

Habitat suitability for Nesting White-headed Woodpeckers in the Pacific Northwest: Past, Present, and Future

Introduction: The USDA Forest Service Rocky Mountain Research Station (RMRS) and Pacific Northwest Region (R6) are leading the effort to examine habitat suitability for nesting White-headed Woodpeckers, a regional endemic species of the Pacific Northwest and California. This woodpecker may be particularly vulnerable to environmental change because it occupies a limited distribution and has narrow habitat requirements. They are year-round residents of dry coniferous forests, typically found in open ponderosa pine forests with mature, cone-producing trees that provide seasonal foraging resources, and snags and stumps that provide nest cavity substrates. Mature, open, ponderosa pine habitat has declined more dramatically than any other forested habitat of the Interior Pacific Northwest.

Monitoring & Research Objectives:

- Determine habitat suitability for nesting woodpeckers in burned and unburned forests under current conditions.
- Determine the effect of fuels reduction treatments on habitat suitability.
- Estimate occupancy of woodpeckers throughout the USFS Pacific Northwest Region.
- Evaluate historic and future nesting habitats under different management & climate scenarios.
- Identify future needs of habitat suitability to help guide forest restoration activities.



Male White-headed Woodpecker on Ponderosa Pine

Monitoring & Research Approach:

- Validation monitoring – designed to validate & refine habitat suitability models of nesting white-headed woodpeckers in burned and unburned forests.
- Broad-scale occupancy monitoring - designed to provide reliable, standardized data on the distribution, site occupancy, and population trends for white-headed woodpeckers across their range in OR and WA.
- Treatment effectiveness monitoring – designed to assess effect of stand-level treatments on woodpecker occupancy and nest survival.
- Fuels data collection – designed to support modeling of fire-climate impacts on historic and future habitat suitability

Forest Management Concerns:

Dry forest habitat occupied by White-headed Woodpeckers is the target of most restoration and fuels reduction projects in the USFS Pacific Northwest Region, which have the potential for either beneficial or negative effects on their habitat. This research and monitoring will provide a better understanding of habitat needs, to inform restoration projects and fuels prescriptions.

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