POSITION ANNOUNCEMENT:

FUTURE PARK LEADERS of EMERGING CHANGE

The National Park Service (NPS) is pleased to support the *Future Park Leaders of Emerging Change* (FPL) internship program as a pathway for exemplary students in higher education (advanced undergraduate students and graduate students) to apply their skills and ideas to park-based challenges and solutions. The program offers 12-week paid internships which allow students to gain valuable work experience, explore career options, and develop leadership skills through mentorship and guidance while helping to advance NPS efforts on emerging management issues. Successful students may be eligible for non-competitive hire into federal positions for which they qualify following completion of all academic requirements.

Developing a Climate Smart conservation framework

for aquatic resources in the Greater Yellowstone Ecosystem

Greater Yellowstone Inventory and Monitoring Network & Yellowstone National Park (Climate Program)
Bozeman, MT

PROJECT SUMMARY

Create the foundation for a climate smart aquatic resource (water quality, flow, fisheries) conservation strategy in the Greater Yellowstone Ecosystem! This internship sets the stage for a regional aquatic conservation workshop by integrating existing literature, climate projections and project mapping to identify strengths, weaknesses and unrealized opportunities in aquatic conservation in America's headwaters.

INTERNSHIP PROJECT BACKGROUND

Climate change is affecting resources throughout the Yellowstone region, but the negative impacts to native fisheries are especially notable due to altered stream flow, increasing water temperatures, and competition and hybridization between natives and non-natives. The Greater Yellowstone Area includes a wide variety of aquatic resource management challenges within five National Forests, two National Parks, two Wildlife Refuges and Bureau of Land Management lands from three states.The variety of land use mandates and large environmental gradients in the region requires a new approach that honors management mandates but crosses management unit boundaries. In order to maximize efficiency of restoration and conservation actions a holistic approach is needed that considers the portfolio of options available in large landscapes so that the right actions can be implemented at the right time in the right place.

INTERNSHIP PROJECT DESCRIPTION

This project will compile a database and map of on-going fisheries projects, proposed plans, and known issues across the ecosystem that will guide a Climate Smart Conservation workshop, designed for fisheries biologists, hydrologists and water quality specialists. Specifically the intern will

- Summarize issues through expert interview and literature review.
    - Existing literature reviews will be compiled and appended with new information.
    - Interview regional aquatic professionals to provide context on literature from local perspectives and personal experiences.
    - Integrate literature and professional experiences in a document that can direct discussion in workshop
- Collect, map, and summarize historic and projected climate and stream statistics
    - Most of the mapping and analysis has been completed so this will involve obtaining data and integrating in a GIS framework for dynamic mapping that informs the scale, extent and spatial variation in climate, stressors and existing and proposed projects.
- Creatively organize above findings for the workshop to facilitate discussion about appropriateness of goals and strategies at the local scale that advance ecosystem aquatic health
- Create a high level graphical summary of findings for land managers and the public
- Present high level findings to Greater Yellowstone Coordinating Committee executive leadership

QUALIFICATIONS

A well-qualified applicant will possess the following:

☐ Have or be pursuing a degree in ecology, fisheries, hydrology, climate change science, or a related field

☐ Experience with GIS, statistics, and/or R programing, the more advanced the better

☐ Skill and interest in conducting interviews with resource professionals and compiling the findings into creative information products

☐ Ability to understand and distill large spatial and tabular data sets and research findings

☐ Excellent writing and communication skills

☐ Driver's license required

LEADERSHIP DEVELOPMENT

Interdisciplinary – While focused on aquatic systems generally, the intern will learn about projected climate change, hydrology, water quality and fisheries management issues and conservation solutions in the Greater Yellowstone Ecosystem.

Multi-jurisdictional – Through interviews the intern will learn about management priorities in national forests, national parks and other land management agencies, how these entities mitigate impacts from project activities and climate change.

Ecosystem scale – Neither species, nor climate change and its impacts, are restricted to political management boundaries. The nature of this project will develop broad-scale conservation thinking that acknowledges management mandates but encourages cooperation and information sharing across boundaries to improve project success.

Ecology and management – The intern will be supervised by David Thoma (Greater Yellowstone Inventory and Monitoring Program) and Ann Rodman (Yellowstone National Park), but will interact with regional coordinators (Tom Olliff), and NPS, USGS, BLM, FWS, and USFS fisheries scientists and aquatic ecologists. These resource specialists are the interface between research and management.

DATES OF POSITION

Approximate dates of internship: 05/15/2020 – 08/31/2020. Dates are flexible; time frame for project completion is between 8/31/2020 and 9/30/2020.

COMPENSATION

This initiative supports one student at $16/hour for 12 weeks, or 480 hours.

HOUSING & TRAVEL

The FPL provides a travel stipend to all interns to supplement the cost of student travel to the park site.

Housing is available in a dormitory on Montana State University campus which is a 10-15 minute walk to the Greater Yellowstone Inventory and Monitoring office. Occasional travel to Yellowstone National Park (90 miles one way) will be required and travel for interviews, data assimilation may also be necessary. In both cases overnight accommodations will be provided by the project at no extra cost to the intern.

Bozeman, Montana is a full service community, home to Montana State University, a vibrant mountain culture with access to hiking, biking and water sports. World class outdoor recreation is available nearby in every direction. Yellowstone National Park is an hour and a half drive away.

WORK ENVIRONMENT

This is an office job with shared office space in the Greater Yellowstone Network offices on the edge of Montana State University which provides the library for primary literature review. Travel to Yellowstone will be necessary to interact with specialists in GIS, and water resources (hydrology, water quality and

fisheries). Travel to offices in the Greater Yellowstone Ecosystem (Jackson, WY; Cody, WY etc) may be necessary to obtain project information resources and interviews. This will provide opportunity to meet specialists in person and see conservation actions that will enrich the internship experience.

CONTACT INFORMATION

Park Service Supervisor:
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