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## Project Narrative 2003 Highlights, Accomplishments and Activities

### **Fuel reduction and forest restoration strategies that also sustain key habitats, species, and ecological processes in fire-prone ecosystems in the interior Northwest.**

We are partners with the Okanogan and Wenatchee National Forests in 3 “adaptive management” science projects, including 2 that are part of regional or national “meta-experiment” research networks, that examine in part or wholly the effects of prescribed fire or fire surrogate (thinning) treatments on ecosystem pattern (e.g., plants, animals, fuels, soils) and processes (fire, insects, disease). One study is part of a 15-site national network of sites studying fire and fire surrogates, and another study is part of a 9-site western regional network studying prescribe fire effects on fuels, keystone woodpecker species, and neotropical migrant birds. Thinning was completed in the fire and fire surrogates study, and burning is scheduled for this fall. Pre-burn data collection has been done prior to burning next spring on the prescribed fire study. These Forests are the pilot group for Region 6 forest planning, so projects’ outputs will provide significant short- and long-term information for Forest plan revision in the interior Northwest.

In collaboration with the keystone woodpecker and fire meta-study listed above, we initiated a unique study of snag etiology in ponderosa pine forests focusing on the effects of prescribed burning (or not) on snag development processes, availability, and nest-site selection by woodpeckers. The snag study will be unique in describing how prescribed burning of small watersheds might affect insect and disease processes creating snag and down woody debris legacies.

We completed planning a 4-yr study to begin next year on the implications for northern spotted owls, a potential indicator species for wide-ranging old forest species, of dry-forest fire and fuel management strategies. The study will be a collaboration of the PNW Research Station, Okanogan & Wenatchee National Forests, US Fish and Wildlife Service, and the National Council for Air and Stream Improvement (NCASI), which is sponsored by the U.S. timber industry. This work will contribute significantly to our knowledge of the impacts of fire and fuel management strategies on key wide-ranging old-forest species, towards validation of Northwest Forest Plan Standards and Guidelines for fire and spotted owl management in eastside Cascades habitats, to an understanding of western regional spotted owl viability, and for Forest plan revisions.

Manuscripts on key species and processes (e.g. lichens, mycorrhizal fungi, mycophagy, arboreal rodents) in ponderosa pine, Douglas-fir, and grand fir forests, and their management relative to fire and fuels have been accepted for publication next year or are near submission to peer-reviewed journals.