

Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Monitoring wildlife responses to noise at the Piceance Basin, western Colorado

Discipline: Natural Resources
Type of Project: Research
Funding Agency: National Park Service
Other Partners/Cooperators: Colorado State University
Effective Dates: 8/20/2012 - 12/31/2013
Funding Amount: \$22,500

Investigators and Agency Representative:

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Project Abstract: Numerous scientific studies have documented changes in wildlife behavior, habitat use, fitness, and species richness in proximity to anthropogenic noise and light sources. These effects have been observed in a wide range of taxa: mammals, birds, amphibians, fishes. However, many of these studies have not been structured to determine whether the noise creates the impact by itself, or only in combination with the other potentially disturbing stimuli generated by the activity. Scientific models of auditory perception and general principles of sensory ecology suggest that noise alone can have impacts, and ultimately teasing out what components of the environment are having an effect is important.

The study will continue to focus on evaluating the response of wildlife to noise from energy development but the focus will change from wind energy to natural gas/oil development. The location will also change from Maxwell Ranch, CSU property, to the Piceance Basin in NW Colorado. This is arguably one of the most extensive oil & gas deposits in the lower 48 states and offers an excellent opportunity for study because of collaborations between Exxon Mobil, Colorado Division of Parks and Wildlife, the Bureau of Land Management, and CSU. This will be a one year study and support will be for research associate/graduate student, tuition and miscellaneous materials and supplies. The study will focus on developing a study plan for mapping and modeling noise from energy development throughout the Piceance Basin. The study plan will also include the development of an experimental approach to simulate noise from energy development. An experimental approach will ultimately be important in teasing out impacts to wildlife from other sources such as light and movement.

Outcomes with Completion Dates: December 31, 2013

Keywords: National Park Service - Natural Sounds Program, Colorado State University, noise, wildlife response, Piceance Basin, western Colorado