Science and Art Collaboration Community

To develop the concept for an innovative
science and art community at SERC

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Abstract

The purpose of this project was to create a website and promotional video that would demonstrate the feasibility of establishing a science and art community within Acadia National Park, where scientists and artists come to collaborate. A website and promotional video served as aids for the staff at Acadia and Schoodic Institute to visualize the potential features of this theoretical community, hopefully incentivising the establishment of a real program at SERC. The first phase of the project focused on interviewing the current artist in residence program coordinator to understand the already existing programs and facilities available at SERC. This information as well as information found through independent research was compiled to create a website for the National Park Service and Schoodic Institute. A promotional video was also created to draw attention and lead people to explore more about the program by visiting the website. The National Park Service and Schoodic Institute staff were then given these tools to aid in future development and implementation of this community.

Executive Summary

Acadia National Park strives for an extended commitment to the enjoyment and education of the public as it nears its hundredth year. This is outlined in its centennial mission appropriately named A Call to Action that brings the specific issues of the park to light and describes in detail what needs to be accomplished. One of the many goals that Acadia National Park wants to accomplish is to bring more art, science, and education to the public. The park would also like to combine these three areas to have a complete unique experience that people will come from around the world to be a part of. There are many action points within A Call to Action that pertain to this goal. Among them are Arts Afire (Action Point 10), Park Pulse (Action Point 28), Go Digital (Action Point 17), and Out with the Old (Action Point 19). These action points include educating the public through the use of artistic and scientific mediums, communicating to the public about the resources the park has, and engaging the park in the use and knowledge of technology and social media.

WPI Science and Art Collaboration is an interactive project that combines the arts and sciences with education to offer a well-rounded experience for participants and the public alike. This is accomplished by creating a demonstrational website and promotional video that includes information on how such a collaboration community can be organized. By giving the mock information to Acadia National Park and the Schoodic Institute, it can be evaluated and studied to create a physical community on the campus of the Schoodic Institute where scientists and artists will be able to work, grow, inspire, and produce together.

While completing this project, it was brought to attention that the Schoodic Institute already has programs in place that incorporate both the arts and sciences independently in an educational format. The Science and Art Collaboration team decided to create a whole new

entity within Acadia National Park and the Schoodic Institute that incorporates the arts, sciences, and education while keeping in mind that other programs can be included in the new program. Also, it was found that although a unique product was the desired result, there are other communities throughout history that resemble the need of the park. Although they are similar in nature, Acadia National Park is a unique area and has a special value. Examples of communities that resemble this new entity in the general sense are art colonies such as the MacDowell Colony, the Banff Center of the Arts, and Headlands Center for the Arts. There are a handful of organizations that encourage collaboration between artists and scientists like SERC desires. These organizations include Pioneer Works, the PAIR project of Xerox, as well as environmental art. This collaboration of science and art was first brought up in 1959 in C.P. Snow's lecture *Two Cultures*.

The Science and Art Collaboration Community was successful in creating a complete fictional website and promotional video. The website includes the tabs about collaborations, exhibitions, residencies, public events, education, and support. This website is completely demonstrational, including mock information in place of information that is not yet valid due to the fact that the collaboration is not yet in effect. This website will be changed depending on the specific needs of Acadia National Park and the Schoodic Institute. Its sole purpose of demonstrating how this community can effectively be run and the programs that can be included has been achieved. This website and the information within provides Acadia National Park and the Schoodic Institute an aspiration to look towards in the future when the physical collaboration community is put into place. All aspects of the website may or may not be achieved, but each idea gives the park and the Schoodic Institute goals to work towards and options to pick from in what they would like to see happen in the physical community. Due to financial reasons, all

aspects of the website cannot be realistically accomplished in the physical collaboration community, but there may be aspects not in the website that may be seen to fruition. Organizations with other programs like this proposed program can also help with finances. Once this program is established, resources, exhibitions, participants, and ideas can be shared. In doing this, a global network can be formed to promote the collaboration between the arts and sciences. Different educational programs can be formed to further help the public understand the objectives and actions that Acadia National Park and other national parks are trying to establish to help the natural world. The promotional video incorporates the use of time lapses and short video clips from natural, artistic, and scientific locations to form a short video. This promotional video brings the theme of art, science, and education within Acadia National Park together by juxtaposing artistic and scientific visuals.

Only select few people who were able to view the website and video due to the primitive and infantile nature of the concept. These people included the CEO of Schoodic Institute, the director of science at Acadia National Park, and members of the science and art steering committee within the park. They believe that the addition of the website and promotional video will greatly increase the collaboration between science and art at SERC and Acadia steadily with a graspable inspiration.

Chapter 1: Introduction

The mission of the National Park Service is clearly outlined in their centennial mission statement, A Call To Action (NPS, 2011). The goals of this organization are separated into themes that stress accessibility, education, preservation, modernization, and communication. To achieve them, the National Park Service aims to make parks more accessible to the general public and the communities who host them by connecting more people with the National Park's system. The National Park Service seeks to fulfill the educational mission by strengthening the focus on the historical and scientific aspects of each park and by creating a unique environment for learning. The organization will preserve spaces of national and natural importance by primarily focusing on sustainability and environmental research, putting the National Park Service in the forefront of conservation. Finally, the modernization of media will allow the National Park Service to adopt current technologies and reach full potential. Each of these goals is not exclusive, and can only be achieved when they all are addressed together.

Art is a very important aspect of society past and present. As a culture, we have surrounded ourselves with various forms of art that are experienced daily. Essential to the growth of Acadia National Park, art is a stepping stone towards the completion of the National Park's mission: to integrate nature and the community. Art is especially important to the history of the United States, where "artists were first to record the visual beauty and the drama of the American West on canvas and in photos" (NPS, 2014). Art is also an important communicative medium. Complex concepts are often best related through artistic channels because of the relatability, engagement, creativity involved. There are many opportunities and places for artists to create and display their works to various audiences. The National Parks stand out because places of

such unique natural beauty and ecological importance provide a special inspiration to artists with an environmental and scientific focus.

Science has a large importance in the national parks. The ultimate goal of natural and historic conservation is served and supported largely by scientific research and analysis in biological, geophysical, environmental, and cultural fields. The state of the parks can be analyzed with long term data acquisition that informs park staff and the community on the ecological health and human impact in the parks. While research and analysis are the first steps toward a modern conservation and protection strategy, it is the communication of these ideas that engages the public and promotes productive action. In this way, science and art would best promote and encourage each other. Artistic portrayal of scientific ideas is a more effective public communicator than journal articles or formal reports. The application of scientific thought to the arts would encourage the newly rising genre of science and data based art.

Just as traditional art colonies began to arise with the emergence of traditional landscape painters in the 1800s, a new genre of art colony must arise to support the emergence of new scientific art and artistic science. A community that encompasses both the scientific and artistic needs in Acadia National Park must fill this new demand. Such a community will attract artists, scientists, and visitors to interact with the park's inspirational natural setting.

Chapter 2: Literature Review

2.1 A Call to Action

In response to A Call To Action (National Park Service, 2011), Acadia National Park has established a need for an engaging and interactive connection between the community, science, and the natural world. The National Park Service strives to make parks accessible to the world and to create a unique environment for learning and research. The park's mission is separated into three themes; *Connecting People to Parks*, *Advancing the Education Mission*, and *Preserving America's Special Places. Connecting People to Parks* requires the park to, "Create deep connections between a younger generation and parks through a series of diverse park experiences." *Advancing the Education Mission* requires the park to educate the community through the use of state of the art technology and interactive media that makes the park to be accessible in multiple ways. *Preserving America's Special Places* discusses the environmental goals of the parks service: to address climate change impacts, conserve the natural landscape, and encourage the use of renewable energy, and communicate this information to the public (National Park Service, 2011). Within each theme, specific points of action are identified in Appendix B.

2.2 Art

Art is an excellent medium for communication of ideas, such is needed by the National Parks. As an important aspect of every culture and place, art represents diverse beliefs, history, geography, ideas, and feelings. Our need for art is inherently cultural because art reveals a community's identity. Therefore, we find each culture keen to communicate to others their uniqueness through painting, music, writing, theater, or movies. Artistic representation of the natural world is one aspect of a community's identity and its depiction has diversified greatly

since the separation of the arts and the sciences during the Renaissance. The work of The Hudson River School in the United States during the late nineteenth century is a prime example of standard representation of the natural world. As one of the first artistic schools in the United States, these works are especially significant because they capture the essence of the natural American landscape (Profiles: Artists, Movements, Ideas, 2014).

2.3 Artist Communities

Artistic communities are important because they allow artists to interact and learn from each other. Artists look towards others for inspiration and approval of their completed and unfinished work. In this environment, artists are able to create pieces of beauty in all forms. Artists on average stay in residence between two weeks and a year. This sometimes isolates the artists from the surrounding community due to the fact that they are only associated with the other artists while in residency. One common model of an artistic community is an art colony.

2.3.1 Examples of Art Colonies

Famous colonies include the Banff Center of the Arts and the MacDowell Art Colony. The Banff Center of the Arts is located in the Canadian Rocky Mountains and is a well-known and established center of arts that has various types of programs including residencies, work studies, and workshops. The residency programs at the Banff Center are the most traditional sense of an art colony. Art colonies are important because they, "...provide an environment of support, camaraderie, and professional development for artists to create new work, explore ideas, collaborate in a community of working artists, or concentrate on focused work in a retreat setting" (Banff Center, 2013). This is one of the main reasons why artists flock towards these types of programs. Residencies can incorporate artists in an individual artistic setting, as well as in a group setting where everyone is pursuing the same artistic goal.

The MacDowell colony is located in Petersborough, New Hampshire. The MacDowell colony houses about two hundred and fifty artists per year and is a non-profit organization funded through an endowment and annually raised funds. The mission of this particular colony is to, “nurture the arts by offering creative individuals of the highest talent an inspiring environment in which they can produce enduring works of the imagination” (The MacDowell Colony, 2014). Some artists who have participated in the colony say that a week working within MacDowell gives about the same productivity as four weeks in the real world.

Other notable art colonies include The Grand Marais Art Colony and The Headlands Center for the Arts. The Grand Marais Art Colony, located in Minnesota is both a school for sharpening skills and an isolated area for artists who wish to come from all over the world. It was started by a faculty member of Minnesota School of Art in 1947 and has many local sponsors that help address its financial need. It also has a board of directors, executive director, program coordinator, and registrar of events. Because the program has so many people invested in its well- being, the colony is strong and “hosts concerts, lectures, and weekly fish fries, leaving its mark on both the community and its students” (Grand Marais Art Colony, 2005). The more people involved in an art colony equates to more community outreach. This in turn creates a spill-over effect from community to community.

The Headlands Center of the Arts, located in Fort Barry, California is unique in that it treats artists lavishly. About seventy-five artists participate in the four to ten week programs each year and these programs includes amenities such as, “flexible studio space, chef-prepared meals, comfortable housing, and travel and living stipends when available” (Headlands Center for the Arts, 2014).

2.3.2 Artist-in-Residence Programs in the National Parks

In addition to art colonies, the National Park Service also sponsors artists and have adopted an artist-in-residency program model. These programs usually last two to four weeks and include lodging. Although artists are, "...invited to participate in park programs by sharing their art with the public" (National Park Service, 2014), they are not required to associate with or educate the community. An example of this is the artist-in-residence program in Zion National Park in Utah. This program runs in the spring and fall. Residents may stay up to four weeks then donate a piece of work to the park. In contrast to this, in the North Cascades National Park Complex in Washington, "...residency is envisioned as a partnership. Artists present a minimum of two public programs, which can be workshops, talks, or other educational presentations" (National Park Service, 2014).

Similar to other National Parks, there is an artist in residence program within Acadia. The community is an artist-in-residence program that is held on Schoodic Peninsula. There are four to six artists per year. The program has two sessions; one in the spring and one in the fall. Each artist is housed for two to four weeks in a one bedroom apartment. There is no stipend. During their stay, artists are required to participate in a public program each week and the fall session artists are asked to work with middle school students. Once their residency is over, the artists are asked to donate one of the pieces that was created during their stay. The piece is sold to help support the program (Schoodic Institute, 2014).

2.3.3 Structure Choice of Artistic Communities

There are many ways to organize and manage a successful art community. While a colony may be a space where individualistic minds come together, there are numerous ways in which this goal can be achieved. It may be an outdoor school where people come to learn about

art, like the first art colony formed in the late nineteenth century (Aldrich, 2008). On the other hand, it may be similar to the traditional art colony where artists go to isolate themselves in a remote location in order to get inspired, like the MacDowell Colony in New Hampshire (MacDowell Colony, 2014). Additionally, depending on the people and the colony sponsors, the models may differ. Therefore, the expectations of the management overseeing the internal workings of the art colony will determine the types of artists who come to escape the world and express themselves in a natural setting.

Artists are invited to join a colony once they have shown outstanding pieces of work or join through a selection process. Most artist selection processes request the submission of different pieces of artwork. A résumé, list of references, and a statement of purpose are also often required. A selection committee then chooses those to whom will be sent an offer of support (Acadia National Park, 2014).

Artists know the expectations of their work while they live in the colony, but predicting what they will create and their thought process is impossible. Also, the lifestyle they will lead and the interactions artists will have with other artists are essential to inspiration but unforeseeable. By the time the stay of the participants ends in the park, "it is hoped that these works will characterize the park for present and future generations, giving park visitors and the general public an opportunity to see our heritage through the eyes and ears of the contributing artists" (National Park Service, 2014).

Art colonies are becoming more prevalent in society today because they are thought to "...support local economic development indirectly by enhancing interaction between communities, which in turn generates businesses, jobs, and tourism dollars" (Grodach, 2010). However, how these colonies are started, who invests in them, and how they are maintained and

internally run remains a question. Though the goals of the proposed art colony are known, the administration of the colony is not. Depending on the artistic interests of the administrators of the art colony, each individual entity will be run differently. Even though the director's style may not always be predictable, sponsors and other investors are needed to uplift the colony. These sponsors may be local businesses, individuals, or large companies who want to see art make a positive impact on the community. It is imperative to network local artists and members who support the art community in order to meet the goal of the National Park Service.

2.4 Change

While there exists common precedent for artistic communities around the world, traditional art colonies require a conceptual change in order to match the fundamental outreach goals of the National Park Service. Art colonies are the artistic community equivalent to the wilderness areas in the conservation community. Both of these settings create natural isolation that allow for the development of undisturbed natural beauty. Yet the National Parks are not purely wilderness areas and do not seek to serve this mission, but rather to expose and immerse individuals in areas of environmental and natural importance (National Park Service, 2011). As an important part of every National Park, scientific research must be incorporated into every park experience, including an artistic community in Acadia.

2.5 Science

"Over the past 30 years, more than a dozen major reviews by independent experts and the National Park Service itself have concluded that park management must be guided much more by scientific knowledge and less by managerial guesswork" (Science and the National Parks, 1992). In 1916, the Organic Act was established to highlight the mission of the National Parks Service. It demonstrated innovation and intended to provide protection through the conservation

of park resources. However, this need has grown far beyond passive protection. The park needs to utilize scientific research because it will allow for the proper management of park resources and will educate the public on the best methods towards preserving them. A National Research Council committee tasked with examining the ways to strengthen the role of science in the National Parks notes that "although an adequate science program alone cannot ensure the integrity of the national parks, it can enable faster identification of problems, greater understanding of causes and effects, and better insights about the prevention, mitigation, and management of problems" (Science and the National Parks, 1992). National parks are home to thousands of ecosystems and scientific research is the only way to properly manage them.

2.6 Science and Art

While not often intuitively obvious, there are many ways that science and art could be incorporated into a single community in Acadia. Science and art are both known as sources of observation, creativity, and change. The relationship between science and art is often divided into two chapters: before and after the Renaissance. Before the Renaissance, the arts and sciences were united. Scientists were once regarded as natural philosophers who most commonly studied art, science, religion, and math. One of the best known 'Renaissance men' is Leonardo Da Vinci, a scientist, painter, inventor, and mathematician.

Yet after the Renaissance, science and art became segregated. In 1959, chemist and novelist C.P. Snow delivered a lecture highlighting his theory of "Two Cultures." This theory proposes that scientists and artists each have created different languages, and can no longer understand each other (Snow, 1959). Snow and several others argue that this separation is unproductive and does not take advantage of the many ways that art and science could benefit each other. Vibeke Sorensen, in her lecture delivered at NASA's Jet Propulsion Laboratory,

comments on the multitude of ways that scientists and artists are in fact very similar. She states that artists are especially essential in many parts of the scientific method, especially in the communication of the results (Sorensen, 1987).

Science and art have already started rejoining, especially through modern technology such as computers and the internet. Environmental art is one such example of how the spectrum of modern art has greatly broadened under increasing environmental activism. Environmental art is comprised of a variety of performative and non performative works that often embrace natural, ecological, and scientific themes. (Thornes, 2008). Similarly, Information art has emerged as a way of processing and communicating information and data through artistic means. (Wilson, 2002). For example, Andrea Polli's *Particle Falls*, displays air quality sensor readings in the form of a waterfall projected on the side of the building (Polli, 2014). This work, using both artistic sensitivity and scientific accuracy portrays environmental data in an accessible and informative way. Such works shed a whole new light on the popular definition of art. Such new artistic movements show that art and science are once again returning to the day where they each moved parallel directions, and highlight how art and science could be united in a natural setting such as in National Parks.

2.7 Modern Community: Science and Art Together

With this in mind, a new kind of art colony must be developed that balances creativity, education, and science, just as the National Parks balances conservation and public engagement. Artists and scientists must work together to display the park through an artistic experience, as well as through written information.

The Xerox Palo Alto Research Center Artist in Residence Program, or PARC PAIR, is a unique example of the collaboration between art and science in a professional environment. The

Palo Alto Research Center was established as a setting for corporate innovation within Xerox, and the artist in residence program falls naturally under that mission. The PAIR program took a unique approach to establishing collaboration by pairing researchers at PARC with artists based on common interests and research topics. These pairings were then left to their own direction to work in an uninterrupted and innovative setting (Craig Harris, 1999). While dissimilar from many traditional art colonies, the PAIR program provides a unique model for fostering collaboration between science art and technology.

Another program that begins to work towards this goal is *The Art Assignment*, a web video series created by PBS Digital Studios that focuses on art education. (*The Art Assignment, 2014).* Each short episode invites an artist to assign a creative artistic activity to the tens of thousands of viewers of the show. The show adopts the YouTube platform, allowing viewers to directly respond to the assignment with their own video responses, pictures, or other media. This 'online colony' prioritizes viewer engagement by being highly interactive and by dedicating episodes to viewer responses. This type of colony combined with a more traditional, permanent establishment in Acadia National Park would promote creativity in artists, scientists, and in the community, all the while promoting the distribution of education to a larger audience.

A science and art community addresses the themes of creativity, education, and science by bringing artists to Acadia National Park. They use the environment as their studio and discover what it means to feel connected with the surroundings. Their artwork attracts visitors and members of the local community to the park and help them participate in the park's mission. This outcome helps to maintain a love of nature and keep its beauty alive for years to come.

Chapter 3: Methodology

The need for an education and nature oriented Acadia National Park is clearly stated within A Call To Action, the centennial mission statement of the National Park Service. One way to respond to this call is through efforts to connect art and science. Art helps people see the natural world in new ways, and science helps art see nature. Science and art, however rarely combine as a single area of study. Yet Acadia wants to bring these two together to enhance the work of both, and in the process, make the park more interesting and informative for its visitors.

3.1 Guidance

Many people were involved in the direction of this project, including the steering committee for the sciences and arts that meet at SERC, and Kate Petrie, an interpretive ranger and the head of the Artist-in-Residence program within SERC. Our advisor, Frederick Bianchi, and the head of the science department at Acadia National Park, Dr. Abe Miller-Rushing acted as the liaisons to the steering committee and greatly helped in the direction of the project. The steering committee includes groups of scientists and artists that come from around the country to discuss establishing a collaboration between the sciences and arts in Acadia National Park and SERC.

There were many questions asked to Kate Petrie to help determine the best way to create a collaboration between the sciences and arts. Her experience as the head of the Artist-in-Residence program was crucial in the establishment of a community that runs smoothly and efficiently. The questions that were asked are outlined in Appendix A. Inquiries covered how the current artist in residence program is run in Acadia, how it is sponsored, expectations of resident artists, and how the educational program works. Other questions focused on the desired design of a new program in Acadia. With this base, a new program can be created with new ideas,

generating a better experience for artists, scientists, and the Acadia National Park community as a whole.

3.2 Demo Website

A website was created to demonstrate what a science and art community would look like at SERC and how it could be effectively run. Other websites were analyzed to determine common and popular approaches to web development. Pioneer Works, Headlands Center for the Arts, Haystack Mountain School of Crafts, and many others served as helpful examples on content and organization of an accessible and efficient website. The needs of the National Park Service and SERC also contributed new aspects that were not present in the outside examples. This website was developed using the web content management system Squarespace. A consistent aesthetic theme was chosen and populated with mock information to simulate a live working community.

3.3 Promotional Video

Accompanying the website is a short video that promotes the proposed science and art program in Acadia National Park. Natural, scientific, and artistic themed shots were compiled to make the video that visually combines these three areas, paralleling the relationship between artists, scientists and Acadia National Park in the envisioned community. All of the natural shots and time lapses were taken in and around Acadia National Park, highlighting changes within some of the most popular areas. Visualization of science was taken from both WPI labs and educational programs at SERC, and art scenes from the artist in residence program at SERC.

Chapter Four: Results

Initial research revealed many common structural themes used by other artist communities and science and art collaborations around the world. These outside examples set a precedent for the structure of a similar community at SERC, allowing for imitation and inspiration. It was previously determined that a mock website and promotional video of the community would be the best way to properly demonstrate how a successful community could be established and put in the public's eye. After questioning the artist in residence program coordinator, other insights were gained about how to best convey the park's goals through a science and art collaboration at SERC.

4.1 Demo Website

The structure and functionality of the proposed science and art community was interactively outlined by the developed website. This website was designed to include information on application processes, genres of produced work, sponsorships, education programs, the mission of the community, and provided facilities. This website was developed with tabs labeled Home, About, Collaborations, Exhibitions, Residencies, Public Events, Education Programs, and Support. Each heading was chosen to be mutually exclusive to avoid redundancy, but also collectively exhaustive to ensure that all aspects of the new program were covered.

The homepage (Figure 1) was designed to allow for quick and easy to access to the most relevant and up to date information regarding the community as a whole. Here, featured items from all of the other sections of the website are displayed quickly and easily for new visitors to the website, or prospective visitors to the SERC campus. The promotional video is also featured on the homepage to hook visitors' interest in exploring the rest of the site to learn more.

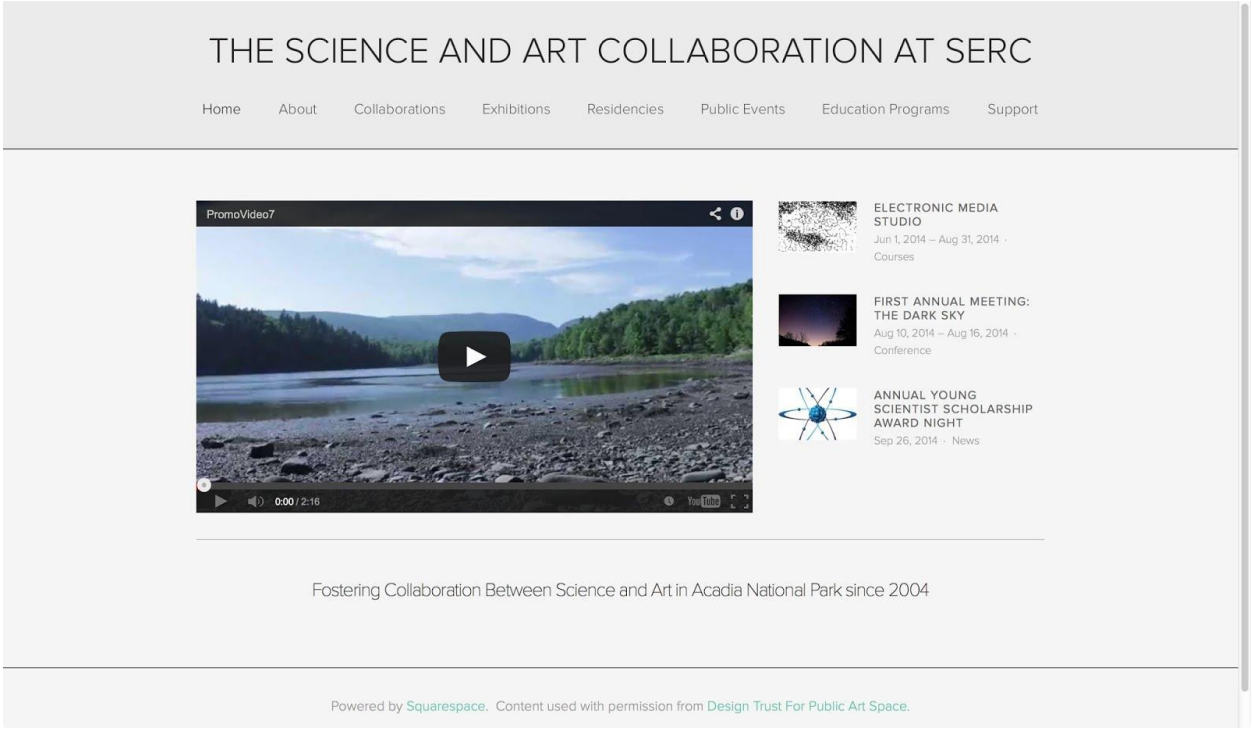

Figure 1: The homepage of the website.

The about tab was designed to include information such as the mission, facilities, facts, contact, and directions to SERC, seen in Figure 2. This information was believed to be important for the visitors of the site because it serves as an overview of the collaboration community and demonstrates the underlying core ideas. Information on why the community was created was meant to help further develop the image that could be placed in visitors' minds and understand its purpose as a whole.

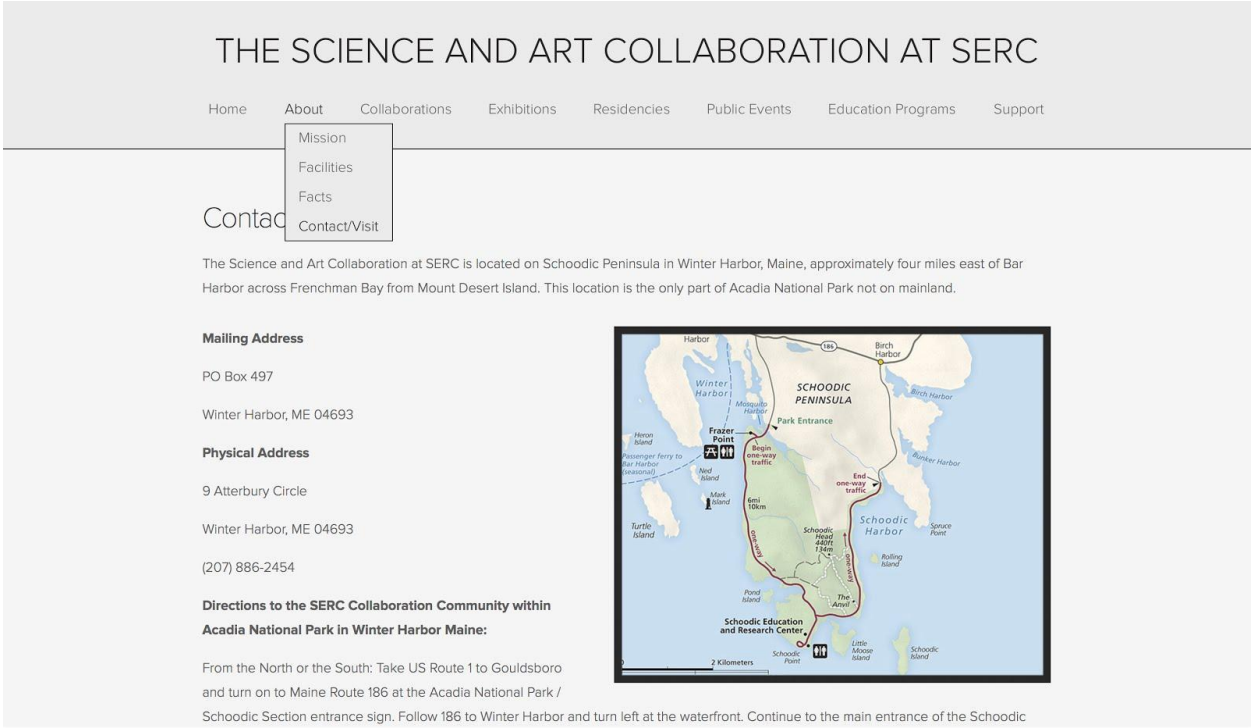

Figure 2: The about tab of the website.

The collaboration tab was developed to highlight the scientists and artists of the community at SERC, Figure 3. This section was designed with two sections: current and past collaborations. The current tab is designed to allow visitors to look up who is currently working at the community. This gives the user an opportunity to learn about the state of the art collaborations and people working currently at SERC. The past collaborations tab was developed to serve as an archive of the previous collaborations of artists and scientists and allows people to look up who has been at the community. This section pays special attention to the creative ways that art and science can work together, and focuses less on the final products of these collaborations. Screenshots of the website can be viewed in Appendix C: The Website.

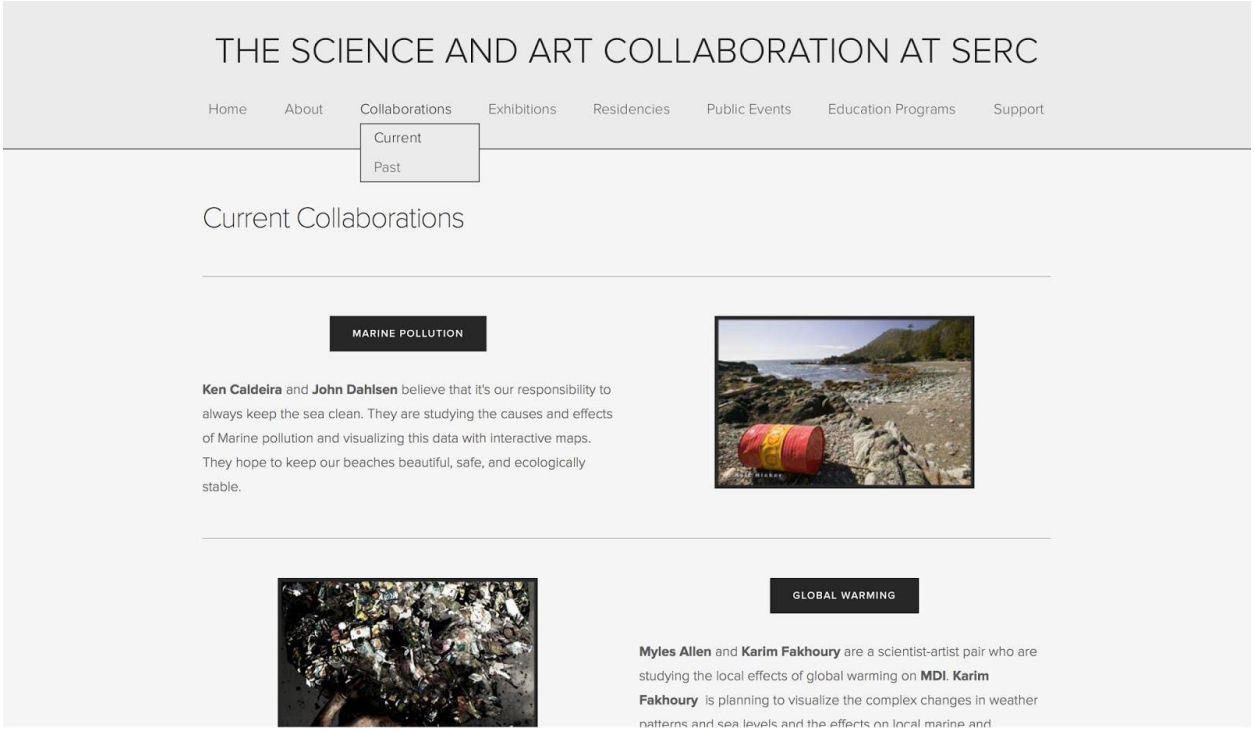

Figure 3: Collaborations tab of the website.

The exhibitions tab (Figure 4) was designed to include works that are currently on display and works that will be done in the future. The format of the current exhibitions page acts as a calendar so the viewer can see when and how long work will be on display, incentivising visiting the exhibition in person. Past exhibits has a similar format but acts more as an archive, showing when and where the work was displayed. The future works page shows the viewer exhibits that are coming soon in the form of a simple list. For visitors coming to the community at SERC, the exhibitions tab gives them an idea of what kinds of work they can view during their stay. It also gives future collaborators the concept of what their work may look like on display and the types of exhibition spaces available. It is important to have an exhibits page on the website because it is an interactive way to get the community involved in the work that is produced.

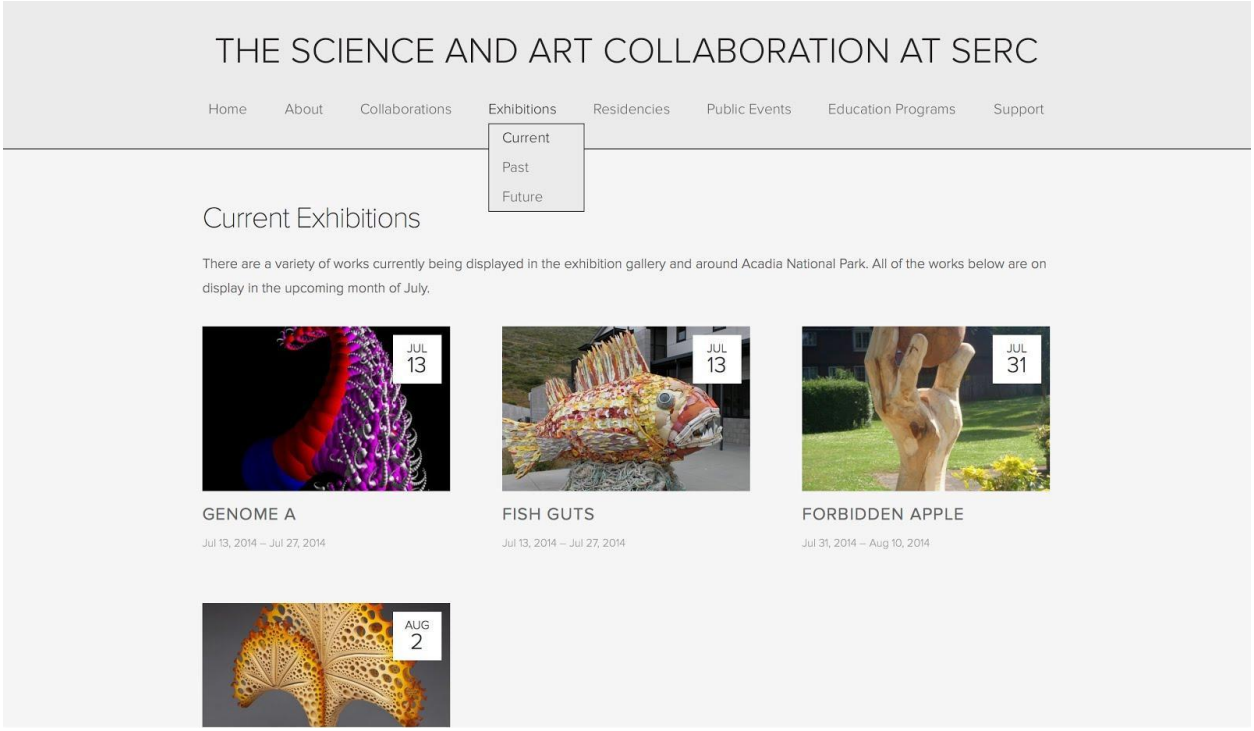

Figure 4: The exhibits page of the website.

Information on how to apply and qualifications to submit an application of both individual and group residencies can be found under residencies (Figure 5). An applicant can apply for an individual residency if they are both a practiced artist and scientist. A group application involves a team of scientists and artists who are judged for acceptance together. Demonstrational applications are available in both types of residencies as well. Also under the residencies tab is a seeking proposals page. This pages lists projects that SERC wants to implement and provides more information about each on separate pages (Figure 6). If the scientist, artist, or a collaboration pair submits a proposal and it is accepted, SERC will bring them to the community to implement the project. Lastly, a collaboration network lives under this tab, seen in Figure 7. This page serves to match scientists and artists together if they so desire. It briefly states the success of the network in the past and has an application for those interested. This application has basic information, a few questions for pairing purposes, and a brief

description of current work. The residencies tab is very important because it describes in detail how to apply in different formats depending on the specific qualifications and needs of the applicants themselves. This is useful because the people who would like to be involved within the community will go to this tab to describe themselves, what the community can do for them, and what they can do for the community.

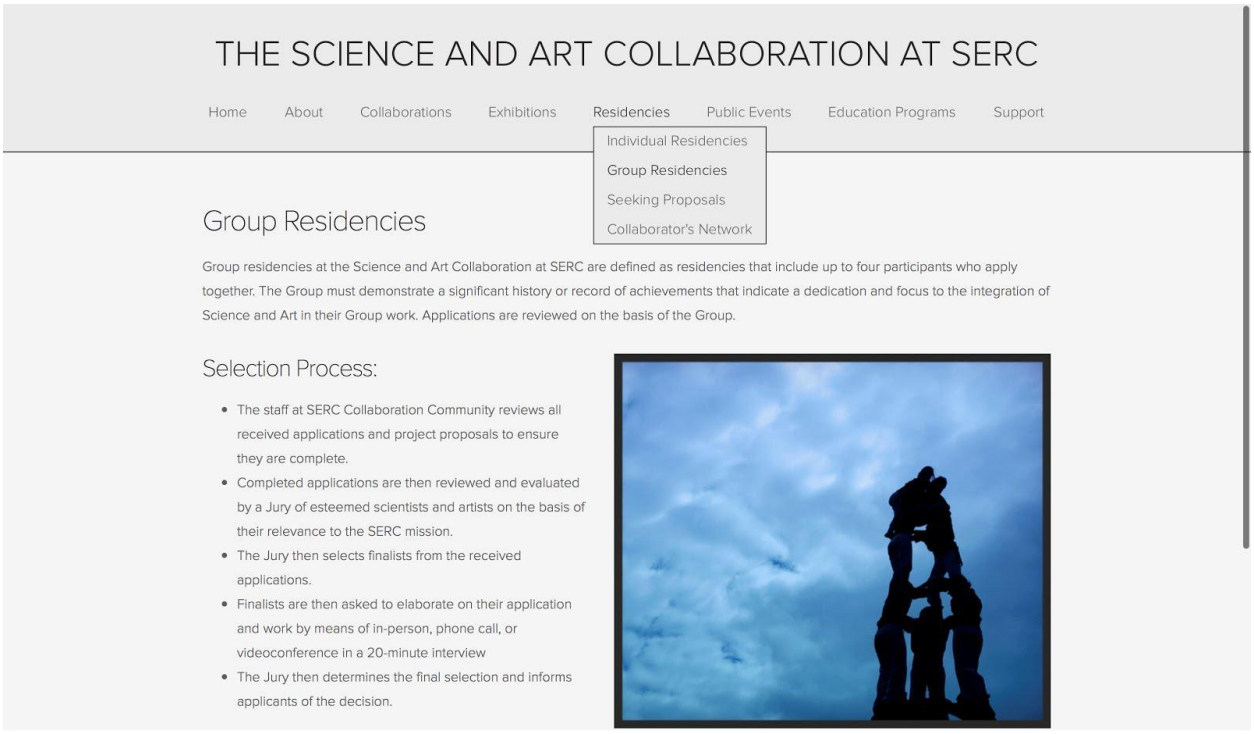

Figure 5: Residencies page.

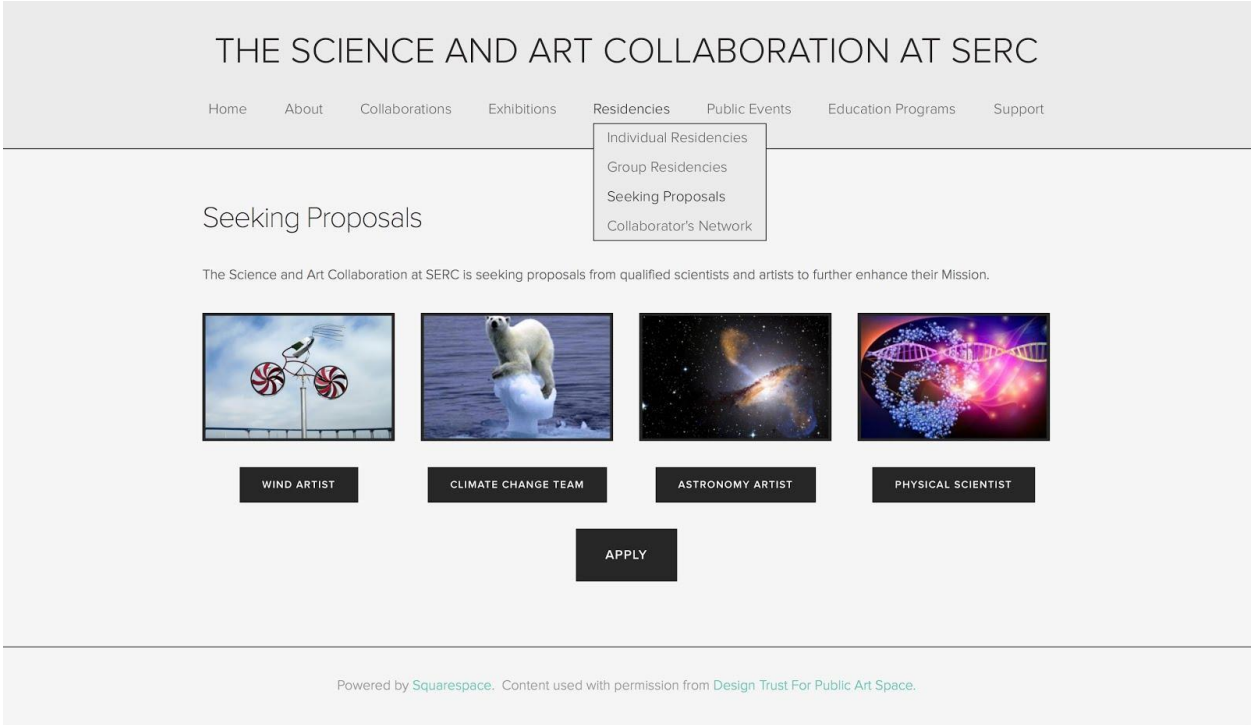

Figure 6: Seeking proposals page.

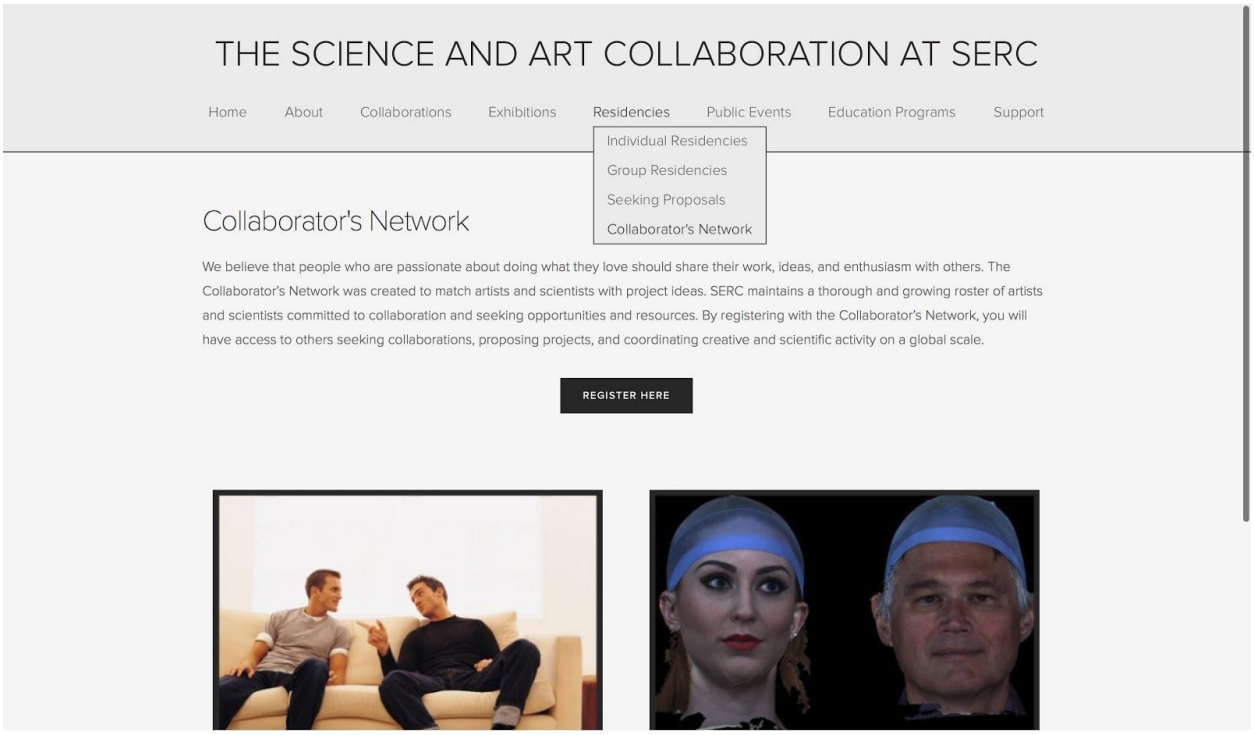

Figure 7: Collaborator's Network section of the website.

The public events tab was designed to include information on conferences, workshops, lectures, and activities open to the community. Each of these subcategories were inclusively developed to cover a wide range of public participation interests, seen in Figure 8. Conferences were aimed towards researchers and artists alike, creating a platform to discuss and share new ideas and work. Lectures was meant to create opportunities for public participants to obtain more knowledge from experts, while being more accessible than traditional classes. Workshops were aimed to be environments that allow participants to learn and develop skills through working together in an interactive group setting. Activities were designed to provide informal opportunities for regular public involvement. The events are listed in calendar format for easy accessibility. Upcoming events are highlighted on the first page to allow for visitors to quickly see events that will be occurring during their time in Acadia. Applications to sign up to attend these events were included in each of these pages.

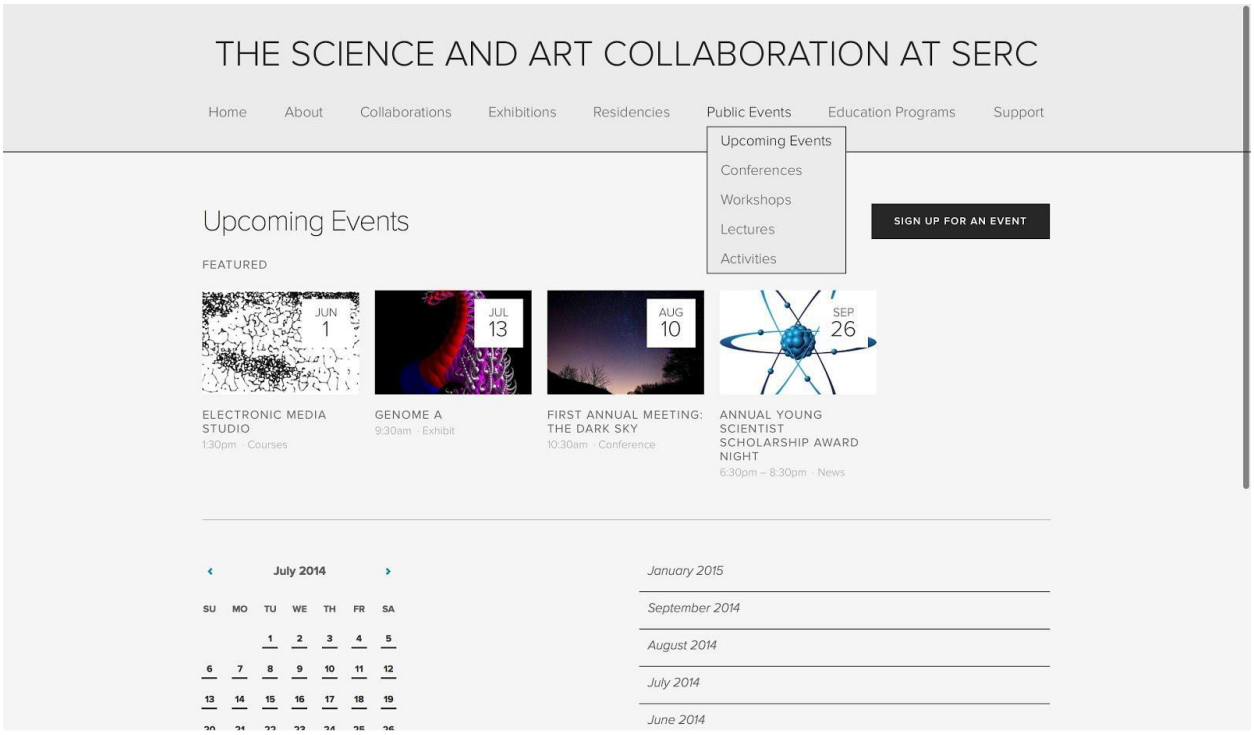

Figure 8: Public Events tab of the website.

The education tab was designed to have information about youth programs, an online presence via YouTube much like the channel *The Art Assignment*, as well as courses on professional development. The youth programs page was developed with a few camp-like events for the younger generation to learn about science and art (Figure 9). Courses are available for those willing to explore different areas of science and art. They are structured like college classes and are taught by professors of science and art from around the country. The primary purpose of this tab was to educate the public on the importance and connection between science and art. Also, it was aimed to spark an interest in science and art and the national park at an early age for students.

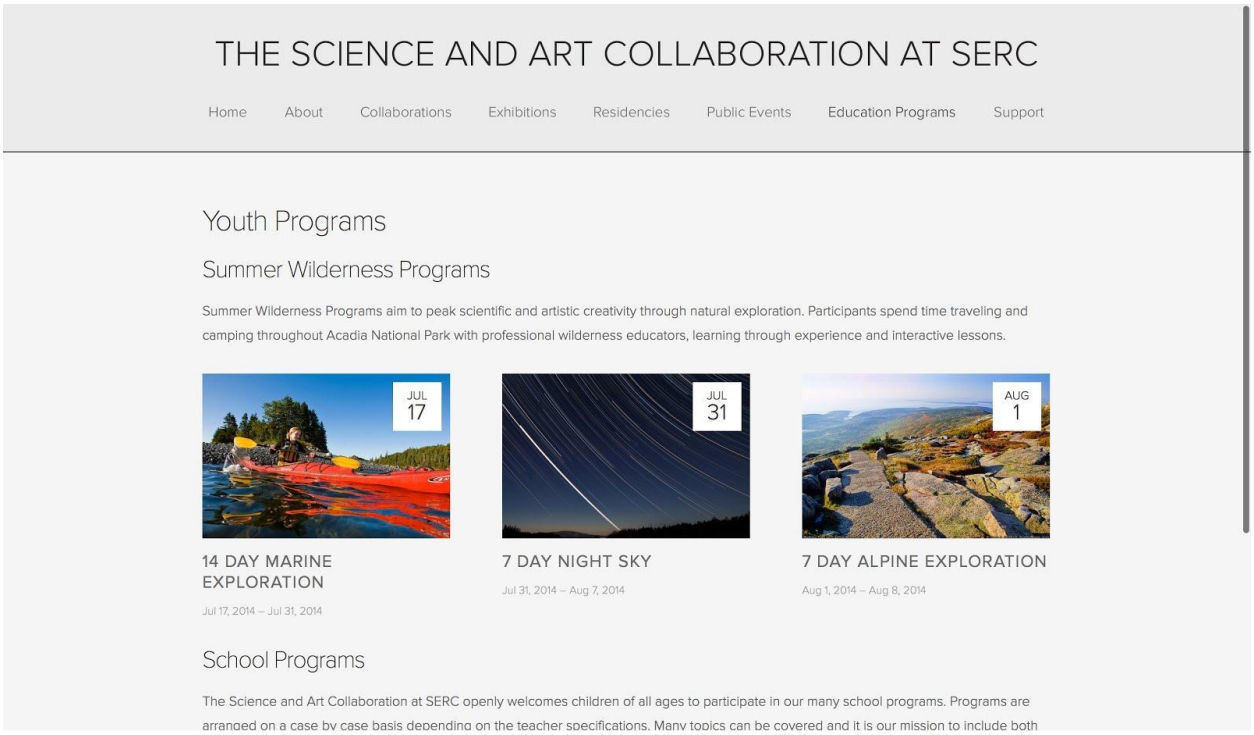

Figure 9: Education programs tab.

Information about how to volunteer, donate, and partner with the Science and Art Collaboration at SERC were listed in the support tab (Figure 10). Several other successful websites that were used as examples all had a page where they listed their partners and had a place to donate if the user was interested. As a new entity, having pages for volunteers, donations, and partnerships is crucial.

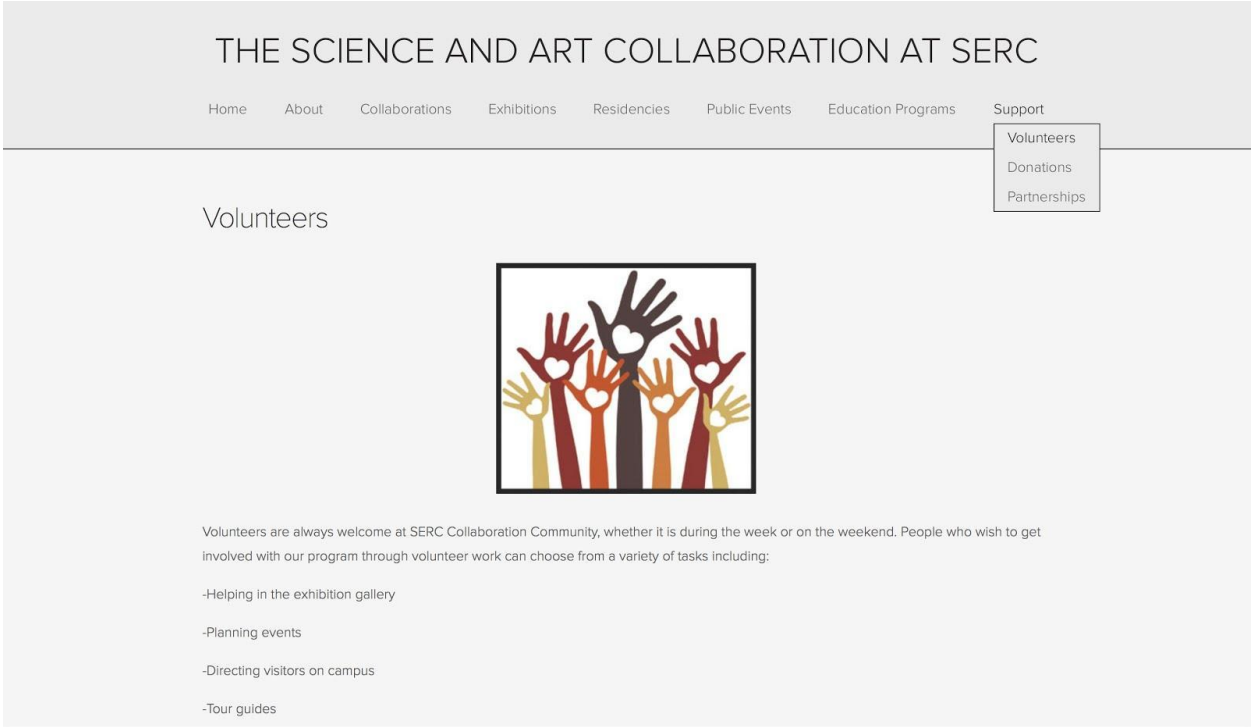

Figure 10: Support section of the website.

4.2 Promotional Video

Accompanying the website is a short video that promotes the proposed science and art program in Acadia National Park. Natural, scientific, and artistic themed shots were compiled to make a video that visually combines these three areas, paralleling the relationship between artists, scientists and Acadia National Park in the envisioned community. All of the natural shots and time lapses were taken in and around Acadia National Park, highlighting changes within some of the most popular and well-traveled areas. Visualization of science was taken from educational programs at SERC, and art scenes from the artist in residence program at SERC.

The video conveys the message that the collaboration community merges the sciences and the arts into one entity within nature. By the end of the production, the viewer sees what the Science and Art Collaboration at SERC is about. This propels the public to want to learn more about the program from the website.

4.3 Feedback

There were many people who offered their opinion on the drafts and final result of the website and promotional video. Among these people are Professor Frederick Bianchi, Dr. Abraham Miller-Rushing, and Mark Berry, who is the President and CEO of the Schoodic Institute. Professor Bianchi was an integral part of the construction and management of both deliverables. He helped with each draft of the website and offered much of his advice on the residency tab, particularly the seeking proposals and collaborators network sections. Dr. Abraham Miller-Rushing acted as the connection between the team and the steering committee of the science and art collaboration effort. He offered guidance in the structure of the website and how it should be delivered to the audience of Acadia and Schoodic staff. Mark Berry offered guidance in how the staff at Schoodic Institute might use the website on their own. He informed that if the website is hosted by Schoodic then the about and support tabs may not be necessary. He also informed the team of some options that the Schoodic Institute may have in putting a program in place that is based off of the website and promotional video and may be included in the development of such a program.

Chapter Five: Recommendations

This project is a work in progress and will be continued with the guidance of the Board of Directors to determine if a physical Science and Art Collaboration will be created at SERC. There were many areas that should have been covered in this project, but could not be completed due to time constraints. Also, different ideas and issues arose that were out of the scope of this project, yet directly affected the outcome of a new program at SERC.

5.1 Existing Programs

This proposed collaboration community would be for scientists and artists and there are many current programs that SERC offers now that include science and art. Students of all ages from the Maine area participate in science programs at SERC and gain valuable insight on how to preserve and conserve nature. In the summer, SERC has a teacher-ranger program where teachers from different states come and shadow a ranger for an allotted amount of time and learn from each other. On the other hand, SERC's Artist in Residence program requires the artist to interact with the community by giving presentations to the public. Some artists get very enthused about giving presentations and take the public out to learn how to draw, paint, etc. By incorporating these already existing programs into the collaboration community, a deeper connection among the public, scientists and artists, and nature can be formed.

5.2 Expanding the Audience

Currently, the programs that SERC has to offer do not get the attention they deserve. This is mostly due to lack of presence in the public eye. Events are listed on websites and throughout the park but getting the public to view the website and come to the park is a challenge. If there were more promotion in newspapers, magazines, and on YouTube, Acadia National Park would have a higher success rate of bringing people to the park and getting them involved in programs.

Another way of promoting is through forming relationships with local businesses and large corporations such as the laboratories located in Bar Harbor. If Acadia National Park established a relationship with Jackson Laboratories and MDI Biological Lab, not only would collaborations be formed between scientists and artists, but publicity through these large corporations would be received by Acadia. A partnership with either of these laboratories would be a beneficial one for both parties.

5.3 Website

Depending on the feedback and the reactions to the website, it will have to be adjusted in the future. The content of the website is going to depend on the people viewing it and their opinions and ideas. The more people the site is exposed to, the more changes that are going to need to be made. Maintaining the demonstrational website and the actual website that will be put in place someday is a task that will never be fully completed.

This website will most likely be hosted within SERC's website. If this is the case, then there is unnecessary information. Tabs such as about and support will most likely be included on the host's website and would be repetitive if they were a part of the collaboration's. This being said, the number of tabs and the information presented within each greatly depends on if the website is its own entity or a program within a larger organization.

5.4 Collaborating with Other Communities

In the future, once the new Science and Art Collaboration at SERC is established and well-rooted, it is possible to connect with other communities that already exist such as Haystack Mountain School of Crafts, Pioneer Works, The Banff Center, and others. If all these organizations got together and collaborated, a worldwide connection could be formed. A partnership among communities would involve scientists and artists collaborating from different

places, exhibitions and resources being shared, and new ideas, research, and work would circulate. This approach is often implemented in the form of consortiums, often seen in the performing arts.

One of the obstacles SERC faces to make these futuristic plans turn to reality is a lack in the number of personnel. One of the recommendations is taking advantages of the relationships with other education organizations. SERC should provide internships and similar opportunities for scholars. These kinds of opportunities provide advantages for both sides. Students look forward to professional experience because they are seeking experience. On the other hand, this would provide SERC with fresh new minds and ideas.

Chapter Six: Conclusions

The Science and Art Collaboration at SERC provides an example of a community that could be established. This project is a complete overview on what this community could include. The outcome of this project provides a future picture of how this community could function. When this demonstrational material is put into effect in the form of a physical community, the website that was created can be modified by adding and subtracting content depending on the needs of SERC. The website and promotional video that were created during this project were sent to Acadia National Park and the Schoodic Institute for further review with an associated steering committee to determine if and when the Science and Art Collaboration will be put into effect physically.

Appendix A: Interview Questions

Appendix A-1: Interview Questions for Kate Petrie, the head of the Artist-in-Residence Program within SERC and an interpretive ranger within Acadia National Park

1. How does the existing artist-in-residence program run in Acadia?
    a. Organization
        i. How many people are employed in the program and what do they do?
        ii. Is their job a permanent or temporary based on seasons?
        iii. What is your position?
    b. Applications
        i. Can you explain the artist selection process?
            1. What basis are used to pick the artist?
            2. Who picks the artists?
    c. What are the existing education programs?
    d. Funding
        i. Budget details
            1. Income
            2. Expenses
        ii. Are stipends provided?
2. Facilities
    a. What kinds of facilities are existent in Schoodic and MDI?
        i. Housing
        ii. Food
        iii. Studios

iv. Labs

v. Galleries

vi. Seminar spaces

b. Are there easy ways to travel between Schoodic and MDI?

3. Expanding the artist in residence program.

a. What is the best way to get the community involved?

i. Ideally, how would education be incorporated?

1. Seminars/Classes

2. Workshops

3. Camps

ii. Could the NPS develop an online format?

1. What do you think about incorporating an *Art Assignment* aspect into the colony? (Youtube)

2. Social Media

b. Desired Organization

i. Could residencies be catered individually to each collaboration?

1. Flexible in…

a. Time

b. Final Product

c. Collaboration size

d. Research/artistic topic

Appendix A-2: Interview Questions for Abe Miller-Rushing, the head of the science program within SERC and Acadia National Park

1. Should the existing artists in residence program be expanded, or should a new program be developed entirely in parallel?
2. What kinds of facilities are existent on Schoodic Peninsula and MDI that could be used for the program?
3. What types of educational programs do you envision accompanying the collaboration between artists and scientists?
4. Could residencies be catered individually to each collaboration?

Appendix B: A Call to Action Relevant Actions

Theme: Connecting People to Parks

Arts Afire (Action 10)

Showcase the meaning of parks to new audiences through dance, music, visual arts, writing, and social media. To do so we will launch 25 artist-led expeditions that involve youth in creating new expressions of the park experience through fresh perspectives and new technology.

Theme: Advancing the Education Mission

Go Digital (Action 17)

Reach new audiences and maintain a conversation with all Americans by transforming the NPS digital experience to offer rich, interactive, up-to-date content from every park and program. To accomplish this we will create a user-friendly web platform that supports online and mobile technology including social media.

Out With the Old (Action 19)

Engage national park visitors with interpretive media that offer interactive experiences, convey information based on current scholarship, and are accessible to the broadest range of the public. To that end we will replace 2,500 outdated, inaccurate, and substandard interpretive exhibits, signs, films, and other media with innovative, immersive, fully accessible, and learner-centered experiences.

Theme: *Preserving America's Special Places*

Revisit Leopold (Action 21)

Create a new basis for NPS resource management to inform policy, planning, and management decisions and establish the NPS as a leader in addressing the impacts of climate change on protected areas around the world. To accomplish this we will prepare a contemporary

version of the 1963 Leopold Report that confronts modern challenges in natural and cultural resource management.

Scaling Up (Action 22)

Promote large landscape conservation to support healthy ecosystems and cultural resources. To achieve this goal we will protect continuous corridors in five geographic regions through voluntary partnerships across public and private lands and waters, and by targeting a portion of the federal Land and Water Conservation Fund to make strategic land acquisitions within national parks.

Go Green (Action 23)

Further reduce the NPS carbon footprint over 2009 levels, and widely showcase the value of renewable energy. To accomplish this, we will foster sustainability in our parks and with our partners by reducing greenhouse gas emissions by 20 percent, including on-site fossil fuel usage and emissions due to electricity consumption.

Park Pulse (Action 28)

Assess the overall status of park resources and use this information to improve park priority setting and communicate complex park condition information to the public in a clear and simple way. To accomplish this, we will complete 50 “State of the Park” reports that synthesize monitoring information, resource inventories, facilities condition data, and visitor surveys.

Appendix C: The Website

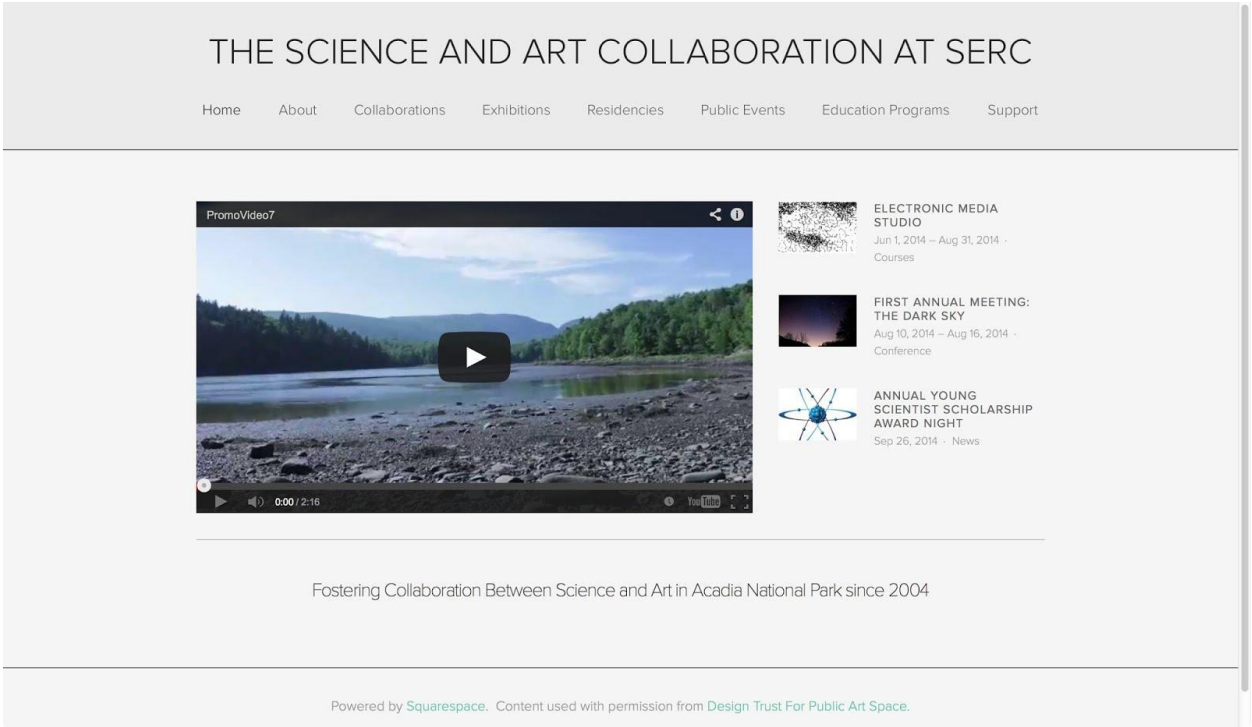

Figure 11: The homepage of the website.

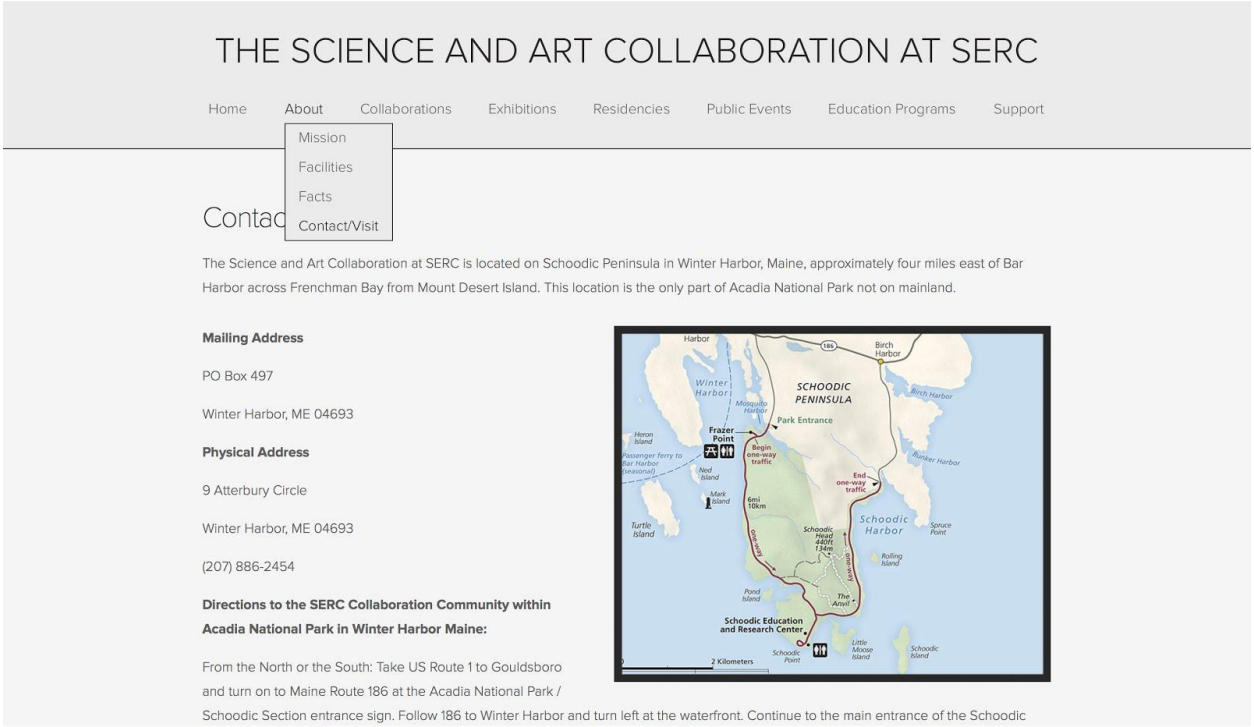

Figure 12: The about tab of the website.

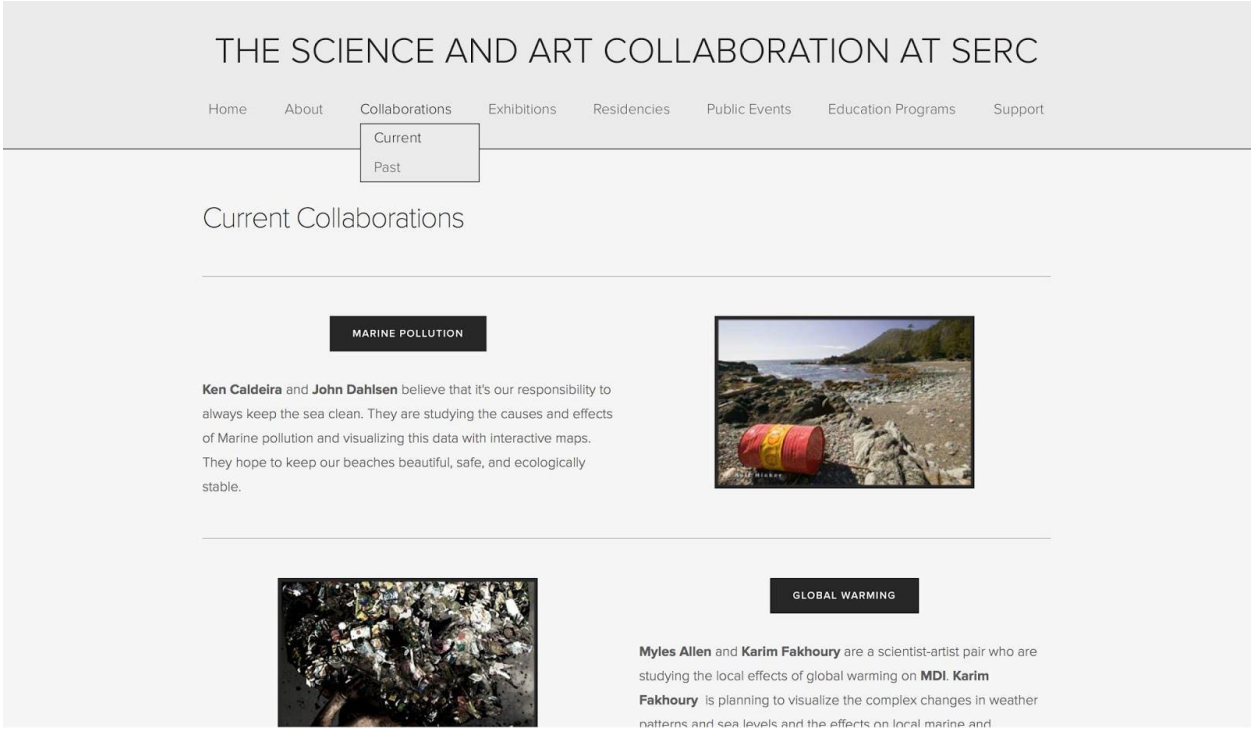

Figure 13: Collaborations tab of the website.

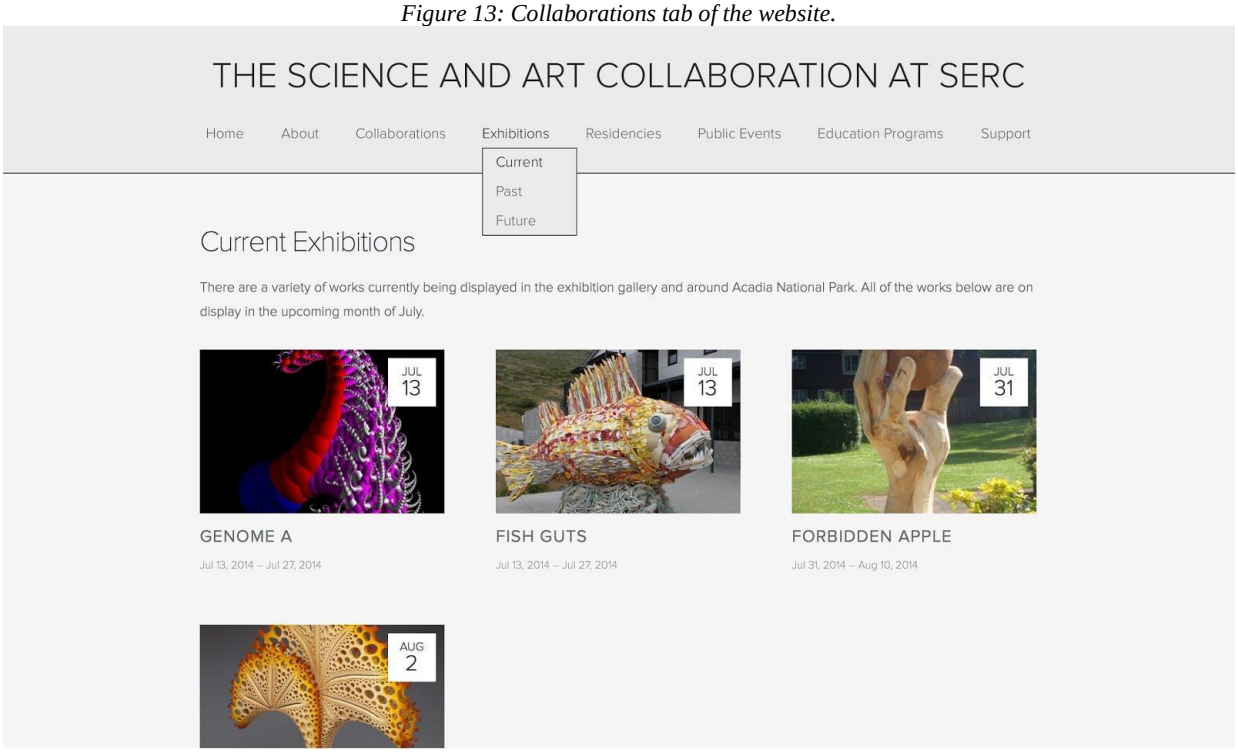

Figure 14: The exhibits page of the website.

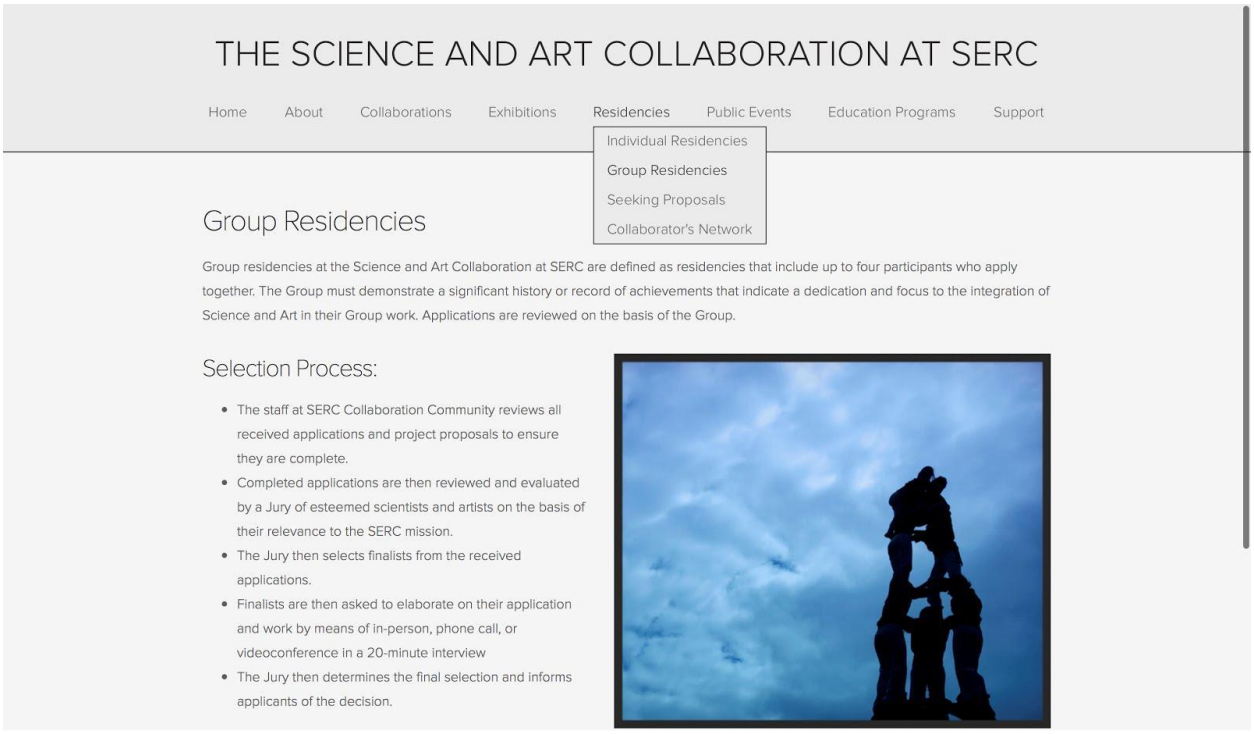

Figure 15: Residencies page.

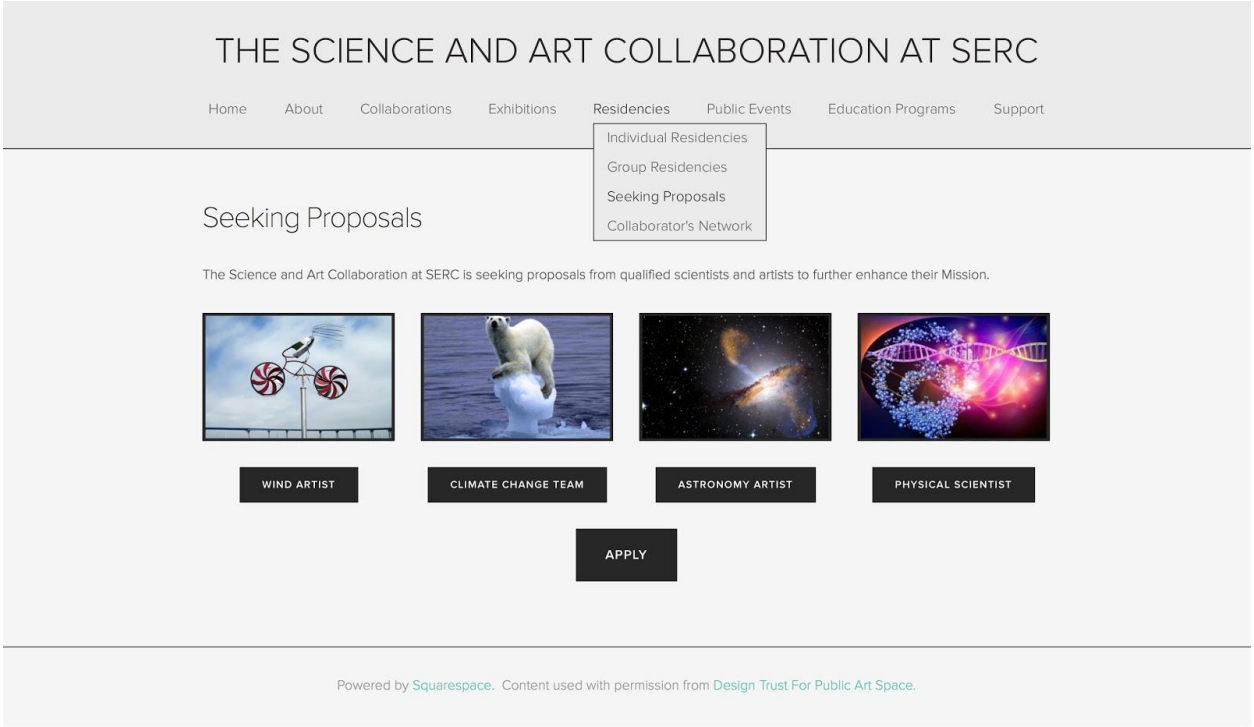

Figure 16: Seeking proposals page.

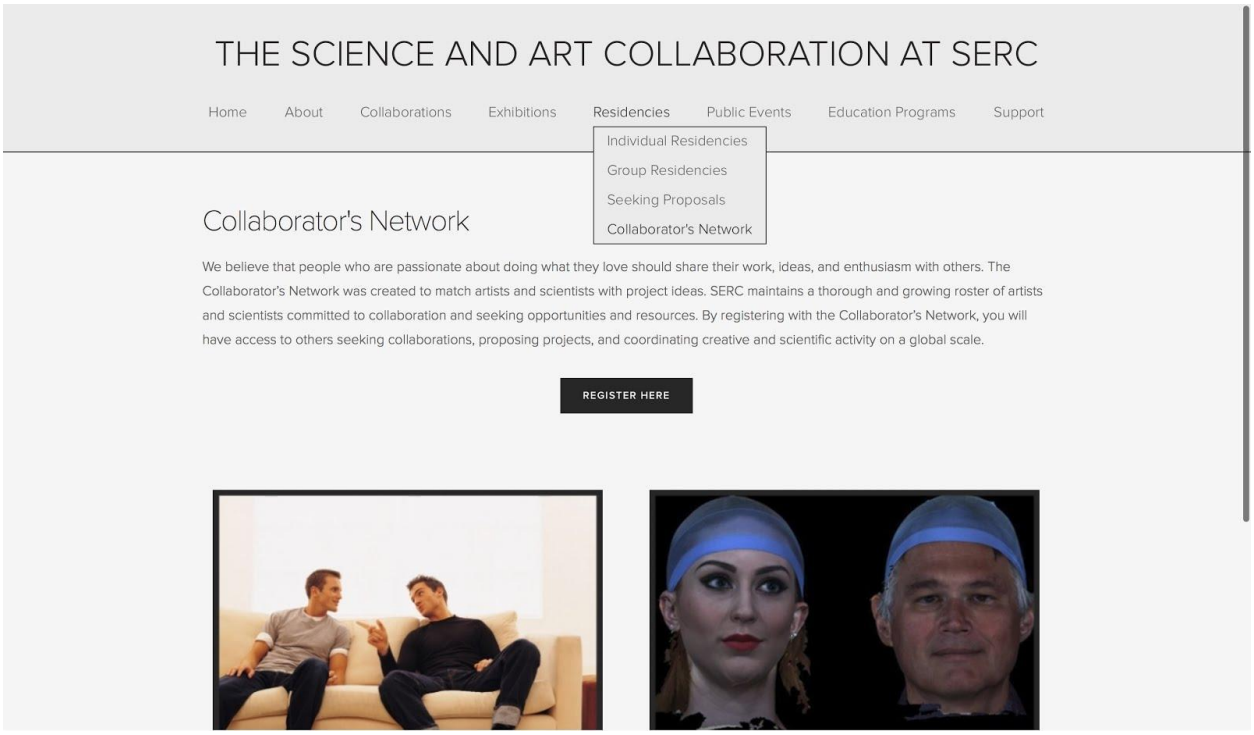

Figure 17: Collaborator's Network section of the website.

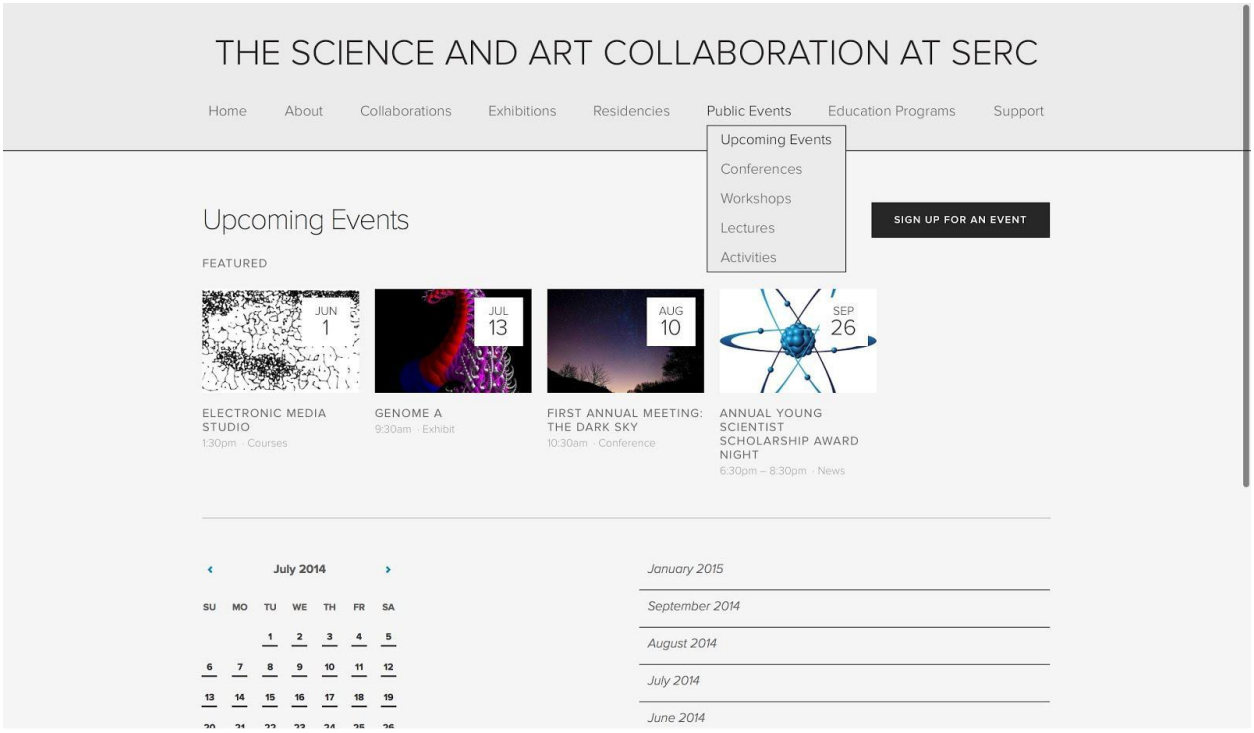

Figure 18: Public Events tab of the website.

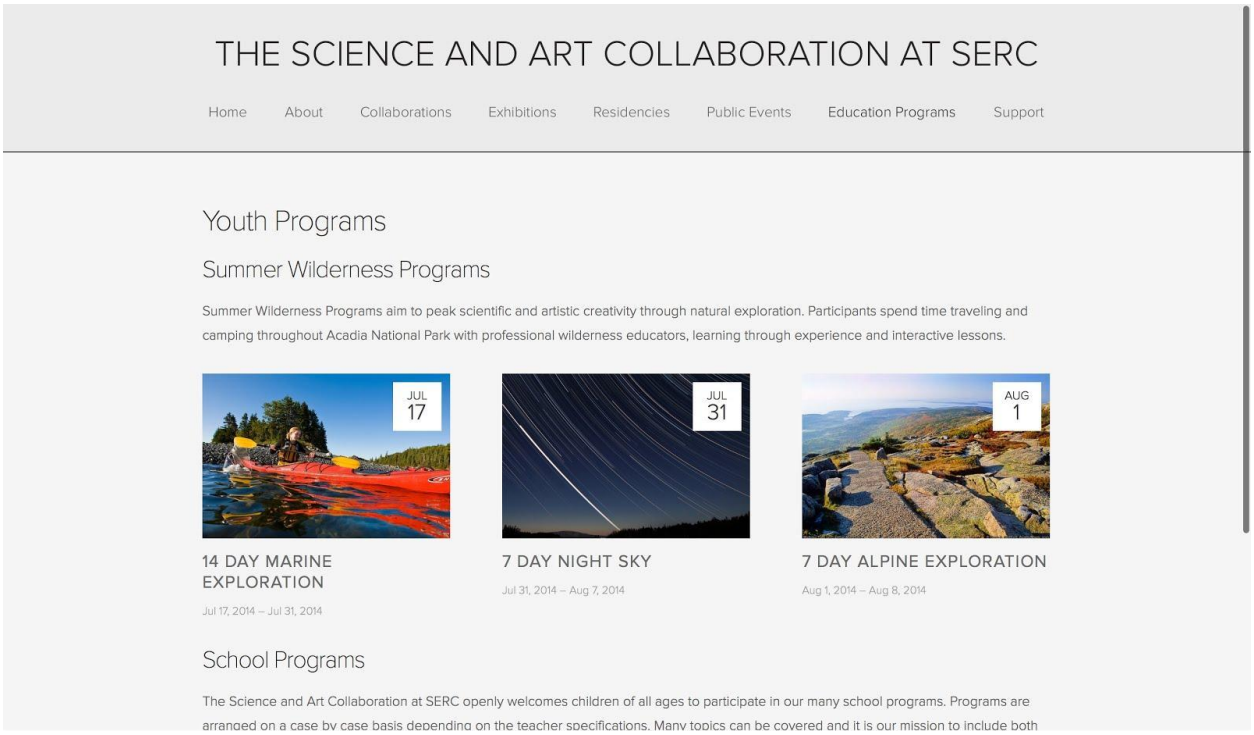

Figure 19: Education programs tab.

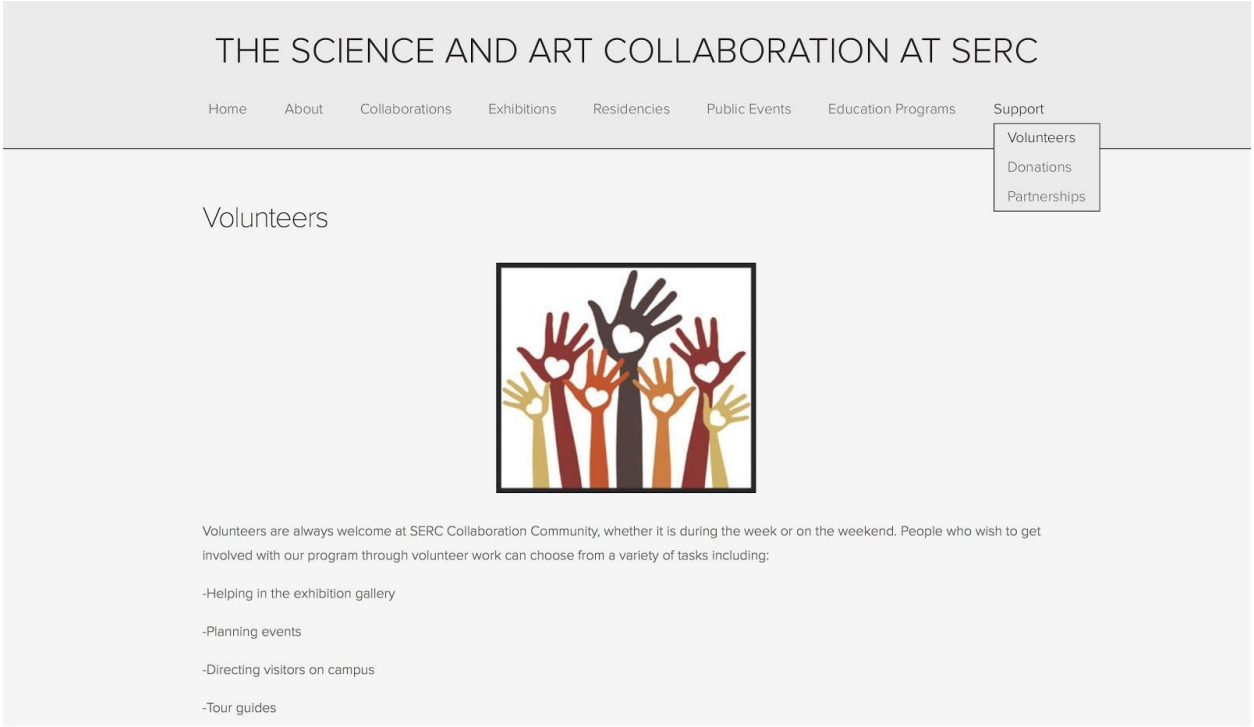

Figure 20: Support section of the website.

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