

JFSP 2004 Principal Investigator Workshop

Project Title: Fire regimes & forest structure of Utah & eastern Nevada: A multi-scale history from tree rings

Project Location: Utah and eastern Nevada

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Description of Project: Utah and eastern Nevada currently lack the site-specific histories of fire and forest structure that are necessary for scientifically based land-management planning in this region. For a region with such extensive fire-adapted ecosystems, surprisingly few fire and forest-structure histories have been reconstructed and these only at stand scales and only in a few of the region's forest types. Twentieth century fire exclusion profoundly changed forest and fuel structures in many forests of the western US. However, these changes did not occur uniformly across the landscape due to variations in forest type, topography, and regional gradients in climate. As a result, we cannot confidently extrapolate fire and forest-structure histories across this region based on the few existing fine-scale histories. Our **main objective** is to reconstruct multi-century histories of fire and forest structure across a range of topography, forest type and regional climate in 10 watersheds in Utah and eastern Nevada, from fire scars and tree establishment dates. Our spatially explicit sampling design will collect this information in an efficient, systematic manner across agency boundaries and forest types. Our **second objective** is to scientifically assess the extent to which our fire and forest-structure histories can be extrapolated to unsampled areas by elucidating the drivers of spatial variation in the areas that we sample. Our **third objective** is to communicate the results of our work to wildland managers in Utah and eastern Nevada. This proposal responds to RFP 2001-3, Task 3.

Status Report: We have completed sampling in 6 watersheds in southern Utah and eastern Nevada (Paunsagunt Plateau, Henry Mountains, Tushar Mountains, Abajo Mountains, Wah Wah Mountains and Snake Range). In these watersheds, we have collected ≈ 5000 wood samples from ≈ 180 plots. We have prepared all these samples for analysis and have completed dendrochronologically dating half of them. We have begun assembling and mapping supporting data on land-use history, climate and the modern fire season. We have completed field reconnaissance in another 3 watersheds in preparation for field sampling during summer 2004, which will include watersheds in northern Utah.

Issues/Concerns affecting the project: We originally proposed to do this research from October 2002 through September 2005. However, we did not receive our funding until August 2003. We received additional funding from local land managers to extend the work funded by JFSP, and were able to use this additional funding to begin the research in 2002 as scheduled. However, we anticipate requesting a no-cost extension until September 2006.