



SCIENTISTS IN PARKS

PROJECT DESCRIPTION SUMMER 2021

NPS UNIT: REDWOOD NATIONAL PARK	PD #: 2021118, 2021119
<p>Project Title: Coast redwood ecosystem restoration data gathering and project planning. (2) Primary natural resource discipline: Biological Sciences Project keywords: Restoration, Forestry, Fisheries, Riparian, Stream, Hydrology, Monitoring, Road Removal Location: Orick, California</p>	
COVID-19 NOTICE	
<p>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.</p>	
PROJECT DESCRIPTION AND WORK PRODUCTS	
<p>Position Description: Redwood National Park was created in 1968 to preserve intact, old-growth redwood ecosystems. Under the Redwood National Park Expansion Act of 1978, 48,000 acres were added to protect the Park from upslope and upstream logging activities. The expansion included 38,000 acres of commercially logged and roaded lands and authorized a program of rehabilitation to restore these new parklands. Two programs emerged from the restoration effort: The Watershed Road Removal Program, which sought to control erosion and reduce sediment delivery to streams, and the Forest Restoration Program, which sought to manage second-growth forests by adjusting species compositions and decreasing stand density. The legislation also mandated the park to conduct erosion and sedimentation studies in Redwood Creek and resulted in a long-term monitoring program evaluating stream channel and water quality response to land use and flood events. The Greater Prairie Creek Ecosystem Restoration Project is a watershed scale, mulit-disciplinary ecosystem restoration project managed by Redwood National Park. It is part of a new collaborative effort under a partnership between the National Park Service, California State Parks and Save-the-Redwoods League collectively called Redwoods Rising (https://www.nps.gov/redw/redwoodsrisingmain.htm.) Interns will have an opportunity to work on a variety of projects assisting restoration geologists, restoration foresters, hydrologists, fish and wildlife biologists in a unique setting. The restoration project areas are between 50 to 200 acres and logging and road construction occurred prior to NPS ownership. Most of the field and office work will be geared toward inventorying the physical landscape, monitoring, and preparation for implementing restoration operations planned in 2022. Interns will learn how to describe physical elements of the current disturbed landscape, and compare to undisturbed reference watersheds. Several listed species inhabit the project area, including anadromous salmonid fish, birds, and terrestrial mammals. The interns’ goal will be to describe the current conditions of a sub-watershed, the legacy effects from past logging and road building, and how the alteration of the physical environment impacts the sustainability and recovery of threatened and endangered species. Interns will be trained in forest sampling including stand inventory and monitoring using a variety of forest inventory techniques, fuels sampling, riparian area deliniation, and marking timber for thinning. They will also learn hydrologic monitoring techniques and will be trained to measure stream discharge, calibrate data sondes, collect water quality and stream temperature data, and maintain stream gaging stations. Other projects include preparing sites for restoration operations and may include working</p>	

with the: park forester in delineating riparian management zones and other special treatment areas; park hydrologist with a stream large wood inventory to describe aquatic habitat conditions in Prairie Creek; and the park restoration geologist in collect basic road mapping and inventory data to support future road removal work. This is the second year where on-the-ground restoration activities will occur while SIP interns are working in the park and provides a unique opportunity for SIP interns to observe and learn first-hand, how restoration work is accomplished on the ground.

The concept of ecosystem rehabilitation in a National Park setting was first introduced in the 1978 Redwood National Park Expansion Act. Congress recognized that encroaching activities (outside threats), mostly logging next to the established national park, was degrading the park's natural resources. The 1978 law also called for the establishment of a "program of rehabilitation" to address issues that degrade the park's natural resources from past land use activities. This project is the first time Redwood National Park (or any publicly managed land-base in the redwood region) has embarked on a multi-disciplinary ecosystem restoration project on this large of a scale. Due to the project scope with many moving parts, it is imperative that we collaborate with partners, as stated in the NPS mission, to help successfully carry out the project. An essential component of project planing is scientific data to guide natural resource management decisions. The SIP interns will provide much needed data to support project planning, to support next years operations (ex. prepare sites for implementation such as marking trees and boundaries for forestry operations) and assist in compliance monitoring.

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: The intern(s) will produce a report that includes maps, locations and summaries of the resource inventories covering a variety of disciplines for the Prairie Creek project area. This document will inform park managers in the adaptive management strategy to restore natural function to the highly disturbed area. The end product of the work will be used to provide managers with decision making tools for the on-going restoration plan.

QUALIFICATIONS

Applicants should have a strong interest in learning about natural resource science and management and have a strong desire to work in the field. Good communication skills are important and must be able to work productively as part of a diverse team. Must be reliable, on time, and commit to their agreed upon work schedule. Need to be physically fit, able to work 10-hour days outdoors, and capable of hiking long distances (about 5-6 miles) off trail in arduous terrain in a variety of weather conditions. Must be able to comfortably work in the field alone and also in a fieldteam. Must be able to swim - important since the position requires wading in streams. Ability to pay attention to details when collecting data, follow standard methodology or protocols, accurately record physical and biological data and to learn to identify tree species. Applicants must be at least an upper level undergraduate in a university or college. Applicants who have graduated from college will qualify. The project will require an intern with general knowledge of geosciences and physical processes, environmental science, ecological restoration, and forestry. Previous field experience is highly recommended due to the arduous nature of traversing the landscape. The applicants should be familiar with Excel, Word, ArcMap, Access and GPS use. The participants must be self-motivated and able to function independently once field assignments are understood.

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 veterans up to age 35. Prior to starting this position, a government security background clearance will be required.

VEHICLE AND DRIVER LICENSE REQUIREMENTS

Applicant must have a valid drivers license and a good driving record.

A personal vehicle is 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. Park housing is provided in a housing facility, near Orick, CA. The facilities comprise of large furnished house with shared bedrooms accommodating up to seven people. During periods of high use, there will be double occupancy of most rooms. A laundry is also available. The kitchens are stocked with dishes, utensils pans, utensils, coffee makers and microwaves. There is no cell service or internet connectivity at park housing. Occupants need to bring their own sheets, blankets, and towels. Groceries and other amenities are available in Eureka, Arcata, McKinleyville, Trinidad and Crescent City, with natural food stores in McKinleyville, Arcata, and Eureka, a mini-grocery store in Orick and a gas station mini-mart in Klamath. The intern will need to have a car to get to the office and to buy groceries and other amenities.

NATURAL AND PHYSICAL WORK ENVIRONMENT

Natural Environment: Redwood National Park is located on the northern most coastline of California. The project area consists of 7,000 acres of Prairie Creek, a coastal stream that feeds into Redwood Creek. The Pacific North West climate is best described as a Mediterranean climate consisting of cool, wet winters and warm, dry summers. The hill slopes are moderate to steep and often include down wood or remnant logging slash which makes traversing the terrain an arduous activity. Vegetation is comprised of second-growth forest that's dominated by Douglas-fir, with lesser amounts of coast redwood and Sitka spruce. **Physical Work Environment:** The position will be stationed at the South Operations Center in Orick, California. Work will involve arduous hiking long distances, off trail through rough, steep terrain in adverse weather conditions (cold, rain, heat), wading in streams, exposure to poison oak, contact with ticks and other hazards of outdoor work. The intern will work within the Resource Management and Sciences Division of the park. The division is made up of professionals from the disciplines of Vegetation Management, Geology, Cultural Resources, GIS, and Fire Management. The intern will have access to all park resources including staff expertise, vehicles, equipment, and other existing documents that will assist with completing tasks. Assistance will also be provided by other divisions as necessary (e.g. Interpretation).

INTERNSHIP DATES

Start Date: 9/13/2021

Number of Weeks: 12 Weeks

Flexible Start Date: Yes

LIVING ALLOWANCE

12 Weeks (\$400/week = \$4800)

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

Primary:

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Secondary:

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