Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

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

Discipline: Cultural
Type of Project: Technical Assistance/Education
Funding Agency: National Park Service
Other Partners/Cooperators: University of Montana
Effective Dates: 3/1/2011 – 12/31/2013
Funding Amount: $327,380 [FY13:$30,000; FY12: $117,380; FY11: $180,000]

Investigators and Agency Representative:
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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 work to identify and evaluate 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 southern shore of the lake will be conducted by a qualified investigator. If possible, Marc Hendrix (Professor, University of Montana) 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 and assessment 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 interval transects. 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 test probes may be conducted where the Crew Chief deems it necessary. As part of the site evaluations, 1 by 1 meter units will be excavated in areas where shovel tests produce 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.

Cultural materials collected during the project, under research permit and accessioned to the YNP Museum, will be processed for analysis at the University of Montana archeology laboratory during the winters of 2011-2012 and 2012-2013. Cataloging and packaging shall follow guidelines provided by Yellowstone Heritage and Research Center personnel. After museum collections records for each significant collected artifact are completed, the artifacts will be returned to the YNP Branch of Cultural Resources Archeologist. Field notes, photographic negatives, and other documents will be curated at the NPS, Heritage and Research Center, in Yellowstone National Park. Artifacts will be returned no later than December 31, 2014 with the electronic ANCS+ cataloging records.

2013: This portion of the project entails completion of the project reports and final geomorphological survey along south shore of Yellowstone Lake, Wyoming, within Yellowstone National Park (YNP). These areas have been subjected to previous archaeological survey due to the heavy erosion of lake shores and the potential destruction of the sites.

Outcomes with Completion Dates:

- National Register Testing, East and South Shores, Yellowstone Lake during 2011-2012
- Complete Yellowstone Lake area inventory; any areas not included in prior years' survey by end of field season, 2012
- Geomorphological survey of southeast and south shore of Yellowstone Lake by end of field season, 2012
- Wyoming Cultural Sites Forms for all historic and prehistoric archeological sites recorded within survey area by March 5, 2012 for 2011 field season and by March 5, 2013 for 2012 field season
- Site Condition Assessment Forms for each site by September 25, 2011 for 2011 field season and September 25, 2012 for 2012 field season.
- Inventory and Evaluation report by March 5, 2012 for 2011 field season and by March 5, 2013 for 2012 field season; full 2011-2012 field report due by December 31, 2013.
- Data entered into ANCS+ database and artifacts transferred to NPS for curation by December 31, 2013
- GIS Data and Metadata by December 31, 2013
- Draft Final Technical Report, South Shore Archaeology - 12/31/14
- Final Technical Report, South Shore Archaeology- 5/01/2015
- Draft Public Outreach Volume—12/31/2015

Keywords: archeology, geomorphology, inventory, field school technical assistance, Yellowstone National Park, University of Montana