



Boggs Mountain Demonstration State Forest Bird Study

Board of Forestry Effectiveness Monitoring Committee, 2023 Update

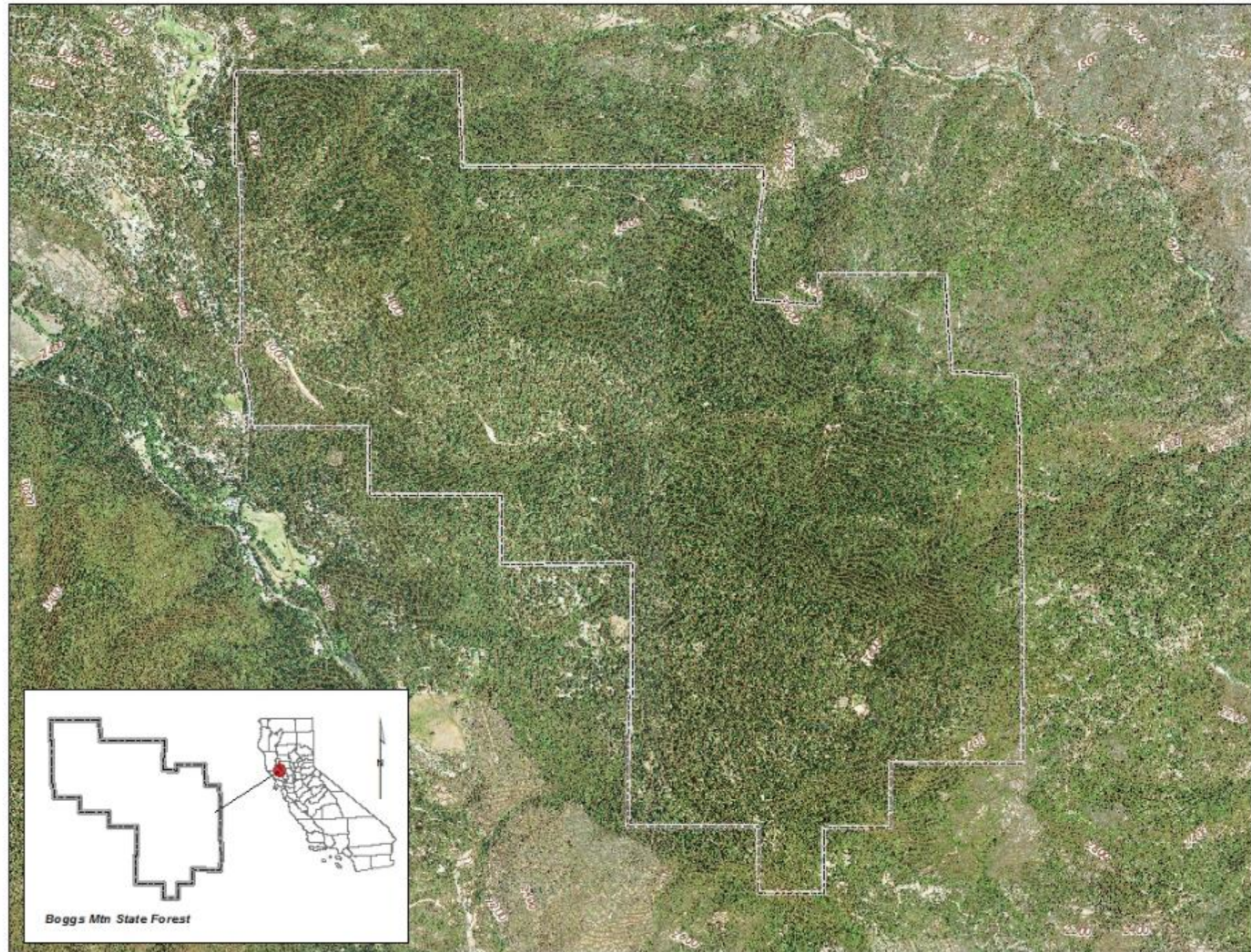


February 16, 2023

Background

Boggs Mountain Demonstration State Forest

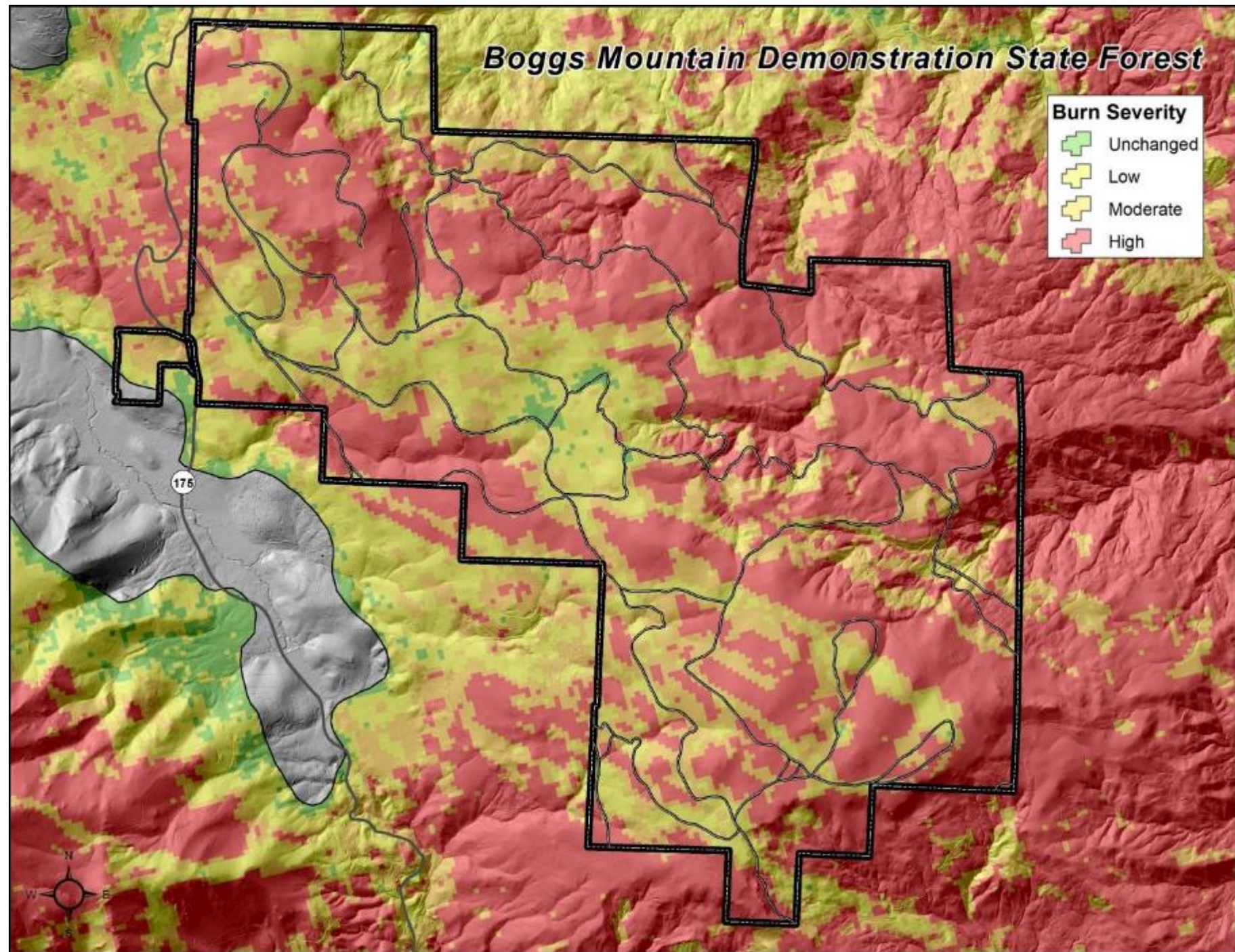
- Lake County
- 3,493 acres
- Forest stands of ponderosa and sugar pines, Douglas fir, hardwoods
- 2400 - 3750' elevation
- Temps 13 – 100°



Background

Valley Fire 2015

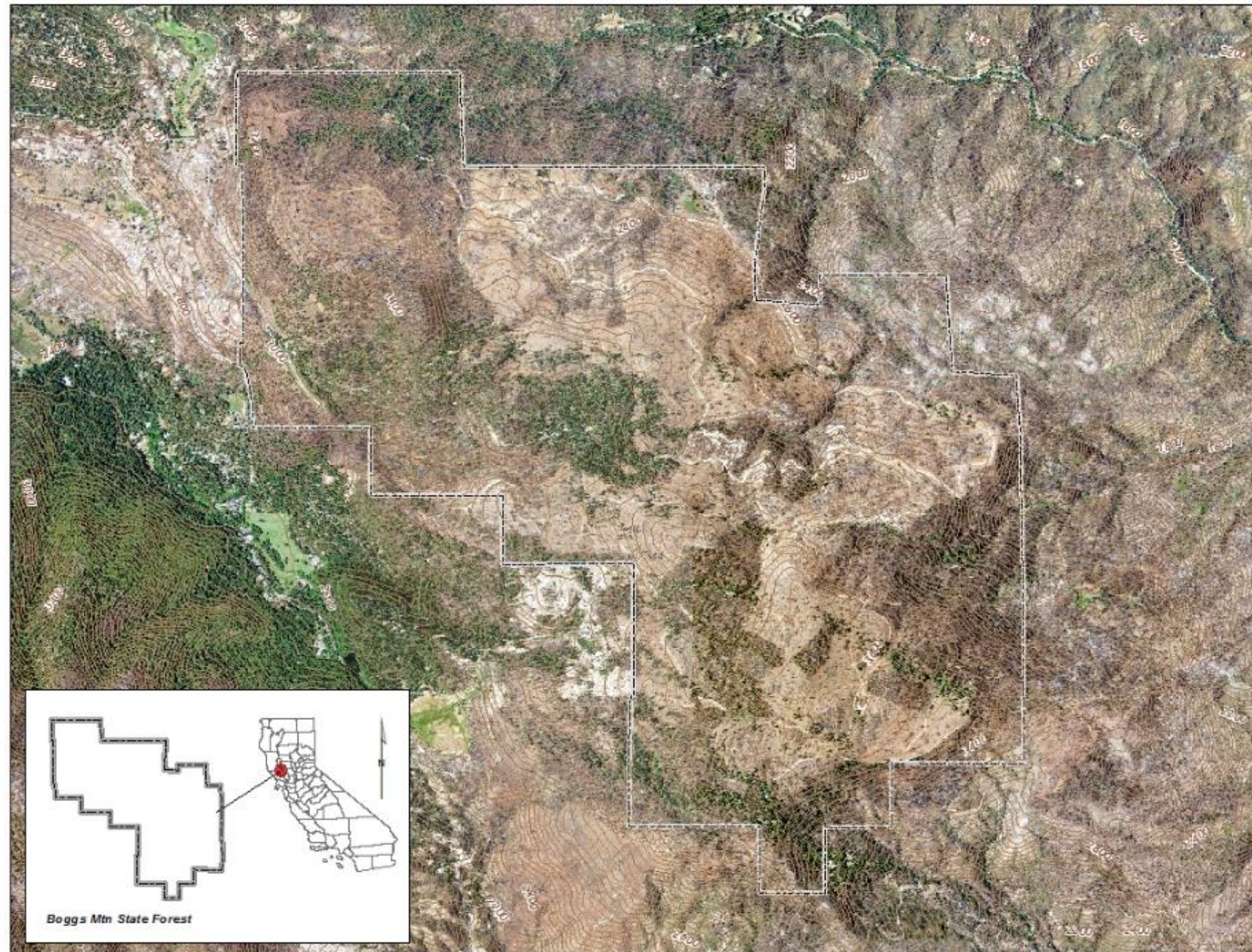
- 76,067 acres
- Boggs - 99% burned
- Moderate to High severity



Background

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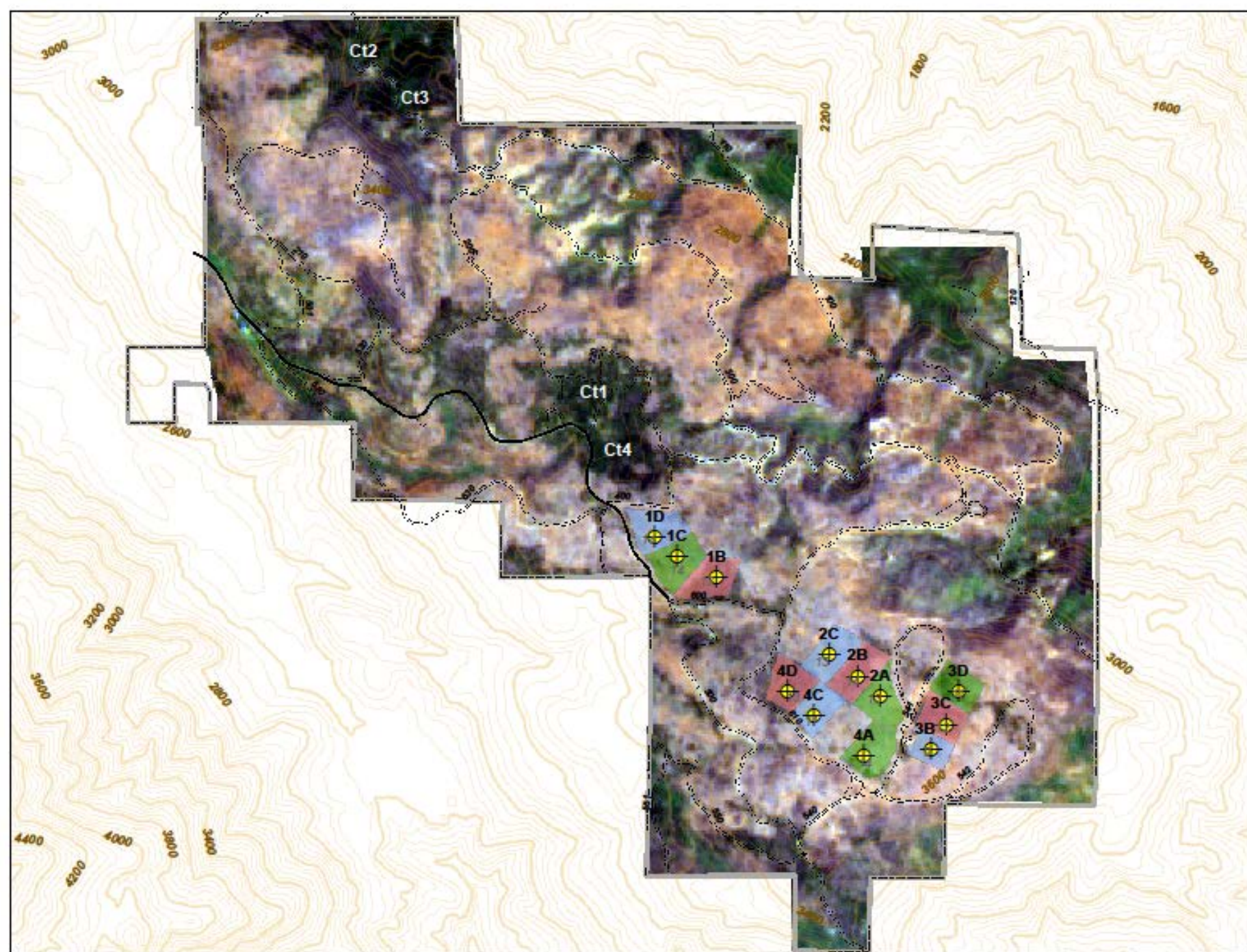
Study Design

FRAP Plots

- Salvaged, ripped, pile burned, ripped, herbicided, & planted
- Salvaged, pile burned, no herbicide, no plant
- Unsalvaged

Controls

- Landsat



Study Design

FRAP Plots

EBM Protocol

- Late spring, early summer
- Plot Center photos
- At least 3 recording days
- 5 minutes
 - ½ hour before sunrise
 - Sunrise
 - ½ hour after sunrise
- Bird interpreter
 - Species
 - Type: Call, Song, Forage, Drum, Wing Flap
 - Distance: Very close, close, intermediate, distant, very distant



Study Design



3B

Harvest, Pile,
Burn, Rip,
Plant, Spray



2A

Harvest, Pile,
Burn
NO Rip, Plant,
Spray

Study Design



1B

No Salvage



Ct3

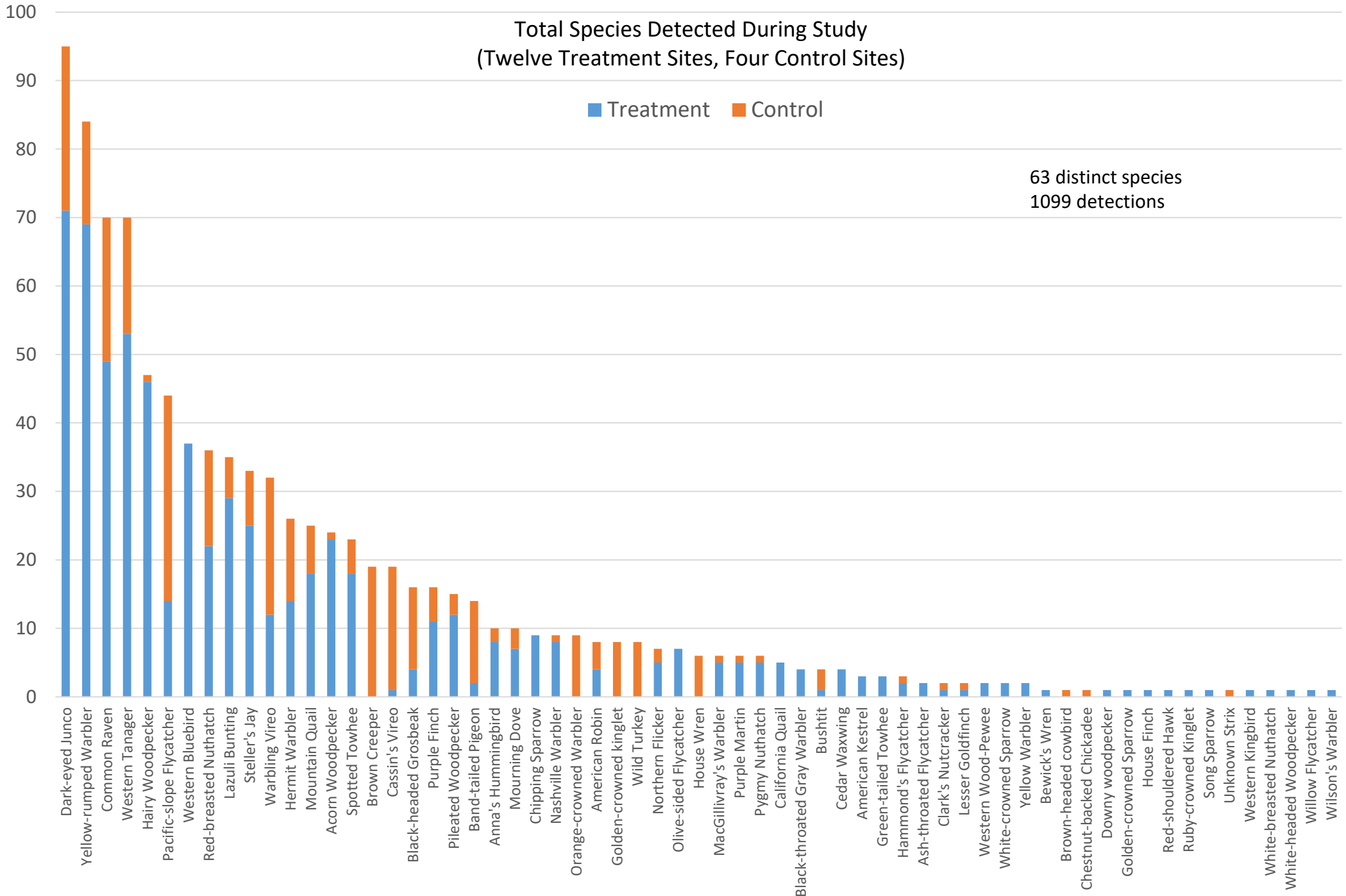
Control

Results

Total Species Detected During Study
(Twelve Treatment Sites, Four Control Sites)

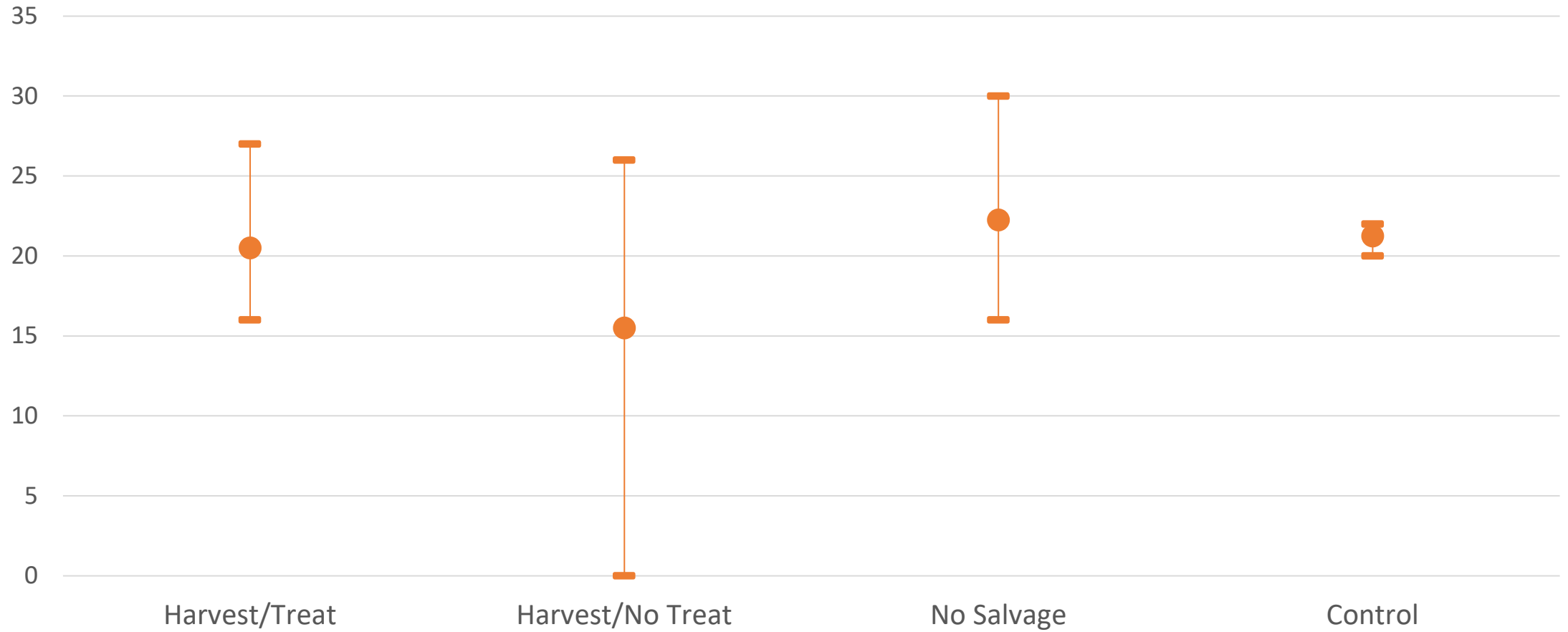
Treatment Control

63 distinct species
1099 detections



Results

Species Richness



Boggs Mtn DSF Bird Study – Results

- General Observations

- Lower abundance of woodpeckers in 2019 compared to 2017 in all plots
- Lazuli Bunting
 - One of most abundant species in 2017
 - Present, but low abundance in 2018
 - Not present in 2019
- Uncommon species persisted throughout study years
 - White-headed Woodpecker
 - Clark's Nutcracker
 - Hammond's Flycatcher
 - Green-tailed Towhee
- Northern Goshawk detection in 2019

Clark's Nutcracker



Green-tailed Towhee



Hammond's Flycatcher



White-headed Woodpecker



Boggs Mtn DSF Bird Study – Products

- 2018
 - Update to the EMC in Ukiah
 - Poster Presentation. Western Section of the Wildlife Society Annual Meeting. February
 - Presentation. Sacramento-Shasta Chapter of the Wildlife Society Forest Forum. November
 - Presentation. California Association of Resource Conservation Districts. November
- 2019
 - Presentation. Wintu Redding Chapter Audubon Society. November
 - Provided Hermit Warbler detection recordings to CDFW's Brett Furnas for dialect study
- 2020
 - Update to EMC
- 2023
 - Field Presentation to CAL FIRE Legislative Staff

Boggs Mtn DSF Bird Study – Next Steps

- 2019 was last year for bird recording data collection (Completed in June 2019)
- Bird call interpreter completed interpretations in January 2020
- Need to coordinate with FRAP to include vegetation data from the plots
- Next steps: prepare data, study materials, compile FRAP information, work with CAL FIRE RDS2 to run stats
- Restart study in 2025