

Songbird Response to Alternative Forest Density Management in Young Douglas-fir Stands

Joan C. Hagar

Presentation Abstract

Thinning has been increasingly used in the Pacific Northwest to restore structural and biological diversity to densely-stocked young- to mid-aged forests that have been previously intensively managed for timber production. In the short term, thinning promotes development of understory vegetation, which in turn can increase habitat diversity for wildlife, particularly for songbirds. Thinning also has been identified as a potential approach to accelerate the development of characteristics that are typical of older forest stands. Both the immediate and long-term response of wildlife and habitat to thinning is likely to be influenced by thinning intensity and pattern. The BLM Density Management Study (DMS) was designed to compare ecological responses among various thinning intensities. The purpose of our study was to compare songbird abundance among these thinning treatments to demonstrate the range of responses that might occur as a result of different thinning practices.

We sampled breeding songbird abundance using fixed-radius point counts at four of the DMS sites (Bottomline, Green Peak, O.M. Hubbard, and Ten High). We conducted bird surveys one year before treatment and in five non-consecutive years after the first thinning, including surveys at two sites in the first season following a re-thinning treatment. Species richness increased following thinning, but response to thinning varied among species. Although several species differed in abundance between control and thinned stands following treatment, few species responded differentially to thinning intensity. The patterns of songbird abundance and species richness that we observed represent short-term responses to the disturbance of thinning; documenting bird response to variation in structural development among thinning treatments will require long-term monitoring.

Keywords: commercial thinning, forest structure, Neotropical migrants, songbirds.

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Joan C. Hagar is a research wildlife biologist, US Geological Survey Forest and Rangeland Ecosystem Science Center, 3200 SW Jefferson Way, Corvallis, OR 97331; joan_hagar@usgs.gov.