

**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 - 6/30/2019  
**Funding Amount:** \$38,044

**Investigators and Agency Representative:**

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**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).

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