to health care, arts, culture, and civic rights in the early 20<sup>th</sup> century. Longue Vue's mission is "to preserve and use the historical and artistic legacy of Longue Vue and its creators to educate and inspire people to pursue beauty and civic responsibility in their lives."

Art exhibits are frequently held on the grounds and are used to address important environmental issues. For example, in 2010, local artist Mitchell Gaudet created an installation piece consisting of 53 black oil drums placed on the lawn at Longue Vue to represent the amount of oil spilled from the BP leak into the Gulf. The exhibit was provocative and not only gave a visual indication of the spilled oil but it also helped spur the conversation about the important environmental issues that arose from the spill. Longue Vue is currently partnering with Laumeier Sculpture Park in St. Louis, Missouri to host joint panel discussions and to exchange art and ideas about the social and environmental issues that they share along the same Mississippi River. Longue Vue's willingness to use art to connect its visitors to the environment has enabled them to connect new audiences to their messages and mission (Baker, 2013).

The Community Initiatives Department develops programs that use Longue Vue's resources to revitalize the New Orleans landscape and environment as well as to promote art and community dialogue. Through these programs, the Garden honors the Stern family's historic dedication to civic responsibility and aims to remain connected



to some of the original philanthropic projects that the Sterns supported, including work on the Dwyer Canal.

### Gentilly Rainwater Harvesting Program

Pontchartrain Park and Gentilly Woods (together known as “Pontilly”) are adjacent neighborhoods in New Orleans, bordered by Lake Pontchartrain and the Dwyer Canal. These areas were severely damaged during Hurricane Katrina in 2005 and continue to face issues of storm water flooding.

Since 2006, Longue Vue has been active in the Pontilly Disaster Collaborative, a non-profit organization working to revitalize the Dwyer Canal to amend the flooding. Through this organization, Garden staff members have helped to create a more sustainable, new landscape design for the area that is historically sensitive, with a focus on water retention and flood mitigation in this low-elevation area.

In 2011, Longue Vue created a program to distribute rain barrels to residents in Pontilly that would capture and hold rainwater during storms and help to prevent canal flooding.

In the first phase of the project (January 2011-July 2012), Longue Vue worked with over 100 volunteers to clean, assemble, and install rain barrels. Pontilly residents were encouraged to attend workshops and demonstrations to build their own barrels, which were made of recycled olive shipping containers donated to the Garden. Workshops were held at homes in the Pontilly neighborhood rather than at Longue Vue in order to reach more of the community and to build relationships. After each storm, residents are encouraged empty the barrel fully and use it to water their plants. The ultimate goal is to install 2,300 rain barrels at homes in the area and to educate the

community on and how they play a role in the larger water system in New Orleans. To date, 148 rain barrels have been installed.

The project was initially funded through the Audubon's TogetherGreen Initiative and sponsored by Toyota; funding was used primarily for supplies and professional development training. Longue Vue recently identified a corporate sponsor to donate 60 barrels a quarter and will continue to hold workshops out in the community and at the garden, itself.



Figure 4.20 Rainwater Harvesting Project at Longue Vue House and Gardens, photo credit: Hilairie Schackai.

### Cultivating Communities

Through the Education Department, Longue Vue has developed a longstanding program that connects local students to the Garden and to their community. Longue Vue partnered with the nearby Waldo Burton Memorial Boy's Home from 2000-2005 and after a five-year hiatus due to Hurricane Katrina, they resumed their partnership in 2010. The Boy's Home brings a group of 8-10 home-schooled, middle and high school students to the garden every week. During the growing season, the students grow their own vegetables and learn other horticulture skills. Entrepreneurial and interpersonal skills are cultivated by selling their produce at a local market and to a nearby restaurant. The students work with the restaurant's chef, who teaches culinary skills and helps them create value-added products such as pesto or herb butter to sell at the local market. In the winter and early spring, students learn about the Stern family's philanthropic legacy in New Orleans and visit organizations sponsored by the Sterns. They also visit other local organizations to become more aware of the non-profits in their community and the people they serve. Their earnings from the market sales are subsequently donated to a non-profit of their choice. In 2012, the students donated their earnings to an organization that works with adults with special needs. Some of these adults volunteer at Longue Vue; therefore, the students felt a connection with them and decided to support their organization. Over the years, the students have donated a total of \$11,000 to non-profits in New Orleans.

Longue Vue has developed a stable relationship with the Waldo Burton Memorial Boy's Home enabling the program to grow and adapt every year. The program requires significant staff time and commitment, so responsibilities are shared among several staff members in the Education and Horticulture Department.

Excluding staff time, expenses for the program are around \$1,800 per year and Longue Vue has recently secured sponsorship for most of this amount by the Herb Society of New Orleans.



Figure 4.21 Cultivating Communities at Longue Vue House and Gardens, photo credit: Hilairie Schackai.

### Cheyenne Botanic Gardens

Cheyenne Botanic Gardens consists of a formal garden, nursery, and a community garden on nine acres in central Cheyenne, Wyoming. Its mission is “to inspire, beautify and enrich the greater High Plains community through gardening,

volunteerism, education, and stewardship.” There is no general admission fee but an estimated 70,000 visitors came in 2011 (including tourists and local residents). The population of Cheyenne is 60,000, suggesting that a large visits the Gardens.

Cheyenne Botanic Gardens is a division of the City of Cheyenne’s Park and Recreation Department and, as such, is involved with growing and installing plants in the city’s beds. Salaries are paid by the city but the non-profit organization, Friends of the Cheyenne Botanic Gardens, provides major funding for landscape planning and construction, staff education and volunteer support, and helps to raise funds for projects like the two million dollar Paul Smith Children’s Garden built in 2009.

The staff is comprised of 6.5 employees but the Gardens have a volunteer force of over 120, with more than half volunteering on a weekly basis, during the growing season. Volunteers complete 90 percent of the horticulture work, including maintaining the Gardens and growing over 50,000 plants from seed to plant for city park beautification. Cheyenne Botanic Gardens partners with local organizations to recruit volunteers who are primarily senior citizens, youth, and handicapped adults. The Gardens work with the judicial system to help juveniles earn community service hours that are court mandated. They also partner with local shelters and hospitals to recruit injured or handicapped adults to become volunteers. The Director of the Gardens, Shane Smith, is a trained horticultural therapist and he incorporates the therapy into the volunteers’ tasks and has trained his staff in horticultural therapy practices. The active volunteers help the Gardens engage with its community and make up a large network of Garden advocates.

Beyond their volunteers, Cheyenne Botanic Gardens connects with its community by becoming an essential resource for horticulture. Shane Smith writes a

daily column for the local newspaper on gardening tips and holds a radio show up to 60 times per year to answer local residents' gardening questions.



Figure 4.22 Cheyenne Botanic Garden Volunteers, photo credit: Shane Smith

### Botanic Garden Ballot Initiative

In the August 2012 primary election, Cheyenne Botanic Gardens worked to pass a ballot initiative allocating 16 million dollars from an optional sales tax in Laramie County, Wyoming (also called a “penny ballot proposal”) over the next five

years for a new greenhouse and conservatory complex. The new buildings would allow for ADA compliance, increased space for production and programming, and improved urban planning around the greenhouse area. The ballot was strategically designed with two million dollars allocated for operating and maintenance of the facility, post-construction. The design for the complex had been created and approved since 2008.

The staff and Friends of the Cheyenne Botanic Gardens Board of Directors petitioned city council over a four-month period to put the initiative on the ballot and then relied heavily on the Gardens' volunteers and members to vote in their favor on the ballot. Volunteers assisted with petitioning city council including one handicapped volunteer who spoke on behalf of the Gardens at a city council meeting to further articulate the need for updated ADA compliance. Community support was raised through events in the Gardens and out in the community, such as a sponsored event for young professionals by a local brewery held in the greenhouse and promotional stands at local farmers markets and block parties. In lieu of marketing materials, the Gardens distributed green ribbons for volunteers and members to tie around trees in their yards as a sign of support. The green ribbons became a symbol of advocacy for the Gardens and helped spread support in a grassroots manner.

The ballot initiative ran during a primary election in August 2012 at a time when several candidates who opposed the ballot initiative were running for office. Nevertheless, thanks to community support, the ballot passed with 56 percent of the vote. Construction of the complex will begin in summer 2013.

Renovation and Expansion of the

# CHEYENNE BOTANIC GARDENS GREENHOUSE

Cheyenne, Wyoming

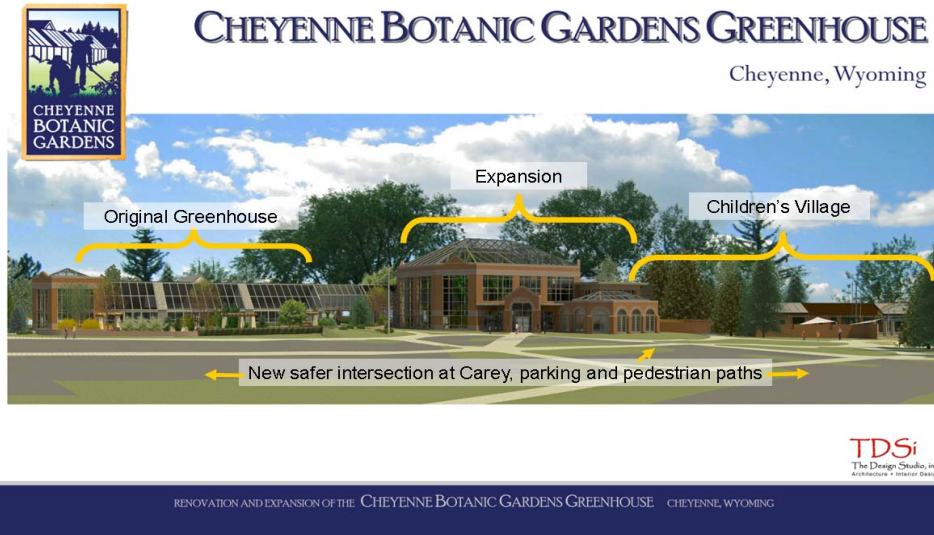


Figure 4.23 Renovation and Expansion Plan, Cheyenne Botanic Gardens

## Tucson Botanical Garden

Tucson Botanical Garden is located in the heart of the city and was built on the site of an historic home and nursery, which have been incorporated into the garden. Its 5.5 acres consist of 16 garden areas. Its mission is “to promote the responsible and appropriate use of plants and water in a desert environment through education and demonstration and to provide a place of beauty and tranquility for Tucson residents and visitors.” The Garden aims to create programming that is representative and



inclusive of diverse demographics and the multicultural background of Tucson residents.

Horticulture therapy has also long been part of their community engagement initiatives. The Garden currently works with high school special education groups, adults with developmental disabilities, and adults recovering from mental illness in a Volunteer Gardener Program. Each group brings its own support staff to the Garden and most of the groups work there on a weekly basis. These programs offer a unique opportunity to combine horticulture therapy and volunteerism.

#### *Nuestro Jardin* Redesign

The Tucson Botanical Garden invited the community to assist in the redesign of *Nuestro Jardin* in 2012. The garden area is a representation of a traditional Mexican barrio or backyard garden, and it and its programming were developed to link Mexican-American culture with the wider Tucson community through demonstrations, interpretation, education, and events at the Garden.

Before the redesign, the Garden developed a photography and oral history project. Stories were gathered from Mexican-American seniors and used in the interpretation of photographs taken of various gardens that demonstrated a traditional barrio design. The photos and stories were displayed at the Garden and provided inspiration for the redesign of the *Nuestro Jardin* garden area. A digital slide show was created and local seniors traveled to several nearby public schools to deliver the presentation and discuss the barrio garden tradition with students.

Focus groups of Mexican-American seniors were held over a six-month period. Garden staff structured focus groups more culturally and senior-friendly by changing

the format to use naturally occurring groups (such as social groups or families) to assure the comfort of those involved. Eight focus groups were held at the Garden with 8-25 participants in each group. Participants walked through the Garden area and helped to develop a list of changes, make plant material and design suggestions, provide signage ideas and wording, and assemble the collection of personal stories to be included in a bilingual audio tour for visitors. Once installation began, local senior citizens and other community members were invited to give periodic feedback on the design and help with planting. Some community members brought statues, decorative items, and planters to put in the garden. Barrio gardens are traditionally filled with gifted items like these from family and friends, and these gifts from visitors provide another way to connect to the community.

In conjunction with the new garden area, a free Humanities Series was created to highlight Mexican gardening traditions. The bilingual workshops were run by local seniors and were held in *Nuestro Jardin*. Workshop topics included traditional crafts, garden design, story telling, and a Day of the Dead celebration. Community members who either expressed an interest to share their knowledge or were recommended by others, conducted all the workshops. By intention, the Garden intentionally did not include any mainstream artists, preferring instead to use everyday members of the community.

*Nuestro Jardin* is presently one of the most popular garden areas and has provided visitors with a new way to connect to horticulture. Residents who identify with Mexican heritage can see their culture represented in the Garden, and the seniors' contributions have added to the traditional knowledge of the greater community (Niehaus, 2013).

The Arizona Humanities Council funded the photography project, the Garden's redesign and the workshops. Grant monies were used to cover scholar stipends, supplies for the workshops, focus groups, events, and for marketing. Garden staff are currently applying for funding to ensure a future for the workshop series.

#### Desert Plants/Desert People: Ethno-botany of the Sonoran Desert

In 2011, the Sonoran Desert garden area of the Tucson Botanical Garden was redesigned to demonstrate two types of traditional and regional water harvesting techniques used for agriculture. An updated curriculum was developed, consisting of a rotation covering five areas: traditional foods, water harvesting techniques, music and games, medicinal plants, and desert plants used for fibers. According to the staff at Tucson Botanical Garden, the curriculum was designed to connect students to the multicultural background of Tucson residents, specifically that of its original Native American inhabitants whose cultures are still vibrant in the Tucson area. The activities also help to provide a basic knowledge of desert plants and a sense of place for the students who are often detached from the desert landscape because of modern conveniences (Moore, 2013).

The program was piloted both onsite and through outreach for one year, allowing for feedback on its efficacy and cultural sensitivity. The curriculum was well received as an effective way to represent a traditional local demographic in the Tucson area. One challenge discovered in the curriculum was a sensitivity to how some of the objects were used. For example, some of the musical instruments were traditionally gender-specific but were used by all students in the rotation. To address these

concerns, the Garden consulted with a Native American Studies scholar to go through the curriculum with staff and volunteers.

The Desert Plants/Desert People program is usually staffed by four volunteers for a class of 40-60 students, with the help of two University of Arizona interns. A grant through the Wallace Research Foundation supported the garden redesign and the educational program.

### Bartram's Garden

Bartram's Garden is the historic home and garden of John Bartram, an early American botanist, plant explorer and collector. Its onsite collection contains representative specimens of Bartram's own 18<sup>th</sup> century collection. The John Bartram Association was founded in 1893 "to protect and enhance the landmark Bartram's Garden and House, advance the Bartram legacy of discovery, gardening, and art, and inspire audiences of all ages to care for the natural world." Bartram's Garden has struggled with being considered a "best kept secret" in Philadelphia that primarily has attracted historians and botanists to its southwest Philadelphia location within in a low-income area. The staff has made strides to add new programming and garden areas that meet the needs and interests of its immediate community. The Garden is a part of Philadelphia's Fairmount Park System and therefore the city provides in-kind support through utilities and grounds maintenance and advocates for the Garden; however most of the Garden's operating budget is made up of raised funds, grants, memberships, and space rentals.

In 2011, Bartram’s Garden developed “Bartram’s Community Farm and Food Resource Center” in a 3.5-acre open space next to the main garden that was primarily unused and considered unsafe. Bartram’s Garden partnered with the Pennsylvania Horticultural Society (PHS); the City of Philadelphia’s Parks and Recreation Department; the Philadelphia Orchard Project (POP); and the Agatston Urban Nutrition Initiative (UNI), a program that addresses issues of poor nutrition in West Philadelphia, to create the farm and help bring in funding. The Farm consists of a crop field, community garden, greenhouse, and fruit tree orchard. The crops are tended by local teenagers working with UNI who sell their produce at a food stand near the Garden in an area that lacks immediate access to fresh produce. The community garden is currently used by 25 families who were selected for their interest and their proximity to Bartram’s Garden based on zip codes. PHS uses the greenhouse to grow seedlings for other community farms and the POP has installed over 100 fruit trees and shrubs for educational and distribution purposes. The creation of a space used by and for the community has increased community connections in southwest Philadelphia and general safety in the immediate area.

### Bartered Goods

In 2012, Bartram’s Garden was awarded a grant from the Pew Center for the Arts through the Heritage Philadelphia Program. The grant required that the Garden think outside of the box to create a low-cost program (\$1,000) that would have great community impact, thus “Bartered Goods” was developed.

For three months in the summer of 2012, a Bartram’s Garden educator bartered with people in nearby neighborhoods for plants that were loaded on the back of his

bicycle. These residents were asked how valuable these plants were to them and what they would be willing to trade for one. Plants were exchanged for a variety of objects, ranging from a young student's report card to the coat a man wore when he got his first job. All objects were recorded and put on display in the historic John Bartram House. Over 60 objects were collected and an exhibition opening and celebration were held at the conclusion of the project. Bartered Goods enabled Garden staff to connect with the community and expand the interpretation used in the historic Bartram house (Phillips, 2013). The project connected new audiences with horticulture and provided the opportunity to reimagine the plant trade in which John Bartram was extremely active. If repeated, the staff hopes to attract more actual participants from the local community to the exhibition, and to the garden itself.



Figure 4.24 Bartered goods at Bartram’s Garden, photo credit: Paul Gargagliano

### University of California at Davis Arboretum

The University of California at Davis (UC Davis) Arboretum sits on 100 acres at the southern edge of the UC Davis campus. It features many different garden areas and significant collections, such as oaks and acacias. Its mission is “to be a living museum connecting people with the beauty and value of plants.” The Arboretum also works in concert with the UC Davis Ground and Facilities Department to ensure that regionally appropriate landscaping is consistent through the entire campus. The Arboretum is used as an outdoor classroom by several Departments and is a

community resource for horticulture. For example, signage is used to identify “All Star Plants,” on the grounds, which are considered the best sustainable plants for home gardeners and the Arboretum hosts “All Star” plant sales several times a year to encourage organic gardening in the area. The Arboretum also illustrates its relevance to the public with its “Arboretum stories” placards, which highlight stories submitted by visitors describing why the Arboretum matters to them.

In 2001, the Arboretum developed a ten-year plan to better connect with the University and the community. Preparation for the plan included extensive surveys, interviews, and focus groups to determine who the current visitors are and how they use the Arboretum. One of the major developments from this process was the GATEways Project.



Figure 4.25 Arboretum stories at the UC Davis Arboretum.



### GATEways Project

The GATEways (Garden, Arts, and The Environment) Project is a framework for building connections between the Arboretum, its campus, and the greater Davis community. The Project was designed to help the Arboretum become more relevant and essential, while promoting community inclusion and science education.

The GATEways garden areas are developed in collaboration with UC Davis departments to extend academics outside of the classroom. The Geology Department worked with the Arboretum to develop a Serpentine Garden in front of their building used for student research and teaching. Staff and students in the Native American Studies Department worked with the Arboretum and members of a local Native American tribe to develop a traditional Contemplative Garden with interpretation to honor the original inhabitants of the Davis area. A newly developed Animal Science Garden was developed to grow forage and range plants for demonstration. In addition to new garden areas, GATEways Project supports a variety of programs. Through the Art-Science Fusion Program, University students use the Arboretum as a backdrop for installation art, and music and drama performances. Students and faculty in the Entomology Department partnered with the Arboretum and with local artists to build a mural of tiles that highlight native plants and insects found at the Arboretum, and to create mosaic plaques to identify oaks in the Peter J. Shields Oak Grove. Community members helped to create the tiles and mosaic plaques and helped fund the efforts. Engagement is also fostered through educational programs hosted by the Arboretum Ambassadors, who are University students dedicated to environmental leadership. They are trained by the Arboretum to run workshops for young audiences.

The GATEways Projects are funded through a variety of sources, including project-specific grants, plant sales, donations, event revenue, and Friends of the UC Davis Arboretum membership. The program connects University students and faculty to the outdoor environments of the University and invites the community in to the University grounds through the creation of relevant programming and garden areas.

### Brooklyn Botanic Garden

Brooklyn Botanic Garden (BBG) is located in the dense Brooklyn borough of New York City. Its mission is to serve its community and the world through horticulture display, research, education, and outreach, and to inspire advocacy. It has a long tradition of community engagement, beginning with a community garden created for children in 1914. BBG developed the GreenBridge program in 1993 as a community horticulture program through which the Garden shares its resources and education with the community. GreenBridge consists of five programs: Street Tree Stewards, Community Garden Alliance, Brooklyn Urban Gardener Program (BUG), Making Brooklyn Bloom, and the Greenest Block in Brooklyn. The Street Tree Stewards are trained to care and maintain street trees and work with the MillionTreesNYC Program. Through the Community Garden Alliance, BBG helps the public create new gardens and supports established gardens with resources and plant materials. Brooklyn Urban Gardener is a free training program for community volunteers who are expected to participate in community horticulture efforts after the Program. Making Brooklyn

Bloom is a free annual event that focuses on issues such as sustainable gardening and food justice.

### Greenest Block in Brooklyn

Greenest Block in Brooklyn is the oldest program in BBG's GreenBridge and is used as a motivational tool for creating communities and greening Brooklyn. The program started in 1994 and its sustainability has enabled BBG to evaluate it with some confidence through anecdotal evidence and also to see how participation in the Program spreads around Brooklyn. Once one block becomes involved, those around it see the immediate results and benefits of greening efforts. The observed physical change from participation in the contest has been an inspiration for neighboring blocks to also get involved (Simmons, 2013).

Residents and commercial businesses must create block or merchant associations in order to participate. The community impact is apparent once a block association is formed, and residents or merchants come together to participate in the contest. For example, one block of active contest participants holds "wine and dirt" events to pot plants together, building relationships (Palmer, 2011). Once a block association is formed, it can work together on other issues and is permitted to attend block association meetings at Brooklyn Borough Hall. Local realtors and commercial businesses have also seen the economic benefit and, as a result, have created block associations to get their neighbors involved with the contest.

BBG provides horticultural assistance by holding small workshops throughout Brooklyn, particularly in neighborhoods that are the most in need for revitalization. The contest bridges the community's connection to horticulture with BBG, and with

other GreenBridge projects by holding workshops at Community Garden Alliance member gardens and using Street Tree Stewards to assist with tree care workshops. Block organizations can request a workshop, on a first come, first served basis. BBG also offers educational materials and greening tip sheets that are specific to each block's needs.

Greenest Block in Brooklyn is funded primarily through BBG's operating budget and through a variety of sponsorships, and personal donations. Its largest partner is the Brooklyn Borough Hall, which assists with promotion of the contest, outreach, and by providing space for the workshops. They also work with the Federation of Brooklyn Block Association, an organization that helps interested blocks form their own associations, NYC's Plant One million Trees Program, and the Brooklyn Community Foundation. Many different prizes are offered such as best window box, best street tree display bed, or the grand prize, the Greenest Block award. Judging is time consuming and completed over several rounds. Judges include BBG staff, the BBG President, potential donors, and other horticultural professionals. Contest participants are able to see BBG's dedication to its community through the extensive judging process and the workshops. The Contest makes BBG more visible and accessible to the neighborhood and shows the community that it is not just a gated place (Brown, 2011).

Back at BBG, some of the creative horticulture techniques used by contest participants have inspired ideas at the Garden itself, such as the best use for limited space and ideas for vertical farming.

## Atlanta Botanical Garden

Atlanta Botanical Garden sits on 30 acres in northern Atlanta. Its mission is “to develop and maintain plant collections for display, education research, and conservation and enjoyment.” The Garden opened in 1976 and underwent a large expansion in 2010 with the addition of a new parking lot, Canopy Walk, Edible Garden, and Outdoor Kitchen. Free chef demonstrations are offered on the weekends, using produce from the Edible Garden and leftover produce is donated to the Atlanta Community Food Bank. Corporate sponsorship has covered kitchen supplies and chef demonstrations in the Edible Garden each year. The Edible Garden has provided the opportunity represent a variety of cultures in the Garden through diverse cuisine and recipes showcased by the chefs and on the Garden’s website.

Atlanta Botanical Garden aims to attract a broader audience to the Garden by partnering with an organization that distributes admission tickets to various non-profits. The Garden also partners with the Mayor’s Office and Atlanta Public Schools on the Cultural Experience Project, a program that provides a different arts and culture experience for students each year. Since 2005, every public school kindergartener visits the Garden annually.



Figure 4.26 Outdoor Kitchen at Atlanta Botanic Garden, photo credit: Heather Holmes

#### Cocktails in the Garden and the Science Cafe

As the quote above the fireplace in their Outdoor Kitchen states, Atlanta Botanical Gardens promotes the Epicurean idea that “not what we have, but what we enjoy, constitutes our abundance.” Cocktails in the Garden was developed in 2002 as a way to attract a new audience and provide a fun and unique experience for visitors.

The events target young professionals and aim to create loyal members to support the future of the Garden.

Every Thursday night during May-September the Garden hours are extended and themed cocktails are served. The cocktails change every month and correspond with an aspect of interest in the Gardens (examples include High Balls and Hydrangeas and Cannas and Cosmos).

The marketing strategy for the event differs from that used for other classes and events. The Garden uses billboards, magazines, newspapers, and banners hung above streets in the area for promotion. Cocktails in the Garden can attract up to 2,000 visitors per event. Since 2010, the Outdoor Kitchen and Edible Garden have been incorporated into the event with cooking demonstrations and tastings. There are several bars set up around the Garden to encourage visitors to explore the grounds and a DJ plays music in a central area.

In October, the event becomes “Fest-of-Ale” where select beers are offered and programming such as a scarecrow exhibit and pumpkin carving contest are included to create a more family-oriented event.

A Science Café was created in 2010 and was initiated by the Garden’s Vice President of Conservation and Research, Jenny Cruse Sanders. The cafes are used to showcase research by regional scientists and create an ideal environment for public discussions on sometimes-controversial environmental topics like climate change (Sanders, 2012). The Science Café is purposefully run as an engaging conversation, under the guidance of a scientific expert in the field, encouraging dialogue among visitors. The cafes can attract up to 100 guests and are held once per month from May through October. They are often paired with special tours or tastings in the Outdoor

Kitchen. Science Café themes change every year; for example, climate change was discussed by a variety of speakers at in 2012. Specialty cocktails are also humorously paired with the café topic, like Heat Wave cocktails paired with a climate change discussion. The Science cafes usually open with a brief lecture on how the ingredients of the cocktails served that month derive from plants, in an attempt to tie the drinks back to horticulture.

Cocktails in the Garden and the Science Café create access for visitors who might not otherwise come to the garden. The events bring in substantial revenue and are completely self-supported. Admission and parking fees can be prohibitive to some audiences so the Garden offers coupon-based discounts several times a summer. Through these events Atlanta Botanical Garden has become a destination of choice for a traditionally underrepresented audience.



Figure 4.27 Science Café at Atlanta Botanical Garden, photo credit: Heather Holmes.



### Middle School Culinary Program

The Atlanta Public School System provides afterschool and summer programs for Title One students in the district. The program, entitled Afterschool All Stars partners with several cultural institutions, including the Atlanta Botanical Garden. The Garden hosts seven different schools for four weeklong programs each school year. In summer 2013, the Garden will pilot a culinary program for 20 middle school students who participate in the Afterschool All Stars. For ease of providing transportation to all students, the Garden will be working exclusively with one school. The students will spend 1.5 weeks at the Garden, working with a chef to learn recipes and culinary skills. They will primarily use produce from the Edible Garden. Their curriculum will also include vegetable gardening, recipe development, cooking, nutrition and grocery shopping. In order to participate in the program, students must go through an application process to demonstrate their interest in gardening and culinary arts.

The first school selected for the program has a garden on its grounds and a garden instructor on staff. The Culinary Program will build off of lessons the students have received at their school garden. The Program will extend into the following school year when participants will return to Atlanta Botanical Garden several times to continue their curriculum.

Foundational grant funding will be used to support this program. Several foundations are approached to fund Youth Education Programs as a whole, and the funds are distributed as needed. Funding for this program will be used to provide transportation and for supplies. In the future, after the pilot year, the program will run

for two weeks each summer and will continue to work with one school at a time though the partner schools may change from year to year to reach more students.

### Chicago Botanic Garden

Chicago Botanic Garden has over 300 acres in the Chicago suburbs that includes formal gardens, vegetable gardens, and natural areas. Its mission is “to promote the enjoyment, conservation, and understanding of plants and the natural world.” The Education Department is responsible for a variety of initiatives, and some programs, like Windy City Harvest and the Green Youth Farm take place completely off-site. Windy City Harvest is a nine-month program consisting of horticultural training and a paid internship for adults. The Green Youth Farm provides funded lessons in organic vegetable gardening to teens from the Chicago Public Schools. The participants work in the summer and during the school year. Both programs help develop job skills and encourage hands-on learning. There is an institutional commitment to educating the public and the Development Office spends a large portion of their time raising funds specifically for Education.

### Science Career Continuum

Chicago Botanic Garden provides high quality science education on site through the Science Career Continuum, which includes Science First, College First, undergraduate research positions, and post-graduate internships. The Continuum aims to create an accessible pathway to a career in the sciences, especially for minority

students, who are currently underrepresented in the field. These programs strive to be socially inclusive programs and help level the playing field in the sciences while helping students learn job skills and develop self-confidence.

Science First provides free science immersion for rising 8<sup>th</sup> graders to 10<sup>th</sup> graders from Chicago Public Schools with an age range of 13-16 years old. To promote the program, Chicago Botanic Garden staff makes presentations at the schools and enlists the help of school science teachers and coordinators. Interested students go through an interview process and must complete an application, including recommendations from their teacher and letters of support from their parents or guardians. Science First accepts 40 students. Curriculum runs for four weeks and is offered twice a summer, with 20 students in each session. Curriculum focuses on experiential learning, especially in botany and ecology. The Garden provides lunch, transportation, and mentorship for the students, who usually participate in the program for three years, and after which are encouraged to apply for College First.

College First was created in 1993 and is the oldest program in the Continuum. Students who are accepted into the College First program are offered paid positions for eight weeks each summer, facilitating their participation. They receive group instruction in college-level classes, credit for which is accepted by local universities. They are also paired with a member of the Garden staff to further explore a variety of topics including horticulture, education, and conservation biology. During the summer, the students visit local universities and laboratories. Students are required to research and present a personal research project. Over the course of the school year, Chicago Botanic Gardens hosts the College First students for monthly meetings to assist with the college application and financial aid process. 20 students are admitted

to College First each year and 95 percent of the past four College First classes have enrolled in a higher education program, with many going into the sciences (Benveniste, 2013). Science First and College First provide students with mentors and role models in the field as well as job skills and college preparation.



Figure 4.28 Science First at Chicago Botanic Garden, photo credit: Patsy Benveniste.

The Garden also offers paid summer internship opportunities for college students through its Research Experience Undergraduate Program (REU). The internships are highly competitive and students spend 10 weeks doing research with a mentor at the Garden. Funds from the National Science Foundation help sponsor 15

students each summer. Some College First alumni are among the participants each year. Finally, the Garden partners with Northwestern University and Conservation and Land Management Internship Program to offer paid internships to post-graduates pursuing a future in the field. The Continuum creates an entire track of high quality education associated with Garden and offers deep and extended exposure to science.

The programs in the Science Continuum are occasionally funded through IMLS and other grants but they are primarily funded through donations, with a portion covered by the general operating budget. Challenges do arise such as a recent teachers' strike in the Public School System, which shortened the summer session, and logistical issues like smooth transportation of all participants and finding the appropriate mentor for each student. Still, due to the longevity of the Continuum, many potential obstacles have been addressed.

## **Chapter 5**

### **DISCUSSION**

The programs highlighted in this research demonstrate creative ways to engage the public and to inspire interest in public horticulture. Whether they draw new audiences to the garden or reach out into the community, these programs illustrate the varied breadth and depth of engagement opportunities. They are inclusive and encompass a broader scope of community connection. Based on interview and survey findings, tools for success were identified in current programs and described in this chapter.

#### **Foundation for Community Engagement**

In order to be effective, community engagement must be a priority that is shared by the entire institution. Public gardens reach a small section of society but must now be more active and meaningful to the communities around them; the current model of engagement cannot be sustained (Baker, 2013). When public gardens broaden their definition of inclusion, they create a greater opportunity for transformation in their community and at the institution. They also open the door for partners and funders that they may not have considered before. Community

engagement efforts are often the responsibility of one dedicated staff person or one department but it impacts the entire organization and its value should be communicated as such. The eyes of the institution must be broadened to a set of goals that includes making gardens truly public and providing access to the community, even if revenue is not generated (Niehaus, 2013). The future of public gardens rests on their becoming essential in their communities. Change at the institution usually begins from the bottom up, thanks to passionate staff members who want to share the institution's resources, but it is sustained from the top down (Steinem, 2013). Institutional leadership can support community engagement by allocating more staff time and resources to its efforts and by ensuring that programs have access to necessary funding. The institutions highlighted are successful because they consist of stakeholders who understand the importance of community engagement and are willing to break the mold of traditional public gardens to become more socially inclusive organizations.

### **Program Development and Sustainability**

When developing a program, there must be a clear desire to open institutions to the wider public. Through relevant programming, institutions can reposition themselves in the community but these programs cannot be developed in a vacuum; they require the community's input. Relationships in the community help uncover how a public garden can better serve its potential audiences. DCH attends civic and neighborhood meetings to hear what issues are affecting its local communities.

Atlanta Botanical Garden opens its doors to every public school kindergartener, creating the opportunity to connect with teachers, parents, and students it might not otherwise reach. Tucson Botanical Garden used an already established relationship with a nearby retirement home to completely redesign the barrio garden and make it more culturally significant. Programs become relevant when they are responsive to the community and meet a specific need (Baker, 2013). Public gardens can also connect to a broader audience by linking their collections and resources to something that matters to the public, such as public health or storm water management (Simmons, 2013).

Programs differ greatly but they all demonstrate how an idea can transform into a successful connection with the community, if an institution is open to possibilities. Successful programs are best developed in an environment where staff members are given permission to test, fail, adapt, and evolve, understanding that community engagement is an ongoing experiment (Baker, 2013). Public gardens must be innovative and willing to pilot new ideas in order to find what works best for their institution and their greater community (Sokolofsky, 2012).

It can be useful to understand whom the institution is currently serving in order to determine underrepresented audiences. This information is often gained through visitor and marketing surveys, and through informal observation. However, most interviewees in this research do not use this data to develop new programs. Findings indicate that public gardens are currently in a reactionary mode, in that programs are often created as the result of an opportune grant, partnership, or newfound relationship. Findings did not illustrate an active targeting of specific underrepresented audiences, but rather the following of a thread.



To sustain these programs, internal staff structure can be important and support for community engagement should permeate the entire institution. Programs are often run by one dedicated staff person and can become personality-driven, meaning the program cannot sustain itself if that staff person leaves the organization (Hatherly, 2009). Community engagement programs are also most often developed and executed through the education department, separate from the rest of the organization. This must be amended in order to create a lasting model. There is great benefit to cross-departmental efforts in engagement that help to break down the compartmentalization that so often occurs among departments at public gardens (Schackai, 2013). Finally, it is important to continually check back with program participants and community groups to create continuous conversation and ensure the program is still effective.

### **Partnerships**

Targeting specific organizations and underrepresented audiences is not enough to create civic engagement. Instead, public gardens must co-create initiatives that support both the garden and the partner group or organization (AAM, 2002). Partnerships with local organizations help the garden create a relevant program that is of actual need or interest to underrepresented audiences. Public gardens cannot exist in isolation; partnerships can expand a garden's public dimension. They provide an opportunity for participation from outside the garden in shaping ideas and creating more effective engagement initiatives (AAM, 2008). Clearly defined project goals, expectations, and specific roles for each partner can support the collaboration (Gick,

2013). It is essential to have structured and balanced partnerships with clear expectations set ahead of collaborations to prevent miscommunication. Nevertheless, partnerships are incredibly valuable and worth the effort. A lack of relevant partnerships is often to blame as an obstacle in reaching underrepresented audiences, emphasizing their importance. Partnerships with geographically close organizations can facilitate collaboration. This eliminates the need for often-expensive transportation costs and shared neighborhood concerns help strengthen the relationship (Schackai, 2013). Partnerships can also help attract funding. Grant foundations sometimes require partnerships in order to fund a specific type of program (McClendon, 2013). However, it is important to build long-term relationships with partner organizations because funding is not always guaranteed but a strong relationship can keep collaborations stable (Gutowski, 2012).

### **Programmatic Themes**

There is great variety among the highlighted programs but two major themes stand out in this research: community revitalization and youth education. Community revitalization programs show the public that the institution is invested in its health and improvement. These programs are often successful at reaching underrepresented audiences because they are held outside of the institution and within the comfort zone of community members. Still, they put the institutions on the community's radar. These programs open the door to conversations about the health and wellness benefits of public horticulture (Simmons, 2013). They create a forum for conversations about environmental issues and a context for experiential learning that is relevant and close

to home, while giving the community the tools to be proactive. Programs held out in the community have the added benefit of spreading community revitalization throughout the area. Once the landscape of one neighborhood has been renewed, those around it are influenced and often seek out the institution's resources (Simmons, 2013; Sapko, 2013).

Youth education is a common format to connect with underrepresented audiences. Partnering with one school or the local public school system allows public gardens to hook into an already established structure. Grant funding is often sought to provide transportation for students from Title One public schools, offering those students their programs at little or no cost and creating an incentive for school participation. Programs highlighted promote the benefit of regular exposure to public gardens and to STEAM (Science, Technology, Engineering, Art, and Math) education and can help create more diversity in the horticulture field (Benveniste, 2013). Public gardens can provide in depth learning opportunities for students. It is even more essential to connect youth to the environment in an age where most, especially in urban areas, are so detached from nature (BGCI, 2010). Their environmental education through programs offered by public gardens has the potential to shape their future priorities (Johnson, 2012).

Other theme areas of note are cultural connections, created through special events or workshops that highlighted a specific culture, and programming related to food. Though program themes vary, they all connect horticulture to issues that are of significance to program participants. Experiential learning is often utilized and most programs offer layers of engagement to give the public a variety of access points from which to connect. Finally, most programs do not stand in isolation but rather are

connected to other organizations, departments, or networks in the greater community, adding to their relevance.

### **Barriers to Engagement**

Gardens compete for audiences with other cultural institutions and activities. There is no current sense of urgency to visit public gardens and they have yet to become destinations of choice for the wider community. They need to stand apart in order to appeal to visitors and funders as well (Niehaus, 2013).

There is also a current disconnect with the natural world, which inhibits public gardens from appealing to a broader public (BGCI, 2010). Public gardens must adapt to better serve the needs of a broader audience and help them see the relevance of the environment in their daily lives. Public gardens have traditionally focused inward on their collections and do not have a long history of engaging a diverse public. Some public gardens are still uncomfortable with reaching outside of their historic audience base but that base is diminishing.

Lack of diversity among staff members and volunteers is a barrier that must be amended so the community can better identify with the institution (Sapko, 2013). The board of directors' diversity should also reflect a mixture of the surrounding society, but many board members are required to donate to the organization, which prohibits a wide section of the local public from getting involved (Tracy, 2013; Low, 1942). Boards can be slow to change, especially those with no term limits, and some members may not yet see the value of community engagement initiatives (Baker,

2013). Additionally, many staff members lack experience or comfort with community-based work so they do not consider the wider diverse community when creating programming (BGCI, 2010).

Understanding the range of barriers for the public is essential in order to overcome them. While they may differ at each institution, common barriers include lack of public transportation to the institution and prohibitive entrance fees. Once identified, public gardens can work to eliminate such obstacles. For example, Chicago Botanic Garden transports all students involved with their Science First and College First programs to and from the Garden each day to facilitate their participation and Atlanta Botanical Garden offers admission deals through online coupons to attract a wider demographic to its Cocktails in the Garden Event. Nevertheless, even those institutions that are accessible by public transit and free and open year round, struggle with attracting underrepresented audiences. The key lies in the relevancy of the organization and its offerings (Greater Philadelphia Cultural Alliance, 2009). Underrepresented audiences are those who do not yet see the value in visiting a public garden or participating in its programs, therefore communication with the greater public about how and why public gardens matter to them is essential. Also, awareness of the institution is not equivalent to feeling welcome there, so institutions must strive to be more inviting (Greater Philadelphia Cultural Alliance, 2009).

For the institution, staff-time and funding are the greatest impediments to successful community engagement. The two are intertwined since staff time is needed to continually secure funding; many institutions need more staff to support community engagement efforts (Schackai, 2013; Holmes, 2013, Phillips, 2013).

## **Funding**

Community engagement programs often do not directly create revenue so supporting funds must be raised. Research findings show a variety of funding methods. All programs are funded through one or more of the following: operational funds, personal donations, corporate sponsorship, and grant funding. The most stable format is a diversified funding model that includes a combination of two or more funding sources. This ensures that a program can likely continue even if it loses one income stream (Sokolofsky, 2012). Operational funds are often used to pay for staff time but do not usually cover the costs of community engagement program.

Personal donations can be a lucrative funding source because funders are about people and loyal patrons can often see the value in reaching a wider public (Phillips, 2013). Research indicated that grants are the most common funding source, but they usually cannot sustain engagement programs over time (Sandrick, 1995). Programs that are dependent upon grants for their longevity face a potential hiatus, which can hinder enthusiasm and support over the longer term. One-time grants can spur the creation of a program that has profound significance but the program can only be repeated with subsequent grants.

Funding is often program-specific. For example, humanities grants are sought when creating a program that connects the public with multicultural activities and the Forestry Service is often approached to fund tree plantings and maintenance training. The current model dictates that institutions seek different funding sources for each program. Thus, in order to develop long-term engagement, a new funding model would be helpful.

Partnerships can help secure funding in a more stabilized way. Collaborative efforts with like-minded organizations can offset many program costs and help with sustainability (Sandrick, 1995). Through partnerships, costs are shared and multiple goals are reached simultaneously. Good programs tend to bring in funding when their impact is clearly seen and expressed. For programs that lack significant assessments, this can be difficult to articulate (Schackai, 2013, Benveniste, 2013).

Interestingly, the institutional budget size neither hindered nor helped to create programs of social inclusion. Regardless of size, lack of funding was a consistent barrier. The one benefit of the larger institutions was a proportionately large development office to which the responsibility for fundraising and grant writing was often allocated, while staff at smaller institutions had to take on more of the development role in addition to their other duties. Nevertheless, the findings from this research suggest that all public gardens share similar challenges and need more funding to develop community engagement programs. The challenge still lies in articulating the necessity of engagement and demonstrating the connection between community engagement and the future of the organization. Without a broader audience, a public garden faces the loss of significance in its community, which can diminish funding avenues for the institution as a whole. Funding cannot continue to be program-specific; institutions must show that community engagement is part of the common agenda by financially facilitating engagement efforts. Though community engagement programs do not often bring in revenue, they create purpose and need for the organization in the community. Until community engagement is viewed as intrinsically tied to the organization and its mission, programs will struggle to find funding.

## **Benefits of Community Engagement**

Through increased community engagement, the institution can better articulate its purpose and function in its community to show its worth to governing bodies and potential funders (BGCI, 2010). When one organization is better able to serve its constituents, the entire community benefits (Litzky, 2009).

Engaging a wider audience about the importance of plants can help protect the future of the environment (Corner, 2012). Community engagement can add relevancy to plant collections by linking them to something contemporary and immediate (Corner, 2012). It can also improve public health and strengthen the community as a whole (Libman, 2007).

We are a diverse society and public gardens can become richer and more vibrant cultural institutions by connecting with new audiences (Baker, 2013). Public gardens have the potential to encourage dynamic community dialogue and help create a stronger community (AAM, 2002). Their efforts in environmental education can positively affect the landscape in areas of the United States where revitalization is needed most. Engaging the community can help gardens escape isolation and develop new ideas and approaches (BGCI, 2010). There are unused resources and potential advocates in the community who can help a public garden share its resources with the public in more meaningful ways. Working with the community can also uplift the morale of the entire staff (McClendon, 2013). Staff members and volunteers take



huge satisfaction in providing their resources to those who need them most and are proud of their institution's dedication to the community (Benveniste, 2013).

### **Looking Ahead**

Public gardens must shed their traditional skin and reinvent themselves as newly popular and relevant in the 21<sup>st</sup> century (Corner, 2012). The highlighted programs in this research illustrated the great variety of ways that public gardens can connect with underrepresented audiences, but there is still room for growth in the field.

### **Funding**

In order to create long-term success in engaging underrepresented audiences, the greatest barriers must be eliminated. Funding issues are preventing the expansion and sustainability of many engagement initiatives and alternative funding sources must be found. A shift in institutional outlook is required to create an environment where engagement is a part of every staff person's job and therefore funding for and efficacy of engagement becomes an institution-wide concern (Sokolofsky, 2013).

### **Assessments and Evaluations**

To better articulate the impact of community engagement efforts, public gardens must implement more program assessment, including evaluations completed by current and potential garden visitors, and more qualitative surveys. This is still an under-researched area in public gardens and is rarely done, even with longstanding

programs. Those programs that have collected data have been able to use their findings to gain financial support and help show the value of the program to the rest of the staff.

### Volunteers

Although not a primary focus of this research, the use of volunteers as key assets to community engagement arose in several interviews. Volunteers are community advocates for the institution and Tucson Botanical Garden and Cheyenne Botanic Gardens have found great success working with underrepresented audiences on their volunteer corps. A structured volunteering program can open the door to a wider net of potential audiences and build interest in and support for the institution (Smith, 2012, Niehaus, 2013). Likewise, it is beneficial for the institution if staff members are involved in other local organizations, thus strengthening the community connection.

### Branding and Interpretation

Many individuals who are currently underrepresented do not know what a public garden is and how it can be relevant to them (Well Resources, Inc., 2006). Public gardens must work to ascertain what role they can play in their communities and how they can best serve the public. Once that is established, an institution can better articulate its purpose to a broader audience (Corner, 2012). A clearly articulate vision can benefit the institution internally and it can orient stakeholders towards the need for community engagement and social inclusion, and create more consistent messaging. Engagement also goes beyond programs; public gardens must strive to be more inviting and format displays and collections in a more inclusive way. All aspects

of the public's access should be considered, including media, signage, and even plant labels. For example, Tucson Botanical Garden uses bilingual signage and Atlanta Botanical Garden aims to hire bilingual staff for admissions. These simple changes can make a difference in how welcoming the garden is to the public.

### Public Garden Priorities

Interestingly, while many of the current successful programs connect the public to horticulture, they do not often focus on the garden's collections or encourage garden visits outside of the specific program. The programs are separate from the rest of the institution's offerings. Community engagement at public gardens still needs to be clearly defined; research findings indicated the top five terms for its definition to be education, mission, relevance, connection, and local efforts. Public gardens must decide where collections, research, and other resources fit into engagement and where the future priorities will lie. For public gardens, social inclusion must be a long-term goal and occur in all aspects of the institution, in order to be successful.

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## Appendix A

### SURVEY RESEARCH

#### Exploratory Survey Questions

1. Does your organization have programs that take place “outside the garden walls,” defined as community outreach and engagement?
  - Yes
  - No
  - Not Sure
  
2. Does your organization plan on developing programming “outside of the garden walls?”
  - Yes
  - No
  - Not Sure
  
3. Please check all of the programs “beyond your garden gates” that might apply:
  - Community gardens
  - Pop-up gardens
  - Educational programs such as lectures or classes
  - Community “work days”
  - Street or neighborhood tree plantings
  - School classroom programs
  - University extension programs
  - Vacant lot plantings or cleanup
  - Other
  
4. Does your organization partner with any specific group to develop or support programming “outside of the garden walls?”
  - Yes
  - No

- Not Sure
5. Mark any partner that applies:
    - Schools (K-12)
    - Governmental organizations (local, regional, national,)
    - Local horticulture organizations
    - Local housing or community organizations
    - Other
  
  6. Have you seen a measured increase in visitation to your organization as a result of this programming “outside of the garden walls?”
    - Yes
    - No
    - Not Sure
  
  7. How do you currently assess the program(s)? Check any that apply
    - Online survey
    - Mail-in survey
    - Interviews (personal, phone, etc.)
    - There are no current assessments
  
  8. How do you quantify the success of your program(s)?
    - Fulfillment of mission and vision
    - Growth in program attendance
    - Increased visitation to your organization
    - Other
  
  9. How are new program ideas generated?
    - By the organization
    - By the public
    - Both
    - Not Sure
  
  10. Do your programs become financially self-sufficient (with at most minor support from your organization)?
    - Yes

- No
- Not Sure

11. If yes, please describe briefly:

12. What was the impetus for developing a program “outside of your garden walls?”

13. What type of research would help your program’s effectiveness “beyond the garden walls?”

- Program impact assessment
- Examining the role of volunteers
- Examining how programs “outside of the garden walls” promote social inclusion
- Other

14. Your Name

15. Your Organization

16. Your Position

17. If you or your organization is willing to participate in an interview, please write your contact information below:

### **Final Survey Questions**

1. Which of the following terms or characteristics do you think important to include in a definition of community engagement at public gardens? Please select 5 terms only

- Mission
- Equality
- Social inclusion
- Cultural connections
- Socioeconomic factors
- Local efforts
- Environmental justice
- Diversity
- Relevance

- Connection
- Education
- Conservation
- Biodiversity

2. Please list any terms missing from the list above that you think belong in a definition of community engagement at public gardens

3. How does your institution currently determine the demographics of its visitors?  
Check all that apply

- Membership surveys
- General visitor surveys
- Focus groups
- U.S. Census data
- Internally conducted marketing research
- Other

4. Is your current audience representative of the diversity you would like to reach?

- Strongly disagree
- Disagree
- Not sure
- Agree
- Strongly agree

5. Does your institution's target audience reflect the demographics (gender, age, race, ethnicity, physical ability, income status) of your greater community?

- Strongly disagree
- Disagree
- Not sure
- Agree
- Strongly agree

6. Is it an institutional priority that the demographics in your greater community be represented in your target audience?

- Strongly disagree
- Disagree
- Not sure

- Agree
- Strongly agree

7. Are you actively targeting demographic groups in your community who do not visit regularly?

- No
- Not sure
- Yes

8. How does your institution attract a more diverse demographic?

- Send outreach staff into targeted demographics
- Participate in or co-host events created by specific cultural organizations
- Hold special events that focus on audiences with underrepresented demographics
- Create or host exhibits that focus on audiences with underrepresented demographics
- Encourage recruitment of volunteers who possess underrepresented demographic characteristics
- Use consultants such as social anthropologists or sociologists to assist in reaching new audiences
- There are no strategies in place to accomplish this
- Other

9. Please assess your institution's obstacles to attracting audiences with underrepresented demographics

Strongly disagree      disagree      not sure      agree      strongly agree

- Lack of public transportation to your institution
- Visitor fees
- Language barrier
- Lack of relevant programming
- Lack of funding for new programming
- Minimal effective partnerships with underrepresented demographics
- Lack of institutional commitment to reaching new demographics
- Other

10. Please assess the benefits of attracting audiences to your institution who have underrepresented demographics

Strongly disagree      disagree      not sure      agree      strongly agree

- Fulfillment of mission
- Increased public awareness of institution
- Increased staff morale and connection to community
- Spreading messages of the institution to a wider audience
- Sense of improving local community by creating a change in public action
- Creation of new partnerships
- Other

11. Identify the top three common themes or topic areas your institution uses to connect with audiences with underrepresented demographics

12. Does your institution provide operating funds and resources to reach audiences with underrepresented demographics?

- Strongly disagree
- Disagree
- Not sure
- Agree
- Strongly agree

13. What supplementary funding does your institution use to fund programs aimed at reaching underrepresented audiences?

- Federal grants
- Private grants
- Private donations
- Private endowments
- Other

14. If your institution currently partners with an organization to assist with funding efforts to attract underrepresented audiences, please list the top 3:

## Appendix B

### EXPLORATORY SURVEY RESULTS

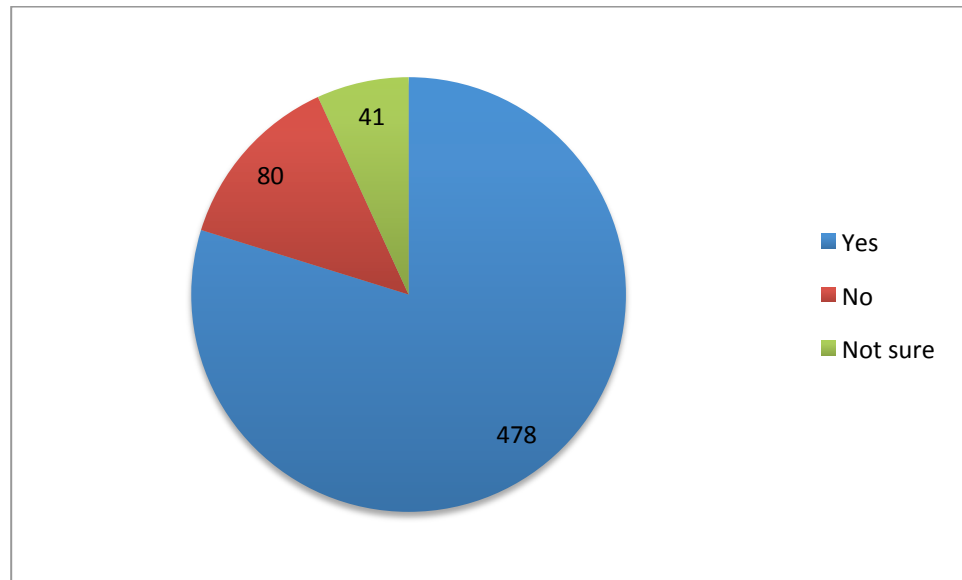


Figure B.1 Does your organization have programs that take place outside the garden walls," defined as community outreach and engagement (N=599)?



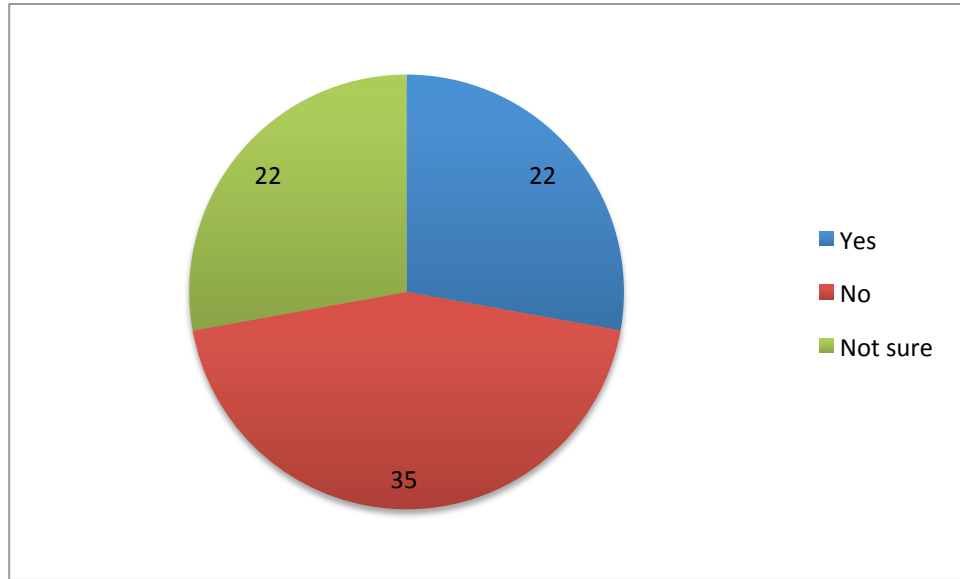


Figure B.2 If no, does your organization plan on developing programming "outside of the garden walls" (N=79)?

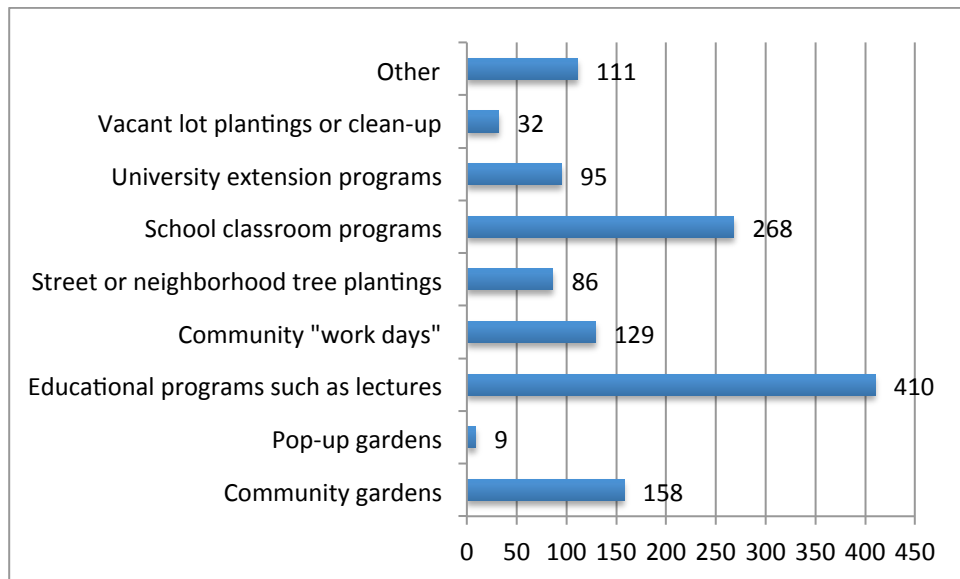


Figure B.3 Please check all of the programs "beyond your garden gates" that might apply (N=467).

Restoration (6)  
Design consulting  
Scout Programs  
Community Trees Program  
Arts projects  
Master Gardener remote plant clinics  
Garden fairs and festivals, Earth Day events (9)  
Economic Development ventures  
Horticulture therapy programs (6)  
Grow food for local food bank  
Summer camp (2)  
Guided tours at the garden or at private homes (6)  
Meetings with community groups  
Hospital Environmental Education Program  
Teacher professional development  
Programs at hotels  
Urban Outreach Children's Gardens, and Urban Garden Youth Employment  
School gardens (5)  
School partnerships  
Field trips to other locations (4)  
Rare species monitoring and invasive species control  
Grant writing and administration for storm water mitigation  
Attend annual garden expo  
Plant sales (2)  
Sherriff's Boot Camp  
Green streetscapes in public ROW  
Storm water mitigation installations that combine landscaping and engineering solutions  
Leading regional coalitions to work on various topics including urban agriculture and other environmental issues, governmental advocacy,  
Food health  
Plantings in schools, hospitals & other public places  
Special community outreach events for adults and children  
Research programs  
Walks / classes on conservation properties  
Land preservation  
Water matters day, orange blossom festival and others  
Invasive removal  
Art events  
Website q&a with the experts  
Nature hikes  
400 volunteers doing rare plant surveys  
Distance learning program

We do many programs with other organizations as well as staff sitting on community boards  
 Native plant plantings and monitor populations of endangered plants (2)  
 Farmers Markets (4)  
 Science cafe  
 Community Events  
 Garden Contest  
 Public landscaping and parks programs  
 Workshops and lectures (2)  
 Hands-on demos  
 Public landscape enhancements  
 Citizen science (2)  
 Engage outside groups with on-site programs  
 Interpretive walks on other conservation properties, or town street trees.  
 Community programs such as TED X, Science Day, Farm Day, etc.  
 Camellia clubs nationwide  
 Guest speakers to organizations, civic leagues, etc.  
 Offsite program partnerships with other organizations  
 Invasive species program  
 Partnering with community service organizations of all types to support greening projects throughout Brooklyn  
 Native Garden Contest/Installation  
 Professional Landscaping Workshops  
 Plant show appearances  
 Community recycling drop-off  
 Youth trade shows  
 Eagle cam that shares information with an international audience  
 Volunteer seed collections  
 Outreach Arborists, Consulting Botanists  
 \$20,000 of passes, rentals to United Way affiliates and other non-profits  
 Front yard makeovers (2)  
 Prison programs (2)  
 Partner with job training program for ex-offenders  
 High school After School Programs

Figure B.4 Please check all of the programs “beyond your garden gates” that might apply: Other (N=100)

**Figure B.5 Does your organization partner with any specific group to develop or support programming "outside of the garden walls" (N=470)?**

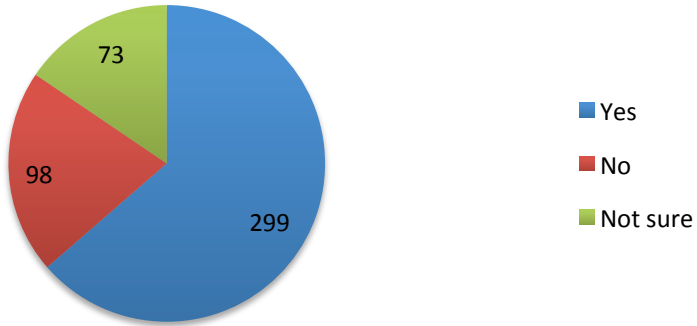


Figure B.5 Does your organization partner with any specific group to develop or support programming "outside of the garden walls" (N=470)?

**Figure B.6 Mark any partner that applies N=267**

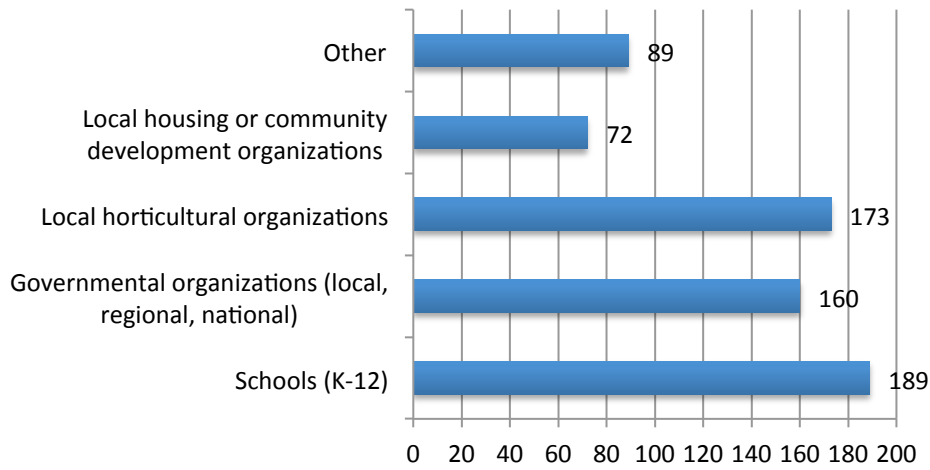


Figure B.6 Mark any partner that applies N=267

Universities and Colleges (17)  
Cultural orgs  
Friends groups (2)  
Individuals statewide  
Other non profits (6)  
Small Businesses (2)  
Corporate funding (3)  
Community organizations  
Hotels and other cultural institutions  
Veterans  
Local conservancy  
Local youth serving organization  
Faith community organizations  
Local cultural consortium  
Special needs programs  
Neighborhood group  
Organic farmers market  
Orphanage  
Health organization  
Rotary, Kiwanis, etc.  
Alumni associations  
Civic organizations, governmental agencies, etc.  
APGA  
Local stores with diverse audiences, i.e. a children's toy store, to do a traveling  
carnival or kids show  
Neighborhood Organizations  
Extension  
The Garden Conservancy  
Fundraising Arm of the institution  
Museum  
Slow food  
Agricultural society  
Libraries  
Land trust  
Botany in Action  
Hospitals  
Audubon Society (2)  
Watershed organizations (2)  
Garden Clubs of Georgia  
Environmental nonprofits  
Science museums (2)  
Scientific organizations  
Bronx Land Trust

Civic Associations  
 Non-Government organizations (3)  
 Clothing company  
 Food pantry (2)  
 Social service organizations  
 YMCA, Girl Scouts  
 Town music festival  
 Local land conservation organizations  
 Chamber of commerce  
 Individual donor with outreach specific mission  
 Children's discovery center  
 Master gardeners  
 Informal science organizations  
 Arts and nature organizations  
 farmer's markets  
 Food justice organizations  
 Landscape architecture  
 Facility managers  
 Engineering organizations  
 The Food Trust  
 Prisons  
 Boys & Girls Club  
 Science curriculum providers  
 Local festivals  
 Reading organizations  
 General public  
 Regional horticulture organizations  
 Conservation groups  
 Garden clubs  
 Community organizations  
 Neighborhood community councils  
 Chester County Food Bank  
 Local Whole Foods  
 Foundation funders  
 Private donations  
 Medical/hospitals  
 Produce market  
 Humane society

Figure B.7 Mark any partner that applies: Other (N=89).

**Figure B.8 Have you seen a measured increase in visitation to your organization as a result of this programming "outside of the garden walls" (N=409)?**

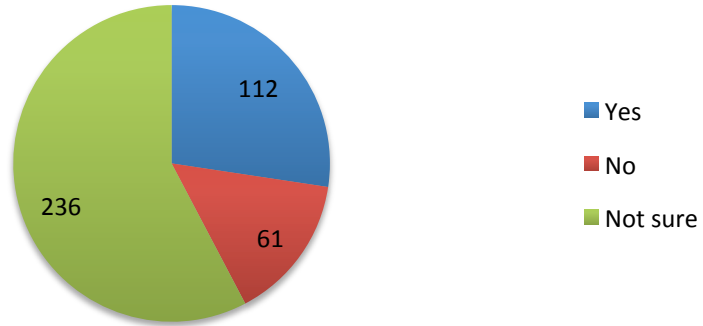


Figure B.8 Have you seen a measured increase in visitation to your organization as a result of this programming "outside of the garden walls" (N=409)?

**Figure B.9 How do you currently assess the program(s)? Check any that apply (N=372)**

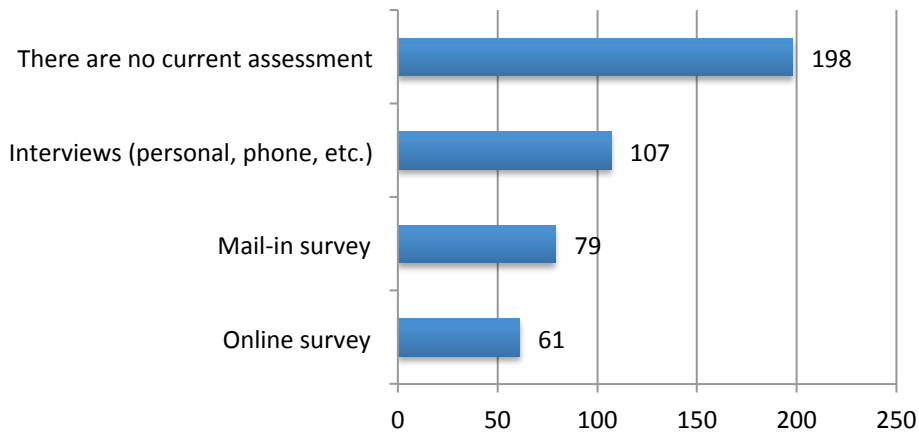


Figure B.9 How do you currently assess the program(s)? Check any that apply (N=372).

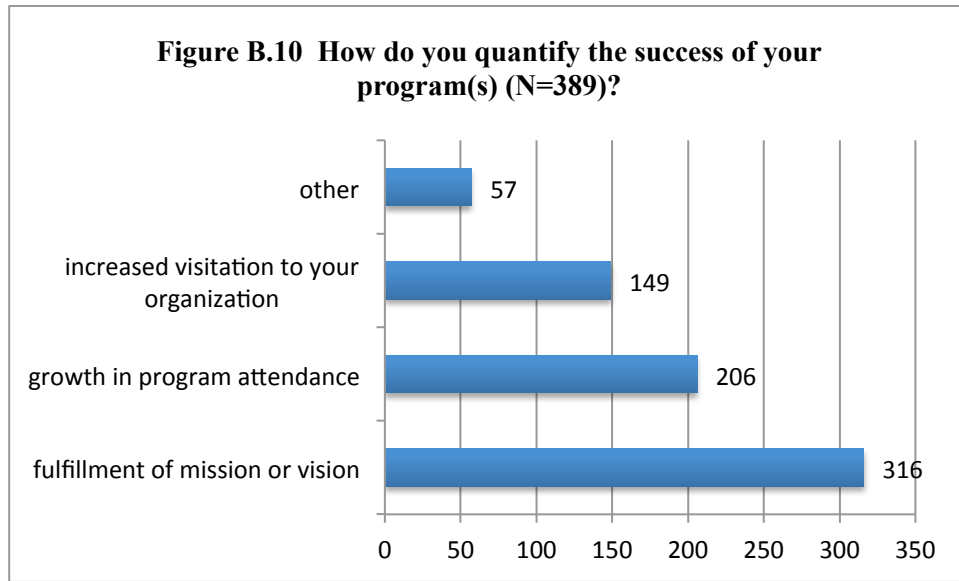


Figure B.10 How do you quantify the success of your program(s) (N=389)?

- Growth in membership (3)
- Engagement with other audiences (diversity)
- Continued interest and requests for programs
- Project goals complete
- Impact on botany/horticulture comprehension
- Change in attitude about plants and plant conservation
- Increased attendance (3)
- Revenue (8)
- Staff evaluations
- Conservation of rare native flora
- Number of gardens created, number of pounds of food donated to the food bank
- Increased e-news reach
- Positive/negative feedback (5)
- Change in conservation behavior
- Participant Evaluations
- Number/nature of enquiries relating to program
- Increased visibility as a leader in the field of horticulture
- Funding of scholarships for horticulture students
- Pre- and post-program evaluations (4)
- Partners are happy (2)
- Neighborhood buzz and recognition of organization
- Positive impact on the community
- Workshop evaluations



Increased visibility to university administration  
 Changes in observed and/vs. reported teacher science inquiry practices and science content scores  
 We have no assessment system in place (2)  
 Increase in number of gardens practicing sustainable horticulture techniques  
 Increased awareness in the community (2)  
 Measuring what the youth have learned  
 Number of kids doing activities  
 Increase in standardized testing scores in student assessment  
 Increased participation in volunteer program  
 Number of trees planted

Figure B.11 How do you quantify the success of your program(s): Other (N=57).

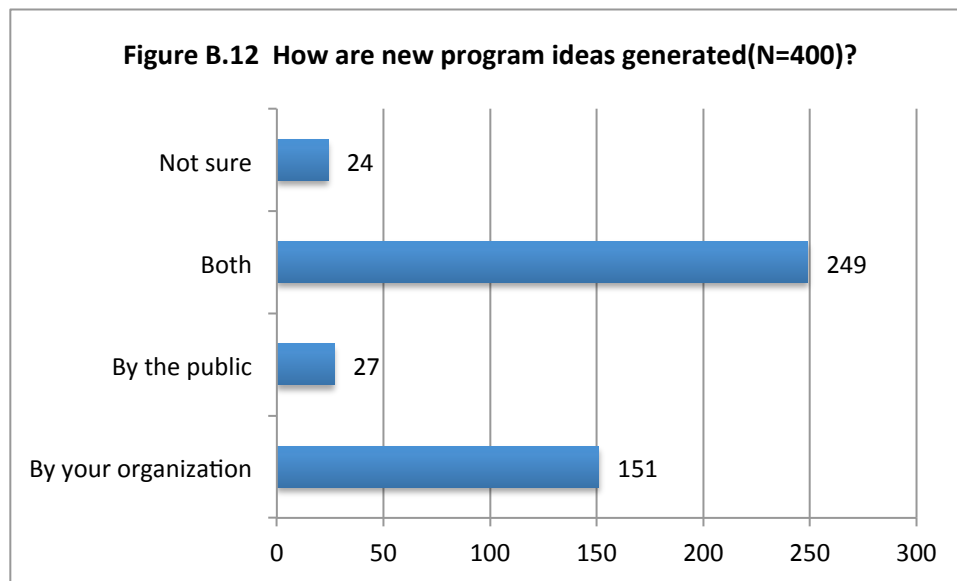


Figure B.12 How are new program ideas generated(N=400)?

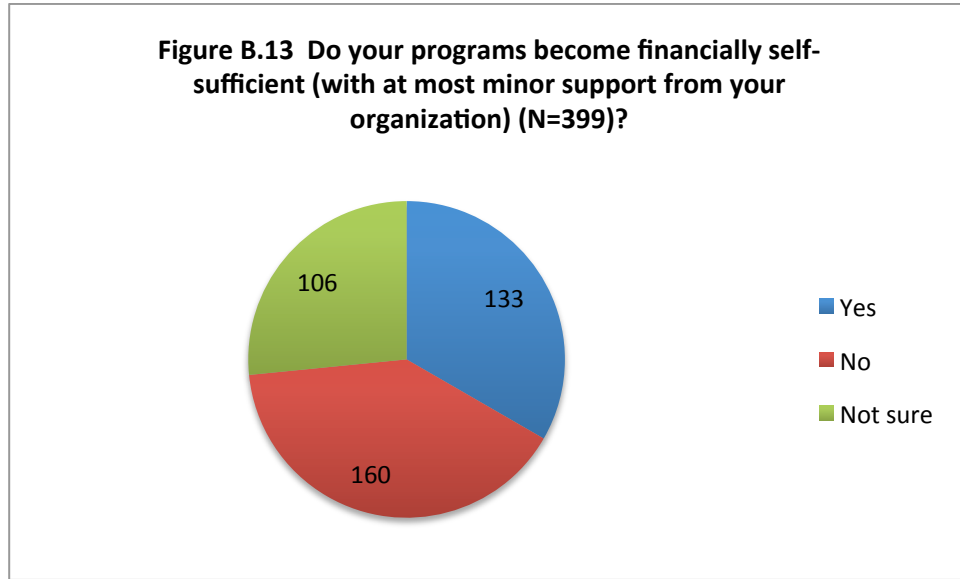


Figure B.13 Do your programs become financially self-sufficient (with at most minor support from your organization) (N=399)?

- Many of these programs are partially supported by grants (14)
- Program revenue covers cost (30)
- University support
- Raised funds and donations (9)
- Partnerships cover certain costs (3)
- State support
- Corporate sponsors
- Children's programs are subsidized
- Programs generate income (2)
- There are no expenses incurred (4)
- Once established, programs continue without support from institution (aided by cultivating community leadership) (3)
- We don't look to cover our expenses for each class, but for all classes overall for the entire year.
- Usually takes a few years to build numbers
- This is always the goal. If a program can't demonstrate this, it is cut. Consequently, we invest in trial efforts a great deal.
- Tax support
- Use of volunteers or donated staff time (10)

Figure B.14 Do your programs become financially self-sufficient (with at most minor support from your organization)? If yes, please describe briefly: (N=75).

Spreading awareness of healthy eating and growing vegetables (3)  
 Better serve audiences we already engage  
 Responsibility for the people living in the community that borders our institution (7)  
 Promotion of the historical landscape and campus grounds  
 A membership "thank you" and outreach  
 Fulfilling the mission (25)  
 Community relations (5)  
 Increased visibility and presence in the community (16)  
 Reach new, broad, diverse audiences (8)  
 Increase program participation (3)  
 Increased revenue and development opportunities (5)  
 To create greener, healthier and more beautiful communities (3)  
 It's the right thing to do  
 To expand our community outreach (6)  
 The community asked for it (5)  
 To generate enthusiasm for the Gardens  
 To cover transportation issues for schools (4)  
 To reach people that can not come here because of geography or economics (4)  
 To provide a pre-trip visit to prepare school groups for an onsite session  
 People learn better in spaces that are important to them (not on brief visits to our spaces)  
 Community awareness and involvement (2)  
 The interest in partnering with schools to help promote connection to place  
 Help special needs groups  
 Public awareness of the plight of endangered native flora  
 To become vital to the community=support  
 Long winters / arboretum closed  
 Creating more energy and knowledge about the arboretum, leveraging for support, being seen as a community resource (2)  
 Build closer relationships with disadvantaged communities  
 Train at risk youth to grow veggies commercially  
 Increase visitation (2)  
 Sharing our intellectual capital with others in the industry  
 Storm water impacts  
 Education (2)  
 New partnerships (2)  
 Increased membership  
 Assist us in stewardship of our gardens, especially in these tight budgetary times.  
 Need to think outside the box for sustainable programming and operations  
 Mainly as a part of grant-funded conservation projects

Engaging community; increasing relevance of organization; improving community understanding/motivation in environment

Figure B.15 What was the impetus for developing a program “outside of your garden’s walls” (N=278)?

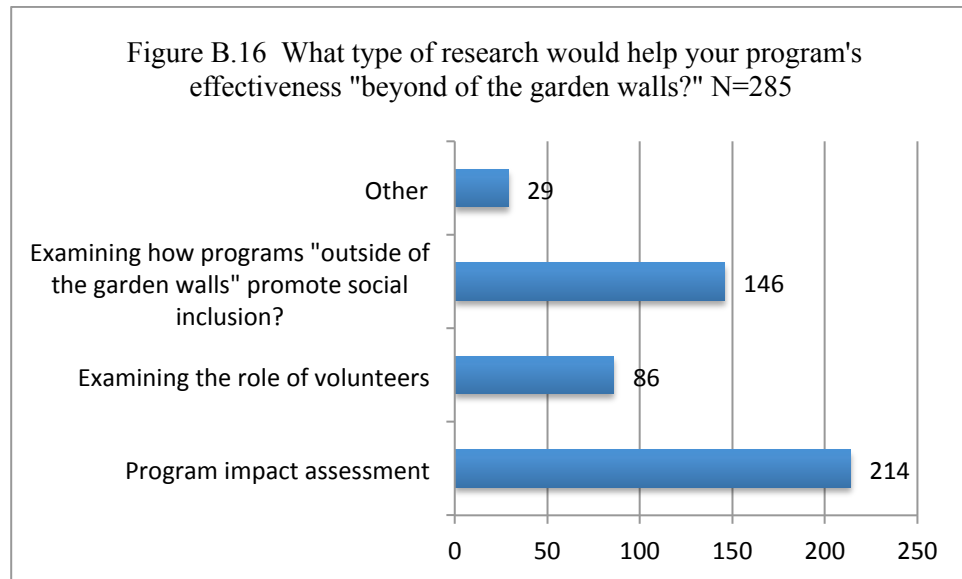


Figure B.16 What type of research would help your program's effectiveness "beyond of the garden walls?" N=285

Financial support

Each program is different--each program could use different research. Overall: demographics, marketing, brand impression, education, outreach, audience change, environmental improvement, community change, new opportunities, legal and legislative impacts

Identify messages that best promote biodiversity conservation

Focus groups

How to make outreach self-sustaining

Better understanding what motivates people to support our programs financially or become members of the organization

What types of partners work best, how much do other gardens invest in these programs?

Program specific content-related research  
Examining cost vs. benefits  
Have lots more natural areas to explore!  
Successful models  
Impact on garden visitation (2)  
Attracting New Members  
Awareness by general public as to our organization's offerings and mission  
Examining other organizations' offerings  
Long term planning goals  
Pre-and post-testing of students  
Citizen science, environmental activism in young citizens,  
Community needs

Figure B.17 What type of research would help your program's effectiveness "beyond the garden walls?" Other (N=29).

# Appendix C

## IRB LETTER



RESEARCH OFFICE

210 Hullen Hall  
University of Delaware  
Newark, Delaware 19716-1551  
Ph: 302/831-2136  
Fax: 302/831-2828

DATE: December 7, 2012

TO: Sara Levin  
FROM: University of Delaware IRB

STUDY TITLE: [292847-2] Gardening Beyond the Gates FINAL

SUBMISSION TYPE: Continuing Review/Progress Report

ACTION: DETERMINATION OF EXEMPT STATUS  
DECISION DATE: December 7, 2012

REVIEW CATEGORY: Exemption category # 2

Thank you for your submission of Continuing Review/Progress Report materials for this research study. The University of Delaware IRB has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

We will put a copy of this correspondence on file in our office. Please remember to notify us if you make any substantial changes to the project.

If you have any questions, please contact Jody-Lynn Berg at (302) 831-1119 or [jlberg@udel.edu](mailto:jlberg@udel.edu). Please include your study title and reference number in all correspondence with this office.