Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Dendroclimate Analysis for Dinosaur National Monument

Discipline: Cultural
Type of Project: Technical Assistance
Funding Agency: National Park Service
Other Partners/Cooperators: Utah State University
Effective Dates: 8/1/2014 – 12/31/2017
Funding Amount: $7,360

Investigators and Agency Representative:
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Investigator: Judson Finley, Assistant Professor, Utah State University, Address - USU Logan Campus, OM 245F, 0730 Old Main Hill, Logan UT 84322-0730, Phone - (435) 797-9621 judson.finley@usu.edu

Project Abstract: The purpose of the project is to develop a 2000-year tree-ring record for Dinosaur National Monument that can be used as a baseline climate proxy for archaeological analysis. The project will collect tree ring samples, prepare the samples, and conduct analysis through tree-ring series cross-dating and series analysis. A written report of the analysis will be prepared for this aspect of the project.

Utah State University contributes to this project in several ways. Dr. Finley will collaborate with Dr. Justin Derose (US Forest Service Forest Inventory Analysis, Rocky Mountain Research Station), a tree-ring specialist whose duty station is on the USU Logan campus. Dr. Derose will contribute his time and expertise in field site collection, sample preparation, tree-ring series cross-dating (a significant time investment), and series analysis. Dr. Derose will also provide training for Dr. Finley, Elizabeth Hora-Cook, and one USU anthropology undergraduate student. Tree-ring analysis will be conducted at the USU College of Natural Resources Dendrochronoloy laboratory. The analytical facilities and instrumentation include a Velmex Unislide Stage Encoder software package installed on 10-45x microscopes. The dendrochronology lab also provides access to saws and equipment for field sampling.

Final products will include:

1) Digitized archeological base map
2) Hard copy large format base maps

Outcomes with Completion Dates:
Final Report on the tree ring analysis – September 30, 2015

Keywords: Dinosaur National Monument, Utah State University, tree-ring record, climate history