



New Mexico Avian Conservation Partners Research Priorities*

Climate Change

*Tier One***

- Resilience analyses (to determine which species will be most impacted) for the following species:

Bendire's Thrasher
Lesser Prairie-Chicken
Brown-capped Rosy-Finch
Pinyon Jay
Juniper Titmouse
Chestnut-collared Longspur
Virginia's Warbler
Flammulated Owl
Black Rosy-Finch

Spotted Owl
McCown's Longspur
Lewis's Woodpecker
Grace's Warbler
Scaled Quail
Red-faced Warbler
Mexican Whip-poor-will
Woodhouse's Scrub-Jay

- GIS models to determine (or further refine) potential climate change habitat refugia in NM for the following species (models should use the best available habitat use data for each species; for species with limited habitat use data, combining habitat use research with climate change models is recommended):

Bendire's Thrasher
Lesser Prairie-Chicken
Brown-capped Rosy-Finch
Pinyon Jay
Juniper Titmouse
Chestnut-collared Longspur
Virginia's Warbler
Flammulated Owl
Black Rosy-Finch

Spotted Owl
McCown's Longspur
Lewis's Woodpecker
Grace's Warbler
Scaled Quail
Red-faced Warbler
Mexican Whip-poor-will
Woodhouse's Scrub-Jay

Bendire's Thrasher

Research Needs:

*Tier One***

- Continued statewide breeding inventory (to capture variability of habitats and climatic conditions that may influence presence and occupancy)
- Winter abundance, distribution, and habitat needs
- Reproductive success in grazed vs. ungrazed habitats
- Reproductive success among the different habitat types used by this species
- Pilot program to remove heavy grazing pressure from areas with known Bendire's Thrasher populations, and resulting Bendire's Thrasher reproductive response
- Can Scaled Quail and Bendire's Thrasher be managed for together?

*Tier Two***

- Additional studies on breeding habitat needs, especially in northwestern New Mexico
- Better understanding of the Bendire's Thrasher life cycle
- More accurate population size estimate

Lesser Prairie-Chicken

*Tier One***

- Effects of oil and gas development on Lesser Prairie-Chicken
- Effects of wind development on Lesser Prairie-Chicken
- Effects of USDA Farm Bill conservation programs on Lesser Prairie-Chicken

*Tier Two***

- Avoidance behavior of Lesser Prairie-Chicken
- Translocation methodologies for Lesser Prairie-Chicken
- Additional studies regarding Lesser Prairie-Chicken response to fire and grazing

Pinon-Juniper Woodlands (P-J)

Research Needs:

*Tier One***

- Abundance and diversity of pinon-juniper birds before and after woodland thinning
- Impacts of thinning, and tree density, on pinon pine health and cone production
- Locate and monitor Pinyon Jay colony nesting sites
- Pinyon Jay occurrence and abundance at different elevations

- Reproductive success in different P-J habitat types (especially with varying tree canopy cover, tree health, elevations, and aspects) for:
 - Pinyon Jay
 - Juniper Titmouse
 - Woodhouse's Scrub-Jay
- Reproductive success in thinned vs. unthinned woodlands for:
 - Juniper Titmouse
 - Woodhouse's Scrub-Jay
- Studies investigating the importance of pinon pine mast crops for:
 - Juniper Titmouse
 - Woodhouse's Scrub-Jay
- Habitat needs at different scales, in different parts of NM, and during all aspects of their life cycle for:
 - Juniper Titmouse
 - Woodhouse's Scrub-Jay
- Investigation regarding why it appears populations of many P-J priority bird species, including Pinyon Jay and Juniper Titmouse, are increasing in the Gila Region
 - If populations are indeed increasing, studies looking at what can be done to sustain and protect the Gila populations
 - If Gila populations are indeed increasing, studies comparing P-J habitat structure in the Gila to habitat structure in other P-J woodlands statewide

*Tier Two***

- Additional studies regarding Pinyon Jay habitat needs at different scales and during all aspects of their life cycle

Forests

Research Needs:

*Tier One***

- Habitat needs at different scales, and in different parts of the state, for:
 - Mexican Whip-poor-will
 - Lewis's Woodpecker
- Statewide abundance and distribution for:
 - Flammulated Owl
 - Virginia's Warbler
 - Mexican Whip-poor-will
 - Lewis's Woodpecker
- Effects of grazing on abundance and reproductive success for:
 - Red-faced Warbler
 - Mexican Whip-poor-will
 - Lewis's Woodpecker

- Effects of forest thinning on abundance and reproductive success for:
 - Red-Faced Warbler
 - Mexican Whip-poor-will
 - Flammulated Owl
- Effects of prescribed fire on abundance and reproductive success for:
 - Red-faced Warbler
 - Mexican Whip-poor-will
- Effects of post-fire salvage logging on Lewis's Woodpecker abundance in ponderosa pine forests
- Surveys to determine current breeding locations of Brown-capped Rosy-Finch in NM

*Tier Two***

- Surveys to determine population trend for:
 - Red-faced Warbler
 - Flammulated Owl
 - Mexican Whip-poor-will
- Comparison of Lewis's Woodpecker abundance, distribution, habitat needs, and reproductive success in riparian areas vs. ponderosa pine forests
- Additional studies regarding impacts of forest thinning on:
 - Virginia's Warbler
 - Grace's Warbler
 - Spotted Owl
- Additional studies regarding habitat needs for:
 - Virginia's Warbler
 - Flammulated Owl
 - Grace's Warbler
 - Red-faced Warbler

Grasslands

Research Needs:

*Tier One***

- McCown's Longspur wintering habitat needs
- GIS models to determine abundance, distribution, and important wintering areas for:
 - Chestnut-collared Longspur
 - McCown's Longspur
- Effects of management actions (including prescribed fire during different times of the year, brush removal, grazing, etc.) on:
 - Chestnut-collared Longspur
 - McCown's Longspur
 - Scaled Quail
- Effects of oil and gas development on:
 - Chestnut-collared Longspur

- McCown's Longspur
- Scaled Quail
- Effects of wind development on:
 - Chestnut-collared Longspur
 - McCown's Longspur
 - Scaled Quail
- Effects of USDA Farm Bill conservation programs on:
 - Chestnut-collared Longspur
 - McCown's Longspur
 - Scaled Quail

*Tier Two***

- Chestnut-collared Longspur wintering habitat needs in eastern NM

Riparian Areas

Research Needs:

*Tier One***

- Lewis's Woodpecker abundance, distribution, and habitat needs (including availability of nest cavities) in riparian areas
- Effects of fuels reduction treatments (thinning and brush removal) in riparian areas on Lewis's Woodpecker abundance

*Tier Two***

- Lewis's Woodpecker abundance, distribution, reproductive success, and habitat needs in riparian areas vs. ponderosa pine forests

**This is a working list that will be periodically reviewed and updated; it is focused on NM Avian Conservation Partners Species Conservation List Level 1; incorporating Species Conservation List Level 2 species into the above research projects, when feasible, is highly recommended*

***Items listed in each tier are NOT listed in order of priority, they are listed in random order*