



# GEOSCIENTISTS-IN-THE-PARKS Internship Program

## PROJECT DESCRIPTION 2020 SPRING/SUMMER

<b>NPS UNIT: DENALI NATIONAL PARK AND PRESERVE</b>	<b>PD #: 2020042</b>
<p><b>Position Title:</b> Natural Resource Management Assistant (1)  <b>Position Type:</b> Guest Scientist  <b>Primary natural resource discipline:</b> Multidisciplinary  <b>Project keywords:</b> Wilderness, backcountry, GIS, monitoring  <b>Location:</b> Denali Park, Alaska</p>	
<b>PROJECT DESCRIPTION AND WORK PRODUCTS</b>	
<p><b>Position Description:</b> Denali National Park and Preserve approved a Backcountry Management Plan (BMP) in 2006 which listed specific standards for resource and social conditions throughout the National Park and Preserve. The applicant will work closely with many NPS work groups and park partners to collect and compile data to determine if Denali is meeting standards set in the BMP and make suggestions for improvements in the future.</p> <p>This work could include mapping OHV trails that access the park boundaries, developing and testing the Arc Collector app for frontcountry and backcountry data collection, re-mapping informal trails, and compiling data for a baseline assessment following Denali's Wilderness Character Monitoring Plan.</p> <p>During fieldwork, the applicant will be paired with NPS staff. Denali's Backcountry Operations Guideline dictates at least two people for overnight, off-trail operations, but one person can day hike on formalized trails, so the applicant may work solo once trained. Fieldwork can entail up to 14 days of camping in a remote location.</p> <p>The applicant could be asked to assist with other tasks associated with the Wilderness and Backcountry programs in Denali including: sound monitoring equipment installation and maintenance, trail counter installation and maintenance, backcountry impact observations, staffing the Backcountry Information Center, participating in backcountry patrols, attending meetings of a park-wide Wilderness Work Group, and wilderness outreach to youth, NPS staff, and park partners.</p> <p>These projects contribute to natural resource protection through data collection and management. Work supporting the Wilderness Character Monitoring Plan contributes to the NPS legal mandate to preserve wilderness character. Supporting the backcountry operation contributes to the Backcountry Management Plan through data collection to inform adaptive management.</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> <p><b>Work Products:</b> This will depend on the projects selected. The applicant can expect to document work flows particularly in relation to GIS components, data collection protocols, or data management processes.</p>	

Spatial data collected or analyzed should be presented in professional maps, and other information should be compiled in a report formatted for publication in IRMA.

A brief GSA Final Report, photos, and thank you letter may be required as part of this project, in addition to final materials submitted to the National Park Service and Stewards Individual Placement Program. GSA will confirm this and share instructions regarding the additional reporting requirements upon selection into this project.

### QUALIFICATIONS

Applicant must have completed at least 3 years of undergraduate work towards a degree in natural resources management, cartography/GIS, environmental studies, geosciences (including soil science), biology or social science.

Applicant must have experience and interest in hiking and backpacking in remote areas. Backcountry skills include camping in inclement weather for multiple days, navigation using maps and GPS, and knowledge of proper LNT practices. Off-trail travel experience, knowledge of how to camp and travel in grizzly bear habitat, and experience in Alaska is desirable but not required. Experience with ATVs and OHVs is desirable, but not required.

Advanced GIS and data management skills are required either through coursework or applied experience. The applicant will be expected to work with GIS applications including ArcMap, ArcPro, AGOL, ArcCatalog, and the Arc Collector app. The applicant must be familiar with how to create raster background images for handheld devices, create relationship classes, create and maintain geodatabases, design and update feature classes for Arc Collector, and edit vector data and attribute tables. An advanced understanding of datums and coordinate systems is expected. Metadata creation and detailed field notes are required components of the GIS data creation. Experience with mapping grade Trimble GPS units and associated workflow is preferred, but not required.

Applicant should be familiar with public land management and have a strong interest in designated wilderness and backcountry management.

Applicant should be self-motivated, reliable, and accommodating of changing work schedules and priorities.

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.** A driver license is required for accessing some projects with a government vehicle.

**A personal vehicle is RECOMMENDED but not required for this position.** A personal vehicle is recommended but not required as many staff live in the same housing area and have vehicles. There is a bus system available within the park for recreational access, but basic needs such as groceries or medical services require transportation.

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.** Park housing is provided at no cost to the participant and there are two options available. Which option the applicant ends up in will be based on availability. Pets and long-term guests/partners are not allowed in either housing option.

Option 1: The NPS seasonal housing area called C-Camp contains 20' x 20' cabins a short walk from the office area. Cabins have two occupants. Each person has a small private room and there is a shared kitchen and living space. Cold water is available in the cabin roughly June-August. Showers, bathrooms, and laundry are shared and located in a separate building. C-Camp residents are responsible for purchasing all of their own food and providing bedding and cleaning supplies.

Option 2: Campus Housing is located about two miles from park headquarters, and most residents work for the park concessionaire with a few NPS staff and interns housed here each year. There is no kitchen and meals can be purchased at an employee dining hall. From May to mid-September, the dining hall provides breakfast, lunch, and dinner, as well as bagged meals when you are away for the day. Housing consists of small condominium-type units in which residents have a private room with two bunk beds. Showers, bathrooms, and laundry are shared and located in a separate building. Bedding is provided. Commuting options to the office include bikes (available for loan), walking along a roadside trail, and a free shuttle system from May – mid-September.

Some fieldwork will involve remote camping in small tents and backpacking for multiple nights. Most backcountry camping gear for work (backpack, tent, sleeping bag, stove, cooking pots, etc.) can be supplied by the park but cannot be used on days off. It is recommended to bring a personal backpack and sleeping bag.

### INTERNSHIP DATES

**Start Date:** 5/11/2020

**Number of weeks:** 20 weeks

**Flexibility of dates:** Yes

### LIVING ALLOWANCE

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

### RELOCATION ALLOWANCE

\$1000

### 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 \$1,638 - \$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 GIP or other AmeriCorps positions, they will not be eligible to apply for an additional GIP position.

## NATURAL & PHYSICAL WORK ENVIRONMENT

**Natural Environment:** Denali National Park and Preserve is a six-million-acre park with the Alaska Range as a backbone. The park is replete with extensive glaciers and braided rivers, miles of tundra plateaus, and countless glacial lakes and ponds, all capped by the highest peak in North America, Denali. Park Headquarters is located on the main highway system in a rural area about 250 miles north of Anchorage and 125 miles south of Fairbanks. The Denali Park Road starts at the Parks Highway and proceeds east into the park approximately 90 miles. Public traffic and a free shuttle access the first 15 miles of paved road, but traffic is restricted after that. There is a bus transit system to access the rest of the park road.

There are few formalized trails, so most hiking and backpacking is off-trail. Spring, summer, and fall weather can range from snow and freezing temperatures even at low elevations to sunny with temperatures in the 80s F, with much rain and 40-50 F degree temperatures in between. Moose frequent the frontcountry developed areas, and hikers and backpackers need to be knowledgeable about traveling in grizzly bear habitat.

Food and community services are available in the canyon outside the park entrance and in Healy (10 miles north of park). Larger city services are located in Fairbanks, a 2-3 hour drive away. There are limited shopping opportunities after arrival, so it is important to come prepared.

**Physical Work Environment:** The position will spend about half of the time in an office environment with a shared computer space adjacent to other NPS staff near park headquarters. Applicants are expected to be respectful of others working around them by minimizing distracting noises and conversations. The applicant will work alone as well as closely with other NPS staff.

The other half of the time will be hiking in the field for day or overnight trips in Denali's off-trail backcountry as well as formalized frontcountry trails. Fieldwork is performed outside in a subarctic environment where the weather is highly variable; summer temperatures can vary from the high 80s F to below freezing, and it can snow at any time of year. Off-trail hiking can be challenging, as it can be difficult to navigate across soggy uneven tundra, through thick brush, or through multiple river crossings. Adequate footwear is required.

Backcountry hiking and camping will occur in all weather conditions and includes moderate to strenuous physical exertion. Exposure to large wildlife (grizzly bears and moose) is common, and NPS specific guidelines when hiking or camping in bear country must be followed. A bear/wildlife safety orientation will be provided at the park upon arrival. Interior Alaska's infamous biting insects can be plentiful from June-August in areas of the park.

## MENTORING AND LEARNING GOALS

**Mentoring:** The applicant will work closely with and be supervised by the lead General Ranger, but will collaborate with other backcountry, resources, and ranger staff. Orientation to the park and job will be conducted one on one with additional training in a group setting provided by GIS specialists in the park or region, wildlife specialists, and the backcountry staff. Training could include: introduction to the NPS by interacting with multiple divisions and all-employee orientations, understanding of the Wilderness Act and Wilderness Character, safe camping and hiking practices in bear country, Leave No Trace, Trimble GPS training, NPS GIS standards, ATV training, and advice on how to obtain federal jobs in the future. There will be opportunities to learn more about different careers in the NPS by job shadowing or sit down meetings with NPS staff members outside of the immediate work group.

**Learning Goals:** This internship will be largely based on available projects and applicant interests. New skills could include Trimble GPS use, increased knowledge of the Arc Collector app and application of this tool to natural resource monitoring, wilderness stewardship, Search and Rescue training, backcountry travel skills, ATV/OHV use, and data manipulation and analysis.

<b>SUPERVISORS/MENTORS</b>	
<b>Primary Supervisor/Mentor:</b> Sarah Hayes General Ranger PO Box 9 Denali Park, AK, 99755 (907) 683-9597   sarah_hayes@nps.gov <a href="https://www.nps.gov/dena">https://www.nps.gov/dena</a>	<b>Secondary Supervisor/Mentor:</b> Paul Larson North District Ranger, Acting Chief Ranger PO Box 9 Denali Park, AK, 99755 (907) 683-9587   paul_larson@nps.gov <a href="https://www.nps.gov/dena">https://www.nps.gov/dena</a>