

**Project Summary**  
**Rocky Mountains Cooperative Ecosystem Studies Unit**

<b>Project Title: A National Study of Fire/Fire Surrogate Treatments – Lubrecht Forest Site</b>
<b>Type of Project :</b> Research
<b>Funding Agency: USDI/USDA Forest Service Joint Fire Science Program</b>
<b>Effective Dates: April 21, 2000 – December 31, 2005</b>
<b>Funding Amount: \$1,121,066</b>
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<b>Project Abstract:</b> In response to severe wildfires across the U.S. in historically short-interval, fire-adapted forests, the USDA/USDI Joint Fire Sciences Program funded a five-year nationwide study of hazard reduction treatments. The overall objective is to evaluate the effects of prescribed underburning and/or thinning (i.e., fire/fire surrogate treatments) on fuels and fire behavior, soils, birds and small mammals, bark beetles, root rots, and treatment costs and product revenues. The University of Montana's Lubrecht Experimental Forest was selected as one of 13 sites in the Fire/Fire Surrogates national network. The overall design incorporates four treatments that represent the primary options managers are considering for hazard reduction/ecosystem restoration: 1) cut-only (thin to 50 BA/acre, which removes about half of the existing trees), 2) burn-only (prescribed underburn in the spring), 3) cut-burn (thin to 50 BA and prescribed underburn in the spring), and 4) control (no cutting or burning). These four treatments, in turn, emerge from the four common hypotheses for hazard reduction/ecosystem restoration: <i>Hypothesis 1:</i> Forest ecosystems are best conserved by restoring ecosystem structure, which leads to the cut-only treatment.  <i>Hypothesis 2:</i> Forest ecosystems are best conserved by restoring ecosystem processes, which leads to the burn-only treatment.  <i>Hypothesis 3:</i> Restoration of sustainable forest ecosystems requires both process and structural restoration, which leads to the cut-burn treatment.  <i>Hypothesis 4:</i> Forest ecosystems are best conserved by passive management i.e., "let nature take its course," which leads to the control or "no treatment."
<b>Outcomes with completion dates (reports, publications, workshops, videos, etc.):</b> <b>Theses beginning in 2002; publications beginning in 2004.</b>

**Keywords: Ecosystem restoration, hazard reduction, prescribed burning, thinning, wildfire**

**For Administrative use only:**

*Date Annual Report Received:*

*Date Final Report Received:*

*Publications, etc. on file:*

Attach any appropriate supporting materials.