

SCIENTISTS IN PARKS

PROJECT DESCRIPTION SUMMER 2021

NPS UNIT: YELLOWSTONE NATIONAL PARK	PD #: 2021147, 2021148
Project Title: Geologist/Geophysicist (2) Primary natural resource discipline: Physical Sciences Project keywords: Yellowstone, Geothermal, GIS, Geohazards, Hydrothermal Location: Mammoth Hot Springs, Wyoming	
COVID-19 NOTICE	
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.	
PROJECT DESCRIPTION AND WORK PRODUCTS	
Position Description: Our Geology/Geophysics SIP's are an integral part of Yellowstone National Park's Geology Program team. Beyond the Geology Program team, our Guest Scientists interact with people from almost all of our Park divisions and many of the stakeholders that make this park special. Based on a Guest scientist's knowledge and experience, duties may include: 1) Maintain and retrieve data from hydrothermal monitoring stations. 2) Collect rock, water and gas samples. 3) Collect pH, temperature, conductivity and other measurements related to the inventorying of the Park's hydrothermal features. 4) Maintain and use field equipment. 5) Provide field assistance to our research collaborators. 6) Gather field data with Collector for ArcGIS and other ESRI products. 7) Use ArcGIS ESRI products to manage and visualize collected data. 8) Write scripts in Python and other languages/packages to manage and analyze data. 9) Create maps with ESRI ArcGIS software. 10) Create reports describing field and laboratory work findings and share these findings with Park management and other vested parties. 11) Create print and web-based science content to educate visitors and increase geologic literacy for the park. 12) Assist in law enforcement investigations of resource damage, 13) Assist in geologic questions related to park infrastructure. SIP's are given the opportunity to develop and manage projects relevant to Geology Program work based on their experiences. Guest scientists are also encouraged to learn a new skill while part of the Yellowstone Geology Program team.	

Our SIP's have been integral in creating and completing projects essential to our mission to monitor and inventory Yellowstone's volcanic features and protect other geologic resources that make the world's first national park extraordinary.

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:

Our SIP's, given their strengths, will:

- 1) Create and present geologic datasets.
- 2) Create content for visitor interpretive displays and presentations.
- 3) Create and display datasets on maps with GIS software.
- 4) Create reports describing field and laboratory work findings and share these findings with Park management and other vested parties.

QUALIFICATIONS

The applicant must possess an undergraduate degree in geology, geophysics or related geoscience degree by the start of the internship. A candidate either in possession of or in the process of obtaining an advanced degree in geology or geophysics is preferred. Experience with geologic field work is required. A solid proficiency with the Microsoft Office suite (Excel, Word, PowerPoint, etc.) is required. Experience with mobile mapping software such as ArcCollector and Survey 123 is preferred, and proficiency in ArcGIS 10.x or ArcGIS Pro is necessary. Experience with natural resource field data collection is required. Demonstrated skills in programming (Python is preferred) and database management is also necessary. An applicant must have the ability to work both independently and as part of a team and be able to hike five miles with a 30-pound pack over steep or uneven terrain. Applicants must have a valid driver license. 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 veteran up to age 35. Prior to starting this position, a government security background clearance will be required.

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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 available and will be provided at no cost to the participant. The intern may be assigned to a shared dorm room or a private room with shared or kitchen facilities, living areas and bathrooms and will need to bring to the park kitchenware and bedding.

NATURAL AND PHYSICAL WORK ENVIRONMENT	
Natural Environment: Visitors and employees alike enjoy the diverse geology displayed within Yellowstone National Park. Rocks from Precambrian through Cenozoic time can be seen. The Laramide and Sevier Orogenies, which formed the current Rocky Mountains, and the early Cenozoic, Absaroka Volcanics have profoundly impacted the Yellowstone landscape. But, it is the numerous volcanic eruptions of the Yellowstone Volcano and glaciers that constructed and finally sculpted the diverse landscape that we see today. The numerous hydrothermal features are evidence of heat from Yellowstone's active volcano. Protection of Yellowstone's geologic resources and natural processes is the main reason why we still see a large concentration of hydrothermal features within the world's first national park. Located immediately outside of Yellowstone's north entrance, the town of Gardiner, Montana is the closest community to Mammoth. In Gardiner, amenities include a market, gas station and several restaurants. The town of Livingston, Montana is approximately 50 miles north of Mammoth Hot Springs. Bozeman, Montana is a 90-minute drive from Mammoth and the home of Montana State University, major shopping centers, movie theaters and the Museum of the Rockies. Weather varies greatly from the low elevation of Mammoth (~6,200 feet) to moderate elevation around Yellowstone Lake (~8,000 ft). High elevation (11,000-12,000 ft), rugged mountains surround Yellowstone Lake. Within Yellowstone, passing storms can drop snow at any time of the year. At Mammoth, winter temperatures can vary from lows in the -20's to highs in the 40's. Dressing in layers is highly recommended for Yellowstone's extremes in temperature. Physical Work Environment: The participant will be stationed at Mammoth Hot Springs, Wyoming (park headquarters). The likely ratio of office work to field work is 50/50 office/field in the shoulder season and in winter, once or twice a week in the field. Field work can include hiking up to five miles per day carrying a 30-pound backpack. Overnight stays at government dorms/trailers in the Old Faithful area may be a possibility; backpacking may also be a possibility. Yellowstone is known for its wildlife, including large animals such as bears, bison, moose, wolves and elk. The selected participant will be encouraged to take seasonal safety training for working in Yellowstone's wildlife-rich habitat.	
INTERNSHIP DATES	
Start Date: 5/16/2021 Number of Weeks: 26 Weeks Flexible Start Date: Yes	
LIVING ALLOWANCE	
26 Weeks (\$400/week =\$10400)	
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	
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