

Communities Advancing Science Literacy: Year 1 Evaluation Report

Project: Communities Advancing Science Literacy

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Executive Summary

Communities Advancing Science Literacy (CASL) is a two-year National Science Foundation-funded project led by New England Aquarium, in collaboration with Frameworks Institute, the Harwood Institute for Public Innovation, the Aquarium of the Pacific, and the evaluation team at New Knowledge Organization Ltd. CASL aims to support informal science learning centers as catalysts for building community science literacy. Working on both the east and west coast, CASL organizes City Teams consisting of partner community organization members to address community issues, resilience, and remediation action plans.

In Year 1 of CASL, our evaluation highlights that City Team members and Leaders from their organizations see the benefit in collaborative work. CASL has helped organizations within each City Team deepen their relationships with each other and with the communities they serve. The missions of each organization have further been supported and nurtured through the partnerships and resources provided by CASL. This year's work has laid the foundation for participating organizations to address real environmental issues as they increase their understanding of the connection between those issues and the needs of the communities they serve.

Introduction

Communities Advancing Science Literacy (CASL) is a project led by the New England Aquarium (NEAq), in collaboration with Frameworks Institute, the Harwood Institute for Public Innovation, the Aquarium of the Pacific (AoP), and New Knowledge Organization Ltd. (NewKnowledge). From 2017 to 2019, the project seeks to advance the role of informal science learning centers (ISLCs) as catalysts for building community science literacy.

Both coastal ISLC sites, NEAq and AoP, are working to provide evidence of the value of partnerships in fostering community change. NEAq, in Boston, Massachusetts, is working closely with the community organizations Zumix, Harborkeepers, Eastie Farms, and Piers Park Sailing. AoP, in Long Beach, California, is working with Khmer Girls in Action, Long Beach Forward, and Friends of Colorado Lagoon.

The two City Teams – one on each coast – each consist of 10-12 people from the ISLC and community organizations. Members of the City Teams include staff at the various organizations who committed to collaborating over the life of the CASL project. City Team members also participated in a training with Harwood Institute to develop a shared understanding of resilience. The training explored engaging communities in co-creation of steps to address consequential community issues, including development of community-specific remediation action plans.

NewKnowledge is the evaluation partner, assessing progress toward the project's intended outcomes:

- **Authentic community-ISLC partnerships**, indicated by key factors of effective collaboration;
- **Institutional change**, indicated by increased buy-in for the work of CASL and for ISLCs' role as social assets;
- **Increased community science literacy** in terms of gains in content knowledge and perceived relevance of environmental challenges for City Team members and community members;
- **Observable community action**, with indicators of movement toward community-defined goals; and

- **Effective implementation of the project** as seen in the perceived successes and challenges in pursuing project activities.

In Year 1, completed evaluation activities assessed the first two outcomes, including authentic partnership building and institutional change. We conducted a City Team survey, two rounds of interviews with City Team members, and interviews with Organizational Leaders from the partner organizations. Organizational Leaders refer to executive level staff at the partner organizations who are not directly engaged with the project.

In Year 1 we also created and deployed a community member survey in order to understand a baseline measure of their community's science literacy. However, due to difficulties in data collection, the community member survey is still ongoing and results from it will not be presented in this report.

Lastly, in addition to these evaluation activities, NewKnowledge attended the CASL Mid-Point Check-in Meeting in Boston, MA October 10-12, 2018. During this convening, NewKnowledge presented the evaluation plan for the life of the project, and the findings to date from the first round of City Team interviews.

Methods

INSTRUMENTS

This report describes and reports on data from three instruments NewKnowledge created for data collection; the City Team survey, a City Team Interview protocol, and an Organizational Leader Interview protocol.

City Team Survey

The City Team survey was developed to assess City Teams' knowledge and understanding of relevant environmental topics and climate change as it relates to different aspects of community life (Appendix A). The instrument also included items related to personal beliefs about respondents' capacity to engage with their communities and perceptions of their communities' engagement with climate-related issues. This instrument was informed by validated scales NewKnowledge developed on behalf of the NNOCCI (National Network for Ocean and Climate Change Interpretation) project (NewKnowledge, 2016).

This survey was developed to collect baseline data and will be distributed again at the end of the project to understand changes in their knowledge and confidence with regards to community-relevant science topics, self-efficacy, and their community's engagement with environmental topics.

City Team Interviews

Four rounds of City Team interviews were envisioned to occur over the course of the CASL project. In Year 1, two rounds were completed (Appendix B) and the remaining two are planned for Year 2. The City Team interview protocol was developed to evaluate collaboration among City Team members.

To understand the early phases of authentic partnership building, the first round of interviews assessed initial engagement among colleagues within each City Team and expectations for their work. We explored the indicators of collaborative processes within the City Teams, focusing on the use of inclusive practices to initiate partnerships. City Teams were also asked about indicators of culturally

responsive relationship building, such as adoption of methods and strategies that ensure equitable participation, recognition of partners' unique contribution and shared goals, development of trust, and appreciation of different viewpoints. They were also asked about dealing with differences in opinions, and their preparedness to address or manage conflict.

The second round of interviews asked many of the same questions as the first set, with the addition of also asking Team members to reflect on their perceptions of institutional change (Appendix B). This outcome was measured by focusing on the perceived value of the community-ISLC partnership, the value added to their organization's work towards its mission, anticipated benefits to the organization's constituents, perceptions of the project's impact on the organizational culture, and the perceived role of the organization as a changemaker in the community.

Instruments were adapted from evaluations of similar collaborations for resilience planning efforts in urban sites, such as the CRUX (Climate Resilience in Urban Campuses + Communities) project being led by Second Nature (Gloeckler, Gupta, Rank, & Ardalan, 2017), and the Children and Nature Network on the Green Schoolyards for Healthy Communities Initiative that is creating a network to advance the role of green schoolyards in impacting health equity (Gupta, 2017).

Organizational Leader Interviews

Organizational Leaders were interviewed as they are individuals not directly involved in the project, yet work with the organizations that are core members of the City Teams. Similar to the second set of City Team interviews, Organizational Leaders were asked about the perceived value of the community-ISLC partnership, the value added to their organization's work towards its mission, anticipated benefits to the organization's constituents, and perceptions of the project's impact on the organizational culture, and the perceived role of the organization as a changemaker in the community (Appendix C). This protocol also used questions

from our work with CRUX (Gloeckler et. al., 2017) and Children and Nature Network (Gupta, 2017).

PARTICIPANTS

City Team Survey

An online link to the City Team survey was distributed to City Team members in the summer 2018. The survey received 18 responses in total, with a total of 13 complete and usable responses. Respondents included 8 participants from Massachusetts, and 5 participants from California.

City Team Interviews

The first set of City Team interviews took place between February and March of 2018. We spoke with 9 individuals from 7 different organizations, who are members of the City Teams. In December of 2018 we conducted the second set of City Team interviews and were able to speak with 8 individuals from 7 different organizations.

Organizational Leader Interviews

In December of 2018 we conducted the Year 1 annual interviews with Organizational Leaders. We interviewed 9 individuals from 7 organizations.

ANALYSIS

City Team Survey

Quantitative results were analyzed according to their data type, and compared across locations (Boston and Long Beach). Due to a small number of participants, we could not use descriptive statistics (e.g., means). Instead, we counted the number of times respondents had selected a particular response category (e.g., strongly agree) for a given question (e.g., the extent to which they can explain the basic science about the climate) to assess the group's opinion overall. Depending upon the question, we compared the overall opinion related to a question between locations.

City Team & Organizational Leader Interviews

Given the relatively small number of City Team participants in the interviews we used a grounded theory approach, in which a NewKnowledge researcher took an iterative, bottom-up approach to data analysis. After each interview, the researchers briefly debriefed and documented emergent themes relating to the project outcomes (i.e., Authentic Community-ISLC Partnership, Institutional Change, and Increased Community Science Literacy, etc.) After all interviews were completed, a researcher further identified themes across the eight interviews relating to project research and evaluation questions.

Results

AUTHENTIC PARTNERSHIP BUILDING

Partnership building among the community organizations and ISLCs was top of mind for City Team members in particular, and appeared to be the most robust tangible outcome for these individuals in Year 1. However, Organizational Leaders did not as often comment on this outcome.

City Team Members

First Interview

In the introductory interview, City Team members shared that they were eager about partnering with the NEAq or AoP to increase their presence in their community and for the way they anticipated the relationship would help them collaborate with other organizations and institutions. City Team members thought affiliation with the aquarium would allow them to work with new colleagues, diversify outreach in their community, broaden their scope of issues they focus on, and garner additional collaboration opportunities.

City Team members also voiced excitement about the resources and skill building opportunities within CASL. These opportunities included the potential for learning and developing curriculum, having an involved presence in their community, and networking with partners. Some City Team members expressed eagerness to work more frequently with youth, and reach out to communities who may not be connected to organizations or institutions due to language barriers or socioeconomic barriers.

Others shared excitement about the impact they thought their relationship with the aquarium could have on their ability to become more connected to low-income communities. Another member was excited about partnerships between organizations that typically function in areas with very different income levels. Meanwhile, some were also looking forward to moving forward with what they had learned from the Hardwood Institute.

City Team members identified important aspects of CASL, such as focusing on science literacy and resilience, local and

national collaboration, communication between and within communities, and prioritizing organizational action over policy. For example, one City Team member shared excitement about the approach of CASL to find intersections between environmental work and science, and getting more people engaged in the conversation to recognize ways they can contribute.

City Team members anticipated challenges, including lacking a common language to engage in the partnership across organizations, limited time and resources, and difficulty in providing programming and relevant resilience efforts to serve the various socioeconomic levels within the different communities their organizations serve.

When asked what support they anticipate for the project moving forward, City Team members hope for additional support from aquariums through goal clarification and faster communication on digital platforms. Looking to longer-term support from CASL, City Team members also mentioned clarifying role between and within organizations, maintaining the network of practitioners, and sustainable support after funding ends would all be valuable additions.

Second Interview

In alignment with what we heard regarding the anticipated benefit of partnerships resulting from CASL, City Team members continued to report on the benefit of partnership building throughout the second round of interviews. They explained that partnership building allowed relationships to grow between and within organizations, and has enabled many of the City Team members to connect with a wider and more diverse audience than they had in the past. Two audiences CASL has helped organizations reach are youth and communities that are generally poorer; in the past these groups have been less connected with the aquariums. Working with CASL has also encouraged organizations to engage multiple audiences at the same time, including having younger and older audiences participate in the same events,

as well as putting community members in conversation with scientific experts.

The connection to the aquarium was seen as a key relationship for City Team members from community organizations in both Long Beach and Boston. Similar to the introductory interview, the central role of the NEAq was referred to as “a central hub” and a “conduit for information.” In Long Beach, City Team members said the benefits of partnership with AOP included increased access and exposure to high quality science resources. Examples of these resources included information about climate change basics and case studies that were provided for a recent campaign kick-off by one of the partnering organizations.

One City Team at one of the aquariums interprets their role within CASL as facilitators and connectors of different ages of people and different organizations. They also expressed prioritizing finding out where the “gaps” are in the network between different parts of the Boston community, as well as between different groups within it (i.e., adults, high schoolers, retired people, new community members). However, City Team members at both NEAq and AoP feel that their role as facilitator has influenced the way they engage with the community and between organizations as a result of CASL.

Strategies for partnership building that were considered successful by City Team members from both locations included prioritizing shared events hosted by multiple organizations, inviting other organizations to events even if they aren’t co-hosted, using NNOCCI language when talking about climate change with other organizations, and keeping track of the events of other organizations.

A recent meeting for City Team members in Long Beach exemplified what building authentic partnerships can look like. Here, they brought organizations together to discuss issues like defining community, resilience, the tools and conditions needed to attain resilience, and what their organizations were doing to support this work. Additional success relating to partnership in Long Beach also featured the City Team’s work on “turning outward” resulting from Harwood, their commitment to making sure they collect evaluation data, and ensure content expertise is provided with context.

Long Beach City Team members also shared that they are planning to prioritize honoring stories from the community by having neighbors interview each other. This approach, they anticipate, can help City Team members in both locations identify the authentic needs of the community. One City Team member also clearly acknowledged the connection between “relationships” and “resilience” within communities.

Additional obstacles mentioned in the second interview regarding partnership included the challenge of creating and maintaining a shared vision, and accepting the amount of time it takes to form relationships can be longer than expected.

Organizational Leaders

Organizational Leaders and City Team members had similar understandings of the role of partnership building, and the importance of inclusive practices and cultural responsiveness. In some cases, Leaders felt that partnering with the aquarium legitimized their organization, and hoped that their partnership with the aquarium will allow them to reach a greater population, though that population was yet to be determined. One Leader shared they felt the aquarium had become more approachable as a result of CASL, and they hoped to leverage this development. They also felt that CASL had changed their “lens of engagement,” allowing them to think differently about the way they interact with their community.

The Organizational Leader interviews revealed that CASL aids in forming non-traditional partnerships that can be extremely valuable in disseminating work and knowledge to a broader audience. Additionally, the project enabled one organization to form connections with other organizations that focus on different topics and that are outside of the network they usually work within. These non-traditional partnerships resulting from CASL provide some Organizational Leaders the opportunity to step back and think about the big picture of the impacts of climate in their community and “draw connections on our day-to-day campaign work and the overall resiliency of the city.”

INSTITUTIONAL CHANGE

Both City Team members and Organizational Leaders perceived some degree of impact in their institutions on account of CASL, primarily in the form of strengthening or supporting existing approaches and priorities within their communities.

City Team Members

Second Interview

The degree of institutional change that occurred as a result of CASL at different organizations varied among City Team member institutions. Some reported that their organizations had experienced minimal change to their mission or institutional culture because they felt they were already aligned with CASL in prioritizing community engagement and the improvement of community-based science literacy. On the other hand, others reported that their missions had evolved to focus more on youth involvement, or more on climate change literacy in certain areas.

An additional aspect, briefly mentioned as an anticipated obstacle in the introductory interview, was the challenge of dispersing a new strategy or pedagogy throughout an entire organization. Many City Team members noted that change happens very slowly in institutions that have been set in their ways for a long time. Some also felt that their efforts remained closely tied to certain individuals and they had yet to see it being integrated into the whole institution.

In both rounds of interviews, City Team members felt that an important aspect of understanding their role in the community came from engagement through “*community conversations*,” a core tactic of the community engagement approach they learned in the training with the Harwood Institute. One characterized this type of conversation as a way to understand the needs of the community that *aren't* included in an institution's mission. For example, a series of panels including three Boston City Team members engaged community members who were not previously involved in the aquarium's lecture events. Boston City Team members also focused on community engagement through activities like public art installation and radio shows. This strategy allowed institutions and organizations to make sure their missions

aligned with the needs of the community they served. NEAq, in particular, felt that CASL supported their Institutional priorities and goals, which were also exemplified by three additional funding opportunities they are pursuing.

Organizational Leaders

Organization Leaders varied in the way they felt CASL had impacted their work. In many cases, they felt CASL had helped strengthen their mission rather than change it.

Some Organizational Leaders did not think CASL had directly changed their organizational mission of working in the community. One shared that “*the way that CASL is approaching the work isn't too different besides the academic part*,” and CASL “*isn't radically different from how we currently function*.” This perspective was similar to that of some of the City Team members, including that CASL validated how they were serving their community rather than changing it. Additionally, some organizations are so small or new and reported their missions changed frequently so it can be challenging to determine the direct influence of CASL on the way they are being carried out.

Another Organizational Leader shared that though their organization's mission hasn't changed much, the resources provided by CASL allowed them to more strongly pursue that mission. CASL impacted one organization by reminding their Leadership team that including events and projects in relation to conservation are essential to their mission and can't be overlooked. Additionally, CASL solidified their understanding of the importance of including community members' insights and perspective when developing or acting toward their organization's mission.

At one aquarium, an Organizational Leader shared that their perspective on stewardship was changing and expressed their new understanding that people are just as related to ocean issues as animals are. The Organizational Leader also clarified that CASL had influenced the way they were working toward their mission rather than the mission itself. For many, CASL exposed the importance of listening to stakeholders and community members rather than just being a provider of knowledge.

A general challenge shared by many Organizational Leaders – which also reflected the concerns of the City Team

members – was that relationship building takes a long time. They also pointed out that turning a new idea into an “*action phase*” requires a similar amount of time. Like the concerns voiced in the introductory interview, Organizational Leaders felt it can also be hard to create a cohesive mindset that includes ideas from multiple organizations, and multiple people at those places where some have been for a long time and are set in their ways. Additionally, we heard that maintaining funding in ways other than grants was an issue for both Organizational Leaders and City Team members.

In multiple interviews, we heard that CASL provides a new way for Organizational Leaders to think about their mission, which can lead to a new pathway for them to pursue the organization’s objectives. We also heard that even though some organization have very different missions than the aquarium, they find the partnership still very beneficial by broadening their reach and access to resources to pursue their own goals.

However, the level of engagement and familiarity with CASL varied across Organizational Leaders, and had impacted institutional change at various levels in both the aquariums and the community organizations.

COMMUNITY SCIENCE LITERACY

We examined community science literacy on two levels: perceptions of science literacy among City Team members and their colleagues and perceptions of science literacy among members of the public who participate in events or are otherwise constituents of the community organization. In comparison to other outcomes, City Team members and Organizational Leaders infrequently described changes in community science literacy, suggesting it was not a strong outcome of CASL in Year 1.

City Team Members

Second Interview

Depending on which audiences they had access to, CASL helped City Team members understand their communities differently, which also appeared to influence how they thought of community science literacy. Many shared that working with the aquarium allowed them to reach a larger audience, which in parallel expanded their understanding of the community.

Some City Team members spoke about the important role of experts in both increasing community science knowledge *and* in increasing the confidence of staff at their organization around discrete topics. City Team members appreciated learning about discrete topics, such as sea turtles or risk of building luxury apartments in a flood plain. Importantly, for some City Team members, they said science experts helped their colleagues begin to gain a sense of authority when working with constituents. Many noted that the aquarium often plays a key role in making the connection with science experts.

One City Team member recounted using a strategy for solidifying knowledge gains by debriefing after events with colleagues to reflect about the activity relates to community resilience. Another City Team member shared that CASL fosters the inclusion of youth knowledge about climate change through collaboration between environmental organizations with other organizations that focus on youth empowerment, remarking that some of the youth in their program are highly skilled and are a valuable asset in conversations about local environmental issues because they have been personally impacts by them.

Organizational Leaders

Overall, Organizational Leaders reflected on how CASL helped them think of literacy as a dialogue, rather than a didactic teaching model. One Organizational Leader shared that the experience with Harwood showed them that when gauging the concerns of the community, it’s far more effective to focus on aspirations rather than deficits. This Leader also saw the importance of saying “*we’re listening*” rather than approaching environmental conversations by telling people what to do.

Talking with the community helped the aquariums determine the relevant concerns for local community members. For example, one Organizational Leader learned that the local police prefer fewer trees because it gives them clear lines of sight and limits the opportunity for clandestine criminal activity, even though more trees are a way to mitigate climate change.

Another Leader shared that they hoped their participation in CASL would be an opportunity to create curriculum that would

not be too “teach-y,” which was consistent with the ambitions we heard in the introductory interviews with City Team members. Another shared that working with the aquarium allowed them to “advance environmental health knowledge and awareness within our community” showing that this partnership had been successful in making scientific information more accessible and relevant in their community.

CITY TEAM SURVEY

The City Team survey was completed by 13 City Team members, 8 from Boston, and 5 from Long Beach. Of the ten respondents who disclosed their gender six identified as male and four as female. The majority of the respondents had post-graduate degrees / professional degrees ($n = 8$), but all had at least completed a 4-year college degree (Table 1). Of the seven individuals who described their ethnicity, three identify as White / Caucasian, one as White and Latino, two as south Asian (Table 2).

Table 1. Level of Education of City Team Survey respondents

Highest Level of Education Completed	Responses ($n = 11$)
College graduate	3
Some post-graduate study, no advanced degree	1
Post-graduate / Professional degree (Masters, PhD, JD, MD, etc.)	7

Table 2. Ethnicity of City Team survey respondents

Race / Ethnicity	Responses ($n = 8$)
White / Caucasian	3
White and Latino*	1
South Asian*	2

Note. *answers from “prefer to self-describe.”

Respondents from both locations showed high levels of science literacy. When asked about scientific concepts relating to climate change, most respondents from both locations indicated medium to high confidence in their understanding.

The majority of respondents in both locations shared that they felt a particularly high confidence level in their knowledge of scientific evidence for climate change, and the impacts of climate change in their city. They also expressed confidence in their understanding of scientific evidence indicating that humans have contributed to climate change, basic physical science about the process by which climate change is occurring, solutions that would reduce causes of climate change, and their ability to link humans to climate change.

The way the climate influences the ocean and if CO2 can be harmful or helpful depending on the amount of it are the only two concepts that received any inaccurate answers, and these were minimal.

Overall, respondents lacked consensus about what people can do as the most effective way to prevent climate change from getting worse. Respondents from Boston were split between supporting investment in renewable energy systems and taking personal actions to reduce consumption, while respondents from Long Beach were split between taking personal acts to reduce consumption and reporting they were unsure of what to do.

Most participants across locations expressed similar concern on environmental issues like issues like excessive heat waves, flooding, pollution, climate change, and droughts as they do with gun violence, indicating that they are alarmed about each of these problems.

Responses also showed that the most commonly taken actions toward a more environmentally friendly lifestyle are donating money or time to environmental groups, participating politically and addressing environmental topics, talking to friends or family members about environment issues, using e-mail or social media to share information about the environment, and taking part in activities addressing their community’s contribution to the environment.

In both Boston and Long Beach, respondents expressed that talking about environmental topics is an effective way of increasing awareness of environmental topics among people they know. Responses indicated that climate change in general, personal activities to reduce climate change, political debates and public opinions about environmental topics,

climate justice, the impacts of climate change on public health, and group efforts to reduce climate change were all commonly discussed in both locations.

Discussion & Recommendations

At the end of CASL's Year 1, we observed a number of overarching themes that depict the progress of the project.

RELATIONSHIP BUILDING IS A CRITICAL FIRST STEP

Across the two coasts, City Team members engaged deeply with their colleagues from other organizations to learn about each other and from each other to advance their organizational missions to address their community environmental issues. This finding is reassuring for collaborative efforts such as the CASL project, where organizations with distinct approaches and foci areas could possibly find it difficult to connect with other organizations. This pattern also suggests the potential for organizations to authentically understand and appreciate each other's work. A truly collaborative effort, as is anticipated for CASL, is predicated upon recognizing each partner's unique contribution towards a shared vision. In the case of CASL, the success of the collaboration will rely on the recognition that each organization contribution to creating solutions for environmental challenges faced by the partners' communities.

Even as they engaged and learned within their respective City Teams, members in each city expressed interest in connecting more often with their colleagues in their community. Although the opportunities to connect deeply with their coastal counterparts may be limited, we see value in creating a sense of community and attempting to reduce perceptions of isolation as each City Team moves forward with their work.

LEARNING ABOUT ENVIRONMENTAL TOPICS

We observed an inclusive approach as City Teams engaged with their constituencies to learn about the environmental challenges that need to be addressed. Whether City Team members learned new tools and resources to do this work (e.g., community conversations with the support of the Harwood Institute) or continued to use existing organizational strategies, they engaged and listened to the priorities raised by community groups. A key aspect of this process was surfacing the complex relationships humans have with their

environment; this complexity has critical implications for devising solutions that meet the community's needs. Interestingly, solutions to address challenges (e.g., air-conditioning for areas where extreme heat is a problem) may seem counter-productive to environmental goals (e.g., reducing energy use), but are essential for the community's wellbeing.

We see these complicated scenarios as learning opportunities for the City Team members to jointly discuss and brainstorm with their communities about how their choices can affect the local environment both positively and negatively. As the City Team members continue to reinforce and grow their own capacities and skills to create evidence-based solutions, we emphasize the value of continued attention to the cultural context where they work. We underscore that for an intervention to respond effectively to a community's needs, it will be integral to identify meaningful ways in which the residents can take care of their environment that align with their social, cultural, and health-related needs.

FOUNDATION FOR FUTURE CHANGE

The work of the City Teams in Year 1 has been laying the foundation for communities in Boston and Long Beach to address the very real environmental challenges they face. Despite the constraints (e.g., limited resources and capacity) within which the City Team members' organizations operate, they are committed to advance the project goals. We recognize that these constraints may have also limited their capacity to engage community members more directly in the evaluation process to understand the community's environmental priorities.

Though the steps towards the goals were open-ended and undefined initially, the City Teams are now working towards identifying ways they can implement the lessons learned through their interactions with their colleagues in their communities. They reinforced their appreciation of the NEAq

as a trusted partner, who heard their concerns and provided further guidance to help guide their work.

RECOMMENDATIONS

We make the following recommendations for the project team to advance the CASL project's work in the second year.

- Provide strategic guidance and resources to City Team members as they start to plan projects to address their community's needs. Even though the onus is on them to create culturally responsive efforts in ways that are relevant and meaningful to their communities, we anticipate they will consistently look to NEAq for advice and support to help shape the projects.
- Encourage continued use of collaboratively developed timelines & goals set by each City team, including strategies to track accountability within each team.
- Create more communication channels between teams within and across coasts to facilitate learning and inculcate a sense of community between City Teams. We see this investment as having value for the teams' work moving forward, in that they will likely feel supported and optimistic about working jointly towards a shared vision.
- Continue to create opportunities for City Team members to jointly discuss with their constituencies and learn more about the environmental priorities that matter to their residents and intersections with other priorities in their lives. We anticipate that open dialogue about topics that are personally relevant and emotional will foster ownership in in addressing these issues.
- Strategize about how best to capture project impact through the remaining evaluation activities. For example, community data collection approaches for the final year of the project could include new methods that are more culturally responsive (e.g., engage the City Team members as informed observers of community change) or program-level tactics that NEAq can implement (e.g., provide more focused communication to City Team members to tie evaluation support to their project responsibilities).

Conclusion

In Year 1 of CASL, we see a number of positive indicators highlighting the effectiveness of the National Science Foundation's investment in supporting organizations to meet their communities' needs and build communities' science literacy. City Team members and Organizational Leaders overwhelmingly expressed the benefit CASL provided in focusing their organizations' missions and creating connections and positive pathways toward the fulfillment of those missions.

Year 2 has the potential to create deeper collective cohesion among City Team members and participating organizations, while at the same time offer concrete steps toward addressing relevant community-based and environmental issues.

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