



Legacy Bird Species at Risk Monitoring in and around Camp Navajo and the Naval Observatory Flagstaff Station, AZ

Project # 07-344

Background:

Current forest conditions on two Department of Defense (DoD) facilities – Camp Navajo and Naval Observatory Flagstaff Station (NOFS) are conducive to high-intensity wildfire. High intensity wildfire at Camp Navajo or NOFS could destroy forest cover necessary for realistic training, could negatively affect the sustainability of training ranges, and could damage high value mission-essential equipment. To reduce this risk, both facilities are currently using mechanical thinning and controlled burning to restore the ecological balance of their forestlands. However, the effect of these forest treatments on two DoD avian Species at Risk, the Cordilleran Flycatcher and the Olive-sided Flycatcher are unknown. Therefore, this study was initiated to determine what effect forest treatments have on these priority species, and to inform proper management for the conservation of priority species in lieu of federal listing.

Objective:

The overall objective of this study was to determine the effect of forest thinning on two avian Species At Risk: the Cordilleran Flycatcher and the Olive-sided Flycatcher. The results of this research effort were used to make recommendations regarding the most effective management approach to reduce risk of catastrophic wildfire while preventing further federal listing of species residing on DoD installations.

Summary of Approach:

This project was funded by the Department of Defense Legacy Program. Our study area was comprised of four study plots in recently-thinned ponderosa pine forests in northern Arizona. We used avian point-counts along linear transects to survey all avian species residing on survey plots, focusing on locating the two priority species. Point-counts were conducted throughout the breeding season (May, June, and July) in 2008 and 2009. We compared forest characteristics in locations where we did not detect priority species to forests in northern Arizona where these species are known to exist.



Fire-managed ponderosa pine forests in northern Arizona that were the focus of this study typically consist of young, smaller trees, with a low density of snags, little understory vegetation, and low prevalence of Gambel Oak

Benefit:

Treatment of forests on DoD facilities in northern Arizona reduces the risk of wildfire to mission-critical equipment and activities. However, adverse effects of this management on priority species could increase the likelihood of further federal listing of wildlife, thereby reducing flexibility of military operations. Our study provided management recommendations to effectively merge forest management and proactive conservation of priority species to facilitate the military mission at NOFS and Camp Navajo.

Accomplishments:

We found that at present, young, recently-thinned ponderosa pine forests characteristic of those surveyed in our study represent low-quality habitat for priority species. However, over time thinning will likely create habitat for these species by facilitating oak recruitment, creating forest openings, and encouraging growth of large, older trees leading to the eventual creation of large snags.

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