## Project Summary Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Acoustic monitoring in Mount Rainier National Park

Discipline: Natural

Type of Project: Technical Assistance
Funding Agency: National Park Service

Other Partners/Cooperators: Colorado State University

**Effective Dates:** 9/15/2006-12/31/2009

Funding Amount: \$55,862

Investigators and Agency Representative:

NPS Contact: Kurt Fristrup, National Park Service, 1201 Oakridge Drive, Suite 100, Fort

Collins, CO 80525, 970.267.2102, kurt\_fristrup@nps.gov

Investigator: Jim Loftis, A207J Engineering Building, Colorado State University, Fort
Collins, CO 80523-1372, ph (970)491-2667; fax:( 970)491-7727, jim.loftis@colostate.edu

**Project Abstract:** An environmental acoustic inventory will be conducted in Mount Rainier National Park. This inventory will document sound levels in representative acoustic zones in the park, and quantify the contributions of identified sound sources. Sites adjacent to Highway 123 will also be monitored to document the sound levels associated with road construction activity. These data will be analyzed to describe the  $1/3^{\rm rd}$  octave band sound levels in each acoustic zone in relation to time of day and season. Statistical summaries of the audibility of identified classes of sounds will be produced. These results will support the Air Tour Management Planning process and other park management activities.

Objectives of this monitoring include:

- 1. Obtain digital recordings using low-noise microphones to document sound sources and associated sound levels in primary acoustic zones in the park.
- 2. Obtain similar recordings in areas adjacent to park Highways to document the ambient sound levels and sources prior to and during road construction activities.
- 3. Analyze these data to provide concise summaries that will assist park managers in evaluating the effects of park activities on the acoustical environment.

Outcomes with Completion Dates: Complete draft report by March 31, 2009.

**Keywords:** soundscapes, acoustic monitoring, Air Tour Management Plan, Mount Rainier NP, Colorado State University

## For Administrative Use Only:

Date Annual Report Received: Date Final Report Received: Publications, etc. on file: