



MOSAICS IN SCIENCE Diversity Internship Program 2021 Project Descriptions

NPS UNIT: POINT REYES NATIONAL SEASHORE	PD #: 2021514
Project Title: Coho and Steelhead Monitoring and Diet Composition Study Position Type: Mosaics PLC Primary natural resource discipline: Biological Sciences Project keywords: coho, monitoring, steelhead, salmonid, restoration Location: Point Reyes Station, 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.	
PROJECT DESCRIPTION AND WORK PRODUCTS	

Position Description: This proposed project requests one Scientist in the Parks (SIP) Intern to assist with the San Francisco Area Network (SFAN) Coho and Steelhead Monitoring Program (CSMP) based at Point Reyes National Seashore (PORE). The SFAN CSMP collects vital population data on salmon within PORE and Golden Gate National Recreation Area (GOGA) lands. Coho salmon (*Oncorhynchus kisutch*) populations are estimated to be at less than 1% of their historic population size within California and the populations residing in GOGA and PORE are considered to be a stronghold against regional population extinction. The SIP Intern will be paired with the SFAN Inventory and Monitoring Program (I&M) fishery biologist in a 12 week (May, 2021 through August, 2021 time frame) biological field assistantship where they will collect vital information on endangered coho salmon and threatened steelhead within PORE and GOGA. By assisting with the SFAN I&M CSMP, the intern will receive in-depth education on techniques used to monitor endangered coho salmon and threatened steelhead along with other fish species. In addition, members will be exposed to restoration techniques being applied to increase the chance of species survival for the enjoyment of generations to come. As a goal of this position, the SIP Intern will be tasked with an independent project evaluating salmonid diet composition within Redwood Creek. The outcome of this work will be to further advance park management understanding of changes to the ecological processes post restoration within Redwood Creek, Muir Woods National Monument (MUWO). The SIP Intern will be integrated into the summer coho and steelhead monitoring team based at PORE. They will work directly with other CSMP staff including the program lead fishery biologist, fisheries technicians, Watershed Stewards Program members, and program volunteers. During their service term, the intern will learn fisheries monitoring techniques including but not limited to: seining, electrofishing, juvenile coho habitat typing, snorkel census, water quality monitoring, and tagging. The intern will be tasked with ensuring all equipment is ready for each field day, collecting field data, verifying collected field data, and data entry. In concert with these ongoing monitoring efforts, the SIP intern will be assigned an independent diet composition project under the guidance of the GOGA aquatic ecologist and in cooperation with USGS biologists, to evaluate recent restoration activities within MUWO. The goal of this position is to continue to develop future resource management professionals in the NPS. The SIP Intern will continue their education by learning field techniques that build off of their previous educational experiences. Young adults often receive education at a conceptual level in the field of natural resource management, but due to socioeconomics or access to wildland areas may never physically experience these techniques in the field. By the end of this position, the intern will understand issues surrounding threatened and endangered (T&E) species within the park, management techniques used for T&E species recovery, and a mastery of coho and steelhead field monitoring techniques. Without a SIP Intern, both PORE and GOGA would not collect the data needed to fully understand the impacts and make management decisions on threatened and endangered aquatic species residing within the park.

This project will have both a large and fine scale impact. By increasing the capacity within the Coho and Steelhead Monitoring Program, long-term data will continue to be collected for two populations of endangered coho salmon residing in PORE and GOGA. This long-term data will be used to further our understanding of critical factors that are limiting the survival of the species within our watersheds. This data will also be used to determine the status and trends for the species at both the local and regional level. Other agencies that rely on our data include National Marine Fisheries Service and the California Department of Fish and Wildlife. In addition, the project will increase our knowledge on the changes within Redwood Creek after a major restoration project. This project will be used for additional restoration designs planned over the next few years within Muir Woods National Monument. By working on a discrete project, the intern will be able to describe specific changes to the diet composition and prey availability before and after restoration within Redwood Creek. Secondly, the study will evaluate the potential threat of a recently colonized aquatic snail within the watershed to negatively impact the prey source for aquatic fauna within Redwood Creek.

NATURAL & PHYSICAL WORK ENVIRONMENT

This is a coastal position in the small community of Point Reyes Station which is located approximately 3 miles from the intern's duty station. Point Reyes Station contains a few restaurants, grocery store, library, gas station, and medical services. Point Reyes Station has one major grocery store and is a popular vacation site for tourists. Summer temperatures range from 60-90 degrees Fahrenheit. Typically the morning will start with fog and then becoming sunny by mid-morning before the fog returns in the late afternoon to early evening hours. This position is 80% in the field working in creeks within GOGA and PORE. The SIP Intern will be trained on how to identify field hazards such as poison oak, stinging nettle, and ticks. All field equipment and Personal Protective Equipment (PPE) will be provided by the National Park Service. Field work consists of stream surveys performed over rough terrain in water averaging 55-65 degrees Fahrenheit in temperature. The SIP intern should be prepared to spend up to 8 hours daily in an outside setting. The SIP Intern should be prepared with layers of clothing to regulate body temperature as the weather changes throughout the day. Field work activities include but are not limited to: habitat surveys requiring walking in streams wearing waders, snorkel surveys requiring emersion and walking in streams wearing a wetsuit, and electrofishing or seining requiring the capture of fish. It is anticipated that field work for will be conducted within Redwood Creek, Olema Creek, and Pine Gulch Creek watersheds located within Marin County, California.

QUALIFICATIONS

The ideal candidate is able to work independently on complex projects while maintaining open lines of communication with project staff. The intern would ideally have a degree or working towards a degree in freshwater biology, fisheries, marine biology, or other life science. The candidate will ideally be in good physical fitness and can work full days in a field setting.

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.

HOUSING

Park housing is available and will be provided at no cost to the participant. The type of housing will depend on required Covid mitigation measures at the time of this internship. If Covid mitigation measures are no longer needed, the housing will be a shared bunkhouse style unit. Both males and females are allowed but do not share bedrooms. The housing unit is not located within walking distance of the reporting office. Transportation to and from the housing unit to the duty station will need to be provided by the SIP intern. Bed and bathroom linens, personal care items, and food are not provided. If Covid mitigation measures are still in place, housing will consist of a shared house with the SIP intern receiving their own bedroom. For many who have stayed in PORE housing units, the scenic beauty of these locations has been a memorable experience.

INTERNSHIP START/END DATES

Start Date: 5/17/2021

End Date: 7/30/2021

Eleven weeks of the internship will be in the park. A mandatory Career and Leadership Workshop will be held in Washington, D.C. from August 1 – 5, 2020.

PLEASE DIRECT ANY QUESTIONS TO ENVIRONMENT FOR THE AMERICAS

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