

ST. LAWRENCE UNIVERSITY

Canton, New York 13617

February 2, 2009

Dr. Eugene M. Tobin
Program Officer
The Andrew W. Mellon Foundation
140 East 62nd Street
New York, NY 10065

Dear Gene:

On behalf of St. Lawrence University, I am pleased to submit the enclosed proposal request in final form to the Andrew W. Mellon Foundation Liberal Arts College Program in support of our “Environmental Education Initiative for Active Learning, Research, and Advocacy.” This proposal is the culmination of extensive collaborative work by our faculty over the past two years, informed by the helpful feedback provided by you and Phil Lewis. As a result, our project will leverage the great collection of intellectual resources represented by our faculty within our Environmental Studies Department and those with environmental expertise in other disciplinary departments across campus. To fund this initiative over the next four years, we respectfully request a grant of \$800,000.

With grant support, we will expand experiential learning opportunities for our students in environmental education, research, and advocacy and increase interdisciplinary faculty collaborations to strengthen student learning and faculty professional development. As outlined in this proposal, promoting and fostering opportunities for interdisciplinary and multidisciplinary endeavors related to the study and protection of the environment are critical for creating a learning environment in which students can develop an understanding of the complexities of environmental problems, the value of interdisciplinary knowledge, and the need for multifaceted strategies to raise public awareness and resolve environmental problems.

In the months since we submitted this proposal in draft form for your consideration in June 2008, there have been considerable changes in both the national political climate and the global economy. At St. Lawrence, we are heartened greatly by the first and are well situated to weather the second. These external factors make our request at this time even more relevant to the University’s long-range plans to achieve neutral status in the environmental impact of our operations, and in our ongoing commitment to educate global citizens who will be leading stewards of our natural world. Now, with your grant assistance, St. Lawrence will carry out a comprehensive

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Dr. Eugene M. Tobin
February 2, 2009
Page 2

environmental education initiative that will have both a long-term positive impact on the University's curriculum and lasting benefit for the environment.

At this time, St. Lawrence University requests a grant of \$800,000 to implement our "Environmental Education Initiative for Active Learning, Research, and Advocacy" over the next four years. We thank you most gratefully for the thoughtful suggestions and guidance you and Phil have provided to help shape this proposal, and we thank the Andrew W. Mellon Foundation for your past support of St. Lawrence University and your ongoing commitment and investment in liberal arts education.

Sincerely,



Daniel F. Sullivan
President

DFS/ktj

Enclosures

St. Lawrence University
Proposal to the Andrew W. Mellon Foundation
Environmental Education Initiative
For Active Learning, Research, and Advocacy
February 2009

Executive Summary

St. Lawrence University and the Andrew W. Mellon Foundation share a long-term commitment to interdisciplinary undergraduate environmental education and a deep concern that colleges and universities must do more to equip our students to be environmental leaders and agents of positive change in the face of the Earth's dramatically decreasing natural resources. To address this need within the St. Lawrence curriculum, we propose to implement the Environmental Education Initiative for Active Learning, Research, and Advocacy – a four-year collaborative project with broad multi- and interdisciplinary participation. Through this effort, we seek to build on the traditional interdisciplinary strength of our longstanding environmental studies program, capitalize on the abundance of additional environmental disciplinary expertise within the broader faculty, and link these various offerings into a coordinated, ongoing initiative that will have both a long-term positive impact on the University's curriculum and lasting benefit for the environment. With the assistance of the Andrew W. Mellon Foundation, St. Lawrence proposes to expand experiential learning opportunities related to environmental education, research, and advocacy; coordinate and increase collaborations between faculty across disciplines; and implement these programmatic enhancements in environmentally-sensitive ways. To achieve these objectives, St. Lawrence University respectfully requests a grant of \$800,000 from the Andrew W. Mellon Foundation.

The Curricular Need: Increased Real World Experience and Applied Learning

To envision and shape the future of environmental education at St. Lawrence, a team of approximately 15 faculty members, broadly representative of our academic environmental offerings, has dedicated considerable time over the past two years strategizing how to advance our curriculum in ways that will serve better both our students and the environment. They have recognized that the significant momentum currently underway within our faculty's teaching and scholarship presents a unique opportunity to develop greater synergies among our environmental faculty and programs and enhance our curriculum in new and creative ways.

In exploring areas for potential growth and collaboration, the team has identified that what is largely missing for both students and faculty is a greater "real world" contextual understanding of the complexities of the environmental issues they are studying that comes from direct, firsthand engagement in: (a) geographic, cultural, and political settings with varying environmental issues and conditions; and (b) the complex inter- and multidisciplinary nature of these issues and their potential resolutions. As a result, we now seek to enhance our academic study of the environment from this dual focus. By doing so, we believe our faculty and students

can better learn about, reflect upon, act on, and propose solutions to current and future environmental problems.

To address this need, the St. Lawrence faculty team has set the following programmatic goals for our proposed project.

1. Increase in-depth experiential learning opportunities for students to apply and discover knowledge through firsthand “field” opportunities off campus, including environmental research, advocacy, internships, activism, and seminar/studio study.
2. Promote and foster opportunities for interdisciplinary and multidisciplinary collaborations related to the study, sustainability, and protection of the environment.
3. Implement project activities (i.e., increased field study and advocacy activities) in environmentally-sensitive ways for short- and long-term benefit to the environment.

With grant assistance from the Andrew W. Mellon Foundation, the St. Lawrence faculty proposes to achieve these goals by building upon the strengths of our existing programs and resources in ways that will incorporate more “real world” applied learning into our environmental curriculum, establish collaborations among faculty from different disciplines, and elevate our environmental offerings to a new level of excellence and long-term impact. Following is an overview of the types of activities our faculty plan to implement to achieve each project goal. In Appendix A you will find more specific examples of proposed project activities that members of our faculty team have indicated they will pursue if grant funding is available.

Goal 1: Increase Experiential Learning Opportunities

Throughout the St. Lawrence curriculum, our faculty strives to offer students the in-depth and transformative learning opportunities that take place through hands on, experientially-based study. Within our environmental education offerings, however, the limiting factor is often access to different locations where our students can learn firsthand about varying types of environmental issues and the ways that site-specific factors such as geography, industry, culture, politics, economics, etc. affect whether and how the issues are addressed. Our faculty team has identified that additional funding to support academic-based travel for groups of students with faculty – including local, regional, national, and international travel – as the highest priority need for advancing our environmental education curriculum. As a result, we envision that more than half of the requested grant funds on an annual basis will be dedicated to the addition of experiential learning components into courses (see project budget on page 8). In addition, we expect approximately 20% of the proposed grant funds will be designated for individual students or small teams of students to participate in faculty-mentored experiential learning opportunities, such as environmental research, internships, and advocacy projects.

Examples of the types of experiential learning activities that will be supported through the proposed grant funding include:

- On-campus courses with major off-site field components;
- Summer courses taught in off-site locations;

- Faculty/student collaborative research and advocacy projects; and
- Staged comparative studies of local/regional environmental issues versus similar or parallel national/global issues.

Goal 2: Foster Multi- and Interdisciplinary Collaborations

Today more than ever before, the skills needed to address environmental problems or take advantage of sustainability opportunities require knowledge and experience with multiple disciplines, perspectives, and areas of expertise. As part of our focus on providing students direct experience with “real world” environmental challenges, our proposed initiative will support – and encourage – multi- and interdisciplinary collaborations among faculty. Over the course of time spent developing our project strategy for this grant proposal, members of our faculty team have learned about the research and curricular interests of their colleagues from other disciplines and of existing or potential links between them. As a result, with grant funding we will provide faculty with the resources both to explore these potential connections and gain dedicated time to collaborate in new ways that will lead to interdisciplinary study and cross-disciplinary discovery.

Examples of the types of multi- and interdisciplinary collaborative activities that will be supported through the proposed grant funding include:

- Coordinated courses in different disciplines that offer a shared field component;
- Collaborative curriculum development for interdisciplinary courses, First Year Program seminars, and Senior Year Experiences;
- Cross-disciplinary collaborations to provide students with a broader skill base for their environmental study (e.g., an illustration course in fine arts for field scientists, or a science field methods course for non-science environmental majors); and
- Community-building programs that expose students and faculty to multiple perspectives, such as an annual environmental seminar series with a broad representation of speakers, including our own faculty, local and regional specialists, and nationally-recognized experts.

Goal 3: Maintain a Low “Environmental Footprint”

Regardless of what activities are developed and implemented through our proposed project, our faculty team is committed to the underlying purpose – to protect and preserve our natural environment. To help students and faculty decrease the potential for implementing project activities that will have a negative impact on the environment, participants will be asked to estimate the “environmental footprint” of their proposed activities and offer suggestions for how they can and will mitigate or offset those factors, for example carbon usage. In evaluating projects for funding, the Project Steering Committee will consider both any potential short-term negative impact on the environment (primarily due to a travel component) and potential short- and long-term benefit to the environment that will result from the activity (i.e., outcomes).

As faculty and staff propose activities for consideration by the Project Steering Committee, they will be asked to provide the following information:

- A clear delineation of the goals of their proposed activities and their relationship to the broader initiative goals and a specific description of planned academic outcomes of the project (e.g., curriculum development, impact on faculty research and/or scholarly or creative work, impact on student learning, contribution to students' Senior Year Experience projects, etc.).
- A description of the activity's short- and long-term benefit to the environment;
- A rationale or justification for any components of the project that potentially will have a negative impact on the environment (i.e., travel outside the region); and
- An estimation or acknowledgment of the activity's "environmental footprint" and the proposer's plan to counter-balance it.

Project Administration

To ensure a lasting and transforming impact within the University curriculum, St. Lawrence proposes to use a "faculty-driven" project administration strategy. Our faculty team has formed an initial Project Steering Committee to oversee the project and the annual allocation of grant funds (see Appendix B for a list of the members of the inaugural Steering Committee, as well as a brief summary of the Committee's responsibilities). This committee will meet on a regular basis throughout the academic year both to coordinate grant activities and to continue to cultivate cross-departmental and inter-program connections that will lead to collaborative work among faculty.

Several times each year, the Project Steering Committee will invite faculty and staff from across disciplines, departments, and programs to submit proposals for environmental programming and activities to be funded through the grant. Based on potential activities already identified by our project team (and listed in Appendix A), we anticipate funding requests for: implementation of in-depth, off-campus experiential learning components within courses; collaborative curriculum development within departments and across disciplines; faculty development; research projects; special events for faculty, students, and the broader community; and opportunities for students to participate in environmental advocacy activities off campus.

A primary responsibility of the Project Steering Committee will be to review these proposals and decide which projects will receive grant funds. By design, for the first several years of the grant, the steering committee will be large. This serves two purposes: (1) it ensures broad representation from multiple disciplinary and interdisciplinary interests; and (2) it ensures good continuity and timeliness for administration of the grant as the funding structures for the individual grant projects are put in place.

However, during the grant term, we expect the Project Steering Committee will pare down the size of the committee to make it more manageable and functional beyond the grant term. As envisioned, the committee will evolve into an ongoing environmental curricular/programming advisory committee for the academic community – to ensure

coordination of ongoing and emerging efforts and to maximize the benefit of available resources and opportunities for students and faculty. This long-term advisory committee will need to function within institutional administrative structures and the faculty governance system; as a result, the long-term configuration of the committee will be determined as part of the grant administration process.

In their time working together on this proposal, the faculty team also defined the following “core project elements” that will serve as guiding principles for the Steering Committee as they review faculty and staff proposals for grant funding.

Experiential: To deepen students’ learning, a large focus of the project will be to provide students with firsthand, applied experience working on-site with real environmental issues. For example, these experiential learning opportunities may be based in research, advocacy, outreach, or other “hands on” activities.

Inter- and Multidisciplinary: To help students appreciate both the complex nature of environmental issues and that their own work can often be enhanced through collaboration with those in other areas, a primary focus of the project will be the investigation of environmental issues from interdisciplinary and multidisciplinary perspectives, as well as disciplinary investigations that are informed through cross-disciplinary exploration and study.

Sustainability: To educate and inspire students and faculty to adapt more sustainable lifestyles, project activities that expose participants to different cultural, social, and/or technological ways to achieve low-impact living will be encouraged. Likewise, as participants propose activities that will produce tangible, positive impacts on the environment, they will be asked to look for ways in which those impacts can be sustained beyond grant funding.

Advocacy, Outreach, and Research: To enable students and faculty from different backgrounds to apply varying disciplinary knowledge, interests, and skill sets to learn about and address environmental issues, the project will promote and value equally a number of different kinds of environmental activities within the academic and scholarly framework, including advocacy, outreach, and research.

Environmental Offset: To help students and faculty decrease the potential for implementing project activities that will have a negative impact on the environment, participants will be asked to estimate the “environmental footprint” of their proposed activities and offer suggestions for how they can and will mitigate or offset those factors, for example carbon usage.

Local Impact: To enhance the regional/local environment in which St. Lawrence is located, project participants will seek to develop collaborative relationships with community partners (businesses, organizations, not-for-profits, etc.) to improve the physical, social, and economic environmental health of the area.

Global Awareness: To broaden students’ perspectives beyond what they have experienced within their home and school communities, to provide students with new knowledge

and information for in-depth comparative study across cultural, social, and geographic spectrums, and, ultimately, to prepare students to be agents of effective change within the global environmental arena, the project will support transformative “hands on” learning opportunities that will take students beyond the northeastern U.S. in which the University is located. However, as national and international travel is proposed within the project, participants will be asked to assess ways in which the other “core elements” of the project can potentially inform the activities and outcomes of the travel for greater overall positive environmental impact.

Project Outcomes: Increased Environmental Education and Impact

The project faculty team has agreed the primary and priority outcome from the grant will be the increase in interdisciplinary and experiential environmental education for our students and the development of a faculty culture that will ensure that focus continues. Over the course of the grant term, the group plans to initiate some organizational programming that will build and strengthen the interdepartmental communication that will foster future collaborations. Following are examples of programs the faculty team plans to implement:

- Regularly scheduled “non-scripted” brown-bag lunches for faculty to talk about their current projects, research, and courses;
- An annual “Focus on the Environment” type of event for students and faculty to display information about current academic environmental initiatives, to educate the community about ways to live/work in more environmentally friendly and sustainable ways, and to present student research;
- A series of environmental symposia – with scheduled presentations by our faculty and students of their projects in progress, with the potential outcome being interdepartmental coordinated Senior Year Experience projects;
- Participation in the annual open house at the Wachtmeister Field Station during Parents Weekend by faculty and students representing a broad range of environmental interests and disciplines; and
- Student research opportunities that will have community benefit through collaboration and long-term partnership with the St. Lawrence County Environmental Management Council.

In designing the proposed project, the St. Lawrence faculty team has set high expectations for both short-term and long-term outcomes that will be demonstrated by positive changes within the University curriculum, the lives of project participants, and the University’s campus and local environment. Following are brief summary descriptions of some of the project outcomes St. Lawrence faculty anticipate.

Student Learning Outcomes:

Via increased participation in experiential learning opportunities, St. Lawrence students will improve their abilities to:

- grasp complexities of environmental problems;
- appreciate the value of interdisciplinary knowledge;
- develop strategies to illuminate and/or solve an environmental problem;

- develop strategies to raise public awareness of environmental problems and advocate for their resolution;
- understand contextual underpinnings for environmental issues (e.g., geographic, historic, political, economic, cultural, legislative, etc.); and
- understand cultural differences in environmental values and problem solving.

Faculty Development:

Through increased collaboration with colleagues from across disciplines, as well as the continued building of individual research programs and other scholarly work, project faculty will:

- broaden students' perspectives on the multidimensional complexities of environmental problems;
- gain and bring interdisciplinary expertise to the classroom and research;
- inspire students to engage the above;
- attempt innovative pedagogies to research/teach environmental issues;
- build experience in current, nascent environmental projects; and
- foster interdisciplinary student collaboration on summer research and Senior Year Experiences.

Curriculum Development:

One of the considering factors that the Project Steering Committee will use to evaluate faculty proposals is long-term curricular impact. As a result, at the conclusion of the four-year initiative, our faculty team anticipates a significant number of new courses will have been developed and existing courses enhanced as a result of the project. We also expect to see increased student collaboration on Senior Year Experiences, thus allowing them to do more sophisticated and complex projects.

Project Funding

St. Lawrence University proposes to implement our project over the next four years, beginning in September of 2009 and concluding during the fall of 2013 (grant-sponsored activities will likely conclude during the summer of 2013, and faculty will use the fall semester for project assessment and reporting purposes). Based on our cost estimates and experience with similar programming in other disciplines, we need approximately \$200,000 each year to support the desired level of curriculum development, experiential learning, research, advocacy, and outreach activities that will best serve our students and faculty as well as move our environmental academic program to the next level.

Following is an estimated four-year project budget that outlines how we plan to allocate the proposed grant funds into our five primary project components each year (see Appendix A for brief descriptions of example projects). However, as noted, specific project costs will vary and specific allocations by project component will be determined on an annual basis by the Project Steering Committee based upon the faculty proposals under review at that time. Our

allocation plan is based on a \$200,000 per year baseline budget; however, in Years 2 - 4, we have added the anticipated grant interest income that will be available to spend in each of those project years (conservative interest income estimates are based on earnings rates of: 1.5% for 2009-10; 2% for 2010-11; and 2.5% for 2012-12) .

Proposed Four-Year Project Budget

Project Component	Cost Detail	Year 1: 2009-10	Year 2: 2010-11	Year 3: 2011-12	Year 4: 2012-13	Total
Experiential Learning Components in Courses	3 to 6 annually @ \$18,000 - \$35,000 each	\$107,000	\$110,750	\$110,750	\$112,000	\$440,500
Curriculum and Faculty Development	Up to 6 annually @ \$3,500 each	\$21,000	\$21,000	\$21,000	\$17,500	\$80,500
Student Research, Internships & Advocacy	5 to 10 projects annually @ \$3,000 - \$8,000 each	\$40,000	\$40,000	\$43,583	\$43,417	\$167,000
Environmental Speaker Series	From 1 to 3 speakers per semester @ varying costs	\$15,000	\$15,000	\$15,000	\$15,000	\$60,000
Advocacy, Outreach & Special Events Fund	Available as needed for emergent issues	\$17,000	\$20,000	\$20,000	\$20,000	\$77,000
	Total Annual Costs:	\$200,000	\$206,750	\$210,333	\$207,917	\$825,000

NOTE: Allocation per component may vary by year based on specific activities proposed by faculty.

During the proposed four-year grant term, St. Lawrence will develop a long-term funding strategy to enable the University to maintain an increased level of experiential learning activities beyond the grant funding. One strategy will include seeking dedicated endowment funds in support of environmental education.

The Proposal

St. Lawrence University respectfully requests a grant of \$800,000 to implement our Environmental Education Initiative for Active Learning, Research, and Advocacy over the next four years. With your grant assistance, St. Lawrence will build upon an already strong and long-term commitment to interdisciplinary environmental education by: increasing the opportunities for students to experience and apply their learning about the environment in firsthand and real world situations; enhancing ways in which faculty can collaborate for increased student learning and faculty professional development; and elevating the standard of environmental education at liberal arts colleges to a new level of excellence commensurate with the increasing degree of global environmental crisis and concern. St. Lawrence University is extremely grateful for the past and current support from the Andrew W. Mellon Foundation and we appreciate your consideration of our new request at this time.

Appendix A
St. Lawrence University
Proposed Project Activities:
Environmental Initiative
For Active Learning, Research, and Advocacy

Following are example projects that faculty members have identified and expect to propose if Andrew W. Mellon Foundation grant funding is awarded.

Curriculum Development: Proposed New Courses

- ***Wildlife Conservation in Africa: Challenges and Success Stories:*** This junior-level course will help students develop an independent and informed picture of the complexity of biodiversity conservation in the developing world, using examples from Africa as a backdrop. During the semester, students will participate in a discussion-based seminar exploring such topics as the ecology of African wildlife, traditional relationships between humans and nature, transboundary issues in wildlife conservation, the impact of civil war on biodiversity protection, regional differences in approaches to biodiversity protection (e.g., East vs. Southern Africa), the conservation strategies employed in the US vs. in Africa, and the relationship between poverty eradication and conservation. In May, students will travel to a location in either East Africa (Kenya and environs) or Southern Africa (Botswana and Namibia), depending on the semester in which the course is taught. This three-week travel component will include field science (e.g., evaluating habitat quality, counting game, studying behavior), meeting and working with local people, and attending presentations from in-country representatives of NGOs, governmental organizations, in-country research scientists, and university faculty.
- ***Environmental Writing for Environmental Scientists:*** Faculty members from the English Department propose to collaborate with faculty in Environmental Studies and the sciences to develop a special writing course for science students studying the environment. Expository techniques, creative non-fiction, and technical writing will all be taught and practiced.
- ***Great River Ecosystems:*** (Collaborative class with Biology and Environmental Studies) Faculty propose to develop and offer a new interdisciplinary course that will focus on river ecology and the effects of human land use in two large river systems: the St. Lawrence River and the Colorado River. Students will investigate and compare portions of each watershed.
- ***Human Values of Tropical Ecosystems:*** (Collaborative class with Biology, Global Studies, and English) This course will investigate the ways that tropical marine ecosystems are viewed, used, and protected by local residents. The course will be offered in two different iterations (in separate project years) – to focus on two specific ecosystems and communities: San Salvador, Bahamas and Roatan, Honduras. In each course, students and faculty will travel to the area of study to gain a comprehensive view of the complex reasons why residents use and manage marine resources as they do. Ultimately, faculty plan to develop one course that will compare these two locations.

- ***Land-Use Change and Policy in the St. Lawrence River Valley:*** This course will look at Indian settlements by Iroquois and Algonquin tribes, as gleaned through oral accounts, early diaries/maps, and current archaeological work, in both St. Lawrence and Jefferson Counties. Land use during European settlement will highlight agriculture and water-powered mills in the nineteenth century. Then, using a core-periphery model from the social sciences, the course will demonstrate how the St. Lawrence River Valley became an internal colony during the twentieth century, particularly during the development of mines and the construction of the St. Lawrence Seaway and Power Project. The second half of the course will focus on current land-use issues, including the value of the valley for wildlife, competing visions for an agricultural future, and local efforts to promote tourism and historical preservation. The course will include weekly fieldtrips to places of historical and contemporary interest, narrated by residents with varying perspectives and backgrounds, and will be informed by the instructor's published research about the Seaway, hazardous waste remediation, and land protection for wildlife.
- ***Local Environmental Advocacy:*** This course will introduce students to strategies and techniques for becoming effective leaders in the environmental movement. Data on the Class of 2011 (from St. Lawrence's Institutional Research Office) indicates that 40% to 45% of first-year students wish to "become a community leader." This proposed course will teach these students the how, what, when, and where of environmental advocacy. It will include topics such as written and oral articulation of environmental arguments, identification of critical community actors, use of the media, networking, and organizing, etc. The focus will be on skills that have proven particularly useful for advancing environmental aims. The course will include assigned readings as well as guided practice on both writing and speaking. During the semester, a current environmental issue in the North Country will be examined as a case study on how advocacy is or could be utilized. Guests will be invited to offer workshops based on their own experiences. Potentially, this course may be offered as a Senior Year Experience (SYE) option in Environmental Studies.
- ***Natural History of the Colorado Plateau:*** This Biology course will be a month-long summer course taught in collaboration with faculty offering one of the following courses: ***Geology of the Colorado Plateau***, ***Natural History Writing: Inspirations from the Southwest Desert***, or ***The Colorado River: Policies, Problems, and Solutions***. Many St. Lawrence University students have not traveled outside northeastern North America. As a result, their view of the natural world and environmental problems and solutions is quite limited. Currently, the curriculum infrequently offers course options that expose students to the particulars of arid environments. Students in this field-based course will study and camp in selected areas along and near the Colorado River. Lectures, labs, and writing will all be conducted outdoors.
- ***Environmental Physics:*** Energy and energy resources are important factors in the consideration of human interaction with the environment. Currently, the Physics Program at St. Lawrence offers two introductory level courses cross-listed with Environmental Studies: ***Energy*** and ***Global Climate***. The proposed new ***Environmental Physics*** course will be offered at the sophomore level with ***Introductory Physics*** as a prerequisite in order to enable students to explore energy, thermodynamics, spectroscopy, and atmospheric physics at a deeper level.

Curriculum Development: Enhancement of Existing Courses

- ***Climate Change Policy and Advocacy:*** The major component of this sophomore-level course is studying international climate change policy developed by the United Nations Framework Convention on Climate Change (UNFCCC). Students will attend the UNFCCC, which meets every year, usually in early December at locations around the world (2007 – Bali; 2008 – Poland; 2009 – Amsterdam). The travel component will significantly enhance the class by providing students the opportunity to witness policy formation in action. Students can also attend innumerable side events dealing with many different aspects of climate change, such as Inuit hunters and Arctic sea ice melting, gender issues related to climate change, reforestation of native lands in Bolivia, and, of course, climate change science and policy. The coursework during the term prepares students for the conference so they have the skills to interpret and evaluate the proceedings.
- ***Landscape and Popular Memory in Ireland:*** This summer course studies the intersections of Irish landscape, culture, and history along with contemporary conflicts over building new highways versus preserving natural landforms. Faculty propose to teach the course in Ireland, with particular focus on the bog as a cultural and technological resource with significant implications for conservation. This course is offered through Global Studies, and cross-listed with European Studies and Outdoor Studies.
- ***Marine Ecology:*** With proposed grant funding, this course will include a post-semester ten-day lab component that focuses on snorkeling studies of the endangered coral reef ecosystems in San Salvador, Bahamas and builds on the individual faculty member's research program. The course covers the biology of marine organisms, their ecological interactions, their adaptations to the dynamic ocean environment, and their importance to humanity. Topics will include the life histories, behavior, ecology, and commercial use of marine organisms, as well as abiotic factors (e.g., salinity, nutrients, water currents and tides, ocean floor spreading) that influence them.
- ***Nature And Environmental Writing:*** Faculty propose to develop for this course a new unit on local and sustainable food that will include community speakers from a variety of backgrounds and class field trips to area farms. Students may have opportunity to participate in community-based learning internships with local farms over the spring term break.
- **Natural History Writing Components in the following courses: *Ecology; Mycology; Plants Systematics; Vascular Plants;* and *Winter Ecology.*** In conjunction with the proposed environmental speaker series, faculty members propose to offer an “Environmental Symposia” featuring a series of well known nature writers (e.g., Rick Bass, Terry Tempest Williams, Michael Pollan, Bill McKibben, David Suzuki). Interactions with these writers will be incorporated into the syllabi for the identified courses, and the courses' writing modules will be expanded to include more time for students to receive training and inspiration from these writers. In addition to scientific papers, students in these courses will write creative non-fiction responses to their encounters with the natural world. Learning to write about place – with writing sessions on location – will be part of these proposed symposia.

- ***Tropical Ecology and Tropical Ecology/Forest Ecology of Asia:*** Faculty members propose to add a two- to three-week travel lab component to two variations of this upper-level course for biology majors to expose students to actual field conditions in tropical climates and to conduct an in-depth field research project based on work performed during the semester. Two faculty members with research programs in tropical ecology will alternate teaching the course, which is offered annually. Potential lab travel sites for *Tropical Ecology* include Cocha Cashu Biological Station, Los Amigos Biological Station, and the Cloudforest Lodge in Peru, and Tiputini Biological Station in Ecuador. *Tropical Ecology/Forest Ecology of Asia* will have a field component in Malaysian Borneo that will include excursions to tropical mountain flora (Mt. Kinabalu), orchid gardens, medicinal plant gardens, coral reefs, bat caves, etc. Funds will be sought to collaborate with another faculty member in Asian Studies (Religious Studies, Psychology, Economics, History, or Global Studies) for a shared field experience. One version of the course will be offered each spring, with the lab component in May.
- ***Advanced Non-Fiction:*** Faculty propose to enhance the current course with the addition of an overnight nature writing retreat at Catamount Lodge (nearby retreat center in the Adirondack Park). Student guides from Outdoor Studies and an area naturalist will join the group for a nature walk (likely on snow shoes) and introduce students to the ecosystem of the North Country. Students will observe animal tracks, identify trees, and participate in other nature-observing activities, then return to the lodge and write. A group reading session of the work produced will take place on-site.
- ***British Romanticism:*** This course focuses on the development of the modern Western concepts of nature and conservation and their ethical implications and relationship to British imperialism. The English romantics were a major influence on the American transcendentalists. The course includes an outdoor component in which students go alone to a remote location and write a reflection on their consciousness in that place. Faculty propose two different potential travel components to enhance this course, including: a trip to the Lake District in England to learn about how it has been preserved as a result of the ideas of Wordsworth and Ruskin, and later Beatrix Potter, with a comparative look at the Adirondack Park, and/or a trip through the Hudson River Valley, culminating in a tour of the Albany Institute of History and Art to view the paintings of the areas visited.

Advocacy, Outreach, and Research Activities

- **Community Outreach at Glenmeal State Forest:** In recent years, field components for several biology courses have been conducted at the Glenmeal State Forest near campus. As an extension of this work, faculty members have led a community outreach mushroom walk, a vascular plants walk, and trash cleanup efforts. Currently, biology students are compiling a comprehensive eukaryotic species list for this state forest, which will ultimately serve as a biodiversity example for the hundreds of other New York State (NYS) Forests, many of which are on a 20-year logging rotation. Faculty propose to collaborate across disciplines to involve students in the identification of appropriate advocacy programs for Glenmeal State Park that will inform the community about these bioreserves and help local citizens become

involved in the decisions regarding the management of these areas.

- **Environmental Seminar Series:** To educate students, faculty, staff, and community members about both local and global issues pertaining to the environment, this project will sponsor three to six speakers per semester, from a wide range of disciplines and perspectives – including those who challenge the dominant paradigm – to lecture on environmental issues. Each semester will feature at least one widely known speaker, several environmental scholars or professionals from within the region (e.g., faculty from other area colleges/schools who are conducting environmental research, local environmental professionals, environmental artists, etc.), and at least two St. Lawrence faculty or student/faculty teams who will update the community about environmental work being conducted at the University. The seminar series will also provide a forum for campus and community members to gather on a regular basis and talk about their own and each others’ work with the environment – something that currently does not take place within the St. Lawrence community.
- **Scientific Field Survey of Small and Medium-Sized Mammals in St. Lawrence County:** Faculty and students will conduct a scientific field survey of small and medium-sized mammals in St. Lawrence County. New York State (NYS) has relatively good data on the abundance and distribution of birds, amphibians, and reptiles in the state as a result of the NYS Breeding Bird Atlas and the Herp Atlas projects. However, there is no available data on the abundance and distribution of mammals throughout the state. The goal of this research project will be to do intensive field surveys to inventory mammalian diversity within the boundaries of St. Lawrence County, including sections of the Adirondack State Park and the St. Lawrence River Valley. This project is of specific importance to identify potential mammal species at risk within NYS to develop plans for their long-term protection. With the completion of the NYS GAP Analysis project, faculty and students will have GIS-based predictions of which species should occur in which locations. Thus, work will serve to not only document species’ presence and abundance, but will also allow us to test the accuracy of the GAP Analysis predictions before they are used for planning purposes.
- **The St. Lawrence University Environmental Archive:** This proposed resource will serve as a digital repository for scholarly works created by students, faculty, and alumni. This body of work will be made available as a part of the NITLE-sponsored Liberal Arts Scholarly Repository (LASR), an initiative for which St. Lawrence University is a founding member. A significant portion of the environmental research, advocacy, internships, activism, and seminar/studio work done by students and faculty has the potential to benefit the broader community and also future students. The establishment of a web-based scholarly archive will provide a platform for this information to be shared more broadly. Access to past research and/or data has tremendous potential for students to establish quickly a foundation for projects that expand on work already done. As envisioned, the Environmental Archive will be established during the first year of the initiative with a plan to continually acquire and describe scholarly work as it is produced. Workshops will be held twice per year (each year) so that contributors may learn how to publish their work into the digital repository. The SLU Libraries and Information Technology Department will provide additional support.

Appendix B
St. Lawrence University
Project Administration:
Environmental Education, Research, and Advocacy
Steering Committee

The St. Lawrence Vice President of the University and Dean of Academic Affairs will establish an “Environmental Education, Research, and Advocacy Steering Committee” to administer the proposed grant from the Andrew W. Mellon Foundation and to oversee long-term development and coordination of the University’s academic opportunities for students and faculty related to the study and protection of the environment. The Project Steering Committee will be comprised primarily of faculty members, broadly representing the academic departments and divisions that contribute to the environmental education curriculum, including the interdisciplinary environmental studies department, as well as the academic divisions of the sciences, social sciences, and the humanities and arts.

Steering Committee Members for Project Year One:

Brad Baldwin, Associate Professor of Biology and Department Co-Chair

Areas of Expertise: marine ecology, invertebrate biology, ecology of lakes and rivers;

Research Interests: aquatic biology and ecology

Erika Barthelmeß, Associate Professor of Biology and Program Director of the Integrated Science Education Initiative (ISEI)

Areas of Expertise: ecology, wildlife conservation, mammalogy, conservation biology, behavioral ecology, population biology; Research Interests: biology of small populations, anthropogenic disturbance and wildlife populations, detection and enumeration of hard to count species, basic wildlife ecology

Carol Cady, Geographic Information System (GIS) Specialist and Map Librarian

Area of Expertise: GIS, including academic support for teaching with GIS and research design with GIS; Research Interests: seasonal behavior in terrestrial passerines, and the impact of long-term landscape changes on avian communities

Glenn Harris, Professor and Teaching Fellow of Environmental Studies

Areas of Expertise: health effects of pollution, land-use planning, and environmental thought; Research Interests: environmental history, land-use, and environmental policy, particularly in the Adirondack Park and the St. Lawrence River Valley

Mary Hussmann, Associate Professor of English

Areas of Expertise: nature and environmental writing and literature; experiential education; Research/Writing Interests: experiential education, bioregionalism, sustainability issues

Carolyn Johns, Associate Professor and Department Chair of Environmental Studies

Areas of Expertise: ecological impacts of air and water pollution, sustainable agriculture,

environmental impact assessment; Research Interests: biological monitoring and trophic transfer of contaminants, conservation-based agriculture

Jon Rosales, Assistant Professor of Environmental Studies

Areas of Expertise: climate change, science policy, economic growth, old-growth forests; Research Interests: the ethics of international climate change policy; climate change impacts on Yupik hunters; old-growth forests in the North Country; economic growth and biodiversity loss

Catherine Shrady, Associate Professor and Department Chair of Geology

Area of Expertise: structural geology; Research Interests: structural geology and tectonic history of the Adirondack Lowlands; the use of geological materials in traditional healing of Peru

Natalia Rachel Singer, Professor of English

Areas of Expertise: creative nonfiction, fiction, and contemporary literature of the environment; Research/Writing Interests: environmental writing

Eve Stoddard, Dana Professor and Department Chair of Global Studies

Areas of Expertise: English literature, global studies, and the development of the concept of nature as something to be valued, enjoyed, and hence conserved, through aesthetics and travel, in 17th – 19th century Europe, particularly mountainous areas; Research Interests: impact of tourism on island economies, cultures, and ecologies, especially in the Caribbean

Eric Williams-Bergen, Science Librarian

Areas of Expertise: Chair of the St. Lawrence University Conservation Council; Co-chair of the St. Lawrence University Digital Collections working group; and leader of the University's implementation of NITLE's Liberal Arts Scholarly Repository (LASR). Research Interests: human-computer interactions, interface design, and web applications programming

Susan Willson, Assistant Professor of Biology

Areas of Expertise: tropical avian ecology and conservation biology; environmental security; Research Interests: Conservation of avian biodiversity in Amazonia; effects of climate change on boreal birds in northern New York

In addition, the Steering Committee will include:

- One representative from the Academic Dean's Office;
- One representative from the Center for International and Intercultural Studies; and
- One representative from the University's Corporate and Foundation Relations Office.

Committee Membership Guidelines and Responsibilities:

Committee membership will rotate over the course of the four-year project with renewable one-, two-, and three-year terms. Initial membership (for Project Year One) will be by

appointment by the Dean of Academic Affairs. In Project Years Two and beyond, the Steering Committee will make membership recommendations for review and appointment by the Dean of Academic Affairs. Faculty members who are funded through the project will be expected to volunteer to serve on the Steering Committee within two years of their receipt of grant funding.

The Project Steering Committee will meet on a regularly scheduled basis throughout the academic year to:

- Administer the grant project, including: oversight of programming and project activities; determination of project timeline; management of grant budget; and implementation of periodic project assessment and reporting.
- Plan and implement project programming, as needed (e.g., invited speakers, faculty development programs, campus events).
- Monitor project for short- and long-term progress toward goals.
- Review project proposals and award project funding.
- Coordinate and issue communications to the campus community about academic environmental initiatives underway, upcoming events, and opportunities for project participation and funding.
- Trouble-shoot project issues, questions, and conflicts, as needed.
- Maintain active and representative membership of Steering Committee, including recommendations to Dean of Academic Affairs for new appointees and oversight of membership terms.
- Communicate with relevant project and University personnel on campus about grant activities as needed to ensure that University policies are maintained (e.g., the Dean of Academic Affairs; the Center for International and Intercultural Studies; all departments and programs that offer academic opportunities related to study and protection of the environment; the Academic Affairs Committee; Campus Facility Operations Department and the University Building and Grounds Committee; and others as identified).