

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

Project Title: Applying spatial models to better understand the nature of ship-whale encounters in and near Glacier Bay National Park

Type of Project: Research
Discipline: Natural Resources
Funding Agency: National Park Service
Other Partners/Cooperators: University of Montana
Student Involvement: yes, Ph.D. student
Effective Dates: 6/1/2012 - 9/30/2017
Funding Amount: \$220,386

Investigators and Agency Representative:

NPS Contact: Scott Gende, Glacier Bay National Park & Preserve, PO Box 140, Gustavus, AK 99826, 907-364-1591, scott_gende@nps.gov

Investigator: Paul Lukacs, College of Forestry and Conservation, University of Montana, Missoula, MT 59812, 406-243-5675; paul.lukacs@umontana.edu

Project Abstract: The overall objective of the project is to expand on the effort to put an observer on board ships outside the park, and use the data to better ship management for the public and state/federal agencies in Glacier Bay. This will include continuing data collection and applying statistical and spatial modeling techniques to make inferences about the inherent risk of collisions or impacts to whales and factors that can reduce this risk. Specifically the focus of this project will address some questions about the efficacy of pilots/captains to detect and avoid whales using a combination of data sets including data collected during the project, data collected previously (6 years of ship-whale encounter data), and AIS (ship location) data. The project will include funding to purchase berth space aboard cruise ships in order to allow observers to embark at ports of call (embarkation: Skagway or Juneau) the day prior the ships entry into Glacier Bay, and disembark at ports of call (disembarkation: Ketchikan or Sitka) the day after the Glacier Bay visit. These 'cruises' will number 10-25 per year. This will facilitate observations in these key areas of Icy Strait and lower Glacier Bay where many whale-ship encounters occur.

Keywords: spatial models, ship-whale encounters, Glacier Bay National Park, University of Montana