

## **Project Summary**

### **Rocky Mountains Cooperative Ecosystem Studies Unit**

**Project Title:** Inventory and Monitoring of Coastal Erosion for Alaska's Arctic Network of Parks

**Discipline:** Natural  
**Type of Project:** Research  
**Funding Agency:** National Park Service  
**Other Partners/Cooperators:** University of Colorado at Boulder  
**Effective Dates:** 7/1/2008 - 9/30/2010  
**Funding Amount:** \$187,036

**Investigators and Agency Representative:**

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**Project Abstract:** This project is a cooperative venture between the Arctic I&M Network (ARCN) of the National Park Service and University of Colorado, Boulder related to the extent and causes of coastal erosion in Alaska parks, including Bering Land Bridge National Preserve and Cape Krusenstern National Monument. Efforts over the last few years have gone into planning, project management, and compilation of a requisite spatial database for the ARCN coastal parks. Most important is the NPS public release in 2007 of high-resolution orthorectified coastal imagery for the coastal areas of BELA and CAKR. Goals for the FY08 year of the project are centered on spatial analysis of coastal change. Specifically, objectives are to: 1) complete a report on bluff erosion; 2) conduct a comprehensive analysis of coastal erosion and accretion (based on "timeslices" for ca. 1950, ca. 1980, and 2003), with a final report; and 3) develop a plan for change analysis using higher temporal resolution. The second objective, comprising the bulk of the FY08 activities, will be to conduct a comprehensive spatial analysis along the entire length of the BELA and CAKR coastlines.

**Outcomes with Completion Dates:** Due by June 30, 2010, Final report on bluff erosion; finalized protocols for orthorectification and coastal analysis (after drafts to be submitted before July, '08); draft final report on comprehensive coastal erosion; coastline GIS layers and derived GIS layers, with metadata; maps and other presentation materials in electronic format; draft plan for increased temporal resolution study; progress reports and related documentation.

**Keywords:** Inventory and Monitoring Program, coastal erosion, GIS layers, Arctic I&M Network, Bering Land Bridge N Pres, and Cape Krusenstern NM, University of Colorado at Boulder