

Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Scientific Investigation of Wildlife Disease Outbreaks

Discipline: Natural
Type of Project: Technical Assistance/Research
Funding Agency: National Park Service
Other Partners/Cooperators: Colorado State University
Effective Dates: 6/5/2014 - 8/31/2018
Funding Amount: \$477,990

Investigators and Agency Representative:

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Project Abstract: The mission of the National Park Service's Biological Resource Management Division (NPS BRMD) is to work in cooperation with parks, regions, other divisions of the Natural Resource Stewardship and Science Directorate, and other partners to preserve, protect, and manage biological resources and related ecosystem processes in units of the NPS. One of the responsibilities of the BRMD is to provide expert scientific, planning, and evaluation assistance on management actions and biological resource management issues. The Division is also responsible for policy formulation, planning, training, coordination, and implementation of biological resource management activities and programs of broad Service-wide importance. Wildlife health issues are an important aspect of these biological resource and ecosystem management programs. Wildlife disease outbreaks can occur or expand unexpectedly and require prompt response for scientists to gain critical data necessary to understand the ecology of the disease and its impacts. These data contribute to our scientific knowledge base that can be used to monitor and manage ongoing outbreaks as well as predict or prevent future outbreaks in wildlife populations managed by NPS or other wildlife agencies. Outbreaks of diseases such as bighorn sheep pneumonia complex and chronic wasting disease (CWD) of deer and elk may have population limiting effects and require further investigation to fully appreciate their threats to native wildlife populations.

Colorado State University Veterinary Diagnostic Laboratory (CSUVDL) has the capabilities to provide specialized support to the National Park Service (NPS) wildlife health program in wildlife disease outbreak investigation. Staff of the Department of Microbiology, Immunology, and Pathology assigned to the CSUVDL includes a nationally recognized expert on bighorn sheep pneumonia complex and CWD. CSUVDL has the capability to train NPS and partner staff on techniques of outbreak investigation including animal monitoring, disease ecology, identification, and distribution, and defining impacts on populations. CSU also provides facilities for any associated diagnostic work as well as research libraries to support investigation of wildlife diseases. The CSUVDL has the capability to provide well trained technicians, students, and other staff that can maintain close collaboration with professional personnel at the laboratory and assist the NPS wildlife health team.

The co-location of the NPS wildlife health program and CSUVDL in Fort Collins, Colorado, allow for close collaboration in project conception, implementation, and reporting regardless of where outbreaks occur. Further, NPS staff has an opportunity to interact with CSU students in the Professional Veterinary Medicine Program and undergraduate majors interested in wildlife diseases and outbreak investigations. Through collaboration with NPS BRMD, CSU will have the opportunity to diversify the exposure of their students. CSUVDL staff and students will visit NPS units to investigate disease outbreaks, work collaboratively with co-investigators, and compile and publish research findings.

Keywords: Wildlife Health, Veterinary Pathology, NPS- Biological Resource Management Division, Colorado State University, Veterinary Diagnostic Lab, students