Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: University of Montana Archeological and Geomorphological Inventory and NR Testing on the East Shore of Yellowstone Lake

Discipline: Cultural
Type of Project: Research
Funding Agency: National Park Service
Other Partners/Cooperators: University of Montana
Effective Dates: March 1, 2010– December 31, 2011
Funding Amount: $180,000

Investigators and Agency Representative:
NPS Contact: Tobin Roop, P.O. Box 168, Yellowstone NP, WY 82190; Tobin_roop@nps.gov; 307-344-2224 (phone); 307-344-2211 (fax)

Investigator: Doug MacDonald, Department of Anthropology, University of Montana, Missoula, MT 59812; douglas.macdonald@mso.umt.edu; 406-243-5814

Project Abstract: Due to the current uplift caused by the magma chambers under Yellowstone Lake, 2,000-10,000+ year old previously buried cultural remains are being uncovered and lost into the lake as the shoreline erodes. This natural phenomenon is destroying some of the oldest archeology in YNP -cultural information which will help us understand human use of the area and its resources. Also recent forest fires have resulted in a loss of vegetation in this area, resulting in additional shoreline erosion. All of these factors, as well as looting by park visitors, contribute to the loss of significant archeological data.

Archeological inventory to identify prehistoric/historic archeological sites will be conducted to the standards set by the Secretary of the Interior's Standards and Guidelines for Identification of Historic Properties and the Wyoming State Historic Preservation Officers 2003 Guidelines and Standards for Class III Reports. Additional archival research may be required. On-going tribal consultation with the affiliated tribes has yet to identify any traditional cultural properties, although some tribes (Crow, Kiowa) have identified Yellowstone Lake as a significant ethnographic resource. A geomorphological study of landforms along the eastern shore of the lake will be conducted by a qualified investigator. If possible, Kenneth Pierce (Retired Professor, Montana State University) will fulfill this task; however, if he is not available, another geomorphologist (to be hired as a sub-consultant to the University of Montana) will complete this portion of the project.

The inventory will follow standard archeological investigation procedures accepted by the Wyoming State Historic Preservation Office. The project area will be initially examined by the field crew with personnel spaced at 10-30 meter intervals. Information on previously identified sites will be provided by YNP archeologist Elaine Hale and/or Robin Park prior to the inventory. Sites will be identified on the basis of two or more prehistoric artifacts, or one diagnostic artifact, or one or more features within 30 meters of one another. Site maps showing prominent landmarks will be prepared. Shovel tests may be conducted where the Crew Chief deems it necessary. If time/weather permits, 1 by 1 meter units will be excavated in areas where shovel tests produced buried cultural artifacts. Samples of eroding features such as hearths will be taken with the samples processed for additional analyses such as radiocarbon and macrofloral. Cultural site locations will be plotted on the appropriate USGS topographic quadrangle and photographs will be taken of the project area, site locale, and pertinent geological or locational features. Appropriate Wyoming Cultural Properties Forms will be filled out for each site and a Wyoming Isolated Find form filled out for isolated finds. Condition assessment forms will be filled out for all sites.

Outcomes with Completion The draft inventory report and site forms should be submitted during the spring of 2011 (due March 5, 2011). The draft report will be sent to YNP for review and comment, after which the final report can be completed prior to the project deadline of 2011. The final report is due September 30, 2011, in 15 copies. Site forms will be complete with site map, site photo, and National Register recommendation.

Keywords: Archeological inventory, shoreline erosion, Yellowstone Lake, Yellowstone National Park, University of Montana