

# A Tale of Treatment

How might fuel reduction treatment affect bird diversity? As part of the Marin Wildfire Prevention Authority-funded **San Rafael-San Anselmo Fuel Reduction Zone Project**, biologists used acoustic monitoring, along with routine nesting bird surveys, to understand how bird populations may respond to treatment in the pilot project treatment area. This study provides insight on how treatment could enhance native biodiversity. Results show:

**+25%** Increase in total bird species detected after treatment

**93** Distinct bird species detected in 2025, compared to 74 species detected in 2024



Acoustic monitoring equipment recorded bird calls at two locations in the same 10-acre initial treatment area (referred to as Sites 5 and 8). Acoustic monitoring was conducted at dawn and dusk during the same two-week period before treatment in 2024 and repeated during that same window one year later in 2025.

**+13%** More bird species detected in Site 5

**+17%** More bird species detected in Site 8

**These monitoring efforts help Marin Wildfire understand wildlife and habitat benefits of fuel treatment while reducing wildfire risks.**



Fuel reduction treatments within the study sites included thinning and limbing of primarily non-native eucalyptus trees, removal of hazard trees, reduction of understory ladder fuels and non-native species, and dispersal of wood chips on site. Native trees and shrubs were intentionally retained throughout the treatment process.

Nesting bird surveys were conducted weekly throughout the nesting season, both before and during all treatment activities, to ensure protection of active nests.



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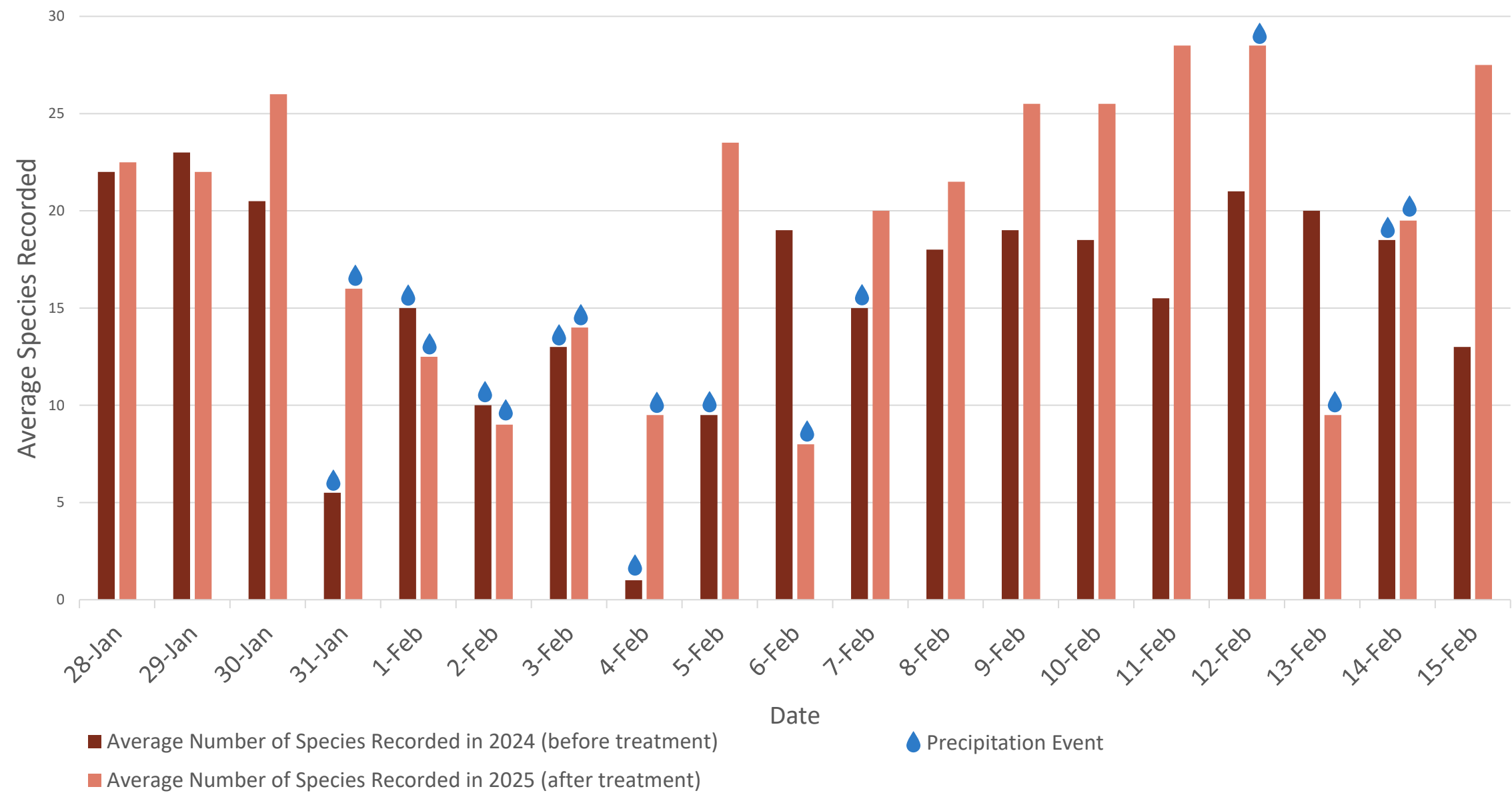
# Reduced Wildfire Risk, Increased Native Bird Diversity

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about the SRSAFRZ Project



The graphs below show the number of species recorded in Site 5 and Site 8. Each graph shows the comparison of pre-treatment (2024) and post-treatment (2025) data, as well as the precipitation that occurred during each day of monitoring. As shown in both graphs, rainy days resulted in fewer bird species detected, and there is an observable increase in the total number of native bird species in 2025 compared to 2024.

Average Species Recorded at SRSAFRZ Sites 5 and 8  
2024 vs 2025



Biologists replicated the 2024 monitoring methods in 2025 to maintain integrity of data collection between pre-treatment and post-treatment years. Recordings were analyzed to determine which species were present in the study sites, and how frequently those species were detected. In 2025 after treatment:

- Acorn woodpecker, spotted towhee, and great horned owl were most often recorded compared to other species.
- New species detected include violet-green swallow, pileated woodpecker and cedar waxwing.
- More species were recorded even during rainy days—showing a healthier, more resilient native bird community.

