

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Development of Visitor-based Acoustical Indicators and Standards

Discipline: Social Science
Type of Project: Research/Education
Funding Agency: National Park Service
Other Partners/Cooperators: Colorado State University
Effective Dates: 8/1/2010 - 12/31/2013
Funding Amount: \$203,741 [FY12: \$52,773; \$FY11: 73,902; FY10: \$77,066]

Investigators and Agency Representative:

NPS Contact: Frank Turina, National Park Service, Natural Sounds Program, 1201 Oakridge Drive, Suite 100, Fort Collins, CO 80525, 970-267-2102, frank_turina@nps.gov

Investigators: Peter Newman, Department of Natural Resource Recreation and Tourism, Colorado State University, 233 Forestry Building, Ft. Collins, CO 80523-1480, (970) 491-2839, peter.newman@cnr.colostate.edu

Project Abstract: This social science project will investigate the effects of noise on visitor experience in national parks and other protected natural areas, as well as the effects of noise on interactions between visitors and wildlife. This project will stimulate research and education by hosting workshops, participating in scientific meetings, publishing scientific findings, and incorporating results into academic curricula. This project will also encourage the utilization of research findings in park planning and management.

The following tasks will be pursued.

1. Work toward the development of a Coupled Human and Natural Sounds (CHANS) Model. This model will address the effects of noise on interactions between visitors and wildlife.
2. Participation in national and international "standardization development groups" such as the *International Standards Organization (ISO) TC 43/SC 1/WG 54: Human Perceptions of Sounds in Natural Areas Working Group* and accompany the ATR to National Park sites to work with managers on the protection of the acoustic environment.
3. Develop social science survey instruments that:
 - a. Measure the effects of aircraft and transportation sounds with an emphasis on improving dose response methods.
 - b. Measure and model the trade-offs associated with sounds from aircrafts and transportation.
 - c. Measure the effects and power of messaging in an effort to alter visitor behavior in the reduction of unwanted human noise.
4. New surveys will be deployed in Yosemite in the summer of 2010. These surveys have been submitted to the OMB for approval.
5. Develop integrated visitor use and transportation acoustic models that use the social science outputs from task 3 as parameters within the modeling platform.
6. Develop study questions, a study design, and a pilot survey for a nationwide survey to assess the importance and benefits of the protection of natural sounds in National Parks.
7. Continue to facilitate the interdisciplinary working group that includes NPS and CSU scientists from wildlife, social science, and environmental psychology. This interdisciplinary team will integrate the state of knowledge from each discipline as it relates to acoustical science and park management. This group will also provides peer review of scientific and scholarly activities in this agreement, to help address the Interim Guidance Document Governing Code of Conduct, Peer Review, and Information Quality Correction for National Park Service Cultural and Natural Resource Disciplines, dated January 31, 2008. The Office of Management and Budget uses the definitions and processes of National Academy of Sciences for peer review processes. It outlines standards for peer review panels. It states they should have the expertise, independence and balance to represent to uphold scientific integrity. This group represents independent scientists from multiple disciplines. This group can also make informed choices for external reviewers from extensive networks of otherwise unrelated scientific communities.

Outcomes with Completion Dates: 31 May 2013

Keywords: sound, visitor experience, visitor/wildlife interactions, National Park Service, Natural Sounds Program, Colorado State University