

Promoting Education through Action for Conservation of Habitats

Final Evaluation Report

Project: Promoting Education through Action for Conservation of Habitats

EPA #NE00A00338

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Executive Summary

Promoting Education through Action for Conservation of Habitats (PEACH) seeks to increase awareness of environmental issues and knowledge about local habitats among Boston-area volunteers, and develop skills for making informed environmental decisions. With support from the Environmental Protection Agency, PEACH brings together New England Aquarium, National Parks of Boston, Emerald Necklace Conservancy, Trustees of Reservations, Massachusetts Audubon and Speak for the Trees Boston to provide resources, collaborate, and build capacity in each of the project partners. This report presents the results of the two years of evaluation activities.

The Year 1 evaluation showed that project partners felt their volunteers had gained skills in responding to local conservation issues. Partners found the collaboration with project partners and other organizations to be a highly valuable outcome of PEACH, helping them to expand their capacity, further their mission, and solidify PEACH's specific outcomes. In Year 2, partners highlighted opportunities for collaboration and connection as crucial to the success of their organizational missions. In Year 2, partners collectively identified strategies for expanding and diversifying their volunteer base, and shifted the focus of volunteer training from specialized to more generalized skill development.

INTRODUCTION

Promoting Education through Action for Conservation of Habitats (PEACH) is a project led by the New England Aquarium (NEAq), in collaboration with five local environmental organizations – National Parks of Boston, Emerald Necklace Conservancy, Trustees of Reservations, Massachusetts Audubon and Speak for the Trees Boston (who joined in Year 2). PEACH seeks to increase awareness of environmental issues among Boston-area volunteers, increase knowledge about local habitats, and develop skills for making informed environmental decisions. With support from the Environmental Protection Agency (Grant #NE00A00338) PEACH provides training opportunities through organizational partnerships focusing on field-based habitat restoration opportunities and education for the public. The project also aims to build capacity in each of the organizational partners, including supporting and preparing volunteers to engage in citizen science efforts and deepening the collaboration among their partners.

Knology (formerly NewKnowledge) a long-time collaborator with NEAq, is the evaluation partner on the two-year PEACH project to assess program impacts on volunteers and staff at partnering organizations.

For volunteers, Knology is assessing their:

- Knowledge of specific habitats and their connections to local environmental issues;
- Perceived self-efficacy as community change agents to support local habitat restoration projects; and
- Sense of community in a group that's committed to local environmental issues

For partner organization staff, Knology is assessing their:

- Perceived value added for programs, including new skills, knowledge, and resources, and
- Collaborative capacity to engage residents in restoration efforts.

METHODS

To address the evaluation objectives of the PEACH project, Knology asked partner organization staff to complete quarterly journals, and volunteers to fill out a survey.

Instruments

Staff Journals

Staff at partner organizations were asked to participate in quarterly journaling exercises to reflect on their experiences throughout the project (Appendix A). The purpose of this activity was for partners to continually self-reflect on the value of the PEACH project, their needs, their successes, and their challenges, in order to understand how the program can grow and become more effective.

Journal prompts sought to assess the outcome of perceived value added for programs (including new skills, knowledge, and resources). Staff were asked to reflect on the various ways PEACH was enhancing their volunteer programs. The journals included prompts about skill building, awareness of new resources, techniques, and projects relevant to their work. To assess the collaborative capacity of programs to engage residents in restoration efforts, staff were asked to comment on perceived successes and challenges in implementing the project and their future aspirations for PEACH. We also encouraged staff to consider suggestions to improve the PEACH model for volunteer-based local restoration efforts.

In Year 1, we collected journals for Quarters 2, 3, and 4 of the project. We also collected responses from all five participating organizations for Quarters 2 and 3, and all but one organization for Quarter 4. Due to timing and delays in contract signing, we did not collect journals from Quarter 1.

In Year 2, we collected journals for all four quarters. Five participating organizations provided responses for the first and last quarter. We received responses from four organizations in Quarter 2, and three organizations in Quarter 3.

Volunteer Surveys

In Year 1, we intended to develop a pre-program survey to assess volunteers' knowledge of habitats and connections to environmental issues, along with their perceived self-efficacy

as community change agents to support local habitat restoration projects. Due to difficulties in data collection, we did not complete pre-program survey data collection in Year 1.

Due to programmatic developments, Knology and the leadership team decided to revise the instrument prior to using it with new volunteers in Year 2. These modified questions asked volunteers more generally about their learning experiences, as opposed to specific questions about knowledge acquired from the individual workshops or trainings they attended. The survey explored three main themes (Appendix B):

- Their understanding of relevant topics in their communities, as well as their knowledge of how to address these topics in their communities as an indicator of preparedness for undertaking restoration in their areas;
- Their attitudes and perceived efficacy in undertaking local habitat restoration work, including their personal beliefs about capacity to engage with their communities; and
- How they feel about being a part of a group unified by interest in local environmental topics, including questions about how individuals define the group, perceive a close emotional connection with it, identify with it, believe in collaborating for success, and envision a legacy for future members of the group.

In this report, we share combined responses from Years 1 and 2 for questions that were asked in both iterations of the survey. We do not report on responses to questions that were removed from the first iteration of the survey.

Participants

Staff Journals

Project partners invited staff at their organizations to participate in the journal evaluation activity. Throughout both years, two staff members from New England Aquarium completed the exercise, along with one staff member each from National Parks of Boston, Emerald Necklace Conservancy, Trustees of Reservations, and MA Audubon. Speak for the Trees Boston staff began responding to journal prompts in Quarter 3 of the second year of the project.

In Year 1, we received six responses each in both the second and third quarter, and five responses in the fourth quarter. In Year 2, we received six responses in both the first and fourth quarter, and four responses in the second and third quarter.

Volunteer Surveys

A total of 26 participants responded to the surveys. For the first iteration of the survey, we collected data from July to September 2018, and received 15 completed responses from volunteers. For revised version of the survey, we collected data from May through July 2019, and received 11 completed responses from volunteers. Subsequent reporting shares combined *n*'s where applicable.

Of the 26 total respondents, 20 identified as White/Caucasian, 1 as Hispanic/Latinx, and 2 as Asian (the remainder did not report their race/ethnicity). Volunteers ranged from individuals in their teens to their seventies, with most volunteers under the age of 40.

Table 1. Age distribution of volunteers.

Year Born	n
1940-1949	1
1950-1959	1
1960-1969	2
1970-1979	3
1980-1989	8
1990-2000	8

*Note. The survey was not distributed to minors.

In the first survey, most participants had begun volunteering with PEACH within two and eight months of taking the survey. In the second survey, all but one of the participants had begun their involvement with PEACH in the same month they took the survey. Many of the participants had previous experience volunteering with other organizations involved in the project (Table 2).

Table 2. Past volunteer experience.

Organization	n
Emerald Necklace Conservancy	6
Massachusetts Audubon Society	11
New England Aquarium	12
National Parks of Boston	6
Trustees of Reservations	7
DCR North Region*	2
None	5
Other**	5

*Only asked in first iteration of survey

** 'Other' responses included NH Audubon, Brookline Conservation Commission, The Arnold Arboretum, The Nature Conservancy, The Boston Area Rape Crisis Center

Analysis

Staff Journals

A Knology researcher organized all qualitative data from staff journals into a framework in order to identify consistent themes across each question. This approach allowed us to identify the specific ways that PEACH added value to staff's programming, and to what extent collaboration is happening over time. Due to the limited amount of data, we report findings by themes that emerged across journals overall, rather than reporting on statistics (e.g., frequencies and percentages).

Volunteer Surveys

This report presents the frequencies of responses for rating items and coded themes from the descriptive responses to open-ended items where applicable. Responses from both versions of the survey were combined for reporting. SD, D, N, A, and SA, respectively mean Strongly Disagree, Disagree, Neutral, Agree, and Strongly Agree and *n* denotes the number of respondents or responses. Percentages are not shared because using percentages for a small sample size such as this would be misleading for the interpretation of the results.

RESULTS

Knowledge

Staff Journals

Through journaling exercises in Year 1, participants generally agreed that PEACH has helped support their organizations' missions. Both staff and volunteers acquired knowledge that benefitted their programs' objectives of environmental stewardship such as how to teach people about local environmental issues, knowledge of local flora and fauna, and native seed gathering. Participants also said they gained a more general understanding of the mission of the project and collaborative conservation work.

Staff appreciated PEACH's encouragement and consideration of their organizations' existing paradigms for volunteering. Additionally, they appreciated PEACH's support for their efforts to provide experiences for local residents to engage more with their local area, as well as to help non-residents learn about and work in a new setting. Journals also exposed that in the future, participants anticipated benefitting from learning how to determine best ways to get volunteers involved.

In Year 2, partners felt that the volunteer corps had a better understanding of the ecosystems that they were working in, and had learned more about various environmental science topics such as tree identification and shorebird monitoring. They reported that volunteers were excited to be involved in projects and to learn more about environmental issues. "PEACH did a great job reaching out to volunteers to get them in the room and teach them about our mission, values, and goals." Moving forward, the partners expressed interested in additional field opportunities and service projects that would help their volunteers learn more about habitat restoration. They also planned to continue developing focused trainings and workshops.

Volunteer Surveys

The survey asked volunteers to share the workshops that they had attended through the PEACH project. The majority attended workshops on bird habitats (Table 3).

Table 3. Workshops and classes attended.

Event	2018	2019
Bird habitats	14	3
Invasive species	6	8
Native plant species	3	1
Citizen science	NA	3
Other	1	1

In addition to being asked about their experiences with the trainings and workshops, they were asked to reflection their learning as a volunteer overall. Volunteers almost unanimously agreed that this positive learning experience taught them about their local ecosystem and how to care for their local habitat (Table 4).

Table 4. Knowledge of habitats and connections to environmental issues.

Item	SD	D	N	A	SA
I have learned new information about Boston's local ecology	0	0	0	4	7
I am more aware about how people impact Boston's local ecology*.	0	1	2	14	9
I have gained science knowledge related to Boston's local ecology.	0	1	0	3	7
I have developed new skills to help residents take care of Boston's habitats.*	1	1	2	14	8
I have developed new skills to share information about Boston's habitats with Boston residents.	1	0	1	3	6

*Note. Includes survey data from 2018

Skills and Self Efficacy

Staff Journals

In Year 1, participants described skills they had acquired from their engagement with PEACH, along with skills they hoped to acquire through future involvement. Participants felt that PEACH led to more diverse workshops and trainings for volunteers. They expressed hope that these trainings would continue in the future, helping to make volunteers into educational leaders for their local environment.

Some participants in Year 1, however, felt the project had not been as successful as it could be regarding skill

development, due to training volunteers on one specific initiative (i.e., local species), limiting their involvement with PEACH overall. Along those lines, another participant mentioned that the skills needed by volunteers varies between projects and requested trainings that teach general skills useful for volunteers on all projects to help create a volunteer platform that could be ready to switch over to any project quickly.

After going through the first year of the project, participants shared that in the future they could also benefit from the development of a system that supports volunteer orientations, trainings, recruitment, data-collection, and feedback collection that operates on a more regular schedule.

Partners observed skill development in volunteers throughout Year 2. Most notably, they saw volunteers learned what it means to be a good volunteer, and felt that the skill level and excitement of the group was one of the most valuable aspects of the project overall.

In Year 2, partners noticed leadership skills developing in their volunteers and felt that dedicated volunteers could start to take on leadership roles in the group. One partner shared that one of their more seasoned volunteers had been attending new volunteer trainings to “make connections between more experienced and incoming volunteers”. Partners continually expressed the hope that volunteers would take on more of a leadership role in projects, such as at events, and in creating curriculum and programming.

Partners also brought attention to other specific skills volunteers developed, such as mapping, climate

communication, volunteer management, shorebird identification, invasive plant clearing, and trail maintenance and safety. Partners hoped for additional training on education techniques, and communication best practices to continue to build these skills in their volunteers.

spaces, in-person training, training materials, and new service opportunities. Staff named projects they perceived to be especially effective resulting from PEACH resources (e.g., the Bluebird Nest Project, Coastal Waterbird Program.)

Table 5. Self-efficacy as community change agents.

Item	SD	D	N	A	SA
I will be able to make a meaningful contribution by engaging in habitat restoration actions to improve habitats in my region.*	0	0	4	12	9
I am confident that, through habitat restoration, I can help in promoting social justice.*	1	0	9	9	7
I am confident that, through habitat restoration, I can meet new people and build new friendships.*	0	2	3	8	13
I am confident that I can help individuals in need by participating in habitat restoration activities.*	0	0	8	12	6
Through engaging with habitat restoration projects, I can apply knowledge in ways that solve "real-life" problems.*	0	1	6	10	9
I am confident that I will participate in habitat restoration efforts in the future*	0	0	2	9	15

*Note. Includes survey data from 2018

Volunteer Survey

Volunteers reported positive perceptions of their ability to make a difference in their communities (Table 5). Most felt confident that they would continue participating in habitat restoration efforts in the future after their experience with the program, but they also felt very strongly about making connections with new people and building friendships with others in their community through habitat restoration.

Volunteers felt that they were making a positive impact by improving habitats in their community, and felt that what they learned through these projects could be applied in a more general way to solve "real life problems". Volunteers felt less confident about promoting social justice and helping people in need through habitat restoration.

Resources

In Year 1, staff journals expressed that having a larger and more diverse volunteer base and forming relationships with other organizations as a result of the project were the two most valuable resources they obtained. Other frequently mentioned resources resulting from PEACH included meeting

Staff could identify various benefits of new resources. For example, partner organizations' had greater access to a larger volunteer base which encouraged them to improve their project management practices. Another shared that PEACH's support allowed them to hire a project assistant, increasing the capacity of events, recruitment, and meetings.

In Year 1, some partner organizations felt that they were limited in their ability to bring the project to fruition beyond recruiting a few new long-term volunteers. Regardless of the numbers of volunteers they recruited, multiple staff highlighted the positive impact that a specific energetic, highly motivated, personable volunteer can have.

By Year 2, partners felt that they could offer volunteers resources they were not previously available to them, including trainings, tools and support. At this point, partners felt that volunteers had many diverse opportunities to get involved, and that engagement was more accessible as a result of the portal which made communications easier. Some partners hired more field staff to develop strategies for volunteer engagement and to solidify partnerships with other organizations. One organization in particular hired a

volunteer leader to bring additional knowledge and skills to volunteers. Partners also came up with ideas about additional resources that could best support training for their volunteers, such as more training and educational opportunities in general. Some had more specific ideas such as building a framework for a successful and accessible leadership program, and specific topics they wanted to focus on (ie. shorebird training and pollinator training).

Collaboration and Sense of Community

Staff Journals

At the end of the first year of the PEACH project, the benefits of collaboration were made clear by participants through all three quarters of journal responses, with many highlighting collaboration itself as the greatest benefit of PEACH. We found something unexpected in the way staff referred to the partnership between the organizations. In their journal entries, they indicated their gratitude for the “community of practice” that PEACH embodies. This term refers to a

volunteer base, new locations for projects, and greater dissemination of the principles of PEACH and partner organizations.

Throughout Year 1, staff expressed hope that increasing collaboration between organizations would enable greater volunteer engagement and recruitment. We also heard that collaboration can help get projects off the ground more quickly. However, collaboration between volunteer groups isn’t always a seamless transition. We heard that sometimes it can be challenging getting long-term volunteers from other organizations involved with PEACH. Journal responses offered the suggestion that providing an overall introductory volunteer training about PEACH could remedy this obstacle. A suggested strategy for collaboration included holding joint trainings to better understand the various needs of different organizations.

Responses contained in staff journals from Year 2 of the project showed that partners hoped for more collaboration, to create new partnerships, and strengthen existing ones. They

Table 6. Perceived sense of community.

Item	SD	D	N	A	SA
I get important needs of mine met because I am part of this volunteer group	0	0	0	8	3
The other volunteers and I value the same things	0	1	0	6	4
The volunteers have been successful in getting the needs of its members met	0	0	1	7	3
Being a member of this volunteer group makes me feel good	0	0	1	4	6
When I have a problem, I can talk about it with other volunteers.	0	0	3	6	2
The members of this volunteer group have similar needs, priorities and goals.	0	0	0	6	5
Fitting into this volunteer group is important to me.	0	1	3	5	2
This volunteer group can influence other communities.	0	0	0	5	6
I care about what other members of this volunteer group think of me.	0	0	4	5	2
I have influence over what this group of volunteers is like.	0	0	5	5	1
If there is a problem in this volunteer group, members can get it solved.	0	0	1	6	4
This volunteer group has good leaders.	0	0	0	6	5

framework for collaboration that NEAq continues to use with their educators, which was not an explicit goal for the PEACH project. Staff described how the partnership, as they perceived it, leads to greater access to resources, a larger

demonstrated the depth of their commitment by signing MOU’s with other organizations, and meeting with prospective new partners they hoped to onboard in the future. As the year progressed, partners expressed that the connections and

collaborations with partner organizations was one of the most valuable aspects of the project. Although many of these organizations have worked with each other in the past, PEACH gave them the chance to connect and enhance other partners' work. As said by one partner, "The PEACH project has allowed those relationships to deepen [through] sharing connections, brainstorming best practices, training each other's staff and volunteers."

Through what some partners referred to as a community of practice, which continued to develop in Year 2, partner organizations supported by one another and developed ideas for recruiting, training, and building leadership into their volunteer corps. They shared resources, participated in workshops, and shared best practices for volunteer management.

By the end of the project, partners identified collaboration as the biggest success of the project. They felt that these partnerships not only enhanced organizations' work on the PEACH project, but on many of their other working programs. Within PEACH, the ability to collaborate resulted in unique programming that leverages varied skills, interests, and expertise. Organizations were able to reach a much broader audience and build conservation awareness in members of the community.

Partners specifically highlighted the unique value NEAq brought to the project as a "strong force for convening the region's environmental groups", and appreciated their continued support and "positive attitude and commitment to equity and access"

Volunteer Survey

According to volunteers, all but one reported that feeling a sense of community with other habitat restoration volunteers very important, with the majority saying that it was very or extremely important. This was echoed by volunteers who reported highly positive feelings associated with being a part of the volunteer group. These feelings were bolstered by the fact that their fellow volunteers shared similar values, needs, priorities and goals (Table 6). Volunteers felt that together, they could influence other communities, and that their collective voices were heard. Survey results support that

volunteers see this group as well knit, competent and action-oriented, with strong leadership.

DISCUSSION

In the first year of the project the staff journals highlighted the initial successes and challenges of the PEACH project. Overall, staff who shared journal responses appreciated the trainings geared towards building volunteer capacity. They recognized the value of engaging more volunteers, and developing their skills in addressing local conservation issues. Collaboration among organizational partners was considered one of the strongest aspects of the PEACH project. Staff especially felt that this approach had helped grow a community of practice among groups, who think of themselves as working towards shared goals, and having a lot to learn from each other with regard to building volunteer capacity and engagement. Staff expressed hope for volunteer training in terms of general skill development, rather than specifically focused skills so that volunteers' roles could be more versatile across projects. The leadership team took this into consideration for Year 2, and focused more generally on volunteer skill development overall to build competent volunteers. In Year 2, we saw the following themes emerge from the responses from staff at partner organizations and volunteers there.

Access and Diversity in Volunteer Corps

The PEACH project identified strategies and techniques for successfully expanding and diversifying their volunteer base across numerous organizations. Together they were able to reach a larger audience, and learn about barriers to engagement in order to address them in their programming. Barriers relating to volunteerism for low income communities, immigrant communities and communities of color were of particular importance.

Developing Volunteer Capacity

As the PEACH project developed, the model moved from specialized skill development to more generalized skill development in their volunteer trainings. Partner organizations began viewing increased capacity not as quantity (a higher number of engaged volunteers) but as quality, with staff and volunteers who have more of the skills

necessary to manage restoration efforts in line with best practices for a variety of habitat types.

With this transition in approach, the project partners noticed leadership skills developing in their volunteers and felt that dedicated volunteers could start to take on leadership roles in the group. They observed volunteers learning what it means to be a good volunteer, and felt that the skill level and excitement of the group was hugely valuable. Through PEACH partners felt that they were able to enhance the quality of volunteers overall, increase their capacity and competence, and offer ways for them to enhance their skills in the field of conservation service.

Connecting to Local Habitats and Community

Through their experiences with PEACH, volunteers gained a better understanding of their local ecosystem and the human impacts on this environment. As their knowledge of and about local environmental issues grew, volunteers gained a sense of agency in feeling that they could improve habitats in their region through restoration activities. In addition to building awareness and connections to their local habitats, participants also felt that through restoration activities they could develop friendships with other members of their community.

Building Meaningful Relationships

PEACH partners consistently expressed the value of the relationships they built with the other participating organizations. Partners identified this group as a community of practice, who supported each other and enhanced each other's work not only on PEACH, but towards their organizations as a whole. Together, they have developed what they believed to be a viable model for volunteer engagement. Through pooling of resources and tools, collaborative planning of workshops, events and trainings, and access to a larger volunteer base, they were able to enhance the skills and capacity of volunteers across a wide range audience and build conservation awareness in members of the community. Partners anticipated that the connections they made with organizations through PEACH would last into the future.

In addition to the meaningful connections made between partners, volunteers also built a tight-knit community of their own, one in which they felt they had trust, support and agency in the group. They felt like through this group of individuals who had shared values and goals, they were able to make a difference in their community together.

RECOMMENDATIONS

Based on evaluation findings, we make the following recommendations to continue to support this model in the future:

- Continue to refine and articulate the volunteer model that PEACH has developed for future cohorts and for wider dissemination beyond NEAq. We anticipate value in describing the key components of this model and ways in which it builds capacity for organizational partners to continue to support and foster a community of volunteers.
- Expand the set of resources currently available to support volunteers by systematically developing protocols and guides, including to identify and address barriers to volunteer engagement. These could include a "best practices" resource that highlights ways to remove barriers to volunteerism for specific communities. Removing barriers can also mean offering more frequent, and shorter trainings, and regularly scheduled volunteer days (as one partner suggested, "Conservation Saturdays").
- Establish strategies and techniques at the start of the project to maximize volunteer participation and continued engagement. This could include outreach techniques, and introductory resources for volunteers to provide structure and expectations.
- Leverage institutional resources to continue to support the community of practice among partner organizations and between groups of volunteers. Insights from past models that NEAq has developed (example from the National Network for Ocean and Climate Change Interpretation project) could provide specific guidance to support and sustain these groups in the long term.
- Nurture leadership skills in volunteers by leveraging existing participants to take on a leadership role with new volunteers.

CONCLUSION

Partner organizations in the PEACH program highlighted the community building and volunteer engagement support that they receive as crucial for the fulfillment of their respective missions. Through their participation in the program, partners have formed new connections and deepened existing ones in ways that are meaningful and beneficial to their work. The commentary offered by staff and volunteers point to an ongoing need for more volunteer-specific resources as well as greater support for a burgeoning community of practice forming among the partner organizations. We codify these suggestions into a list of recommendations included in this report to provide a roadmap that we believe will help PEACH build on the foundation it has established, in ways that maximize its impact moving forward.

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