Cornell University
Cornell Institute for Public Affairs

Friday, May 26, 2017

PALEOTONOLOGICAL RESEARCH INSTITUTE CAPSTONE:

FOUNDATION PHILANTHROPIC SUPPORT

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Acknowledgements

We would like to acknowledge the assistance that we have received through our research from the Paleontological Research Institute (PRI) and the Cornell Institute for Public Affairs (CIPA). We would like to thank Georgia E. Lesh and Robert M. Ross for their collaboration with gathering all the information required to get this project underway. To both Rick Magder and Alan Blankstein, thank you for providing insightful and invaluable advice as we became more informed about education and environmental matters throughout this Capstone Project. We would especially like to thank Laurie J. Miller for her invaluable assistance throughout this journey, and for her confidence and patience in the completion of this project. Her enthusiasm, presence, and dedication kept us motivated and determined to deliver some of our most cherished work to date. Lastly, this project would not have been completed without the help from Kayla K. Malone, who helped us every step of the way.

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Executive Summary

The Paleontological Research Institute (PRI) engaged the Cornell Institute of Public Affairs Capstone team to help explore funding opportunities to support their environmental education professional development initiatives. The Capstone Team focused on philanthropic foundations and developed criteria to guide the selection and presentation of the opportunities presented in this report. After an extensive research and data collection phase, the Capstone has decided to include six Foundations in this report: 1) the American Honda Foundation, 2) the Pisces Foundation[1], 3) 3M Gives, 4) Ecolab Foundation, and 5) the Alcoa Foundation. All of these foundations have demonstrated support for environmental education issues, and in some capacity, have supported professional development initiatives. The report provides each foundation's relevant grant history – examining programs that center on curriculum development, teacher training, climate change education, classroom environmental literacy, and outdoor education programs.

The Recommendations section of this report highlights important commonalities between successfully funded grant applications. Typical successful grant applications focused on students or teachers from a specific school district or community, as opposed to funding insulated teacher development workshop programs. The consulting team suggests that PRI develop partnerships with a group of teachers, school district, or county before approaching any of the reviewed

1 Although the Pisces Foundation is now referred to as the LSF Life Sciences Foundation in Foundation Directory, their website and organizational information still uses the Pisces Foundation name. For the purposes of this report, they are referred to as the Pisces Foundation.

foundations. Additionally, many of the funded grant opportunities were location and demographic specific; programs were concentrated in communities that were home to corporate facilities or had specific underserved communities. PRI can strategically develop partnerships with educators who are part of the PRI community in order to make a grant application more appealing to the review committee.

The final two recommendations state that the Alcoa Foundation and the Ecolab foundation provide the best potential partnerships. The missions of both organizations align with PRI's goals and values in their educator development initiatives. Both foundations have also funded several projects that have utilized the type of relationship PRI would create. Programs like *Nature Up North*, *A World in Motion*, and the *W.E.T. Program* have all been structured as a 3-party model; the respective foundation provided financial support to a 3rd party organization to implement and train teachers within a specific school district or county. The content of all three of these curriculums focus on methods and practices for improving STEM education broadly; *Nature Up North* and *W.E.T.* both look at environmental education specifically. The final important point of consideration for both of these opportunities is that PRI has the chance to leverage its connections at Cornell University and Ithaca College to initiate conversations with both companies/foundations. Effective collaboration between PRI and Cornell/Ithaca College will greatly enhance the chances for success.

Based on the findings and recommendations in this report, the consulting team believes that that PRI has a compelling argument for funding and/or developed partnership with any of the foundations presented. Although PRI's success will ultimately depend on their ability to reflect their impact on local students through their teacher development programming, this

framework is not a marked shift from the current implementation approach. PRI has established connections with groups of educators all over the United States. Their environmental education training is needed and is increasingly relevant and in need of funding. We hope that the contributions in this report will materialize into successful grants to support PRI's efforts.

Introduction

This report is meant to act as a reference guide for staff at the Paleontological Research Institute. It is not meant to be read from cover to cover, as riveting as it may be. Instead, the report will hopefully inform staff about several promising foundation funding opportunities that are strong matches for furthering PRI's environmental education teacher development activities. Each section offers an introduction to each foundation and then highlights the history of their support for education and environmental programs and institutions. Sometimes grant classification can obscure a Foundation's actual funding priorities; the review of each Foundation also covers previously funded grants that bear similarity to a potential grant application from PRI. Finally, the consulting team has provided the best personal contacts at each Foundation or company that we were able to discover. These contacts can be approached most effectively through Cornell and Ithaca College alumni offices, or the respective departments in charge of Foundation relationships, and offer an initial entry point for a relationship with that foundation. Finally, each section closes with a final evaluation of the funding opportunity.

Literature Review

Climate Change Education Philanthropy in the United States

Environmental education in the United States is provided by a number of organizations. A brief prepared by the National American Association for Environmental Education identified 16 different types of providers, which delivered 19 types of activities to 14 different audience groups to try and achieved 16 different types of outcomes.[2] Each individual type is not important – the important point is that environmental education spans an incredible array of topics and organizations. This makes it very difficult to track philanthropic support for environmental education. Academics recognized as early as 1983 that one of the primary challenges for environmental education would be defining what was and was not environmental education.[3] This broad array means that it is difficult to determine appropriate approaches for securing funding.

Since the mid 1990's, foundations have played an increasingly important role in philanthropic giving,[4] and the environmental movement as well. However, tracking funding patterns for climate change education has proved very difficult. Generally, environmental education funding is difficult to catalogue because "many agencies and organization that classify how, when and where funds are granted find it difficult to categorize (…) because of different audiences and providers."[5] The programs are often lumped into broader initiatives, which makes

2 North American Association for Environmental Education 8
3 Disinger 17
4 Schmitt (2015) 550
5 Ardoin and Merrick (2013), pg. 10

it difficult to categorize as a distinct sub-group of environmental funding. Several authors have attempted to analyze the state of environment education giving patterns of foundations and have all pointed towards the same conclusion: although environmental education philanthropy is growing, it still represents a very small portion of overall environmental funding.[6]

Environmental issues and programs addressing climate change have relied heavily on philanthropic support. Increasingly, that support must come from foundations, as "climate-science funding is under perennial threat in Washington D.C.".[7] The first comprehensive review spans environmental education grants from 2003 to 2007. Around $328.7 million was given over the time period, which accounted for less than 5% of all giving in the area of environment, animals and wildlife.[8] By 2007, the number of environmental education grants had increased 110%, and total grant amounts had increased 70%.[9] In 2009, "11% (of the 20,000 largest foundations) had program areas in both environment and education, yet only 86 of these foundations (0.4%) specifically listed 'environment education' as a field of interest."[10]

The most recent numbers for total environmental philanthropy are from The Environmental Grantmakers Association (EGA) published in their Field Column 5: Analyzing Trends in Environmental Grantmaking. The numbers analyzed span 2007 to2013 and highlight the trends present in EGA members: 66,340 grants totaling more than $6.8 billion.[11] An estimated $3.42 billion dollars was given to support environmental issues in 2013, highlighting an increase

6 Ardoin and Merrick (2013), Ardoin and Bowers (2012), Canales and Wolford (2016), Tollefson (2016).
7 Tollefson (2016)
8 Foundation Center Online Directory, 2007
9 Ardoin (2009) 2
10 Ibid. 4
11 Canfield et. al., pg. 2

of 21% since 2011.[12] EGA breaks down their grants into subjects/topics and strategies; Education/Youth organizing did not qualify as a subject area, but was instead coded as a general strategy. As a funding strategy, Education/Youth ranked 6 out of 8 for levels of funding. It finished with less than $100 million dollars of per year funding, significantly far behind the most funded strategies of Advocacy, Organizing, Movement, Building and Stewardship, Acquisition, Preservation, which both received $350-375 million in grant funding. Although it was cited as one of the least funded strategies, the review did credit Education/Youth organizing with an increase of 105% in grant money from 2011.[13]

Besides foundations, both Government and Corporate support provided philanthropic dollars for environmental education.[14] By far, the biggest federal supporter of climate change and environmental education is the US Environmental Protection Agency's Office of Environmental Education.[15] Again - just like with foundation support - the EPA's environmental education funding has increased over time,[16] but it still makes up a small portion of total EPA's grants. In 2015, the Environmental Education Grants Program gave out $3,306,600 in grants money.[17] Total categorical grants for the year 2016 was a reported $1.1 billion dollars.[18] Unfortunately, the EPA is set to face tumultuous times. Since the 2016 presidential election, the outlook for federal support for climate change research and programs has darkened.[19] Although the complete halt of federal support for climate change is unlikely, Trump has suggested that such a move would

12 Ibid. 3
13 Ibid. 8
14 Ardoin (2009)
15 Ibid. 5
16 From just over $3 million in 2003 to $11 million in 2007
17 United States Environmental Protection Agency- EPA Awards Environmental Education Grants in 26 States.
18 EPA FY 2016 Budget in Brief
19 Kahn and Magill (2008)

save $100 billion over 8 years for the United States.[20] On a dour note, the Environmental Education Grants website says the 2017 grant process is on hold because they will not issue "Requests for Proposal(s) in Fiscal Year 2017 until the EPA receives a budget appropriation. We do not anticipate receiving an appropriation until at least the end of April."[21] Although the EPA is not the only source of environmental education funding,[22] ongoing uncertainty for climate change funding makes it difficult for grantees to anticipate how much money will be available.

Despite limited literature around environmental education philanthropy, the consensus is that "environmental education is severely and persistently underfunded in comparison to other strategies that are employed to affect change and improvement in environmental quality and conservation."[23] The literature does suggest that the most profitable approach towards funding PRI's Teacher Friendly Guides (TFG) will most likely be through corporate, public, or other types of foundations. This broad take away from the literature has structured our group's approach when looking for program support grants for PRI.

Environmental Education

The focus of this literature review section is to identify the types of metrics used to evaluate environmental educational programs. The CIPA consulting team felt that it was an important component of this report because of the emphasis that foundations put upon evaluation structures when funding grant proposals. The purpose of these metrics is two-fold –

20 Schoof and Scott (2016)
21 United States Environmental Protection Agency- EPA Awards Environmental Education Grants in 26 States.
22 Department of the Interior, the Department of Agriculture, the Department of Commerce and the National Science Foundation all support environmental education initiatives.
23 Ardoin and Bowers 271

they allow the foundation to: 1) internally evaluate the impact of their philanthropic dollars and whether those resources are being used efficiently and 2) demonstrate the foundation's community impact to donors and the broader public. In this portion of the report, we review some of the research on metrics for evaluating environmental education programs. In the Findings section, we analyze PRI's previously proposed evaluative criteria.

One of the key findings from Ardoin and Bowers is that foundations can be hesitant to support environmental education because its impact is so difficult to measure. "Many foundation representatives commented on the difficulties with measuring the efficacy of a (Environmental Education) strategy."[24] Part of the issue is that there are so many possible desired outcomes; there is no way to have evaluation metrics for all types of environmental education.[25] The literature on environmental education (EE) evaluation has several definitive conclusions. Importantly, there are no universal EE evaluation criteria. In *Challenges for Environmental Education Evaluation*, Monroe notes "Environmental education encompasses such a broad span of programs and goals that the diversity of outcomes and impacts is enormous. As a result, there are few cookie-cutter evaluations."[26] Given the breadth of EE programs, it is no surprise to observe a shift towards *utilization-focused program evaluation* in EE evaluation.[27] *Utilization focused program evaluation* places specific emphasis on the intended users. "The main emphasis in conducting an evaluation is to work for and with specific users of the data to make judgements about the EE programming being evaluated."[28] This approach implies that every program has unique goals and will thus have

24 Ardoin and Bowers 268
25 North American Association for Environmental Education (2013) 12
26 Monroe (2010) 194
27 Carleton-Hug and Hug (2010) 159
28 Ibid. 160

different outcome measures. These measures should be designed to reflect the specific environment the program is being implemented.

Although specific metrics should be designed for each program, researches have grouped EE into several broad categories. Stern et al. identify 7 outcome groups in their paper *Environmental Education Program Evaluation in the New Millennium: What Do We Measure and What Have We Learned?*[29] Specifically, EE outcomes are categorized into *Knowledge*, *Awareness*, *Skills*, *Attitudes*, *Intentions*, *Behavior*, and *Enjoyment* groups. This categorization echoes the findings of Monroe,[30] Zelezny,[31] Rickinson,[32] and others.[33] Changes in each of these categories are measured through test scores, interviews, and behavioral changes. Again, like Carleton Hug and Hug (2010), Stern et al note the difficulty of finding broad metrics for evaluation. "Each of these approaches tends to focus on the unique characteristics and goals of individual programs."[34]

Unfortunately, metrics that offer a true evaluation and assessment of environmental education professional development programs may not be the most compelling metrics for funding organizations. Proper evaluation can do more "than just satisfying the reporting requirements of a funding agency,"[35] but if those metrics do not align with funders priorities, then the funder may choose to support a program whose metrics demonstrate impact on a specific community or group. Any outcome – like enhanced knowledge of climate change patterns, needs to have an associated quantitative metric attached to it. This allows funders not only to use the

29 Stern et. al. (2013) 585-586
30 Monroe (2010) 194
31 Zelezny (1999) 5-6
32 Rickinson (2001) 219
33 Flowers (2009) and Zint (2009)
34 Stern et. al. (2013) 602
35 Thomson, Hoffman and Staniforth (2003)

metrics to evaluate success, but also allows those metrics to be used for publicity purposes. As much as foundations seek to benefit their communities, they are also actively working to promote the funding organization's work and prove its impact.

Data and Methodology

Foundation Review

Foundation Directory

Foundation Directory is an online database that contains, in part, information on the funding history, grant cycles, and focus area of many United States-based philanthropic foundations. As of 2014, the directory listed over 86,000 foundations who have distributed in excess of $60,000,000,000.[36] The magnitude of this database requires established criteria to screen for appropriate potential funding opportunities. The consulting team used a number of different criteria to select the presented funding opportunities. In order, our criteria are: 1) demonstrated dedication to environmental education activities, 2) organizational requirements, 3) limits on qualifying activities, 4) geographical focus of Foundation's impact, and 5) primary intended beneficiaries of Foundation giving.

Environmental Education Activities

This screening criterion is the most important measure for selecting appropriate foundations. It ensures that the funding priorities of the organization are aligned with PRI's environmental educational programs. As identified in our literature review, individual foundations do not have a standardized method for identifying grants as "environmental education funds". Although some organizations use the specific funding category "environmental education", it is not widely employed. Even foundations that do use that label often have grants for environmental education programs categorized under the independent

36 Foundation Center Online Directory (2017)

sections of environmental grants or education grants. Foundation Directory reports individual foundation giving by grant topics; in order to assess the true support levels of environmental education, we assessed giving levels within both environment and education funding opportunities. This initial approach established the main selection criteria for selecting opportunities in the Findings section of this report.

As noted previously, foundational support for environmental education programs is proportionately one of the smallest support areas within environmental giving. The largest giving areas support activism and conservation programs or activities. Although studies have reported varying levels of foundation funding for environmental education programming, the estimate of 3-5% of all environmental support is a good starting point.[37] The foundation selection reported in the Findings section all contain higher than average giving for environmental education programs – though our analysis includes all grants with an environmental education focus, whether or not it was categorized as environmental education specifically or not. Although not a hard and fast rule, we looked for over 33% of total giving to environmental or educational programming, and over 15% of that giving to environmental education programming.

Although our research ultimately relied on the giving amounts for both environmental and education programs as a component of overall philanthropic support, we wanted to ensure that the presented Foundations had a record of supporting initiatives similar to PRI's programming. The consulting team used examples of specific grant history to refine the foundations that demonstrated general support for education and the environment. For example,

37 Ardoin and Bowers 2012

the Alcoa/Cleveland Metropolitan School District/SAE grant partnership demonstrated Alcoa's previous willingness to engage in partnerships around STEM teacher development.[38] Specific examples of similar grants complimented the overall giving breakdown of each funding opportunity and allowed the Consulting team to present the most appropriate opportunities.

Organizational Requirements

Another criterion used to eliminate potential funders was their limits and requirements for organizational structure. All foundations have a number of organizational requirements detailing the types of organizations, activities, and periods they are willing to consider for funding. Few, if any, foundations would not fund PRI on organizational structure alone. The most commonly found limitations were foundations that would not provide grants or support to religious organizations, political parties or individuals. PRI's status as a non-religious and non-political registered 501(c)(3) organization meant that this is not a consideration when considering foundation funding opportunities.

Organizational Activities

A bigger concern for PRI is the giving limitations on organizational activities. There were some consistent limitations – many foundations ruled out grants for capital campaigns, endowments, and general operating support. Less common, but more relevant, is that some foundations explicitly state that they do not support conferences or workshops. PRI previously designed the delivery of their TFG curriculum around workshops located within each of the United States regions. For some foundations, this structure would not qualify for funding. For

38 See Alcoa Findings Section

instance, the General Motor's Foundation provides funding for STEM education and a variety of programs "designed to enhance STEM curricula and student experience."[39] Superficially, this would appear to be a thematic match; however, they explicitly rule out supporting workshops, conferences, and some other educator professional development programs. Our findings do not include foundations whose funding limitations include some or all of the programmatic activities for which PRI is hopeful to secure funding.

Geographic Limitations

The report's findings also reflect geographic limitations. Surprisingly, this may be the trickiest funding limitation for PRI to navigate. PRI has the ability to market and implement the TFG product throughout the United States and can implement their educator development programs more broadly in any geographic region. The regional earth science curriculum is divided into regions that individualize the product to the location it is being implemented. However, PRI is still located in upstate New York and does not have currently developed partnerships everywhere in the United States. Geography was a consideration for including or excluding a foundation from analysis. In some cases, geography itself was not a reason for exclusion. For instance, the Alcoa Foundation focuses their giving on communities in which they have operational facilities. However, they are still a great potential match – PRI would have to frame their proposal to reflect the geographic interests of the foundation. Since PRI can use the geographic flexibility of their environmental educational programming to fit almost any foundation's geographic giving focus, the Foundation's geographical funding scope was a

39 Profile of General Motors Foundation, Inc. – Foundation Directory (2017)

consideration, but not a necessity. The findings section of the report presents several opportunities where geographical match is a potential obstacle, but other criteria mitigated the impact of the geographic mismatch.

Foundation Provided Information

Foundation Websites

Foundation Directory provided an initial source of information, but reported grant history was often vague, incomplete or missing. These details are crucial in ensuring foundational support for teacher development and/or curriculum implementation. Again, some foundations explicitly state that they did not support this type of activity, but our review found that others did not provide any grants for curriculum implementation or teacher development even though they did not explicitly communicate this. Often, the only information on specific grants available on Foundation Directory was the title of the grant and one or two activity categories, like "program development". Other grants reported much more information; reporting could include intended beneficiaries, evaluation metrics, grant timeline, or grantee organizational information. Although the findings section incorporates as much information from the Foundation Directory as possible, we also conducted further research to ensure appropriate matches.

Foundation annual reports were an important source of additional information. Foundation websites on corporate social responsibility programs, community involvement and impact, and reports to stockholders often highlighted successful grantee programs. This proved to be an important repository of information on evaluation metrics, priorities, and intended beneficiaries. For Instance, 3M Gives uses their website to report on their partnership with *The Nature Conservancy*, "3M's $500,000 investment is providing training on land use planning and

natural resource management."[40] Foundations often used their websites to distribute grantee guidelines and annual reports from the Board.

990 Forms

Another important source of information for each Foundation was their respective 990 forms. Ultimately, the 990 forms were a better tool for identifying grants that were potential matches with PRI, as opposed to details of specific grants. Most of the foundations examined were large foundations capable of giving significant gifts, and thus had sophisticated reporting metrics. However, 990 forms did not provide detailed information about each grant. If additional grants were identified through the 990 forms, they were cross-referenced with the Foundation Directory, and also researched using web searches on the grantee organization.

Press Releases

Although it was often difficult to find specific grant information, one of the most effective ways of gathering information was to examine press releases and other news articles announcing programs funded by targeted foundations. Press releases often provided the most detailed program description, intended beneficiaries, and the metrics for success. For instance, Alcoa recently announced a three-year partnership to enhance biodiversity and combat climate change in a press release on April 26th, 2017.[41] Although this partnership is not the type of relationship PRI will be pursuing, it is a good example of the type of information provided in press releases. Importantly, press releases often rely on evaluation metrics to communicate the program's impact. For example, Alcoa writes, "In year one, American Forests will restore over 140 acres in

40 "3M Engages in Environmental Initiatives to Make a Positive Impact on the Earth" - website
41 Alcoa Communications Department, April 26th, 2017

11 locations and engage 2,500 volunteers… the institute will work with local landowners to reforest 50 acres of land."[42] Specific grant applications were usually unavailable, but press releases would highlight important metrics such as number of volunteers, number of locations, or communities affected.

Interviews

The consulting team conducted two interviews as part of the data gathering process. The interviews did not serve as a primary source of information for identifying foundation opportunities, but helped frame the overall project. However, the interviewees did provide information on several funding approaches that fell outside the focus of this report and may be appropriate for future consulting teams to explore. The consulting team conducted the interview with Alan Blankstein in person. Although he does not have specific experience with environmental education, he was able to discuss curriculum development more broadly. Alan Blankstein is a personal contact of Laurie Miller, which allowed the consulting team to structure the interview to allow Alan to share his experience developing workshops and teacher development through the HOPE foundation. The consulting team took notes during the interview and wrote up a summary after the conclusion of the interview.

The second interview was conducted over the phone on April 3rd, 2017 with Rick Magder. Rick Magder is the founding Executive Director of Groundwork Hudson Valley and the Executive Director of Groundwork USA. Currently, he is the Executive Director of the Fairmount Park Conservancy in Philadelphia. Rick Magder has experience looking for philanthropic funds

42 Ibid.

to support Groundwork Hudson Valley's environmental education programming. This programming was not curriculum development or implementation, but instead Groundwork Hudson Valley focused on providing out-of-classroom learning experiences for K-12 students. His experience designing the Science Barge and searching for grants to support its operation were of particular relevance to the topics of this report. The consulting team structured the interview more formally than the interview with Alan Blankstein, with specific questions about his experience with foundation funding.

PRI Documents

The final source of information we analyzed was documents provided by PRI. Georgia Lesh and Robert Ross provided financial documents, background information for the environmental educational program activities, and audience geographical information. The financial documents and background information was used to guide our foundation review.

The geographic information provided by PRI covered both TFG workshop participant and Museum of the Earth audiences. This information was used to put together several maps showing the locations of both beneficiaries. The excel sheets provided by PRI contained the self-reported addresses of workshop participants and audience members. These addresses were then put into an excel geocoding macro-tool developed by the CIPA consulting team. The tool would look up the addresses and return the latitude and longitude of each address. The maps separated the Museum of the Earth audience members by zip code (they do not show audience members from outside the United States or incomplete responses). The same process was used to record and

display information for the PRI teacher database and ReaL Earth Inquiry professional development participation list.

Findings

The Findings section is broken down into a review of the best foundation matches, based on the previously outlined criteria. The following foundation review presents the American Honda Foundation, EcoLab, Pisces, 3M, and the Alcoa Foundation as strong, potential funding opportunities. Our review of these foundations and the grants they fund identified a number of commonalities that should inform PRI's application moving forward. We found that successful grant applications:

- Targeted specific student populations, teachers, and/or school districts that matched the foundation's funding priorities
- Proposed supporting on-going collaborations between classrooms and educational program/curriculum development
- Placed a heavy emphasis on program evaluation metrics

We examine these broad themes within the specific grants distributed by each foundation and largely base our recommendations for TFG grant applications from these findings.

The American Honda Foundation

Description

The American Honda Foundation is the philanthropic arm of the Honda car manufacturing company. Their funding priorities embody the Honda organizational values; namely, they seek to support programs that are imaginative, creative, youthful, forward thinking, scientific, humanistic and innovative. Importantly, they focus on STEM subjects, in addition to the environment.

From 2005 to 2015, the American Honda Foundation gave a total of $13,175,286 to 195 recipients through 247 grants.[43] These grants are typically in the range of $20,000 - $75,000 and last one year, though the AHF has supported some organizations for several additional years.[44] Broadly, the total grants are broken into 14 separate categories, though four of these categories have only received one or two total grants. For the purposes of this review, our analysis excludes these grants because they do not support an overall giving pattern, but appear to be representative of personal connections between the grantee and the American Honda Foundation.

Funding Priorities

Our review of the American Honda Foundation's previous grants shows that education and the environment have been a top funding priority. In grants labeled as "education" or

43 American Honda Foundation Grant Recipients – Foundation Directory (2017)
44 Inside Philanthropy, "American Honda Foundation: Grants for Science Education" (2017)

"environment", 151 grants were awarded to a total of 118 recipients. These categories of grants accounted for just over 60%[45] of total foundation grants.[46]

Education

The educational giving topic is broken down into six subsections – Education, Education Services, Educational Management, Elementary and Secondary Education, Graduate Education and Higher Education. The previously subsections all contain grants with similar components to PRI's programming. Within in the subcategories of education, opportunities similar to the TFGs received 58% of grants for education[47] – this includes professional development, curriculum development, out of classroom environmental education opportunities, and programs to enhance access of disadvantaged schools to preparatory materials.

Environment

The number of grants within the environmental category also indicates that the American Honda Foundation may be a good match for PRI. It is the third largest giving area for the American Honda Foundation, which allocates $1,379,919 to 24 recipients for 31 grants.[48] The Environment category is broken down into five subsections – Biodiversity, Domesticated Animals, Environment, Environmental Education, and Natural Resources. Most of these areas focus on activism, conservation, and preservation. However, the Environmental Education subsection is directly relevant and makes up quarter of both recipients and grants.[49] The American Honda Foundation has provided a total of $4,118,262 to 61 recipients through 76 grants

45 61.78% and 61.13% respectively
46 American Honda Foundation Grant Recipients – Foundation Directory (2017)
47 Ibid.
48 Ibid.
49 Ibid.

in subcategories related to environmental education opportunities. This represents just over 30% of total money, recipients, and grants distributed by the American Honda Foundation from 2005 to 2015.

Eligibility Requirements

Nonprofit charitable organizations and private/public school districts are all eligible for funding. The Honda Foundation typically funds programs and organizations with a well-defined sense of purpose, demonstrated commitment to making the best use of available resources, and a reputation for accomplishing goals. Programs should be innovative and creative; they should proposes untried methods that ultimately may result in providing solutions to the complex educational concerns currently facing the American society.[50]

- Be broad in scope, intent, impact and outreach
- Possess a high potential for success with a relatively low incidence of duplication of effort (i.e. other organizations administering the same programs)
- Be dedicated to improving the human condition of all mankind
- Operate from a position of financial and administrative soundness
- Be in urgent need of funding (priority)

Application Process and Deadlines

Organizations can submit one application over a 12-month period. The typical cycle is approximately 90 days. Phase I covers the application submission. Although PRI has previously applied for an American Honda Foundation Grant, the fact that the grant was unsuccessful means

50 "General Application FAQs", The American Honda Foundation.

that PRI can apply as a new organization. New organizations can apply for grants twice a year. The deadlines for submission are February 1st and August 1st. During Phase II, the program officers and board select 8-10% of the applicants for a site evaluation.[51] After the site evaluation, the board evaluates the grantees during April and October, with the final grants awarded announced on May and November 1st.

Relevant Grant History and Collaborations

San Mateo County Superintendent of Schools

This partnership provided $60,000 for 5th and 6th grade teachers to receive professional development training and strategies to integrate California's newly adopted Education and the Environment Initiative (EEI) curriculum. Importantly, the grant demonstrates support for teacher development programs to support the implementation of new curriculum. The grant was primarily faculty, staff and curriculum development. This project is the most similar to PRI's efforts. However, the grant proposal was a requested by a school district. This successful grant award underlines the need for PRI to develop specific program partners for implementation.

Greening of Detroit

Provided $75,000 to fund an educational opportunity designed around an urban park and school gardens. The Greening conducted four classroom visits and four field trips to a park to explore and observe their ecosystem. The Greening also collaborated with K-12 schoolteachers in the area to create age-appropriate, interdisciplinary curriculum for student built gardens. The Greening of Detroit is not an exact parallel to PRI's programs. The focus is on out-door, interactive

51 Ibid.

educational programs. However, it does demonstrate that the American Honda Foundation provides money for curriculum development and implementation for environmental education.

Elizabeth River Project

The Elizabeth River Project received a total of $58,550 given to support the Learning Barge. The Learning Barge is a floating, wetland classroom powered by the sun and wind. Students conduct data collection and experiments through six learning stations focused on river ecology, green technology, geography, and eco-art. This environmental educational opportunity is substantially different from PRI's TFGs – it focuses on bringing students to a unique, location specific education opportunity. However, there is some support in program. The grant also covers supplemental activities back in the residential classroom tied to the experience on the barge. TFG workshops and teacher development programs are different from the funded experience, but share an emphasis on bringing new climate material into the classroom.

Village of Arts and Humanities

The American Honda foundation provided PhillyEarth with a grant for $50,000. The program allowed local environmental science and engineering professionals to provide instruction within after-school and summer classes. Students learned about topics like composting and soil mechanics, various gardening techniques, and alternative types of cooking. Students reinforced these skills by applying them at the PhillyEarth Farmer's Market. Again, the focus of this grant is on out-door educational programs for students, but demonstrates the foundation's willingness to support curriculum development and teacher training. A major difference between PRI's TFGs and this project is the emphasis on teacher development.

Zeta RHO Foundation

The Ernest E. Just Marine Science program received $45,000. The program is an educational program for minority middle school youth in Southern California. Participants explore Physical Science opportunities through hands-on activities and field experiences at local science facilities. The grant was for curriculum development. Again, this grant focuses on a specific group of children, but does support curriculum and programs similar to PRI's TFGs.

Rocky Mountain Butterfly Consortium

The Rock Mountain Butterfly Consortium supports the GROW (Growing Respect by Observing our World) Science and Literacy program. The American Honda Foundation provided a grant for $24,000. It supported two local low-income elementary schools to couple real-world experiences to already existing science curricula. The funded activities included curriculum support, field trips and interactive in-class lessons conducted by educators. Again, there is an emphasis on connecting to students, as opposed to just providing educators with development opportunities.

Potential Contacts

We were unable to find any ready connections between the American Honda Foundation and Cornell, Ithaca College, or Tompkins County. Instead of leveraging these connections, the best potential contact and first step might be a conversation with Rick Magder, whose interview is provided later in this report. As the Executive Director of Groundwork Hudson Valley, he worked with the American Honda Foundation to implement grant money to support their Science Barge program. He is a personal friend of Laurie Miller, the capstone consulting instructor, and would be able to make an introduction to further explore his input. If he feels

comfortable, Rick Magder may be able to introduce PRI staff to a point of contact at the American Honda Foundation to further application discussions.

Final Evaluation

The American Honda Foundation offers a very real and appropriate funding match. Their grant history supports the conclusion that they would be willing to fund PRI's teacher development programming. Before pursuing any American Honda Foundation grant, PRI would want to design their program around a specific student body or school district. The foundation appeared responsive to grant applications that provided opportunities to specific cadres of students and educators, instead of broad workshops for teachers. PRI should frame the application as a joint proposal from PRI and the school district intended to benefit a group of students. If PRI was able to build this kind of collaborative relationship prior to submitting the application, the proposal has a great chance of succeeding. Finally, the American Honda Foundation is more likely to consider PRI's application if PRI is able to leverage Cornell's existing connections to the American Honda Foundation. The Approach Strategy section outlines these connections and PRI should be pursue them through the appropriate Cornell department.

Pisces Foundation[52]

Description

Motivated by a vision of people and nature thriving together, Pisces works to advance strategic solutions to natural resource challenges and prepare the next generation by supporting environmental education. The foundation is based in California but is now expanding their area of impact into the rest of the United States. Pisces values the natural world and believe environmental solutions and a conservation ethic strengthen communities, economies and human well-being. They seek to empower a new generation of environmental leaders, scientists and engaged citizens. The Pisces Foundation supports organizations working to advance environmental education; improve the stewardship of water resources; and reduce global climate change. Pisces support environmental literacy because the teams believes it yields a range of important benefits to people and communities today—and is an indispensable building block of an environmentally sustainable future.[53]

Funding Priorities

From 2011 – 2015, the Pisces Foundation giving by grant subject is a reported $34,114,508 to 79 recipients for 147 grants.[54] These grants typically range between 2,000 and 2,000,000. Pisces primarily funds environmental issue grants. Of the $34 million dollars given out, over $33 million has been distributed to programs benefiting the environment.[55] The foundation has given small

52As previously noted, Foundation Directory changed the listing for the Pisces Foundation to the Lsf Life Science Foundation. In our follow up research, the consulting team was unable to ascertain why. The organization material was still branded as the Pisces Foundation and they continue to use that name. This report follows the organization's use of the Pisces Foundation name.
53 "Our Purpose", the Pisces Foundation (2017)
54 The Lsf Life Sciences Foundation Grant Recipients, Foundation Directory (2017)
55 Ibid.

grants to other philanthropic focus areas, but they are always related to the environment in some fashion. For example, the all of the grants in the area of Arts and Culture went towards supporting natural history and science museums, or were used for environmentally friendly historic preservation.[56] In every category of giving, grants ultimately support issues that were related to the environment, even if they were not identified as environmental grants. Broadly, Pisces is a strong fit for PRI given their interest in funding environmental issues, and specifically environmental literacy programs.

Education

Pisces has not given any grants that have been counted as Education grants. However, they have supported educational institutions. The Pisces Foundation has given grants to Education-focused recipients in the amount of $507,217 since 2011. Almost 70% of their Educational grants have gone to a single organization, Education Outside.[57] Education Outside's mission is to "advance science education and environmental literacy by teaching outdoors in public schools."[58] This is consistent with the pattern noted previously. Regardless of the grant subject or recipient, they are guided by the foundations focus on environmental conservation, education, and access. The foundation's education recipients are equally split between middle/high school organizations, and college/graduate/professional education recipients. All of the money that went to elementary and secondary education supported STEM education in some

56 The Lsf Life Sciences Foundation Grant Details, Foundation Directory (2017)
57 The Lsf Life Sciences Foundation Grant Recipients, Foundation Directory (2017)
58 "Bringing Science to Life in Vibrant Outdoor Classrooms," Education Outside

form.[59] This could be in-classroom environmental literacy programs[60] or programs similar to the previously mentioned Outdoor Education organization.

Environment

Total grants for environment funding was broken down into five categories: Biodiversity, Climate Change, Environment, Environmental Education and Natural Resources. Among those five categories, natural resources received the highest amount of funding, by far, at $27.9 million.

Pisces donated $2,021,908 to nine recipients through 26 grants for environmental education. Eleven recipients were identified within this group; the grantee receiving the lowest amount received $1,000 (Ecodads), and the highest received $640,000 (Education Outside). As a promoter of children education, environment and environmental education, Education Outside has been very successful in securing funding since 2013. A single grant of $200,000 was awarded to Education Outside to support outdoor environmental education for children in a San Francisco elementary school. [61]

Although the Pisces Foundation is a younger organization (started in 2006), its impact in the State of California, Virginia and New York has been significant. In the State of New York alone, Pisces has donated close to $4.5 million to nine recipients through 21 grants. Although most of these grants have been allocated to recipients in the New York City metropolitan area, with sufficient supporting documentation and a robust case statement, PRI may be able to secure funding to support its TFGs and further climate change educational programs.

59 The Lsf Life Sciences Foundation Grant Recipients, Foundation Directory (2017)
60 2014 grant for $96,810 to Californians Dedicated to Education Foundation for environmental literacy program. The Lsf Life Sciences Foundation Grant Recipients, Foundation Directory (2017)
61 The Lsf Life Science Foundation Map Grant Recipients, Foundation Directory (2017)

Eligibility Requirements

Pisces contributes only to preselected organizations in California, New York, and Virginia with focus on general support, individual development, and program development.

Application Process and Deadlines

No information pertaining the application process and/or deadlines has been posted on the Pisces Foundation website as of April 23, 2017.

Relevant Grant History

Kansas Association for Conservation and Environmental Education (KACEE)

The Pisces grant to KACEE is the most relevant grant to PRI's efforts. Most importantly, the grant was given in Kansas, outside of California. As previously noted, Pisces has traditionally focused their donations on the state of California. However, they are actively looking to expand their impact. In 2015, $31,500 was given to KACEE to support their Solutioneer program.[62] The grant funds a collaborative program between KACEE and the Kansas State Department of Education, and funds a workshop for 10 K-12 educators and 5 non-formal educators. "This cadre will work together over the course of a year to identify their biggest challenges in their school or districts"[63] for implementing environmental education. The program is structured around working with professional educators to become familiar and comfortable with the most recent environmental education standards, and developing methods for classroom delivery and student engagement.[64]

62 The Kansas Association for Conservation and Environmental Education Grant Details, The Lsf Life Sciences Foundation Grant Details, Foundation Directory (2017)
63 Solutioneers Brochure, The Kansas Association for Conservation and Environmental Education.
64 Ibid.

The KACEE Solutioneers program is the type of program that PRI has experience delivering. The program is a professional development workshop series, sustained over the course of a year, with four to five meetings that bring educators together to learn best environmental education practices. Pisces' support for this similar program indicates that they may be interested in supporting some programs fashioned around PRI's professional development curriculum. We were unable to find information for how this program was developed; it seems unlikely that the Solutioneers program was a submitted grant application. More likely, it developed through connections between KACEE and the Pisces Foundation. However, this grant follows the same structure observed in other grants – foundations support specific educational groups like students or teachers over broader professional development workshops. This specific group happens to be the broadest area of all the grants (the State of Kansas), but one of the implementation partners is the Kansa State Department of Education. PRI will need to define the specific group of teachers they are working with, create a partnership with the appropriate representative group, and then try to leverage connections with Pisces in order to maximize their chances for funding.

Californians Dedicated to Education Foundation (CDE)

Pisces provided CDE with $96,810 to support efforts to improve environmental literacy in the State of California. A 47-member literacy task force was created to enhance environmental education in the Golden State. Members included K-12 classroom teachers; school and district administrators; informal science educators; science, environmental, and outdoor educators; higher education faculty; and

educational leaders from government agencies and nonprofits.[65] Although the grant does not support the California program in its entirety, it supports environmental programs that involve outdoor educators similar to PRI's, which can be beneficial considering that New York is one of three states in which Pisces is currently making an impact.

Education Outside

Education Outside, an AmeriCorps program, provided $220,000 to support outdoor environmental education for children in San Francisco elementary schools. The goal of Education Outside is to advance environmental literacy by transforming school gardens into dynamic outdoor environmental educational classrooms led by school-based corps members.[66] They expect to equip and empower students to protect their health and environment while creating a sustainable world. This grant supports curriculum and programs similar to PRI's TFGs.

San Francisco School Alliance

The Alliance provided money for children and youth education. As a champion of public schools in the city, the San Francisco School Alliance works community-wide to generate innovation, funding and strategic engagement that empower students for success. Although their website does not specifically list the type of climate change and

65 Chapman, Inverness Associates.
66 Our Focus- The Pisces Foundation.

environmental projects it supports, the San Francisco School Alliance has the stated mission to prepare students for a more sustainable environment.

Alliance for Climate Education (ACE)

ACE received $25,000 to support action teams that make a big impact on climate change. These teams are youth-led school clubs committed to cutting carbon, pushing for policy changes, and raising climate awareness. Over the years, the Alliance for Climate Education has seen action teams accomplish some incredible things: from kick starting recycling at school, to solarizing homes, to organizing 200+ people climate change summits.[67] The focus of this program is more on student development as opposed to providing elementary and secondary education teachers with development opportunities.

Potential Contacts

There was not an obvious connection to the Pisces Foundation. However, PRI may be able to leverage the CIPA alumni networks to warrant an introduction to Tom Owens. Tom Owens is a program associate at the foundation and focuses on "Water and Environmental Education issues."[68] Mr. Owens is in charge of developing grant-making strategies for urban, agricultural, and citizen science/technology programs. He also leads the Interim Environmental Education Program. While Tom is not a Cornell alumnus, he does have a personal connection with Nathaniel Cordova (CIPA '15), a recent graduate who is a professional contact of Mauricio Cortes, co-author

67 Action Teams, the Alliance for climate change education
68 Our People, The Pisces Foundation

on this report. Currently, Nathaniel Cordova is a Presidential Management Fellow at the U.S. Department of Agriculture in Washington, D.C. It is unclear whether this relationship could be leveraged to make an introduction, but Mauricio is reaching out to Nathaniel Cordova with an inquiry. The consulting team is currently examining whether Nathaniel would be able to make an introduction to Mr. Owens.

Final Evaluation

Pisces is one of the strongest potential funders. They have a proven track record that recognizes the importance of environmental education as a key piece fighting climate change moving forward. They fund environmental education programs, both in and outside of the classroom, and have funded professional development opportunities through partnerships similar to the one developed with KACEE. The biggest potentially limiting factor is the geographic focus; Pisces is a California-based organization and their long-term giving history reflects this geographic focus. However, there has been evidence in recent years that they are interested in expanding their giving to a national scale. This offers a unique opportunity; the character of PRI's educational programming allows it to be implemented nationally, while still being locally relevant. A partnership between Pisces and PRI would allow both to expand their national impact. Although Pisces says that it is not accepting applications at this time, it would be worthwhile to make an initial connection with the organization to explore the potential for future funding.

3Mgives

Description

3Mgives uses a three-pronged approach to create stronger, more resilient communities. They use their foundation, established in 1953,[69] to provide financial investment, product donations, and human capital in order to build sustainable neighborhoods and cities. Their 2016 annual report reports $29.7 million in cash contributions in the United States.[70] The Foundation divides their giving into 3 categories – education, community and environment. Both their educational and environmental giving tries to accomplish specific goals, and they support programs that help them further these goals. Unlike other foundations, 3M has developed a number of their own organizations to distribute foundation support or implement funded programs. For instance, their 3M STEP program partners with Saint Paul Public Schools to open STEM learning opportunities to high school students from disadvantaged backgrounds.[71] There are several more examples[72] of 3M-affiliated organizations that actually implement the grant-funded programs. Their support model first identifies schools, teachers, students, or communities that they would like to support, and then uses their own non-profit and corporate entities to implement programs.

69 3Mgives Overview.
70 3Mgives 2016 Annual report.
71 3M Step Brochure.
72 3M TWIST, 3M Tech, and 3M Visiting Wizards

Funding Priorities

From 2010 to 2014, 3Mgives has given a total of $52,533,281 to 1,641 recipients through 3,583 grants.[73] These grants typically range between $1,000 - 1,000.000.00.[74] The five biggest grant areas are, in order: 1) arts and culture, 2) general philanthropy, 3) health, 4) human services, and 5) public safety. Environment ($3,895,507; 7%) and Education ($2,703,819; 5%) have both received low levels of total support by grant subject. However, when searching grants recipient descriptor, Education ($20,984,089, 31%) organizations have received significantly more support than the grant topics might suggest. Environment recipients still constitute a fairly low proportion of overall giving ($2,765,000, 4%).

Education

3MGives educational funding tries to accomplish three specific goals. Funding aims to "1) increase student achievement in STEM and business curriculum, 2) support post-secondary programs that attract, retain and develop graduate students, 3) promote equity by driving access to quality education for all communities."[75] There is an emphasis to spread giving between all levels of education, and this is reflected in their grant recipients. There is evidence that 3MGives supports educator professional development, but this evidence does not lead to the conclusion that they will support PRI-led educator development. 3M Twist is the most direct way that 3M supports educator development. The program brings educators from 3M located communities to spend 6 weeks with 3M engineers working on actual research projects.[76] "TWIST is based on the

73 3M Map Grant Recipients, Foundation Directory (2017)
74 3M Profile, Foundation Directory (2017)
75 3M's Commitment to Education, 3M (2017)
76 3M Twist Applications (2017)

idea that the way to learn science is to do science – an axiom that applies as much to teachers as it does to their students."[77] This is 3M's most direct giving to educator development, though it does not necessarily train teachers to apply curriculum or materials back in their own classroom. Instead, their view of professional development is to give teachers the opportunity to learn new applications of STEM materials.

Environment

3M's environmental giving from 2010 – 2014 is broken down into 5 grant subject subsections – Biodiversity, Domesticated Animals, Environment, Environmental Education and Natural resources. The total amount is $3,004,482 to 147 recipients. Over the same time period, Foundation Directory reports almost $6,000,000 were given to environmentally-focused grant recipients. In both cases, environmental education as a sub-group makes up a small portion of overall environmental philanthropy. Environmental education accounted for 12% of environmental grant subjects and only 2% of grant recipients. The grant subjects are a more accurate representation of funding for environmental education activities because it includes school districts and other educational institutions; grant recipients is limited to organizations who only do environmental education like Nature Centers or Environmental Learning Centers.[78] The Environmental Education grants are all programs for teacher professional development. Some of the organizations are environmental education specific like the Mojave Environmental Education Consortium, which is an environmental literacy organization in the Mojave Desert that provides teacher workshops, teacher mentorship programs, and scholarship grants.[79] However, 3M also

77 Ibid.
78 3M Chart Grant Recipients, Foundation Directory (2017)
79 "Home" – Mojave Environmental Education Consortium.

provides money to school systems for training educators in the implementation of science curriculum. In 2013, 3M gave $5,000 to the Raritan Valley Community College Foundation to train New Jersey teachers in the implementation of the Next Generation Science Standards.[80] Two years later, 3M gave $40,025 to the friends of Desert Discovery Center to expand their environmental education K-12 curriculum.[81]

Eligibility Requirements

3MGives provides support for any registered 501(c)(3) organizations as long as they are not disease-related, hospitals, religious, or social organizations. They have specific restrictions on the type of activities funded, though many of these are activities are not relevant for PRI. However, they explicitly state that they do not fund conferences, seminars, or workshops. This is a key factor that will determine the shape of any PRI application. PRI would need to frame their program delivery as a partnership between a group of teachers over the course of a year in order to field a competitive application. As evidenced in the above discussion, and the specific grants discussed in the subsequent sections, 3M only provides environmental education educator development when it is targeting a specific group of teachers, or around a 3M facility. They do not consider programs like 3M TWIST as a workshop; instead, it's an educational program for teachers that 3M hosts. PRI would want to gather a group of teachers within a specific school district and present the application as an opportunity to fund the development of environmental education curriculum. 3M might be particular receptive if the application placed heavy emphasis on implementing the virtual fieldwork component of PRI's environmental education program.

80 2013 3M Corporate & Foundation Cash Giving
81 2015 3M Corporate & Foundation Cash Giving

The second key eligibility criterion is that 3M places significant emphasis on providing grants to areas with 3M locations. 3M is based in Minnesota, and they support a significant amount of institutions in and around the Twin City area. Roughly 25% of grant recipients are located in Minnesota, and no other state has more than 9% of total recipients.[82] Texas, Wisconsin, California, Iowa and South Dakota receive the most grant support after Minnesota.[83] Each of these states are home to 3M facilities or other bases of operations.[84] A 3M Gives grant only makes sense for PRI if they are trying to partner with a school system in the geographical vicinity of a 3M facility. The ReaL Earth Inquiry Teacher participation list forwarded by Rob Ross listed several teachers in South Dakota near Brookings and Aberdeen[85] that may be appropriate places to try and expand into 3M communities. Without a "geographic hook", a grant from 3M is unlikely. 3M provides a list of all of their facilities here.

Application Process and Deadlines

Most grants are by-invitation-only. An application form is required and the initial step is to complete an online prescreening assessment. 3M's board giving dates are June and December. Giving targets are communities where 3M has a facility. In St. Paul, MN and Austin, TX, proposals are by-invitation-only. In all the other 3M U.S. communities, send a letter of inquiry to the local facility addressed to "3M Plant Manager." The facility for the State of New York is located at 305 Sawyer Avenue, Tonawanda, NY 14150. Criteria are the same for cash and product donations in communities where 3M has a facility.

82 3M Map Grant Recipients, Foundation Directory (2017)
83 Ibid.
84 3M Communities (2017)
85 Educators in Hazel and Sioux Falls, Internal PRI documents

Relevant Grant History

Delaware Natural Society

Provided $49,880 to enhance its "Outdoor STEM Pathways to Greener Schools" program. Delaware Nature Society will work with schools and teachers to establish outdoor classrooms that can be utilized by the entire school community, provide teacher professional development necessary to use the spaces effectively to improve student achievement, and deliver a three field-based STEM program series on the school grounds that supports academic curriculum[86].

Chippewa Nature Center

Provided $49,945 for Nature School at the organization's Nature Center, where the classroom moves to the center for a weeklong immersion in nature and science. The grant was mainly used for curriculum development and it is aimed to benefit elementary and secondary education students. This approach is very similar to the one used by PRI's virtual expeditions.

Squam Lakes Natural Science Center

Provided $33,264.00 for Children and youth environmental studies and education in Holderness, NH. The center provides programs such as guided discoveries, which are weeklong outdoor natural adventure camps for children ages 4 to 14. Programs, taught by experienced naturalists and educators, give children an in-depth exploration of nature and science.

Chattahoochee Nature Center

Provided $50,000 for "Get Outdoors for Science and STEM" pilot programs. The CNC launched the first grant for vide elementary schools, using STEM curriculum methodology with

86 Rowan (2014)

the education department in collaboration with the Fulton County Charter School System and five local middle schools. Their goal, just like PRI's, is to inspire students to consider future careers with an environmental focus as they also devise potential solutions for existing and future challenges that cannot yet be anticipated.[87]

Friends of Beaver Creek Reserve

Provided $50,000 for infant and toddler environmental education programs. Thanks to the generous 3M grant, the Beaver Creek Reserve in Wisconsin was able to build three outdoor nature play pods in the fall of 2015. It allows young students to be part of learning activities about the ecosystem through field trips, "something that the center likely could not afford to do on its own.[88]" Although the Beaver Creek Reserve targets a younger segment of the population than PRI, it does aim to educate students on the importance of the environment and climate change education.

Potential Contacts

Faculty at Cornell have previously received support from 3Mgives. In 2013, 3Mgives provided $35,375 to Cornell programs. All of the grants supported programs or professors in the engineering department.[89] Tobias Hanrath, Associate Professor of Chemical and Biomolecular Engineering, received 3M's Non-tenured Faculty award.[90] Since someone on the Cornell faculty has received an award/grant from 3M, the Cornell University foundations department will be able to guide any inquiries that PRI wishes to make. This approach mirrors the recommendations

87 Copsey (2017)
88 "Partnership connects preschoolers with nature." University of Wisconsin Eau Claire
89 2013 3M Corporate & Foundation Cash Giving
90 "Assistant Professor, Tobias Hanrath recieves 3M's Nontenured Faculty Award." – Cornell Engineering

in the other potential contacts section. Cornell offers valuable resources for navigating grant applications to major foundations. In addition to 3M, Cornell can offer information on the American Honda Foundation. Cornell can also offer access to alumni within foundations. Some potential alumni have been identified in the potential contacts, but the alumni office may be able to identify more potential contacts.

Final Evaluation

There are more worthwhile funding opportunities to pursue. While 3M has supported STEM education curriculum in the past, their emphasis has been predominantly on engineering and technology applications instead of environmental education professional development. Grants to the Friends of Beaver Creek reserve and Chippewa Nature Center demonstrate that 3M does support environmental education initiatives, but it does not appear to be their primary focus.

Ecolab Foundation

Description

The Ecolab Foundation frames their philanthropic support through their Corporate Responsibility program. They are dedicated to giving back to the employees, customers, and community organizations that surround their facilities. Their contributions are divided between giving programs, volunteerism, in-kind giving, and the Ecolab Community giving campaign.[91] The Ecolab Foundation makes grants through their giving program. Total corporate and foundation giving totaled a little over $11 million 2016, while the Foundation grants came to $6,355,700 in the same year. The Foundation disperses grants across four areas of impact: 1) Youth and Education, 2) Civic & Community Development, 3) Environment and Conservation, 4) Arts & Culture.

Funding Priorities

From 2008 – 2015 the Ecolab Foundation has given a total of $24,129,094 to 790 recipients through 1,792 grants. These grants typically ranged from $3,000 to $84,000. The total amount of grants is broken into 17 categories, the ones with the most funding being arts and culture, education, environment, human services and philanthropy. Between education and environment, Ecolab has donated more than $3.5 million since 2008 to 42 recipients through 105 grants.[92]

91 Community Involvement – Ecolab (2017)
92 Ecolab Chart Grant Recipients, Foundation Directory (2017)

Education

The two impact areas that overlap with PRI's environmental education programming are their Youth & Education and Environment & Conservation areas. Almost 40% of the Foundation's grants went towards Youth & Education grants. In 2016, roughly half of the $2,484,735 Youth & Education support was distributed through the Foundation's Visions of Learning Educator's grants. This program provides K-12 educators with funding to augment basic lesson plans.[93] Most of the reported funded projects provided for physical classroom materials, like supplies for robotics lessons or resources for wind column experiments.[94] It is unclear whether this program has funded teacher development opportunities. In 2014 and 2015, the Ecolab focused their educational grants almost exclusively on elementary and secondary educational giving,[95] which is the primary focus area of PRI's teacher development program. While some foundations like 3M gave to partnerships between non-profits or science centers and schools, Ecolab's giving has gone straight to schools and teachers.

The Ecolab foundation donated $3.3 million to 29 recipients through 74 grants. Five categories (including biodiversity, domesticated animals, environment, climate education and natural resources) are listed and the top two recipients are environmental education and natural resources. The Environmental Initiative of Minnesota received the largest award from the Ecolab Foundation, $50,000, since 2009, granting $10,000 per year since to support environmental change program development in Ecolab's home state. Ecolab is also committed to environmental education outside Minnesota, as in 2014, it funded the Project Wet foundation in Bozeman, MT

93 Ecolab Global Communications Press Release, January 10, 2017
94 Ibid.
95 Ecolab Chart Grant Recipients, Foundation Directory (2017)

with a contribution of $500,000 to ensure proper dissemination of water education methods (see details below in relevant grant history). This would be a good program for PRI to look at considering it engages youth through a network of school and community educators in targeted areas.

Environment

As an organization, Ecolab explicitly states their interest in the relationship between conservation and education. "Recognizing that our earth's future depends upon an educated, caring populace, Ecolab also puts a high priority on teaching the value of conservation to young people."[96] Their environment and conservation support is primarily available for hands-on learning programs and educational opportunities.[97] However, only 3% of their total 2016 giving went towards their Environment & Conservation impact area. Foundation Directory reports that in 2014 and 2015, the organization gave out 34 grants labeled as Environmental Education. These grants primarily supported community relations and program development and learning and nature centers, conservation reserves, or public garden programs.[98] Unfortunately, the general environmental education grants are not very similar to PRI's teacher professional development programs. The major reason that Ecolab is included in this report is that they funded the development and implementation of their Project W.E.T. program, discussed in further depth below. This program provides a model that Ecolab has followed in the past – they funded

96 "Environment & Conservation," Community Involvement, Ecolab
97 Ibid.
98 Ecolab Chart Grant Recipients, Foundation Directory (2017)

curriculum development and then the subsequent implementation and training costs associated with that curriculum.

Eligibility Requirements

To qualify for an Ecolab Foundation NPO (non-profit organizations) grant, a 501(c)3 organization must fall within one of the four strategic areas. There are also the most stringent geographic eligibility requirements of all the Foundations reviewed in this report. Other Foundations have indicated a geographic preference, but have given more broadly. Ecolab's non-profit grant giving seems most tightly restricted to the locations of their communities. Their Visions of Learning giving program has a national scope, though it still favors Ecolab communities. The non-profit giving grant, however, is more strictly limited. Before pursuing a grant from Ecolab, PRI will have to have established a group of teachers or a school district in one of the geographic communities as an implementation partner. The partner is ideally located in Minnesota, but can be located in one of the following communities[99]:

- City of Industry, CA
- McDonough, GA
- Elk Grove Village, IL
- Joliet, IL
- Naperville, IL
- Huntington, IN
- Garyville, LA
- Columbus, MS

99 "Other US Regional Locations," Apply for a Grant, Ecolab

- Ellwood City, PA
- Corsicana, TX
- Garland, TX
- Irving/Fort Worth, TX
- Martinsburg, WV
- Midland/Odessa, TX
- Sugar Land/Fresno, TX
- Beloit, WI

Ecolab does not currently have operations in the State of New York, but Foundation Directory does report that the Foundation has donated a total of $1,091,761 to 24 recipients through 46 grants in the state.[100] More importantly, two of those grants were given to Cornell University. Although the geographic limits of the Foundation's giving are an obstacle to developing a partnership, PRI should still develop an application.

Application Process and Deadlines

Ecolab Foundation has two relevant grant cycles. The Visions of Learning grant cycle is closed for the year 2017, and the grants will be announced by August 31st, 2017. The 2018 grants will not be available in spring 2018.[101] The timeline for this grant means that PRI should invest resources elsewhere instead of focusing on this option. The non-profit organization giving cycle is staggered from the Visions of Learning Cycle. While it is currently closed, it will open up for 2017 applications on July 1st, 2017.[102] The application guide is not readily accessible, but can be

100 "Apply for a Grant," Community Involvement, Ecolab
101 "Other US Regional Locations," Apply for a Grant, Ecolab
102 Ibid.

downloaded through this link. The application requires the organizations history and mission, a description of the board's composition, a breakdown of staff and volunteers, and a list of current programs, activities, service statistics, and accomplishments.[103] The application requires all relevant financial information, including the most recent audited financials if the annual budget is over $750,000. Finally, the application asks for brief grant description. Based on the information provided, this initial application appears to be a screening opportunity for Ecolab. It allows them to gauge their potential interest before pursuing specific opportunities further. This introduction application underscores the importance of a personal contact within the organization to ensure that the application is seriously considered.

Relevant Grant History

Project Wet Foundation

Provided $500,000 each year over three years to the Project Water Education for Teachers (WET) foundation to ensure water education methods for all ages. This grant provided a major component of the curriculum development costs, and helped build online methods for curriculum delivery. A big emphasis on the project is a suite of digital and print materials for children through a network of school and community educators in targeted areas. Their program is quite similar to PRI's TFGs, and is a model for how a potential partnership with Ecolab could look. However, such a partnership is not especially likely. The focus of Ecolab overlaps with Project WET to a greater extent than with PRI's area of interest. It seems unlikely that Ecolab would partner with PRI at a similar scale. However, PRI already has the curriculum of their educational program developed, so Ecolab may be willing to provide implementation funding –

103 Application Overview – Ecolab Applicant Reference Guide.

especially if the schools and teachers receiving the professional training were located in Minnesota.

Eagle Bluff Environmental Learning Center

Provided $10,000 to further develop its outdoor education programs. Because of this grant, K-12 students are able to increase their environmental academic literacy, promote positive outdoor experiences, spark curiosity and appreciation for the natural world and also foster a sense of respect, stewardship and community. Although the Eagle Bluff Environmental Center does not necessarily have a program dedicated to climate change education, it provides money for activity development in the realm of environmental education.

Thomas Irvine Dodge Nature Center

Donated $10,000 to provide exceptional experiences in nature through environmental education. Dodge offers a variety of unique experiences for people of all ages. Its many landscapes provide the outdoor classrooms for more than 40 different curriculum topics for visiting school groups, space for exploring preschoolers attending our premier preschool, community education on evenings and weekends, day camp programs for school-aged children, miles of hiking trails and prairie and oak savanna restoration projects.[104] Similar to the TFG workshops and teacher development programs, Dodge shares PRI's vision of fostering an outdoor experience that can increase awareness for preserving the environment.

104 "About Us", Dodge Nature Center

Potential Contacts

There are a couple of potential points of contact for PRI to pursue if they think that Ecolab is an appropriate grant partner. Anne Davis Gotte is Ecolab's current Vice President of Global Talent. She has several Upstate New York connections; she is a graduate of Binghamton University, and more importantly, received her Master's in Industrial and Labor Relations from Cornell University. According to her LinkedIn page, she has been with Ecolab since January 2016. She works at the company's main headquarters in St. Paul, which positions her close to the Foundation's operations. Although she is not directly connected to the Foundation, she is a high-level management executive that would be able to facilitate appropriate introductions. If PRI was able to leverage the ILR alumni department to facilitate an introduction, it would allow PRI to potentially make a connection to someone in the Ecolab foundation.

Another potential point of contact is Alan Kennedy, another Cornell alumnus. He has been with Ecolab since 1979, but is currently stationed in Zurich, Switzerland. Although he is positioned very highly within the company, he is somewhat removed from the Foundations efforts. He is unlikely to offer much of a connection for PRI.

A more promising Cornell connection is Ruth Petran, who is the Vice President of Food Safety and Public Health at Ecolab. She received a Bachelor of Science degree in Consumer Food Science from Cornell, and is part of the Advisory Council for the College of Agriculture and Life Sciences Department of Food Science.[105] Her participation on the advisory council presents a promising opportunity for developing a personal connection at Ecolab, the first step towards a

105 "Advisory Council", Department of food Science at the Cornell University College of Agriculture and Life Sciences

personal connection with their foundation. Another promising alumnus is Dr. Larry Berger. He is the executive vice president and chief technical officer for Ecolab.[106] He received his undergraduate degree from SUNY – Stony Brook, and both his master's and doctorate from Cornell. He is one of the prominent leaders listed on the Ecolab website and could be a strong connection. It does not appear that he is involved in any committees or advisory boards at Cornell, but is one of several prominent Cornellians at Ecolab. The final potential contact at Ecolab is Roberto Mendex, the vice president and president of Global Services and Specialty for Ecolab. He is a graduate of Cornell University's hotel management executive program.[107] As his time at Cornell occurred as an executive, he may not have formed the same emotional attachment to the Ithaca/Cornell community and is probably the weakest entry point to the foundation.

Final Evaluation

Ecolab may not be the strongest topical fit for PRI, but it has the strongest cadre of Cornell alumni associated with the foundation/company. There is some definite overlap between PRI's educator development offerings and Ecolab's funding priorities, as well as similarities to previous grants. However, any funding from Ecolab is going to materialize through Cornell connections to the company. Several prominent employees have ties to Cornell through undergraduate studies, or various master's and doctoral programs. If PRI decides that they would like to pursue a relationship with Ecolab, the first step will be to coordinate efforts with the alumni and/or foundation departments at Cornell to facilitate an initial introduction.

106 Dr. Larry Berger, Leadership, Ecolab website.
107 Roberto D. Mendez, Leadership, Ecolab

Alcoa Foundation

Description

The Aluminum Company of America (Alcoa) was founded in Pittsburgh, PA in 1888. The company focuses its business operations on producing aluminum products for a variety of different sectors, including automotive, construction, and commercial transportation.[108] Historically, the company's business ventures comprised all major elements of the aluminum industry.[109] In 2016, Alcoa split into two Fortune 500 trading companies, Alcoa and Arconic. Alcoa is responsible for the mining, refining, smelting, and power businesses, while Arconic has taken over operating all of the fabrication activities.[110] The Alcoa Foundation, the philanthropic arm of the aluminum producing company, was created in 1952 and has invested more than $570 million to date.[111]

The Alcoa Foundation is a promising funding opportunity for PRI, with one major caveat. In 2013, Forbes identified Alcoa as the most generous corporation; 12.1% of their profits were distributed through the foundation to a variety of philanthropic endeavors.[112] In 2015, their 990 form reports a total of $22,734,273 in grants dispersed, although some of these grants are part of on-going grant pledges from previous years.[113] As a metals and manufacturing company, Alcoa places funding emphasis on community sustainability through two different types of grants. Roughly, half of all funding is provided through Location Grants. These grants target

108 "Company Perspectives – History of Alcoa, Inc.", Funding Universe
109 Ibid.
110 "Our History – Who We Are," Alcoa Inc.
111 Ibid.
112 Adams (2017)
113 Alcoa Foundation 990 tax form

organizations and needs within the communities Alcoa operations are located. Priority is given to the Foundation's focus areas, local needs, and collaborative partnerships.[114] The remaining balance is dispersed through Alcoa's Signature Grant program that try and drive impact in two key focus areas. "The Foundation supports organizations that are dedicated to 1) promoting the prevention of and resilience to climate change and 2) the restoration and preservation of biodiversity."[115]

Funding Priorities

Foundation Directory provides a detailed history of grants dispersed from 2003 – 2013. A total of $224,548,916 was dispersed to 3,577 recipients through 7,151 grants. Broadly, there are three categories of relevant grants – Education, Environment, and Science. Although the amount of funding in the Science area of giving (which includes Geology and Physical Sciences) is minimal, the Education and Environment areas of giving are the 1st and 3rd largest donation areas. A total of 2,755 grants were given to 1,275 organizations; together, this funding level accounts for just under 40% of total grants awarded.[116]

Education

The clearest match between giving priorities is within the Education giving area. The foundation explicitly supports programs "designed to promote STEM education."[117] Within STEM education, Alcoa appears to emphasize programs that prepare girls, women and other underrepresented demographics for pursuing science programs. Although a significant number

114 "Partners and Programs," Alcoa Foundation Website
115 "About the Foundation," Alcoa Foundation Website
116 Alcoa Organization Profiles, Foundation Directory (2017)
117 Alcoa Grant Profiles, Foundation Directory 2017

of grants in this area are directed towards workforce development and veteran's workforce readiness, this should not be discouraging. Alcoa has supported teacher training in Western Pennsylvania schools,[118] provided support for teacher resources for individual teachers[119] and school districts,[120,121] and have shown a willingness to fund organizations beyond teachers/school districts to further educational development.[122] Over the 10 years of reported grants, they have donated $53,033,691 to 938 recipients through 1,961 grants.

Environment

Alcoa's donations to supporting the environment are almost as generous. They have totaled just over $36 million dollars across six environmental categories. Unfortunately, environmental education falls at the bottom of these categories. The priority environmental funding areas for the Alcoa Foundation are natural resources and biodiversity. Climate change and Environmental Education hold 3rd and 4th respectively. Collectively, the latter two account for only 12% of all environmental giving, and only 15% of all environmental grants. These numbers are slightly misleading however. During the course of our research, the consulting team found several programs that could have been labeled environmental education identified as solely education funding opportunities. These numbers might be underreporting the number of programs similar to PRI's TFGs that Alcoa has supported.

Alcoa's track record supporting professional development programs means they are likely to understand the need for preparing and training educators to teach climate change and

118 Ibid.
119 Ibid.
120 Ibid.
121 Ibid.
122 Ibid.

environmental issues. Alcoa's funding focus is a direct match with PRI's work, and the mission of the foundation seems to indicate that there is a great opportunity to develop a partnership.

Application Process and Deadlines

There is no set schedule or deadlines for Alcoa grant applications. Grant applications are by invitation only. Prospective projects must first submit a letter of inquiry through a local operating office.[123] Although the foundation-wide web page indicates that the foundation is not currently accepting letters of inquiry,[124] the giving channels are structured around their local offices. In both cases, grantees are directed to contact the nearest facility.[125] We find it valuable to reiterate the point that although Alcoa is thematically a great funding partner match, PRI will have to develop an implementation partner near Alcoa operations before approaching any of the local offices to discuss funding opportunities.

Eligibility Requirements

Unlike other foundations, the Alcoa Foundation does not have specific requirements for organizations applying for grants. However, organizations that receive support are typically:

- Programs or organizations located within communities that Alcoa has operating plants or offices
- U.S. Organizations classified as not-for-profit charities and with a 501(c)(3) designation from the IRS
- May be public educational institutions and government entities who designate grant funds for charitable purposes

123 "Who's Getting STEM Funding from America's Most Generous Company?", Inside Philanthropy
124 "Working with Alcoa Foundation," Alcoa Foundation Website
125 Ibid.

- Demonstrate a commitment to diversity and non-discrimination; all organizations must sign the Alcoa Foundation inclusivity statement[126]

The grant has a number of supplemental materials. It will require a Project Budget, a completed and signed USA Patr4iot Act Compliance Form, a USA Patriot Act List of Officers and Directors, the two most recent years of Audited Financial Statements, as well as several other documents for requests in excess of $250,000.

In addition to the above organizational criteria, the foundation underlines its interest in nonprofit partners and programs that are outcome-focused and deliver measureable results.[127] This is not unique to Alcoa; *a consistent theme among philanthropic foundations is that funded programs are able to demonstrate their impact in quantifiable metrics*. Even for topic areas that are typically hard to quantify, like teacher professional development, the program structure finds a way to report the (presumably) positive impact that funded programs are having within the implementation communities. Alcoa has provided examples of the type of results and metrics they are interested in seeing with their funding partners. Within their STEM giving area, they explicitly list "number of teachers, guidance counselors or school administrators trained"[128] to provide STEM education or promote STEM-capable careers, as well as the number of schools impacted.

The most important takeaway for PRI is that grants are specifically for organizations within areas that Alcoa has an operational presence. This is consistent with a number of foundational giving structures and strongly reinforces the idea that PRI needs to develop relationships with school teachers, districts, and students before pursuing grant funding

126 "Partnerships & Programs," Alcoa Foundation website
127 Ibid.
128 Ibid.

opportunity. If there are connections between these community's partners, then Alcoa would be a very valuable funding partner.

Relevant Grant History

Little Chocolate Bayou Park Wetland Restoration and Education

Texas A&M Agrilife extension developed a wetland restoration and education project. While initial efforts hope to stop unlawful vehicular traffic and to develop restoration projects within the park, the grant also included funding for an educational component to teach park visitors about the importance of the area. A key component of the project's future plans is the creation of curriculum to but used and taught to local educators to share with their students. The results of the grant identify how many schoolchildren were involved in the project, and the number of educators incorporated into the process.[129]

Calhoun County Independent School Districts

The public school district in Port Lavaca, Texas is a good example of the relationships Alcoa develops within their community. Alcoa has provided a significant number of grants to the school district to fund a number of STEM initiatives. It has provided the majority funding for a *Birds of Prey* educational program, a Robotics school program, and a variety of field trips meant to expose students to fields within STEM subject areas. If PRI is able to develop connections with schools or school districts that are close to Alcoa facilities, it will benefit from the investments Alcoa makes to its communities.

129"Extension Education in Calhoun County: Making A Difference," Texas A&M University

A World in Motion

Alcoa provided $25,000 to help the SAE International implement their *A World In Motion* STEM curriculum in the Cleveland Metropolitan School District. The grant provides students the opportunity to engage in an Engineering Design Experience, but also provides professional development opportunities for Cleveland Metropolitan School District teachers.[130] "This initiative includes providing teachers with the training they need to effectively teach the curriculum, supplying all program materials and supplies to each participating classroom and giving each teacher the opportunity to have a STEM industry volunteer participate in the program."[131] This initiative resembles the type of relationship that PRI could develop with Alcoa. Alcoa has developed a relationship with a professional organization who has a curriculum, and funded the curriculum's implementation into a school district. PRI would not be asking to take the place of SAE; SAE's STEM education program are geared more towards engineering and design. There is a strong argument to be made that PRI would be filling a funding gap within the Alcoa philanthropic structure that resonates with their ideals and values.

Nature Up North

Alcoa provided $45,000 to the Nature Up North program hosted through the St. Lawrence University. The Nature Up North program targets public schools in the North County region. The program's goal is to enable Northern New York teachers to incorporate out of classroom environment and nature learning.[132] The Nature Up North program, like PRI's TFGs, rely on workshops and training to empower local schools. The grant money, dispersed over 3 years,

130 SAE International Media Communications press release
131 Ibid.
132 "Resources from Nature Up North, Nature Up North website

funded an annual workshop to train local school teachers for participation in the program, school travel kits, and developed relationships between St. Lawrence University students and local public schools.[133] Alcoa also covers website development and funds "St. Lawrence University students to serve as environmental educators and project assistants."[134] The Nature Up north Project director is quoted as saying that "North Country public schools are in difficult straits (…) This generous funding from the Alcoa Foundation will help us provide local teachers with resources to improve the opportunities for young people in our region."[135] Again, Alcoa demonstrates consistency in their funding opportunities. They local for partner programs, like PRI, that can implement educational improvement programs in specific school districts.

The Muskegon Conservation District

Alcoa patterned with the Muskegon Environmental Research and Education Society (MERES) and the Muskegon Conservation District to develop a hand-on, inquiry-based outdoor experiences for students of all ages. In addition to the outdoor investigation component of the program, Alcoa funded classroom presentations and work with educators in K-12 on topics including storm water management, groundwater, and water quality.[136] Based on other grants like the White Pine Project,[137] Alcoa has demonstrated a commitment to the region. This reinforces the importance of identifying and developing partnerships with communities Alcoa has operational facilities in in order to increase the likelihood of a successful grant application.

133 "St. Lawrence University Receives Alcoa Grant to Support Environmental Education," Newswise (2013)
134 "Alcoa Foundation," Nature Up North website
135 Ibid.
136 "Current Events," Muskegon Conservation District
137 "Replanting Our Ancient White Pine Forests," Muskegon County Environmental Coordinating Council newsletter

Potential Contacts

Alcoa has two potential connections to the Ithaca area that PRI may be able to leverage to develop a partnership. The strongest potential contact is Alice Truscott, whose LinkedIn page lists her as the current Development & Communications Manager at Alcoa Foundation.[138] The Foundation only lists two staff members on their national website in addition to their 9 board members; one of those staff members is Ms. Alice, listed as program manager. She received her Bachelor of Arts from Ithaca College, where she was a Park Scholar in the class of 2009. Her presence at the Foundation could be an incredible point of contact, since she is the principal program manager. If PRI was able to work with the Ithaca college alumni department to open up a conversation with Ms. Truscott, it could open up the potential for a very rewarding partnership.

A second potential connection is Josh Donlan, the founding director of Advanced Conservation Strategies. This connection is significantly more tenuous than the connection to Ms. Truscott and only should be pursued if Ithaca College is unwilling or unable to facilitate an introduction. Josh Donlan received his Ph.D from Cornell University, and has done significant work with island conservation and restoration.[139] He is not a current employee of Alcoa, but received a senior fellowship through the Alcoa Foundation's Conservation and Sustainability program.[140] In conjunction with both the Alcoa Foundation and the International Union for Conservation of Nature, Dr. Donlan published a study entitled *Exploring Biodiversity Offsets as a Tool for Fisheries Bycatch*.[141] He has published over 80 scientific articles pertaining to environmental

138 Alice Truscott. (n.d.) LinkedIn profile.
139 Donlan (n.d.), Advanced Conservation Strategies website
140 "Josh Donlan, Conservationist," BigThink.com
141 Donlan (2010)

conservation and at one point held a Visiting Fellow position at Cornell University,[142].[143] Given his success, he may still hold enough sway with the Alcoa Foundation to help implement a program. This approach is less direct that reaching out to Ms. Truscott and should serve as a back-up strategy.

Final Evaluation

The consulting team believes that Alcoa presents the most attractive funding opportunity for PRI. They have operational facilities in the state of New York, the mission that drives the Foundation is a very close match to PRI's organizational values, and Alcoa has been the funding arm for implementing teacher professional development in school districts. Importantly, there two potential personal contacts to Alcoa that could be pursued to set up initial discussions. All of these factors contribute to our recommendation that a partnership with Alcoa be the first partnership that PRI pursues.

142 Jacquet (n.d.), "Funding Priorities: Big Barriers to Small-scale Fisheries."
143 Donlan (n.d.), Advanced Conservation Strategies website

Interview Findings

The consulting team conducted two interviews in order to gather more information about philanthropic funding for teacher development programs. Alan Blankstein, founder of the Hope foundation, was interviewed in person on Tuesday, March 14th at 12:00 pm. Rick Magder, current director of Fairmount Park Conservancy in Philadelphia, PA, was interviewed over the telephone on Monday, April 3rd, 2017 at 11:30 AM. The following interview summaries highlight the major findings from each interview and discusses the implications for PRI's TFG grant approach.

Alan Blankstein

Award-winning author and educational leader, Alan Blankstein served for 25 years as President of the HOPE Foundation which he founded; the organization's honorary chair is Nobel Prize Winner Archbishop Desmond Tutu. A former "high-risk" youth, Alan began his career in education as a music teacher. He worked for Phi Delta Kappa, March of Dimes, and Solution Tree, which he founded in 1987 and directed for 12 years while launching Professional Learning Communities beginning in the late 1980s[144].

He is the author of the best-selling book Failure Is Not an Option®: Six Principles That Guide Student Achievement in High-Performing Schools, which received the Book of the Year award from Learning Forward. Alan is Senior Editor, lead contributor, and/or author of 18 books, including his latest Excellence Through Equity with Pedro Noguera[145], which takes an inspiring look at how real-world educators are creating schools where all students are able to thrive. He

144 Biography of Alan Blankstein, American Program Bureau
145 "Alan M. Blankstein," Corwin Publishing

also authored some 20 articles in leading education print including Education Week, Educational Leadership, The Principal, and Executive Educator[146].

Alan has provided keynote presentations and workshops for virtually every major U.S. Ed Org, and throughout the UK, Africa, and the Middle East. Alan has served on the Harvard International Principals Centers advisory board, and the Jewish Child Care Agency, where he once was a youth in residence.

During an interview conducted with Mr. Blankstein on March 23, 2017, the team discussed matching PRI's teacher friendly guides with testing and educational standards. The initial purpose of the meeting with the former HOPE Foundation President was to brainstorm and generate new marketing ideas to better advertise TFGs to a wider audience statewide and nationwide. As the group was discussing these ideas, Mr. Blankstein brought up an important question: How close (or far) is the material PRI is teaching through its TFGs to the educational and testing curriculum and standards of the schools in the State of New York?

The answer to the above-mentioned question is critical as the team and PRI move forward considering that the level of climate change education funding from government organizations may depend how this education relates to what is being taught in classrooms across the state. TFGs were developed taking into account the Next Generation Science Standards (NGSS), which were developed by states to improve science education for all students[147].

146 Biography of Alan Blankstein, American Program Bureau
147 "Home" page of the Next Generation Science Standards

Rick Magder

The interview with Rick Magder had three main takeaways. First, he identified utility/material production companies as potential sources of funding, highlighted several NYS funding options that he explored, and provided some of the metrics the Science Barge used within their grant applications. The Science Barge is a fundamentally different project than PRI's TFG expansion, but there are similarities that make lessons learned transferable between both projects. The Science Barge received a grant from the American Honda Foundation, as well as garnered the support of the utility company Green Mountain energy. They were also able to leverage state funding through the NYS park system and the Environmental Justice grant program. Although these funding programs directly supported the Science Barge, they may not be entirely appropriate for PRI's TFG programs. The emphasis is on outdoor or out-of-classroom education opportunities. PRI could pursue this type of funding for some of its other environmental educational programming.

Throughout the interview, Rick Magder stressed the role that big foundations can play in supporting environmental education programs. Corporate foundations played an important funding role in his work with the Science Barge and Groundworks Hudson Valley. Two big supporters were the American Honda Foundation, reviewed earlier in the finding section, and the Swiss Re corporation. Although their money was important, Rick expressed hesitation in recommending the American Honda Foundation as a partner. He said that their experience was not entirely positive; they were often difficult to get a hold of and their involvement slowed down certain sections of the project. However, he made sure to acknowledge that their funding was important for the Science Barge. His grant research led him to the conclusion that the biggest

foundations are focused more on community resiliency and adaption, but that each of these areas inherently had an educational focus. He was able to frame the Science Barge's grant applications as an educational component of strengthening community's resiliency to climate change.

Rick Magder identified energy utility companies as potential sources of funding. Much like Alcoa, energy utility companies have expressed interest in funding for environmental conservation and educational organizations and programs. He specifically identified the NYS Power Authority's Catskills Outdoor Education Center as a potential partnership model. Further research revealed that the Visitor Center is operated by the NYS Power Authority, and is more of a visitor center and heritage site than it is an educational center. While this specific example may not be exact match, Mr. Magder thought that targeting an energy utility might be an appropriate source of funding. He worked with Green Mountain Energy Company to secure the donation of a $50,000 off-grid solar electric system for the Science Barge. Although Green Mountain Energy may not be an ideal target, Mr. Magder supported this approach to funding environmental education and agreed that Alcoa may be a valuable initial target.

Finally, Mr. Magder pointed towards two streams of state funding. If PRI developed their model around state resources, it might open up New York State Parks funding streams. This approach would be especially powerful if developed in conjunction with energy or other utility companies in New York State. Another potential program he suggested was the Environmental Justice grant program. Past Environmental Justice Community Impact Grants seem to indicate that this might be a good match. For instance, the Gowanus Canal Conservancy received almost $50,000 to develop and implement a middle school curriculum focused on the range of

environmental challenges related to the Gowanus Canal.[148] Additional impact grants to West Harlem Environmental Action, INC, the Bronx River Alliance, Partnership for Onondaga Creek, and Avillage, Inc. all funded the development and/or implementation of environmental education curriculum.[149] All of the Community Impact Grants, however, are funding proposals that target specific communities. In order to present a competitive offering, PRI would need to identify and develop a proposal with a specific school district, community, or group of teachers. This finding is consistent with observed successful approaches made to larger foundations.

148 "Winners of Past Environmental Justice Community Impact Grants," Department of Environmental Conservation
149 Ibid.

PRI Evaluation Metrics

When the consulting team began our Foundation review, we attempted to gather and catalogue the metrics that foundations used to select successful grant applications. The lack of specific grant information and foundation reporting frustrated our searches, and we were not able to gather a comprehensive list of grant metrics. However, we can make several broad statements about grant trends and metrics that we believe will be the most successful within grant applications.

The previous grant applications provided by PRI have a well-developed approach to program evaluation. Reflecting our findings in the literature review, PRI's proposed evaluation metrics have varied depending on the scope of the project. However, there has been a consistent focus on metrics, which indicate the number of teachers served. This is unsurprising, since the focus has been on providing development opportunities for educators. Our review of grants funded by the foundations show that foundations are not as interested in teachers reached metrics as they are in metrics that communicate how students and communities are impacted. As outlined in our executive summary, and expanded on in the recommendations section of this report, developing implementation proposals with specific schools will make the application more appealing. A new system for evaluating the TFG impact will be necessary to reflect the move from broad teacher development workshops to curriculum implementation with specific educational partners.

PRI's previous proposals have typically relied on external evaluators. The ReaL Earth Inquiry II ReaLtime Connection was an NSF proposal written in 2013 in an effort to secure funding to scale up the impact of the ReaL Earth Inquiry project. In the report, program

evaluation was contracted to by a third party, Carlyn Buckler, PhD.[150] The evaluation uses a mixed-method approach; it relies on interviews, questionnaires, surveys, rubrics, checklists, etc… to demonstrate the impact of the program. The analysis is broken into three broad categories – assessment of expected outcomes from educators, student learning, and product development. The assessment of expected outcomes from educators examines the provision of products teachers created for their students, pre/post surveys assessing changes in educator confidence, and interviews designed to reveal whether REI II has impacted educators' ability to connect classrooms to local environment. These are important metrics for assessing program performance, but may not be the types of metrics that foundations value the most. The focus of grant reports on student impact underlines the importance of designing metrics around changes in student performance and behavior. It will be important to phrase these metrics in terms of impact/behavior changed in students. An example could be that "X% of students who engaged with a ReaL Earth Inquiry trained educator volunteered for conservation work within the next 6 months." This shifts the evaluation from the teachers to the behavioral change in the students benefitting from the educational program.

In 2014, PRI returned to the Arthur Vining Davis Foundation with a proposal to develop online resources for teachers to integrate place-based Earth system change education in their curriculum.[151] The proposal identifies several quantitative metrics; it proposes to track website visits and downloads, provide estimates of teachers and students reached through project participants, and identify project associated terms appearing in media created for and by

[150] ReaL Earth Inquiry II, provided by Robert Ross at PRI
[151] Personal correspondence with Rob Ross, 3/2017

teachers.[152] These metrics again put the focus on teachers as opposed to school districts and students. Foundations priorities, as revealed through grant history and press reports, show greater support for teacher professional development as a vehicle for improving students' performance and changing their behavior. Metrics should reflect these priorities – appropriate metrics would include number of students whose test scores improved, students who have become engaged in environmental preservation/conservation, or students who have gone on to further study environmental issues.

[152] AVD Narrative Draft, provided by Rob Ross.

Recommendations

The consulting team has developed the following recommendations as strategic next steps in the grant application process. Fortunately, PRI has a unique, well-developed product, which can be attractive to many philanthropic funding sources. However, in its current form, the TFG program is unlikely to receive grant funding. Several strong, common themes run through the grants funded by the major philanthropic foundations and provide invaluable insight for PRI. If PRI slightly tailors the TFG program structure in order to receive money for initial implementation, PRI can develop a successful groundwork to build a national program from the TFG curriculum. In order to secure an initial foundation grant, PRI should take the following actionable steps.

Recommendation #1: Develop relationships with program recipients *before* applying for grants

Our review of environmental and climate change educational grants found that foundations were looking for programs with specific partnerships. Examples like the AMF's grant to the San Mateo County Superintendent of Schools or the funding the Cleveland Metropolitan School District received from Alcoa to implement SAE's *A World in Motion* STEM curriculum highlight the importance of designated implementation partners. PRI already has created the teacher professional development curriculum; now, foundations want to see the specific people and places the curriculum will affect. Both PRI and the partner teacher group/school/school district should apply for the grant together. This partnered application has

the benefit of connecting the philanthropic foundation with the teachers and students that will be directly impacted by the program.

This approach has other benefits as well. For instance, a partnered approach has the potential to reduce administrative and monitoring costs associated with the grant. Although Recommendation #3 will address program evaluation and monitoring, developed program evaluation metrics are crucial to a successful grant application. This was evident beyond the actual grant applications; for instance, press briefings that publicized Alcoa's Nature Up North environmental education program in St. Lawrence and their partnership with the Calhoun County Independent School District both cited specific metrics to prove community impact. This type of ongoing evaluation requires sustained partnerships. Foundations are looking for programs or curriculum that have an ongoing relationship – one-time workshops are unlikely to receive as much consideration as programs that emphasize continual relationships. This type of commitment can require additional costs, but developed partnerships also can share costs associated with grant implementation and evaluation between organizations.

PRI has already developed connections with educators around the United States. Within New York alone, there is an extensive network of teachers and school administrators who are familiar with PRI as an organization and specifically, PRI's educational efforts. This is a solid network which can be strengthened by the teachers and professionals who have participated in previous development workshops. PRI should examine its relationships with educators who have previously participated in the TFG workshop program, or been involved in some alternative capacity. Even if they have already received the development training, or are no longer in a position to be a good implementation partner, they will be connected in their localities to school

administrators and teachers who may be interested in pursuing a collaborative relationship. Developing linkages between PRI and school districts in each of the seven TFG regions establishes the initial base from which to develop a national outreach plan.

Recommendation #2: Shape stakeholder engagement around funding priorities of Foundations–

All of the foundations examined for this report provided funding for specific areas of interest. While the foundations examined in depth all emphasize educational and environmental areas of interest, PRI should take steps to develop implementation partners that will strategically further their grant application. The priority of funding organizations should obviously not drive PRI's programmatic activities. However, PRI can actively seek strategic partnerships with collaborators in regions or specific areas of interest to funders that will increase the probability of a successful grant application. As PRI develops relationships with implementation partners, it should target communities within specific geographic regions, who are of specific demographics, or have specific spatial characteristics. This strategic approach ensures that PRI's TFG not only aligns with the thematic funding priorities of a foundation, but also that the implementation partner matches the specific audience that the foundations are attempting to reach. There are three characteristics of partner organizations that PRI should consider while designing their TFG plan.

Geographic Regions: Many foundations emphasize certain geographic regions. For example, EcoLab places their funding priorities in Minnesota and supports programs that either originate or are implemented within the state. The TFGs have the ability to be tailored to any region within the United States, which means that partners can come from any corner of the

country. PRI should pursue connections that could be developed to implement a teacher development within a geographic region targeted by one of the major philanthropic foundations. Pisces is another example of a foundation that has typically supported programs within a certain geographic region. Most of their environmental education support has been distributed within the Bay Area. Recent evidence seems to indicate that Pisces is searching for ways to expand their funding impact, which makes PRI an even more attractive partner. If PRI approached Pisces with a Bay Area partner in hand, it could make the argument that this first pilot implementation could be expanded into other regions that Pisces is attempting to make an impact. Finally, groups like Alcoa provide funding in a variety of geographic locations, but focus funding near their operational facilities. Alcoa's values closely align with PRI and identifying potential partners within neighborhoods around Alcoa should prove very profitable.

Demographics: Foundations often focus on specific, underserved communities. Underfunded schools that serve traditionally marginalized groups may significantly benefit from teacher development programs but be unable to fund them. The evidence from our review of successful grants shows that schools are most likely to pursue funding for new curriculum or development on their own. However, there is a real opportunity for PRI to present grants in conjunction with these districts to foundations. If PRI is able to develop relationships with underserved and underfunded school districts, foundations will be much more likely to provide programmatic funding. For instance, the American Honda Foundation has provided a number of educational grants[153] that focus on large minority school systems.

[153] Not necessarily environmental education grants, but education grants more broadly.

Strategically, PRI should design their pursuit of implementation partners to target groups of students, teachers, and school districts that align with specific Foundation's communities. PRI can decide from their existing professional relationships whether to pursue geographic locations, specific demographics, or different groups along the urban/rural spectrum, but each will have more success with foundations who target these communities. This recommendation is not advocating that PRI limit their efforts to only these communities; instead, partnerships designed with this approach in mind will successfully land initial grant funding. A couple of successful implementations of the TFG curriculum will expanding PRI's national presence as science educator and lead to more funding possibilities.

Recommendation #3: Leverage Cornell University and Ithaca College connections

PRI's staff have a number of connections to two prominent educational institutions in Ithaca. Both Cornell University and Ithaca College have an extensive list of alumni that have the potential to develop personal connections between foundations and PRI. Each of the reviewed foundations has highlight potential contacts; regardless of which opportunities PRI decides to pursue, they should coordinate efforts with the Alumni Affairs & Development office (AAD). The following table synthesize the identified alumni connections to the foundations in this report.

Name	Organization	Connection	Title	Institution Affiliation
Nathaniel Cordova	U.S. Dpartment of Agriculture	Indirect - Previous work with Tom Ownens, Environmental Education program associate at Pisces Foundation	Presidential Management Fellow	Class of 2015, Cornell Institute of Public Affairs
Dr. Ruth Petran	EcoLab	Direct - Works for Foundation	Vice President of Food Safety and Public Health	Class of 1985, Cornell College of Agriculture and Life Sciences, Advisory Council for the College of Agriculture and Life Science Department of Food Science
Anne Davis Gotte	EcoLab	Direct - Works for Foundation	Vice President of Global Talent	Class of 2002, Cornell College of Industrial and Labor Relations
Dr. Larry Berger	EcoLab	Direct - Works for Foundation	Executive Vice President and Chief Technical Officer	Master's and Doctorate from Cornell University in Materials, Science and Engineering
Alice Truscott	Alcoa Foundation	Direct - Works for Foundation	Development & Communications Manager	Class of 2009, Ithaca College
Josh Donlan	Advanced Conservation Strategies	Indirect - Senior Fellowship through the Alcoa Foundation's Conservation and Sustainability program	Founding and Exevutive Director	Ph.D from Cornell University, Visitng Fellow in the Cornell Department of Ecology & Evolutionary Biology at Cornell University

Table 1: Promising Alumni Connections

In addition to Cornell University and Ithaca College alumni, PRI should reach out to the Offices of Corporate and Foundation Relations, respectively. Although both departments are primarily focused on securing and monitoring grants for each educational institution, they may be able to make introductions or guide Foundation selection based on their own respective experiences. The Cornell Office of Corporate and Foundation Relations is the most appropriate office to start with; as a research institution affiliated with Cornell University, the office will be able to help navigate applications to the largest foundations. Specifically, EcoLab has provided grant support to Cornell directly or affiliated organizations. Some foundations have different procedures if they have supported organizations in the past; even if PRI is not owned and operated by Cornell, the foundations may require some involvement on behalf of Cornell. The

Cornell office will be able to guide potential applications, and this relationship may even increase an application's chance of success.

Recommendation #4: The Alcoa Foundation and the Pisces Foundation

After a review of the funding opportunities, the consulting team strongly believes that the Alcoa Foundation and the Pisces Foundation offer the best potential funding matches. Some of the other reviewed foundations, like the American Honda Foundation, are appropriate programmatic matches. Organizations like Ecolab, on the other hand, are attractive because of the potential connections to the corporation or foundation. The Alcoa Foundation offers an incredible thematic and programmatic match, and their primary program manager has local ties to Ithaca College. As outlined in their summary section, the Alcoa Foundation has previously developed partnerships that offer a template for a relationship with PRI. Specifically, their *Way Up North* partnership with St. Lawrence University is a New York state model of nature and environment-based curriculum training for K-12 teachers that PRI could emulate. This model was replicated in a partnership with the SAE and the Cleveland Metropolitan School district. Alcoa again served as the funding partner between an external organization with a developed curriculum and a defined group of educators. This three-team model is a perfect example of the type of partnership PRI and Alcoa can develop in conjunction with a school district near or in and Alcoa community.

Fortuitously, the primary program officer, Alice Truscott, for the Alcoa Foundation is an Ithaca College graduate. This does not guarantee a successful inquiry, but greatly increases the chances that the foundation will consider an application from PRI. Her presence also offers the opportunity to open discussion for a wider implementation program. As mentioned several times

in this report, one of the major strengths in the PRI environmental education professional development products is that there are location-specific forms of a wider national model. Alcoa has operating facilities around the United States – a successful initial partnership in New York State could lead to other opportunities in other Alcoa Communities. Alcoa's New York facility is located in Massena, NY. Massena lies along the New York/Canada border, roughly 30 miles north of St. Lawrence University. Although not in Massena, St. Lawrence University is part of the North Country region. Any connections to school districts in and around Massena should be contacted to begin designing a proposal for Alcoa.

While the Alcoa Foundation is the most attractive match, the Pisces Foundation also offers interesting potential. They aggressively support environmental education programs – both teacher professional development and out-door education opportunities – and have funded school district's efforts to integrate newly developed science standards.[154] They are currently a growing foundation, and according to their materials, are actively looking to expand their philanthropic footprint. Again, PRI offers them a national program that can be uniquely implemented in local contexts. An initial connection with the Pisces Foundation may be more difficult to develop, which is way the consulting team views this possibility as secondary to the opportunity presented by the Alcoa Foundation. It may be worthwhile to reach out to Tom Owens directly, though their foundation website notes that they are not currently soliciting proposals. The most effective way to open discussions will be through a personal introduction;

[154] See references to Pisces and KACEE program in this report.

as noted in the Pisces potential contact section, the consulting team is currently examining whether a previous CIPA alumnus is in a position to make an introduction.

In addition to the Alcoa Foundation and the Pisces Foundation, both Ecolab and the American Honda Foundation are also good matches. However, both of these organizations have large philanthropic arms that deal with hundreds of grant applicants. The American Honda Foundation has funded programs similar to PRI and their mission shares significant overlap with PRI's organizational values. However, the consulting team was unable to find a specific connection to the foundation; the only recommendation is to explore opportunities through the Cornell Office of University Corporate and Foundation Relations. At this current stage, the consulting team does not know if the institutional affiliations between PRI and Cornell University allow AAD to assist PRI in securing and managing support from foundations. This may be an appropriate project for a future CIPA capstone or consulting team to pursue. However, if the Cornell Office is able to assist PRI, they would be an invaluable asset that could not be replicated elsewhere. Ecolab, on the other hand, has a significant number of upper-level management leaders in the corporation who are graduates of Cornell. Most notable is Dr. Ruth Petran who is both a graduate and sits on an advisory council. Although not an employee of the Ecolab foundation, she may be able to help make connections to the foundation. Although Ecolab has funded curriculum development and dissemination programs in the past, their focus has been on water safety and use. They are interested in environmental literacy, conservation and preservation, but they may be unwilling to expand their philanthropic efforts to include material like the PRI Climate Change guide.

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