

POSITION ANNOUNCEMENT:

FUTURE PARK LEADERS of EMERGING CHANGE

The National Park Service (NPS) is pleased to support the *Future Park Leaders of Emerging Change* (FPL) internship program as a pathway for exemplary students in higher education (advanced undergraduate students and graduate students) to apply their skills and ideas to park-based challenges and solutions. The program 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 NPS efforts on emerging management issues. Successful students may be eligible for non-competitive hire into federal positions for which they qualify following completion of all academic requirements.

ASSESSING CULTURAL HERITAGE VULNERABILITY IN RESPONSE TO CATASTROPHIC WILDFIRE AT VALLES CALDERA NATIONAL PRESERVE

Valles Caldera National Preserve/ Science Division and Resource Stewardship/ Cultural Resources Program
Jemez Springs, New Mexico

PROJECT SUMMARY

High-severity wildfires can cause significant damage to archaeological sites and other cultural resources. The damage can result from direct fire effects, suppression activities, and indirect or delayed effects such as post-fire flooding and erosion. The internship at Valles Caldera will focus on the development of a geospatial model that assesses cultural resource vulnerability on the landscape-scale to inform management decisions during wildland fire.

INTERNSHIP PROJECT BACKGROUND

Valles Caldera National Preserve consists of 89,000 acres managed by the National Park Service in the Jemez Mountains of north-central New Mexico. The Preserve is participating in the DOI Resilient Landscapes Program with the goal of improving the resilience of ecosystems in the face of wildfires and other natural disturbance events in order to sustain healthy forests and watersheds for future generations. This collaborative effort is a response to the notable increase in unhealthy forests and catastrophic wildfire throughout the Jemez Mountains due in part to climate change. As part of the Resilient Landscapes Program, the Preserve intends to manage wildland fires to achieve desired restoration objectives in forests, montane grasslands, and woodlands. Lightning-caused wildland fires will be managed to protect cultural resources and enhance landscape restoration objectives.

INTERNSHIP PROJECT DESCRIPTION

New approaches are needed in cultural resource management which consider heritage sites within the larger context of the cultural landscape. The new framework advocated for in this project assesses the vulnerability of landscape character areas, as defined through historic landscape characterization. Developing a geodatabase with a fire-sensitivity scale of definable character areas will allow managers to use fire as a management tool that benefits both the natural and cultural landscape of the Valles Caldera.

Internship Tasks

- Meet with resource management staff from the Preserve to understand the range of desired restoration objectives.
- Attend forest and watershed restoration meetings with adjacent land managing agencies and partners (Bandelier National Monument, Los Alamos National Laboratory, Santa Fe National Forest, Wild Earth Guardians, and surrounding tribal partners) to learn about collaborative landscape-scale restoration projects in the Jemez Mountains.
- Review existing archaeological site and feature data logs to identify fire-sensitive cultural resources based on pre-determined criteria.
- Work with park staff, including the Fire Management Officer and GIS Specialist, to identify areas of the Preserve located within high risk areas for direct and indirect impacts from wildland fire.
- Develop a geodatabase from existing GIS data that synthesizes cultural resource fire-sensitivity with corresponding historic landscape character areas, with guidance from the Cultural Resource Program Manager and Interdisciplinary Scientist.

Internship Products

- Create fire-sensitivity risk maps with data from the geodatabase that management can easily use to inform their decision making in the event of catastrophic wildland fire.
- Present results of the geodatabase and fire-sensitivity risk maps to Preserve staff and the East Jemez Resource Council, Cultural Resources subcommittee.

QUALIFICATIONS

- Advanced skills in GIS spatial analysis modeling tools
- Experience developing a geospatial database
- Ability to carry out independent research
- Strong analytical skills

Background in environmental sciences, including: anthropology, archaeology, ecology, geography, history, or geographical information systems

LEADERSHIP DEVELOPMENT

The NPS Cultural Resource Manager and the park Interdisciplinary Scientist will work closely with the FPL intern. This project is directly related to large, landscape-scale restoration projects in collaboration with local and regional partners, and the intern will be able to step into a diverse network of policy, planning, park management, and scientific partners.

DATES OF POSITION

Approximate dates of internship: 05/25/2020 – 08/12/2020

Are dates Flexible (Yes):

If flexible, what is your time frame for project completion: 03/01/2020 – 10/31/2020

COMPENSATION

This initiative supports one student at \$16/hour for 12 weeks, or 480 hours.

HOUSING & TRAVEL

The FPL provides a travel stipend to all interns to supplement the cost of student travel to the park site.

Housing is available at no cost on the Preserve, which is located at 8,500' elevation in the remote Jemez Mountains of north-central New Mexico, approximately two hours from Albuquerque. The nearest local communities are approximately thirty miles distance and include Jemez Springs and Los Alamos. No public transportation is available at this time.

WORK ENVIRONMENT

Work will take place in an office environment at the Valles Caldera National Preserve administrative offices in the town of Jemez Springs, NM.

CONTACT INFORMATION

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