

POSITION ANNOUNCEMENT:

GEORGE MELENDEZ WRIGHT INITIATIVE FOR YOUNG LEADERS IN CLIMATE CHANGE

The National Park Service (NPS) is pleased to announce the *George Melendez Wright Initiative for Young Leaders in Climate Change* (YLCC) to provide a pathway for exemplary students in higher education (graduate students and advanced undergraduate students) 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.

Analyzing Precipitation, Spring Flow Variation, and Fuel Loads due to Climate Change in Hot Springs National Park

Hot Springs National Park
Hot Springs, Arkansas

The hot springs of Hot Springs National Park are its primary natural and cultural resource, the protection and preservation of which prompted the federal government to set aside the surrounding land as Hot Springs Reservation in 1832, long before the National Park Service was created in 1916. Monitoring the impacts of climate change upon spring flows is critical to achieving the park's preservation mission. Park management will use both the precipitation/flow analysis and the fuel loads inventory produced by the intern to inform land and water management practices to best preserve our natural resources, and will implement a public communication plan to educate our neighbors on the effects of climate change in the park.

PROJECT DESCRIPTION

This project involves the development of a trends analysis to relate precipitation patterns to flow rates of the hot springs, which will serve as both a baseline data set and as part of a predictive model of the effects of climate change on the springs' future flow rates. Using available precipitation and flow data (NPS, USGS, NOAA, etc.), along with an extensive review of the literature available, the intern will produce a trends analysis, and will author an information brief for park staff and interested external parties to summarize their findings. The project's secondary focus is an analysis of fire risks associated with changing precipitation patterns. The intern will help develop an inventory of fuel loads within areas of novaculite outcroppings, which are the main recharge zone of the hot springs. Future research will include the continuation of the inventory and implement monitoring, and ultimately a predictive relationship between precipitation, climate change, fuel loads, and their effect on the recharge zone will be developed.

The intern will produce two written reports (precipitation/flow trends analysis and fuel loads inventory) and an information brief, which will include relevant statistics. The written reports should be in scientific paper format and may be submitted for publication. The information brief will be an interpretive publication for visitors to the park and is expected to translate the highly academic results to the comprehension level of the average park visitor.

QUALIFICATIONS

Applicants should have at least 90 hours of undergraduate degree work, or be in a graduate degree program, in the natural sciences or a closely related discipline. Ideal candidates will have a background or strong interest in statistics, hydrology or hydrogeology, GIS, fire management, and data analysis, and will have strong written and oral communication skills. General computer skills are required. The intern must also be willing to work outside under unfavorable climate conditions and in the presence of environmental hazards such as biting insects and poisonous plants. Applicants should be able to work well independently and as members of a team, both in the office and in the field, with little supervision. Previously demonstrated leadership capability and inter-disciplinary communication skills are desired. Prior to starting this position, a government security background clearance will be required.

LEADERSHIP DEVELOPMENT

The intern will work closely with the park's Natural Resource Program Manager, and will have the opportunity to network with professionals from many scientific organizations in the course of collecting and analyzing data, including many federal agencies. The intern will hone their leadership skills through interaction with other students and volunteers while serving as the field team lead during data collection, as well as in other pursuits. In addition, mentoring meetings will occur throughout the course of the internship to promote the career goals and leadership potential of the intern.

DATES OF POSITION

The approximate dates of the internship are May 24, 2015 – August 15, 2015, and the dates are somewhat flexible. The internship will total no less than 11 weeks and no more than 12 weeks.

COMPENSATION

This initiative supports one student at \$14 / hour for 12 weeks, or 480 hours.

HOUSING

Housing is available, if required. Depending upon the number of interns and volunteers present for the summer, housing may be shared, but each individual will have their own sleeping quarters. A personal vehicle is highly recommended, as the in-park housing is several miles from the park offices and grocery stores.

WORK ENVIRONMENT

Summers in central Arkansas are hot and humid, and biting insects and other wildlife, poison ivy, and sunburn are likely field work risks. Interns will be expected to complete many physically challenging tasks in the conditions described. The intern office space is within the Lamar Bathhouse. Hot Springs National Park is within the ZigZag area of the Ouchita Mountains. The terrain of the park is narrow valleys and steeply inclined mountains topped with novaculite outcrops. The park surrounds the north end of the City of Hot Springs, and there is considerable urban interface.

CONTACT INFORMATION

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