

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

**Project Title:** A Collaborative Approach to Promoting One Health in the NPS

**Discipline:** Natural  
**Type of Project:** Technical Assistance and Education  
**Funding Agency:** National Park Service  
**Other Partners/Cooperators:** Colorado State University  
**Effective Dates:** 8/31/2010 - 12/31/2013  
**Funding Amount:** \$140,100 [FY12: \$40,000; FY11: \$20,000; FY10: \$80,100]

**Investigators and Agency Representative:**

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**Project Abstract:** The concept of One Health advocates cooperation between human and veterinary medicine to combat diseases that are shared between people and other animals (zoonotic diseases) to promote health of all species and the environment. Many human and animal medicine organizations including the American Medical Association and the American Veterinary Medical Association have endorsed a this emerging concept. One Health is predicated on the fact that people, domestic animals, and wildlife share the same planet, the same ecosystems and many of the same diseases. At least 60% of human infectious disease agents can be acquired from other animal species and in the last 30 years 75% of the emerging human pathogens have been zoonotic (originating in other animals) including West Nile virus, avian influenza, and Lyme disease.

The National Park Service (NPS) supports both veterinary and human medical expertise functioning independently but also performing collateral duties to *de facto* perform in a One Health approach. The NPS Biological Resource Management Division Wildlife Health Program addresses service-wide wildlife health issues while the NPS Office of Public Health is charged with protection of visitor health. Because the health of humans and other animals is inextricably linked, collaboration between the programs is inherent for success of each.

Achieving a One Health approach to management in the NPS requires collaboration of multiple disciplines including: public health, veterinary medicine, wildlife biology, and environmental health. Colorado State University encompasses programs in each of these disciplines through the Colorado School of Public Health, Professional Program in Veterinary Medicine (PVM), Department of Fish, Wildlife, and Conservation Biology, and program in environmental health in the Department of Environmental and Radiological Health Sciences. Through this task agreement, NPS will develop and promote One Health collaborations with each of these four programs. Collaboration will occur between NPS and each of these programs individually and collectively.

Collaboration led by the School of Public Health will focus on communication of zoonotic disease risk messages. These messages will be directly applicable to use in NPS units. Further, increasing awareness of CSU staff and students on the importance of wildlife conservation and the threat that poorly crafted zoonotic health messages could have on conservation will enhance the broader educational experience with the ultimate goal of protecting wildlife resources.

Primary collaboration with the PVM program and environmental health program will be through student interns. These interns will be assigned a project to complete during their rotation with NPS. These projects will address NPS needs and will also further the education of student. Students will be assigned to NPS Washington office staff as a mentor and perform their work in the office or at an NPS unit.

The Department of Fish, Wildlife, and Conservation Biology along with the College of Veterinary Medicine and Biomedical Sciences will develop and deliver a short course on wildlife disease for NPS managers. The course will increase awareness, knowledge, and skills of NPS natural resource managers to detect, investigate, and manage wildlife diseases in their units.

**Outcomes with Completion Dates: December 31, 2014**

- Communication messages on at least one zoonotic disease suitable for use to inform visitors at NPS units (December 2011).
- Report(s) produced by at least one student intern in environmental health assigned to NPS (October 2012).

- Report produced by one summer public health/wildlife health intern assigned to NPS (January 2011).
- Report(s) produced by at least one PVM extern assigned to NPS (October 2012).
- Report produced for submission to professional journal detailing MD/DVM cross-training (December 2012).
- A fully developed curriculum including learning objectives and student handouts for a wildlife disease short course for NPS managers (March 2011).
- Presentation of two wildlife disease short courses each for up to 30 NPS employees or invitees (November 2011 and November 2012).
- A brief report abstract suitable for public distribution and a final report shall be provided to the NPS Research Coordinator.
- Update and revise as needed the wildlife disease short course curriculum, learning objectives, and student handouts for the 2012 course.
- Provide report(s) produced by one additional public health/wildlife health intern assigned to NPS (October 2012).
- Provide report(s) produced by at least one additional PVM extern assigned to NPS (October 2013).

**Keywords:** One Health, species health, environment health, human medicine, veterinary medicine, disease, NPS- Biological Resource Management Division, Colorado State University