



POSITION DESCRIPTION

Summer 2022

NPS UNIT: Cabrillo National Monument

Position #: 183

Position Title: Natural Resource Management Assistant

Position Type: Mosaics DHA

Primary natural resource discipline: Biological Sciences

Position Keywords: fog, ecology, monitoring, climate change, water, vegetation

Location: San Diego, California

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.

POSITION DESCRIPTION AND WORK PRODUCTS

Project Description: We propose to set up a fog monitoring system, comprised of cameras, weather stations, and leaf wetness sensors, to understand timing and abundance of fog at the park and determine park locations with the best chance for successful native plant revegetation. An array of 10 cameras will take images of the park every 15 min. The cameras will be placed to cover natural features in the park (i.e., ridges vs. valleys, high vs. low elevation) that may receive variable amounts of fog. Three leaf wetness sensors will be deployed at each weather station site to measure the moisture vegetation is exposed to as the fog rolls through. The intern will be responsible for selecting sites with the assistance of the Chief of Resources and deploying and troubleshooting equipment set up. They will test the effectiveness of the system and develop an SOP on how to retrieve data from the monitoring system. The intern will also organize data from both the wildlife cameras and weather stations/leaf wetness sensors. If time permits, the intern will work on data analysis of the fog monitoring data. We will maintain a database tracking presence/absence of fog through the dry season (April-October) at various sites. Staff will identify areas of the park that can serve as microrefugia by looking at which areas receive significantly more fog and will target those areas for revegetation with rare or unique native plants.

Work Products: Fog monitoring SOP: A 5-10 page document explaining the fog monitoring set up at the park, including how to retrieve and quality control data. Fog monitoring system: deployed and functional by the end of the program. Science communication product: Intern will also complete a short science communication piece, format to be determined but could be an ArcGIS Story Map, 1-2 page blog post, or 2-3 min video. For the science communication deliverable, they will be supported by the Southern California Research Learning Center.

The SIP Fellow will present the fog monitoring system to the park management team at CABR. Partners and stakeholders interested in the data produced from the fog monitoring system may also attend, including USGS and University of California, San Diego / Scripps Institution of Oceanography researchers.

NATURAL & PHYSICAL WORK ENVIRONMENT

Cabrillo National Monument sits at the end of the Point Loma Peninsula. Our proximity to the Pacific Ocean and San Diego bay has a major influence on weather in the area. Coastal marine layers can develop at any time, bringing moisture, cooler temperatures, and wind to the park, while the inland regions remain warm and sunny. The office building sits on a cliff overlooking the bay and has a favorable temperature year-round, except for a few weeks in summer. During this time, portable air conditioning units are provided in each office to reduce the temperature. Point Loma is the nearest community to the park. There is a small shopping center six miles down the road with a grocery store, sandwich shop, coffee shop, frozen yogurt, and pharmacy. A thriving Chicano community called Barrio Logan can be found about 14 miles away in south central San Diego. Latinx communities can be found woven into every neighborhood in San Diego; with colorful murals, events, and delicious food adding greatly to the melting pot of cultures that comprise this city. Work will be done in an office setting and outdoors in rocky, uneven terrain. Long periods of sitting and standing are to be expected. Most work will be done indoors, analyzing data and preparing reports. When participating in fieldwork, the intern can expect to be working in dense vegetation, on steep inclines with uneven terrain, and in varying weather conditions. Rattlesnakes are the main



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concern for staff working off trail, and protective leg gaiters will be provided. The intern must be able to work in all different weather conditions, sit, stand, and walk for extended periods of time, and lift up to 50 lbs.

QUALIFICATIONS

We would like to support an intern that is interested in using the DHA after graduation. The intern should have course or extra-curricular experience in earth/atmospheric science or biological sciences/ecology. Experience working with data in Excel or RStudio, scientific writing skills, and ability to read and discuss primary literature will help with project success. Successful interns will be self-motivated and interested in troubleshooting both equipment set up and data analysis. Interest in both conducting science and communicating results to park management and the public is valued. The intern can expect to meet with primary and secondary mentors on a weekly basis at minimum and will have assistance in writing up deliverables.

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 driver's license to drive a government vehicle.

A personal vehicle is recommended for this position.

HOUSING

Park housing is NOT available. The intern will be responsible for finding housing in the nearby area. There is no housing at the park. As the park is in an urban setting, there are numerous options for housing in the immediate area. Point Loma, the closest neighborhood to the park, is roughly six miles from the entrance. Private room rentals in San Diego can range from \$750 - \$1250 per month. There is reliable public transportation to the park on the #84 bus, so interns will not need to own a vehicle.

INTERNSHIP DATES

Start Date: 05/30/2022

End Date: 08/22/2022

Number of Weeks: 12

Flexible Start Date: Yes

Eleven weeks of the internship will be in the park. A mandatory Professional Development Workshop will be held in Washington, D.C. from August 1 - 4, 2022.

LIVING ALLOWANCE

12 weeks (\$640/week = \$7,680)

Partners

This position is offered through the National Park Service's Scientists in Parks (SIP) Program in partnership with various organizations.



PLEASE DIRECT ANY QUESTIONS TO ENVIRONMENT FOR THE AMERICAS

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