POSITION NOW CLOSED – FOR REFERENCE ONLY

Position Title: GIS Fire and Fuels Steward **–** AmeriCorps

Conservation Legacy Program: Stewards Individual Placements

Site Location: Sequoia & Kings Canyon National Parks, 47050 Generals Highway, Three Rivers, CA 93271

Application Due: Friday, July 3rd

Terms of Service:

- **Start Date:** 10/05/2026
- **End Date:** 03/19/2027
- **AmeriCorps Slot Classification: 675-Hour Slot**

Purpose:

Stewards Individual Placements (Stewards), a program of Conservation Legacy, provides individuals with AmeriCorps service and career internship opportunities to strengthen communities and preserve our natural resources. Participants serve with federal agencies, tribal governments, and nonprofits to provide institutional capacity, develop community relationships, and support ecosystem health. Stewards in partnership with the NPS GIS office is hosting a cohort of GIS stewards.

Sequoia & Kings Canyon National Parks contain iconic, rare, and vulnerable natural resources particularly giant sequoias (Sequoiadendron giganteum) and wildlife species of varied status with the Endangered Species Act, including California spotted owl (Strix occidentalis), fisher (Pekania pennanti), Pacific marten (Martes caurina), and great gray owl (Strix nebulosa). All species are adapted to the deep and varied fire history at these parks; however, they face new threats including fires of greater size and intensity. Understanding forest structure, fuel composition, and wildlife habitat is important for guiding how fire and natural resource managers implement prescribed fires and mechanical thinning treatments in ways to protect giant sequoias and minimize risks to wildlife and wildlife habitat.

Current methods for quantifying forest structure are reliant on field crews and capture only a small area of land by direct measurements. Remote sensing methods, including the use of unmanned aerial systems (UAS) and terrestrial LiDAR scanners (TLS), when paired with on-the-ground field validations can provide a method of landscape-level monitoring of forest structure.

The goals of the SEKI Fire & Fuels GIS Steward are:

1) Generate workflows for data analysis of UAS-derived imagery and/or TLS data to quantify forest structure, including measurements of tree DBH, height, height to live crown, and surface fuels quantity.
2) Validate UAS-derived forest measurements by comparing them to field collected measurements from the long-term monitoring database of the SEKI Fire Ecology program.
3) Conduct spatial analyses connecting burn severity and forest structure.

Description of Duties:

The GIS Steward will serve closely with park GIS and USWFS fire ecology staff to support the validation of UAS-derived forest measurements and analyses of forest structure. Responsibilities will include:

- Remote Sensing
    1) Download, organize, and manage high-resolution imagery and derived datasets.
    2) Process UAS-acquired imagery and terrestrial LiDAR scans.
    3) Use field-collected data and remote sensing products to validate model.
- Data Management & Analysis
    1) Generate workflows for analysis of remote-sensed (UAS & TLS) data for forest metrics.
    2) Conduct spatial accuracy assessments using field-collected data and summarize remote-sensed model performance metrics.
    3) Conduct spatial analyses connecting burn severity, forest structure, and habitat that supports wildlife of management concern.
    4) Generate summary maps and spatial products to communicate findings to park leadership and partners.
- Documentation and Communication
    1) Develop metadata and documentation describing validation procedures.
    2) Create workflow documentation to ensure reproducibility and long-term implementation.
    3) Facilitate data sharing with project partners.
    4) Present interim findings to GIS, resource, and fire staff.
    5) Prepare a final written and mapped summary of methods and results.

Requirements:

- United States citizen, United States national, or a lawful permanent resident alien
- Applicants must be between ages of 18-30 years old, or up to 35 for veteran, based on Public Land Corps Act of 1993 authorizing this AmeriCorps opportunity.
- Has received a high school diploma or equivalency certificate; or has not dropped out of elementary or secondary school to enroll as an AmeriCorps participant, and agrees to obtain a high school diploma or its equivalent prior to using the education award

- Agrees to provide information to establish eligibility and to complete a National Service Criminal History Check.

Preferred Qualifications

- Coursework in GIS, geography, environmental science, forestry, ecology, wildlife
- biology, computer science, or related field
- Experience with ArcGIS Pro and other ESRI products
- Understanding of:
    1) Vector and raster datasets
    2) Coordinate systems and spatial accuracy
    3) Basic spatial statistics
- Experience with remote sensing data (imagery interpretation, raster analysis, photogrammetry)
    1) Familiarity with uncrewed aerial systems (UAS)
    2) Familiarity with field data collection tools (e.g., Field Maps, Survey123, GPS units)
- Basic Python, R, or other scripting experience
- Strong analytical thinking and attention to detail
- Ability to serve in office setting

Applicants who have obtained or are pursuing a GIS degree or certificate and/or with GIS experience are preferred. Prior to starting this position, a federal government security background clearance will be required.

Our Commitment:

Conservation Legacy is committed to the full consideration of all qualified individuals and will ensure that persons with disabilities are provided reasonable accommodations to perform essential job functions. Physical requirements may include periodic overnight travel, non-traditional work hours, ability to move across varied terrain, use program-specific tools and a range of technology on an infrequent or frequent basis. Exerting up to 25 pounds of force occasionally to lift, carry, push, pull, or otherwise move objects. The ability to safely drive an organizational vehicle may also be required for some positions. If you need assistance and/or reasonable accommodation due to a disability during the application or recruiting process, please send a request to the hiring manager.

Time Requirements:

- Typically, this position is expected to serve 40 hours per week, but exact service schedules may vary. A half hour lunch break will not be counted towards AmeriCorps service
- Member may be required to participate in national, state, or local service projects or events as part of their service term.

Orientation and Training:

- Member will receive an orientation that includes training on AmeriCorps prohibited and unallowable activities.

Benefits:

- Segal AmeriCorps Education Award of $2,817.14
- Living Allowance of $600 per week.
- Additional Benefit of $200 per week.

Evaluation and Reporting:

As an AmeriCorps member, performance will be evaluated on whether the member has completed the required number of hours, the member has satisfactorily completed assignments, and if the member has met other performance criteria that were clearly communicated at the beginning of the term of service.

Reporting requirements include, but are not limited to, bi-weekly timesheets and accomplishment tracking.

Supervisor Name and Contact Information:

Program Contact information: James Gasaway, jgasaway@conservationlegacy.org

Service Site Contact Information: Isabella Muscettola, isabella_muscettola@nps.gov

Conservation Legacy is an equal opportunity employer, and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, pregnancy, age, national origin, disability status, genetic information, protected veteran status, or any other characteristic protected by law.

We also consider qualified applicants regardless of criminal histories, consistent with legal requirements. If you need assistance and/or reasonable accommodations due to a disability during the application or recruiting process, please send a request to the hiring manager.