

POSITION ANNOUNCEMENT:

GEORGE MELENDEZ WRIGHT INITIATIVE FOR YOUNG LEADERS IN CLIMATE CHANGE

The National Park Service (NPS) is pleased to announce the 2017 *George Melendez Wright Initiative for Young Leaders in Climate Change* (YLCC) to provide a pathway for exemplary students in higher education (graduate students, advanced undergraduate students, and recent graduates) to apply their skills and ideas to park-based challenges and solutions. The Initiative offers 12-week paid internships which allow students to gain valuable work experience, explore career options, and develop leadership skills through mentorship and guidance while helping to advance the NPS response to climate change. Successful students may be eligible for non-competitive hire into federal positions for which they qualify following completion of all academic requirements.

SHENANDOAH SALAMANDER: CLIMATE CHANGE CASUALTY OR SURVIVOR? TEACHER WORKSHOP

Shenandoah National Park
Luray, Virginia

Produce a new curriculum-based lesson on climate change for the “Exploring Earth Science in Shenandoah National Park” curriculum guide and plan and implement a two-day instructional workshop for 25 middle and high school earth science educators.

INTERNSHIP PROJECT BACKGROUND

Shenandoah National Park, in collaboration with the USGS, Smithsonian Conservation Biology Institute, and The University of Virginia, conducted a multiyear research project, 2011-2013, to assess the impacts of climate change on the federally endangered Shenandoah salamander. The entire species’ range exists wholly within the park in a few mountaintop communities. Research included both field and experimental components with the intended goal to help establish appropriate adaptive management actions to best mitigate potential climate induced effects on salamander populations. A curriculum-based field investigation for middle and high school science classes was developed in 2013 that modeled the research protocols to investigate the mountaintop environmental conditions using the closely related red backed salamander. The program has been field tested with several groups and has been successful at bringing climate change investigation to students at a very local and specific level.

The prototype “Shenandoah Salamander: Climate Change Casualty Or Survivor?” program can now be incorporated into the park’s “Exploring Earth Science in Shenandoah National Park” curriculum guide with the addition of the most current climate change science/research and with new supporting student activities and materials. It will be the first climate change related unit in the curriculum guide and help support educational goals of the park’s Climate Friendly Park status.

INTERNSHIP PROJECT DESCRIPTION

This internship project will create a new curriculum-based lesson on climate change for the “Exploring Earth Science in Shenandoah National Park” curriculum guide (<https://www.nps.gov/shen/learn/education/classrooms/exploring-earth-science.htm>) and provide a two-day instructional workshop for up to 25 middle and high school earth science educators. The “Exploring Earth Science” curriculum guide is currently composed of six units that combine printed lesson plans with STEM-based (Science, Technology, Engineering, and Math) field investigations that include pre-visit, on-site, and post-visit activities involving direct observation, documentation, data collection, data analysis, and application of findings.

This project will have two main components. First, the intern will update and reformat the prototype program “Shenandoah Salamander: Climate Change Casualty or Survivor?” (<https://www.nps.gov/shen/learn/education/classrooms/shenandoah-salamander-and-climate-change.htm>) developed in 2013, for inclusion in the “Exploring Earth Science” curriculum guide to become the first climate change-related unit. The intern will be responsible for the development of new student activities for the “Shenandoah Salamander: Climate Change Casualty or Survivor?” unit. Secondly, the intern will co-lead the planning and implementation of a two-day professional development teacher workshop for up to 25 middle and high school earth science educators. The workshop will introduce the new “Shenandoah Salamander: Climate Change Casualty or Survivor?” unit and other units that study climate change, hydrology, and the geologic history of Shenandoah National Park. The intern will be responsible for leading sessions at the 2-day teacher workshop.

Internship Tasks

The intern will be assigned three main tasks:

1. Review the existing “Shenandoah Salamander: Climate Change Casualty or Survivor?” lesson and revise lesson to incorporate most recent climate change research/findings, create new pre- and post-investigation student activities, and produce the new lesson plan.
2. Collaborate with Natural Resources specialists to gather, organize, and summarize the most up-to-date climate change research findings specific to Shenandoah National Park. Use the results to prepare and lead training sessions for park staff and educators and to create new climate change web pages and posts on social media.
3. Co-lead the planning and implementation of a 2-day instructional teacher workshop to train up to 25 earth science educators on using the new “Shenandoah Salamander: Climate Change Casualty or Survivor?” unit. The intern will be expected collaborate with a Teacher Ranger Teacher, park educators, and resource specialists to plan and lead workshop sessions and provide expertise in climate change research and information at the workshop.

Internship Products

1. New STEM-based pre- and post- investigation activities for students that support the on-site field investigation
2. New web pages for the park’s website that will provide the public with information on the most current climate change research specific to Shenandoah National Park
3. Training sessions on current climate change research targeting both park staff and earth science educators attending the instructional workshop.

QUALIFICATIONS

Required:

- Knowledge of current trends and findings of climate change science/research with ability to translate new scientific research findings into understandable language for public audiences
- Skill in public speaking and oral presentations
- Demonstrated ability to work collaboratively on a team as well as independently
- Skill in use of computers to conduct research, design and produce written products (prefer experience with using Adobe InDesign software), and effectively communicate with the public through social media.
- Valid driver's license with a good driving record

Desired:

- Skill in non-technical and/or educational curriculum writing
- Knowledge of STEM education
- Knowledge of the National Park Service

LEADERSHIP DEVELOPMENT

The intern will work under the direction of the park's education staff to learn environmental and STEM-based education methods and techniques. The intern will learn the existing "Shenandoah Salamander: Climate Change Casualty or Survivor?" lesson to produce new pre/post student activities to support the on-site field investigation. The intern will work with a Teacher-Ranger-Teacher to learn classroom requirements for STEM education and how field investigations are incorporated into classroom instruction. The intern will work closely with the park's resource specialist to organize and summarize current Shenandoah-specific climate change research. The intern will learn from interpretive staff how to produce and deliver effective climate change messaging. The intern will be evaluated on the ability to work collaboratively on a team, take the leadership role in providing up to date climate change information, and to produce quality outcomes within assigned timeframes.

DATES OF POSITION

Approximate start date is June 12, 2017. Start date is flexible but the park needs the internship to last through August 18, 2017.

COMPENSATION

This initiative supports one student at \$15/hour for 12 weeks, or 480 hours.

HOUSING

Housing is shared housing with the possibility of a roommate. Housing units are 5-20 miles from most amenities (groceries, etc.). Local rentals in nearby communities may be available.

WORK ENVIRONMENT

Shenandoah National Park is located in north central Virginia and preserves nearly 200,000 acres of the Blue Ridge Mountains. The park is mostly forested with mountainous terrain of up to 4,000 feet, abundant streams, and more than 500 miles of hiking trails. Weather is generally warm and humid in the

summer with cool nights on the mountaintops. The internship will be mostly office-based with opportunities to learn the park resources in order to produce the desired products for this project. The park will provide transportation from the duty station for work assignments. Intern will need personal transportation for needs outside of official duty.

CONTACT INFORMATION

National Park Service Supervisor:

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