

**Rocky Mountains Cooperative Ecosystem Studies Unit
Project Summary**

Project Title: UWNPS Research Center Support, 2018-19

Task Agreement #: P18AC01075

Discipline: Natural

Type of Project: Interdisciplinary

Funding Agency: National Park Service

Other Partners/Cooperators: University of Wyoming

Student Participation: Yes

Effective Dates: July 15, 2018- December 31, 2021

Funding Amount: \$32,500

Investigators and Agency Representative:

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Project Abstract: Annually, resource managers for Yellowstone National Park and Grand Teton National Park/John D. Rockefeller, Jr. Memorial Parkway submit a list of priority research needs on natural and cultural resources and/or social science to the UWNPS Research Center, who will issue a call for proposals open to scientists from any credible academic or research institution in the nation. Research proposals are submitted by faculty and graduate students, based on the list of research needs or other topics proposed as relevant by the scientific community. Proposals are reviewed by a panel of University of Wyoming faculty as well as Grand Teton and Yellowstone National Park personnel, in whose parks research projects are conducted. Projects are ranked and selected based on merit, contributions to science, and applicability to park and ecosystem needs. Depending on available funds, 10-12 projects are selected each year for small grants, though the number of projects funded for each park varies and often projects span the park boundaries. Researchers will generally complete their studies by the end of the second calendar year following project initiation, although occasionally it takes 3 years until graduate students complete course and field work in addition to a thesis and/or publications resulting from their work in parks. Final products include individual annual investigators' reports submitted to the NPS research permitting website, project reports in the UWNPS Research Center annual report series, talks presented in the UWNPS Harlow Summer Seminar series scheduled at the research center and elsewhere, and publications in other forums such as scientific conferences and publications. Research is supervised by various university professors from across the nation, and accomplished involving graduate and undergraduate students from those institutions, providing an in-field learning experience about parks and surrounding lands, and how research is accomplished in and for the benefit of NPS managers and ultimately park users. NPS provides substantial involvement through development of research needs; providing liaison between student researchers and NPS resource managers; review of proposals, progress, and final products; and application of research findings as appropriate in subsequent monitoring and management plans and actions.

Student interns - The NPS will identify needed summer science or resource management internship projects to be completed in Grand Teton NP/John D. Rockefeller, Jr. Memorial Parkway and provide a project description, from which the UWNPS Research Center will issue a recruitment announcement for interns. Internships, like research grants, are open to post-secondary school students from any accredited academic institution in the nation. The NPS will select two student interns, chosen on merit, each year and provide general supervisory and technical oversight for the assignments. The NPS will determine the appropriate products to be completed by each intern, and advise the UWNPS regarding any problems with the interns' performance or products such as should affect payment. UW will administer payment, according to their usual means and schedule, to the student interns. The UWNPS Center Director will provide on-site assistance, logistical support, and additional academic mentoring for the interns at the UWNPS campus, as agreed upon with the park liaison to the research center. For this agreement, the student intern projects are to:

- 1) Develop expertise in identification of bat species both by sight and by sound (echolocations); survey and inventory park buildings for bats, especially housing units; inventory natural roost sites, including day and maternal roosts; develop a map of species distribution and abundance; develop educational materials related to living with bats and white-nose syndrome (bat fungus infection); and develop plans for constructing appropriately designed and located bat houses to discourage use of buildings.
- 2) Be part of a small research team who will aid the park's social scientist and the GIS specialist in two research projects to better understand visitor use patterns and experience in high use areas within Grand Teton National Park. Tasks will

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include: conducting social science surveys in an outdoor setting; monitoring use levels in popular thermal areas, managing data collected from visitor intercept surveys and GPS units; and conducting analysis for preliminary results.

Internships will be completed within the calendar year, along with a written report on the value of the student internship to the park and to the student. Because research studies typically take at least 2-3 years to collect and analyze sufficient data, then write up professional academic reports