

Bird Responses to Woodland Treatments

This memo provides a summary of preliminary findings. Information provided here has not been peer reviewed, is not finalized, and is subject to change pending further analysis or data collection. A final product will be available for distribution upon project completion and adherence to the USGS Fundamental Science Practices.

Background

- Many sagebrush-associated bird species are declining. In addition, we do not understand the distribution of woodland species across the intermountain West.
- We do not understand how woodland removal management affects bird communities and populations.

Sampling

- Examining the bird community responses to woodland treatments at 5 western juniper woodland sites (CA, OR, ID), 4 pinyon pine woodland sites (NV), and 4 Utah juniper woodland sites (UT) using data collected on point transects.
- Using territory mapping, color banding and nest monitoring to study bird population responses of 7 species at 4 intensive sites: Five Creeks in the western juniper woodland, South Ruby and Seven Mile in the pinyon-pine woodland, and Onaqui in the Utah juniper woodland.

Preliminary results suggest

- Bird community analysis revealed species common to all woodland sites and several species distinct to each woodland type.
- Both species richness and overall bird density were highly variable between years and within woodland type.
- There do not appear to be strong treatment effects on overall bird species richness in year immediately following treatment.
- Abundance of shrubland and grassland focal species increased after woodland treatment at some study locations.
- The overall bird community is aligned along a forest to shrubland/grassland gradient and annual changes in site scores indicate regional dynamics may influence site level community composition.
- Bird communities differed at treatment and control within sites but treatment effects are apparent at sites during the post treatment period
- Visual analysis of mapped territories at the Five Creeks site for Vesper sparrows, Gray flycatchers, and Green-tailed towhees indicate changes in both location and size of territories in the first year post treatment.
- Long-term analysis will be necessary to fully document the response of bird communities and populations to woodland management.

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