

Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Biostatistics Support for NPS Fire Ecology Program

Discipline: Natural

Type of Project: Technical Assistance

Funding Agency: National Park Service

Other Partners/Cooperators: University of Wyoming

Effective Dates: 7/1/2014 - 12/31/2017

Funding Amount: \$28,032 [FY16: \$8,006; FY15: \$10,013 FY14: \$10,013]

Investigators and Agency Representative:

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Investigator: Ken Gerow, Statistical Consulting Center, Department of Statistics, University of Wyoming, Laramie WY 82073, (307) 766-6600, gerow@uwyo.edu

Project Abstract: The NPS Fire Ecology Program has 22 park fire ecologists with field crews, 7 regional fire ecologists and 2 national positions. It is a complex program that services over 100 parks. On all levels, fire ecologists need statistical support. The University of Wyoming Statistical Consulting Center (UWSCC) will provide statistical assistance with Dr. Gerow serving as principal investigator. The UWSCC will provide support through the review of study designs, consulting on preliminary sampling and sample size determination, consulting on all phases of project planning, review and recommend appropriate statistical techniques to analyze fire effects data, and provide a statistical review of statistical methods used in manuscripts or in other documents where data is being interpreted or presented. Specific technical assistance to be provided may include the use of nonparametric statistics, multivariate statistical tests, Bayesian Statistics, confidence intervals, time series trend analysis, and geospatial statistics. The UWSCC will also assist with the development of statistics and probability-based tools.

Consultation with UWSCC will always require close involvement with NPS fire ecologists to ensure that UWSCC understands the concerns or questions being asked by the ecologists and the type of data being used. In addition, because of the complexity of the statistical reviews, the ecologist will work closely with UWSCC to ensure understanding of the results. In addition, close coordination and communication between NPS and UWSCC will ensure that information provided integrates well with fire ecology monitoring software (i.e., FFI) and existing statistical software in use (e.g., Minitab).

Outcomes with Completion Dates:

Schedules would be determined on a project-by-project basis over the three-year time line allotted for in this Task Agreement. The work will be completed by the University no later than the dates agreed to by UWSCC and the requesting NPS unit. All work under this task agreement will be completed by October 1, 2017.

Keywords: NPS Fire Ecology Program, University of Wyoming, Biostatistics Support