

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Glacial Outburst Analysis and Report Study, Bear Glacier, Kenai Fjords National Park, Alaska

Type of Project: Research
Discipline: Natural
Funding Agency: National Park Service
Other Partners/Cooperators: University of Montana
Effective Dates: 9/30/2009 - 12/31/2011
Funding Amount: \$50,000

Investigators and Agency Representative:

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Project Abstract: Concern over the outburst events at Bear Glacier has prompted the park to seek assistance in developing a study of the area to determine hazards and provide management recommendations. The hazards associated with Bear Glacier have not been studied since the 1970's when Austin Post performed an analysis. With concerns over the impacts of climate change and an increase in visitor usage of the area, there is a need to study the glacier and the effects on management actions by park staff. The Alaska River Forecast Center has volunteered the services on a consultation basis to the NPS. Kenai Fjords has offered to provide fixed wing aircraft for overflight and data collection. LiDar has been produced for the area. With all of these factors coming into play, the missing link or need is someone to analyze and assimilate the information into a report to assist the park in managing this resource in a responsible manner with the best available scientific information. This project will fund the work of a graduate student at the University of Montana through the Rocky Mountains CESU to provide the data analysis and report.

This project will look at the impacts and hazards resulting from glacial lake outburst events on Bear Glacier, KEFJ. This project will accomplish the following:

- Provide park managers with up to date information on outburst events and the degree of risk associated with this hazard. This will be presented in a report including management alternatives and mitigation recommendations.
- Provide hazard maps and associated data in a format suitable for park GIS use.
- Identify needs for further research and stimulate additional studies by other scientists regarding natural hazards.

Outcomes with Completion Dates: Final Report due - December 31, 2011

Keywords: Glacier, outburst floods, risk analysis, Bear Glacier, Kenai Fjords National, University of Montana