

SCIENTISTS IN PARKS

PROJECT DESCRIPTION SUMMER 2021

NPS UNIT: MONOCACY NATIONAL BATTLEFIELD	PD #: 2021064
<p>Project Title: Hydrology Assistant Primary natural resource discipline: Biological Sciences Project keywords: Hydrology, Steam Monitoring, Rosgen Method, Field Work, Data Collection Location: Frederick, Maryland</p>	
<p>COVID-19 NOTICE</p>	
<p>As the COVID-19 pandemic continues to change and evolve, project timelines and structure remain flexible and it may be necessary to postpone start dates, begin work remotely, or reformulate the project’s description. Should any development in the COVID-19 outbreak impair a project’s timeline or results, the SIP Team will work with the park and project mentors to assess the situation and determine the best course of action at that time.</p>	
<p>PROJECT DESCRIPTION AND WORK PRODUCTS</p>	
<p>Position Description: Monocacy National Battlefield preserves 1,647 acres of forested areas, agricultural fields, meadows, and waterways that make up its six historic farmsteads. The park lies three miles south of the city of Frederick – the second largest city in Maryland – and has approximately two miles of the Monocacy River running through it. The park is home to fifty-two historic structures, several archeological sites, over five-hundred species of vascular plants, one-hundred species of birds, and almost eighty species of mammals, reptiles, amphibians, and fish.</p> <p>In 2010, a survey was conducted on a 700-foot reach of Harding’s Run, an intermittent stream in the park, to aid in monitoring stream morphology and to potentially document erosion and sedimentation impacts. For this project, TWO hydrology assistant interns will be hired for summer 2021. Each intern will be assigned a stream reach within the park to assess its physical habitat characteristics and stressors. Assessments will use the Rosgen Stream Classification system to document Harding’s Run and the Gambrill Mill Creek.</p> <p>The two stream reaches to be assessed are:</p> <ul style="list-style-type: none"> • 700 ft Harding’s Run - This reach was last assessed in 2014. New data needs to be collected to help monitor for change. • Harding’s Run at West Lewis - This reach will be newly created during summer 2020. This stream reach is being created to track changes to the stream further upstream from the existing reach. <p>Interns will be responsible for:</p> <ul style="list-style-type: none"> • Revisiting and organizing the data for the Harding’s Run stream reach. • Performing field investigations to become familiar with hydrological characteristics of the park. • Installing missing bank pins at Harding’s Run and new pins at Harding’s Run West Lewis. • Creating new stream sketches to note changes from previous assessments. • Conducting cross-section and longitudinal profile surveys of the stream reach. • Taking various measurements and collecting data for discharge, stream habitat, pebble counts, etc. 	

- Performing mathematical computations involving the use of algebra and geometry. Using a calculator, mathematical tables, and graphs in making calculations.
- Using spreadsheets to plot survey and substrate data.
- Determining Rosgen stream type and writing a final report about the current habitat conditions and stressors of the stream.
- Collecting ArcGIS data on stream features.
- Assisting with planning for modifying potential new trail bridges and stream crossings.
- Participating in check-in meetings with supervisor.
- Assisting park natural resource staff with natural resource related projects as needed.

The National Park Service (NPS) preserves unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generations. The Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.

The hydrology interns' management and collection of stream data will help the park to learn more about its resources and how to better manage and preserve them for this and future generations. With increased local development, and the resulting increase in stormwater runoff, these surveys will help document any potential changes to stream morphology and condition. Data created will also be used to create educational materials for the public, and management documents.

This position is offered through the National Park Service's Scientists in Parks (SIP) Program in partnership with Stewards Individual Placement Program (Stewards) and The Geological Society of America (GSA).

Work Products: At the completion of this internship, interns will have organized and created an abundant amount of stream data including stream sketches, Microsoft Excel spreadsheets, ArcGIS maps, AutoCAD drawings, pictures and more. Each intern will also write a final report about the current conditions and stressors of their assigned stream reach. These reports will be used to communicate stream conditions to park partners and local/state government. The data collected and its analysis will be referenced in project proposals for future stream restoration projects.

QUALIFICATIONS

The interns should have bachelor's degree in hydrology or other closely related field. Some experience working or recreating outdoors is required. Interns should be proficient in MS Office software, and have technical writing experience, and excellent written/oral communication skills. Interns must have the ability to work in a team environment. Experience with ArcGIS and AutoCAD, and completion of Rosgen training is preferred.

The applicant must be a U.S. citizen or U.S. permanent legal resident ("green-card-holder") between the ages of 18 and 30 years old, inclusive, or veterans up to age 35. Prior to starting this position, a government security background clearance will be required.

VEHICLE AND DRIVER LICENSE REQUIREMENTS

Applicant must have a valid drivers license and a good driving record.

A personal vehicle is RECOMMENDED but not required for this position.

If the SIP is required to drive a park vehicle for their position, Stewards will perform a driving records search, and the SIP's ability to drive a park vehicle during work hours will be contingent upon the results. SIPs will have to have had their license for 3 years or be over the age of 21 to be insured as drivers under Stewards insurance policy. Examples of things that will preclude a SIP from driving a park vehicle include: SIP under the age of 21 years old that has been licensed less than three years, DUIs, multiple moving vehicle violations, suspended or revoked license, or three or more accidents (regardless of fault) in the last 3 years. If the driver's search is favorable, Stewards will provide driver's liability insurance while the intern is driving a

NPS vehicle for their SIP position. If the SIP is denied coverage by Stewards, they will not be permitted to drive during work hours.

HOUSING

Park housing is NOT available. The intern will be responsible for finding housing in the nearby area. Furnished park housing may be available. Private room in three bedroom co-ed house with shared sitting area and kitchen. Kitchen is supplied with dishes/pans. Intern will need to bring all personal items including toiletries, laundry detergent, pillows, and linens. Housing has cable and wifi.

NATURAL AND PHYSICAL WORK ENVIRONMENT

Natural Environment: Monocacy National Battlefield is a 1,647 acre park located in Frederick, Maryland, approximately 40 miles North of Washington, DC. The park is composed of farmland, forest, and grasslands, and is adjacent to the city of Frederick. Summers in Maryland are hot and humid, winters are very cold.

Physical Work Environment: Work will be heavily field based. Office work be required for data organization and analysis, and writing the final report. Interns may be spending considerable time standing and must be comfortable traversing and working within a stream. Interns may be subject to full sun, high heat, biting and stinging insects, and the potential for dehydration. Hiking and carrying of tools and supplies (up to 50 pounds) will be required.

INTERNSHIP DATES

Start Date: 5/17/2021

Number of Weeks: 12 Weeks

Flexible Start Date: Yes

LIVING ALLOWANCE

12 Weeks (\$525/week = \$6300)

RELOCATION ALLOWANCE

\$350

AMERICORPS PROGRAM



AmeriCorps is a program that engages individuals in intensive community service work with the goal of "helping others and meeting critical needs in the community". The SIP Program is supported through AmeriCorps by providing a Segal Education Award in addition to the SIP's living stipend and relocation allowance.

Upon successful completion of the SIP position, the SIPs (AmeriCorps members) are eligible for a \$1,638 - \$6,195 pre-tax education award that can be used for paying back student loans or for continuing their education. The amount of the education award is based on the length of the position.

AmeriCorps limits the number of terms an individual can serve to 4 terms. If an applicant has previously completed 4 SIP or other AmeriCorps positions, they will not be eligible to apply for an additional SIP position.

SUPERVISORS/MENTORS

Primary:

Andrew Banasik
andrew_banasik@nps.gov
301-988-0681

Secondary:

Kaitlyn Parness
kaitlyn_parness@nps.gov
301-696-8650 ext. 236