



# GEOSCIENTISTS-IN-THE-PARKS Internship Program

## 2019 – PROJECT DESCRIPTION FALL/WINTER SEASON

<b>NPS UNIT: YELLOWSTONE NATIONAL PARK</b>	<b>PD #: 2019457</b>
<p><b>Position Title:</b> Geology Assistant (1)  <b>Position Type:</b> Guest Scientist  <b>Primary natural resource discipline:</b> Geologic resources  <b>Project keywords:</b> Geothermal, GIS, coding, volcanology, hydrothermal, fieldwork  <b>Location:</b> Mammoth, Wyoming</p>	
<b>PROJECT DESCRIPTION AND WORK PRODUCTS</b>	
<p><b>Position Description:</b> The GIP Intern will perform essential work in preserving the natural physical system for future generations to enjoy. The GIP Intern will perform vital monitoring and inventory work on Yellowstone's hydrothermal system - work that is mandated by congress. The GIP will also assist in the management of databases that house data collected by the intern.</p> <p>The GIP intern's duties may include conducting general geologic field work, collecting geologic and water samples, maintaining/downloading temperature data loggers, sampling volcanic gasses, measuring thermal water pH and conductivity, constructing geologic/image databases, using petrographic microscopes and creating geologic and other maps.</p> <p>Other duties include:</p> <ul style="list-style-type: none"> <li>• Assist the park geologist and Geology Program staff to identify and mitigate geologic hazards.</li> <li>• Assist with review and auditing of permitted science research and projects. Yellowstone hosts approximately 175 permitted researchers per year.</li> <li>• Operate and maintain Geologic inventory and monitoring equipment.</li> <li>• Construct GIS, geologic and image databases.</li> <li>• Create print and web-based science content derived from assignments and interactions with researchers to educate visitors and increase environmental literacy for the park.</li> <li>• Field work that includes interacting with a diverse staff of geoscience researchers, educators, law enforcement rangers, landscape architects and other interns and seasonal staff.</li> </ul> <p>Our GIP's have been integral in creating and completing projects essential to our mission to monitor and inventory Yellowstones volcanic features and protect other geologic resources that make the world's first national park extraordinary.</p> <p>This position is offered through the National Park Service's Geoscientists-in-the-Parks (GIP) Internship Program in partnership with Stewards Individual Placement Program (Stewards) and The Geological Society of America (GSA).</p>	
<b>Work Products:</b>	

- Create and present geologic datasets
- Create content for visitor interpretive displays and presentations
- Create and display datasets on maps with GIS software
- 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 35 years old. Prior to starting this position a government security background clearance will be required.

**VEHICLE/DRIVER LICENSE REQUIREMENTS**

**Applicant must have a valid driver license and a good driving record.** The intern will drive a park vehicle to and from fieldwork and labs. The intern will also operate a snowmobile for fieldwork after passing the requisite training.

**A personal vehicle is not required for this position.** The intern would greatly benefit from having a vehicle that is safe in snowy conditions as their mode of transportation. Most amenities can be found in Gardiner, MT, approximately 5 miles from Mammoth.

If the GIP is required to drive a park vehicle for their position, Stewards will perform a driving records search, and the GIP’s ability to drive a park vehicle during work hours will be contingent upon the results. GIPs 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 GIP from driving a park vehicle include: GIP 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 GIP position. If the GIP 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.** GIP's may be assigned to a shared dorm room or a private room with shared or kitchen facilities, living areas and bathrooms. GIP's will need to bring to the park kitchen ware and bedding.

**INTERNSHIP START/END DATES**

**Start Date:** 10/13/2019  
**Number of weeks:** 20 weeks  
**Flexibility of dates:** Yes

**LIVING ALLOWANCE**

20 weeks (\$400/week = \$8,000)

**RELOCATION ALLOWANCE**

\$250 (mainland only)

**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 GIP Program is supported through AmeriCorps by providing a Segal Education Award in addition to the GIP’s living stipend and relocation allowance.

Upon successful completion of the GIP position, the GIPs (AmeriCorps members) are eligible for a \$1,612 - \$6,095 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 GIP or other AmeriCorps positions, they will not be eligible to apply for an additional GIP position.

**NATURAL & 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 Orogeny, which formed the current Rocky Mountains, left its impact upon 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, summer, temperatures can vary from lows in the 30’s to highs in the 90’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. 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.

## MENTORING AND LEARNING GOALS

**Mentoring:** The intern will be supervised directly by an NPS geologist. The intern will have many opportunities to interact and learn from permitted researchers involved in a range of physical and biological investigations related to geology and park management issues. The intern will also attend and participate in staff meetings, park-level trainings and seminars, and have many opportunities to network with land management and education professionals working throughout the Greater Yellowstone Ecosystem.

The park will provide:

- Daily interaction with the intern to assess progress, answer questions, etc.
- Shadowing opportunities with other NPS staff and/or partners tailored to the intern's interests.
- Opportunities to attend a Yellowstone Association field seminar.

**Learning Goals:** The intern will receive training and development in a variety of skills including geology field research and management, GIS field and database management techniques, NPS data management and water flow tracking systems. The intern will also work on a weekly basis with botanists, zoologists, archeologists, educators, ranger professionals to gain a broad understanding of NPS careers.

The intern will:

- Participate in planning and staff meetings to understand the day-to-day management activities of Yellowstone NP.
- Gain a working knowledge on NPS databases.
- Become familiar with NPS research and monitoring process.
- Use GIS equipment to support resource management activities.
- Have access to free on-line ArcView GIS classes.

## SUPERVISORS

### Primary Supervisor:

Jefferson Hungerford  
Park Geologist  
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### Secondary Supervisor:

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