



Governor's Award for
ENVIRONMENTAL
Excellence

2018



APPLICATION



pennsylvania
DEPARTMENT OF ENVIRONMENTAL
PROTECTION

Commonwealth of Pennsylvania
Tom Wolf, Governor

Department of Environmental Protection
Patrick McDonnell, Secretary



Project Application Form

A. Name of organization:

Slippery Rock University (SRU)

B. Brief paragraph about the organization:

Slippery Rock University, founded in 1889, is a member of Pennsylvania's State System of Higher Education. The University is shaped by its normal school heritage and characterized by its commitment to intellectual development, leadership and civic responsibility. SRU provides students with a comprehensive learning experience that intentionally combines academic instruction with enhanced educational and learning opportunities that will help them succeed in their lives and professional careers, and to be engaged citizens.

Slippery Rock University is committed to being at the forefront of preparing the next generation of thinkers, innovators and entrepreneurs to help the world meet its profound environmental challenges. We are also focused on meeting the sustainability goals set forth in the SRU Climate Action Plan that is our road map to achieving carbon neutrality by the year 2037.

C. Title of project:

"Healthy Planet, Healthy People Environmental Summer Camp & Community Project Incubator"



SlipperyRock
University™

1. Provide a description of the project including, characteristics, objectives, goals, benefits and outstanding attributes:

OVERVIEW

This project was an environmental education summer camp for teams of high school teachers and students who were interested in creating an environmental education/stewardship project for their local community. At the end of the camp, each team was provided seed money to fund the community project of their choice. These thirteen projects are located in 8 counties, with the potential to raise environmental awareness among a population of more than 2 million residents.

BACKGROUND

SRU's experience in managing the McKeever Environmental Learning Center indicated that immersive, multi-day environmental education opportunities for young people greatly diminish after they graduate from elementary school and enter secondary school - a time when they actually have a greater potential to positively impact their communities and solidify their interest in environmental stewardship.

To help solve this problem, SRU developed and hosted a week-long environmental education summer camp that included classroom instruction, leadership training, immersive field experiences, and ample opportunities to interact informally with Camp Program Staff and other educators. In addition to the daytime activities, each school district team met in the evenings to select and plan an environmental education/stewardship community project, with mentoring provided by their teacher, SRU camp staff and faculty members.



Students learned about trail design at SRU's Overlook Hiking Trail, while alternative energy systems and organic gardening techniques were demonstrated at the Macoskey Center for Sustainable Systems Education and Research.

In this way, the camp acted as a community project incubator; thanks to an EPA Model Environmental Education grant, each team was able to return to their school district with \$1,700 in seed money to kickstart their community project, helping address a local environmental issue and raising environmental awareness among the general public.

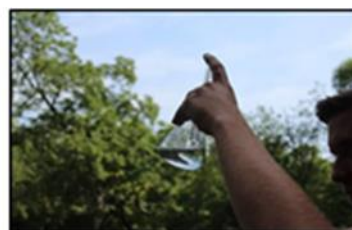


Students learned about acid mine waste mitigation techniques and a variety of habitats at the Jennings Environmental Center.

GOALS

The goals of this program included providing high school students with an immersive, educational and recreational summer camp experience that:

1. Help them better understand and enjoy the benefits of our natural environment;
2. Increase awareness of local environmental problems (including those caused directly or indirectly by climate change);
3. Increase awareness of the environmental organizations working within their local communities to solve environmental problems;
4. Educate students on the scientific principles of ecological sustainability and use a combination of formal leadership training and informal mentoring to develop students' critical thinking, problem-solving and decision-making skills, and
5. Increase environmental stewardship through encouraging short-term volunteerism at local environmental organizations and through camp attendees' developing their own environmental education/stewardship projects to be implemented when they returned to their local communities.



Titusville High School team's community project: documenting water quality at the Lower and Middle Shenango Rivers.

OBJECTIVES

The specific objectives of this program included:

1. Achieve camp enrollment of 120 high school students and teachers from 20 school districts;
2. Achieve a minimum 10% volunteerism rate among camp attendees for existing short-term stewardship projects in their communities run by local environmental organizations, as

measured by the post-camp evaluation survey administered on the last day of the summer camp;

3. Achieve implementation of at least one meaningful environmental stewardship project during the following year at each participating local school district/community.

4. Produce a short video capturing highlights of the camp experience and the students' poster sessions that can be made available at no cost to school career counselors, other colleges/organizations wishing to replicate a similar program in their region.

BENEFITS and OUTSTANDING ATTRIBUTES

This main benefit of this program was in creating a ripple effect of environmental awareness, education and stewardship action in the students' local communities.

In addition to providing students with the tools necessary to carry out local stewardship projects, their teachers benefited from the experience, friends and families attending the poster session at the end of camp became more aware of local environmental issues and solutions, and their local communities are benefiting from the educational value of the stewardship projects carried out in their communities.

The Community Project Poster templates prepared by the camp staff were quite valuable in ensuring that each team had thought through practical considerations (budget, project management, team assignments, etc.), and left the camp with a high level of confidence that they could successfully carry out the project.

ENVIRONMENTAL SUMMER CAMP 2017 COMMUNITY PROJECT MEMBER

Riffle Fishes Assemblages and Elemental Bed Sediment Analysis

A Temporal Comparison of the Middle Shenango River
Greenville High School

Partnering Organizations: Shenango River Watchers, SRU Office of Sustainability, UGWF, Clanton University

Environmental Issue Description
This project is the second step in establishing trends in the Shenango Watershed, related to water quality. By monitoring the fish living in the river, and studying the water chemistry, we are able to identify trends in the river and be aware of any changes that would indicate a change in water quality. As in the past, the public is encouraged to join us during sampling, and our results will be available to the public and other researchers.

Brief Project Description
This project is a continuation of the "periodic monitoring" component of the fish assemblage study completed in 2015. This year we would like to revisit 9 of our sites along the Middle Shenango, in order to compare findings with our baseline from two summers ago. We will sample riffle sites for fish richness and diversity, bed sediment analysis (3 sites), and water chemistry. This will be the second step in identifying trends in our continuing efforts to monitor the Shenango Watershed.

Location
The Middle Shenango River, beginning at the Mercer County, Pa line and continuing downstream and terminating at Shenango River Lake in Mercer County, Pa.

Project Goals
At each site, we will conduct the following analyses:

- Quantify biodiversity of riffle fishes
- Record water chemistry at each site
- Assess riffle fish richness
- Temporal comparison of all parameters
- Establish baseline bed sediment elemental analysis (3 sites only)

Estimated Budget
 Travel- \$225**
 Equipment/supplier- \$165**
 Site Work (2.5 hours/site)
 Pre-grad Assistants (4)- \$900
 Faculty (2)- \$2952
 Data organization & analysis:
 Pre-grad Assistants (2)- \$360
 Faculty (report)- \$2880
 Biosolids Testing (three sites)- \$945**
 Research consumables - \$165**
 ** EPA community project incubator grant

Action Steps/Objectives
 July 15-16, 2017 visit sites to reaffirm access
 July 17-21, 2017 research/data collection
 Completion of deliverables (written report of findings, presentation of results) by Feb 1, 2018

Project Roles
 Project Lead: Mark Russell, MS
 Clanton Faculty: Andrew Turner, PhD
 Field Work:
 Kyle Wingard
 Brianna Pennington
 Caylee Jayne
 Jonathan Miesky
 Clanton University Pre-grad assistants (TBD)

Mark Russell, markrussell4@gmail.com
 Kyle Wingard Class of 2018
 Brianna Pennington Class of 2018
 Caylee Jayne Class of 2018
 Jonathan Miesky Class of 2018

Sample of completed Poster Template describing the environmental issue to be addressed, the project goals, action steps, budget and team member roles.

This program also educated the attendees about climate change and its potential impacts on our local environment (e.g., degradation of local air quality, ecosystem disruption, changes to biodiversity affecting the local food network, etc.). Challenging these students to develop local, community-based environmental education and/or stewardship projects aimed at solving these problems is therefore helping to create more resilient, adaptable communities.



Students created bluebird boxes to take home while waiting their turn at canoeing and enjoying the Nautical Nature Tour at Moraine State Park.

This summer camp's "see-hear-feel-do" methodology, including many experiential opportunities for students to interact with their own teachers and SRU program staff serving as role models, was chosen because of its appeal to high school students and its proven ability to promote behavioral change. We believe that, by exposing students to a wide variety of environmental issues and letting them select a specific issue of interest to them, also increased the probability of them following through with their own community projects. Perhaps the most insightful comment (provided by one of the teachers at the closing of the poster session on the last day of camp) related to the fact that the community projects

extend the learning experience beyond the typical one-week camp, to a year-long follow-up activity that will keep the students' interest and engagement in environment stewardship long after the camp ends.



The Brookville High School/Quiet Creek team constructing their community project: a photovoltaic system, which will be integrated with a living mural wall designed to raise awareness about the environment.

2. What results did your project achieve to improve Pennsylvania's environment?:

As evidenced by pre- and post-camp surveys, the students did increase their knowledge of environmental issues, were more likely to volunteer on more environmental stewardship projects, and were overwhelmingly interested in attending a similar camp in the future. A total of thirteen local community projects that educate the general public about environmental issues and/or help solve an environmental issue are currently underway.



Union City High School students at work on their community project, a large rain garden to protect French Creek from stormwater overflow pollution.

3. How does this project serve the public's best interest and provide environmental protection?:

This program will continue to serve the public's best interest for the long term by providing environmental education, by addressing local environmental issues, and by providing practical experience to the student/teacher teams through their execution of community projects in eight counties throughout Pennsylvania.

4. In what ways did the project involve community members, government officials, and/or employees?:

This program involved local school administrators (who were consulted regarding projects proposed to be located on school grounds), 16 local environmental organization partners, and school district employees/community volunteers/local businesses "recruited" for assistance on the community projects by the student/teacher teams.

5. How does this project use innovative technology or solutions to achieve results?:

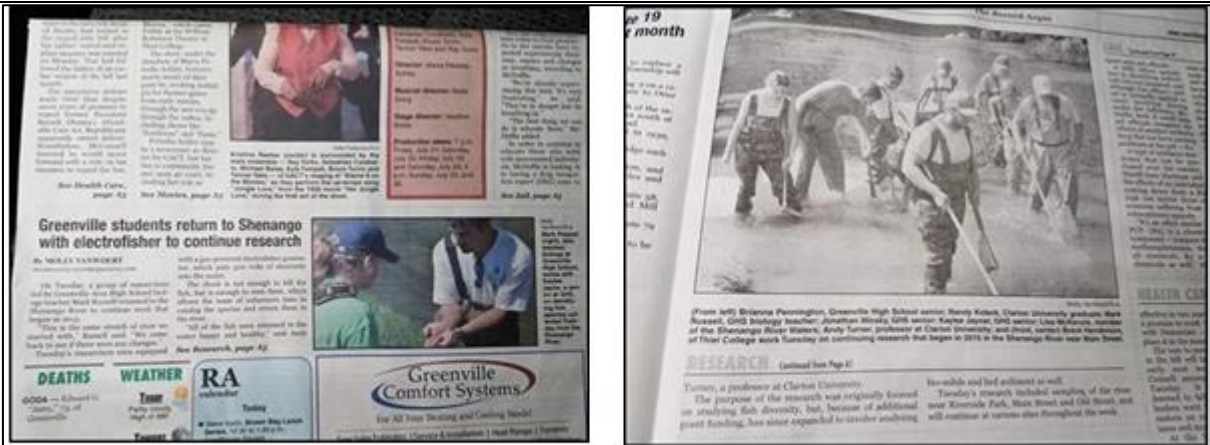
This program was selected for an EPA Model Environmental Education Grant because it provided a new, innovative, and replicable approach to support locally-focused environmental education projects that increase public awareness and knowledge about environmental issues. The program also provided the skills that participants needed in order to make informed environmental decisions and take responsible actions toward the environment. The most innovative aspect of this project was to link the lessons learned during the environmental summer camp to the teacher/student teams' development and implementation of a local community environmental education/stewardship project of their choosing.



Teacher/student teams planned their community projects during evening mentoring sessions.

6. In what ways does this project educate people about environmentally responsible practices?:

This project will continue to educate people about environmentally responsible practices for the foreseeable future, since the community projects are expected to have a long service life. The projects themselves have already begun generating additional interest, and educating the general public, through coverage of project progress by local media.



Local newspaper coverage of the Greenville High School's community project on water quality research at the Lower and Middle Shenango Rivers.

In addition to those directly enrolling in the summer camp, our indirect target audience included schoolmates, friends and families of the students attending the camp (who attended the community projects poster session), school district and community members who became aware of the local education/stewardship projects carried out by the camp attendees, and other colleges and organizations that can view the "camp highlights" video and/or replicate this project in the future. The total potential audience receiving environmental education is more than 2 million residents in the eight counties benefiting from the community projects, plus colleges and other organizations beyond our region who may replicate this program in the future.



Jeff Bitt / Mass Valley Independent

From left, McKeesport Area High School juniors Shelby Harris, Charisma Ford and Logan Mollar hold the "Blue & Red Goes Green!" project poster near one of 12 recycling bins they worked with science teacher Maria Hayes, right, to get placed throughout the school.

'Green team' ramps up recycling at McKeesport Area

After attending a summer camp at Slippery Rock University, the juniors worked to add plastics recycling at their school.

By JEFF STITT
jstitt@courier.com

Three McKeesport Area High School students and a science teacher have spearheaded a recycling initiative to make the district more environmentally responsible.

Charisma Ford, Logan Mollar and Shelby Harris, all 16-year-old juniors, worked with teacher Maria Hayes to obtain a \$1,734 subgrant from the U.S. Environmental Protection Agency.

Part of the money was used to purchase 12 recycling bins that were placed throughout the school.

Hayes and her students traveled to Slippery Rock University over the summer for the five-day Healthy Planet, Healthy People Summer Camp and Community Project — part of the Healthy Schools Initiative.

The students learned about sustainable food and agriculture, water and air quality, environmental ethics, climate change and alternative energy

systems.

"I think I learned that there is a lot more to keeping the environment safe than just recycling," Ford said. "It's an appreciation factor, I got to live here, so I should try to take care of (the Earth)."

Harris said she learned how powerful conservation efforts can be if everyone does their part.

"I feel that going was valuable, and I learned a lot. But I wish more students were able to go so they could have learned what I know," she said.

Hayes said she and her students had time at the university to discuss how to bring what they learned back to McKeesport and how best to spend the grant money.

"We started thinking: We recycle paper, but we don't recycle plastic," Hayes said. "It's something we have been wanting to do at the district for a long time, but it never happened before this."

The team came up with "Red & Blue Goes Green!" — based on school colors and the idea of being "green" for the environment's sake. They presented their ideas to other student groups at the university before bringing it home.

The students worked with district

maintenance personnel to obtain a special Dumpster for plastics through Waste Management. Money for the large bin came from the maintenance budget.

The goal is to teach students that sometimes constraints come with a project, such as contractual obligations and zoning restrictions that must be approached ethically.

Mollar said the program is effective. "It helps keep things clean," he said. "If you throw stuff on the ground or on the ground, it's going to stay there. It takes a period to get rid of it the right way."

The three students say their classmates have been using the bins faithfully, and Hayes said teachers love the idea.

"Teachers keep coming up to me asking if they can have a bin to put in their classroom," Hayes said.

So far, the team has spent \$1,200 from the grant and plans to use the rest for more recycling bins.

Hayes said she is grateful to high school special education students who volunteered to empty the recycling bins and take them to the dumpster.

Hayes said they enjoy being called "the green team."

The McKeesport team selected a plastics recycling project for their high school which has generated much interest among both teachers and their schoolmates.



The Poster Session for friends and family was held at SRU's Smith Student Center.

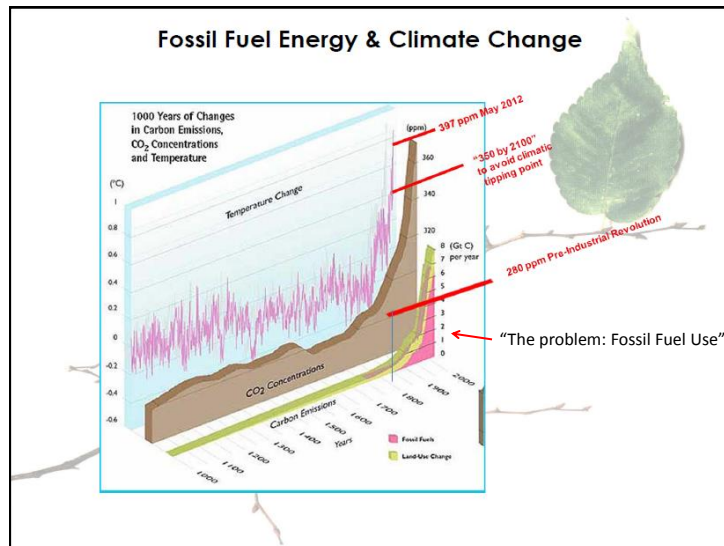
7. Can you describe the potential economic impact your project created (e.g., total project costs, long-term cost savings, potential job creation)?:

The economic impact of this program totaled approximately \$120,000, including a \$90,000 EPA grant and more than \$30,000 in matching costs funded by SRU's Office of Sustainability. Of these amounts, more than \$25,000 was distributed directly to local communities to fund the community projects.

Long term cost savings and potential job creation are dependent on the specific outcomes of the individual community projects, which varied substantially - from "quick return" projects (like reusable water bottle fill stations in a high school) to longer term projects whose economic impacts are more difficult to quantify (such as projects protecting the water quality of Pennsylvania streams and the creation of community gardens in urban food deserts). Please see the attached Project Posters describing each community project in more detail.

8. How does this project address sustainability, climate change, or pollution prevention?:

In addition to classroom instruction on the causes and potential solutions to mitigating climate change impacts, each community project addresses different aspects of sustainability, climate change mitigation, and/or pollution prevention.



Classroom instruction and a panel discussion covered issues such as the role of fossil fuels in climate change and environmental degradation.

Below is a summary of the community projects:

"Healthy Planet, Healthy People Environmental Summer Camp & Community Project Incubator" Community Projects List

Aliquippa School District

Project: "Aquaponics Project in Urban Food Desert"

Partnering Organizations: Uncommon Grounds Café/Spring Street Urban Farm, SRU Sustainable Enterprise Accelerator

Quiet Creek School of Country Living/Brookville High School

Project: "Sustainability Through Creative Influence: Living Wall Mural with 3.9 kW Photovoltaic Array" (Community Education/Demonstration Project)

Partnering Organizations: C.R.E.A.T.E. Brookville, BCAT, Brockway Area School District, and Brookville Area School District

Conneaut School District

Project: "Outdoor Classroom Restoration"

Partnering Organizations: Crawford County Conservation District, French Creek Conservancy, Audubon, Penn State Extension Office, Western PA Conservancy, DCNR, and Creek Connections

Lakeview School District

Project: "School Wide Recycling Initiative"

Partnering Organizations: Kristyak's Corners, Anchor's Away

Armstrong School District

Project: "Trash to Treasure"

Partnering Organizations: Crooked Creek Environmental Learning Center

Greenville High School (Team 1)

Project: "Riffle Bioindicators and Elemental Bed Sediment Analysis: A Comparison of

the Little and Middle Shenango Rivers ”

Partnering Organizations: Shenango River Watchers, UGWF, Clarion University

Greenville High School (Team 2)

Project: “Riffle Fishes Assemblages and Elemental Bed Sediment Analysis: A Temporal Comparison of the Middle Shenango River”

Partnering Organizations: Shenango River Watchers, UGWF, Clarion University

McKeesport Area High School

Project: “Red and Blue Goes GREEN!!! Project Plastic”

Partnering Organizations: PA Resource Council

Moon Area School District

Project: “Sustainability Initiative” (Recreating natural habitat learning environment)

Partnering Organizations: PTO, Boy Scouts of America

New Castle Area School District

Project: “Hope Gardens: Lockley Community Donation Garden”

Partnering Organizations: Salzano’s, 84 Lumber, Pathway to Freedom, Parker Maynard, NCASD, Home Depot, Lowes, Soils Inc., Smith’s Paving, Hilton’s Tree Service

Slippery Rock Area High School

Project: “Plastic Waste Purge: One Bottle at a Time”

Partnering Organizations: Slippery Rock High School Facilities Staff

Titusville Area School District

Project: “Titusville Trout Troopers: Promoting the Ecology of Oil Creek”

Partnering Organizations: PA Fish Commission

Union City Area School District

Project: “Rain Garden, French Creek Watershed”

Partnering Organizations: Pennsylvania Sea Grant Team, Boy Scouts of America, Environment Erie

*Please submit the project application form and any supplemental documents online at

<http://www.ahs.dep.pa.gov/GovernorsAwardsApplication> by

Monday, January 8, 2018, by 5:00 p.m.