

# Integrated Monitoring in Bird Conservation Regions: Four Forest Restoration Initiative 2022 Annual Report



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# Bird Conservancy of the Rockies

*Connecting people, birds and land*

**Mission:** Conserving birds and their habitats through science, education and land stewardship

**Vision:** Native bird populations are sustained in healthy ecosystems

Bird Conservancy of the Rockies conserves birds and their habitats through an integrated approach of science, education, and land stewardship. Our work radiates from the Rockies to the Great Plains, Mexico and beyond. Our mission is advanced through sound science, achieved through empowering people, realized through stewardship, and sustained through partnerships. Together, we are improving native bird populations, the land, and the lives of people.

## **Core Values:**

1. **Science** provides the foundation for effective bird conservation.
2. **Education** is critical to the success of bird conservation.
3. **Stewardship** of birds and their habitats is a shared responsibility.

## **Goals:**

1. Guide conservation action where it is needed most by conducting scientifically rigorous monitoring and research on birds and their habitats within the context of their full annual cycle.
2. Inspire conservation action in people by developing relationships through community outreach and science-based, experiential education programs.
3. Contribute to bird population viability and help sustain working lands by partnering with landowners and managers to enhance wildlife habitat.
4. Promote conservation and inform land management decisions by disseminating scientific knowledge and developing tools and recommendations.

## **Suggested Citation:**

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## **Cover Photo:**

[Acorn Woodpecker](#) by Andy Reago and Chrissy McLaren. Licensed under [CC BY 2.0](#).

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## Overview

This report summarizes the 2022 avian monitoring effort by Bird Conservancy of the Rockies for the Four Forest Restoration Initiative during the 2022 field season in connection with agreement 21-CS-11030400-174. We conducted fieldwork as part of the Integrated Monitoring in Bird Conservation Regions (IMBCR) program: a large, multi-scale avian monitoring program with a statistically rigorous sampling design (Pavlacky et al. 2017). Field staff from Bird Conservancy used survey protocols developed by IMBCR partners (Buckland et al. 2001, McLaren et al. 2019). Avian density, occupancy, and trend estimates will be available once we complete analysis for the IMBCR program and will be summarized in the 2022 IMBCR Final Report.

## Field Season Accomplishments

Bird Conservancy field technicians conducted bird surveys between 14 June and 2 July 2022 within the Four Forest Restoration Initiative project area, completing 34 of 50 (68%) planned 1 km<sup>2</sup> grids (Figure 1) within 4 strata (Table 1). Strata were developed in cooperation with 4FRI partners. Technicians conducted 366 individual point counts in 2022, completing an average of 10.8 points per grid. In total, we detected 4,600 individuals of 69 avian species and one mammal (Abert's Squirrel).

## Accessing Data and Results

To view interactive maps illustrating survey and detection locations, species counts, and density and occupancy estimates from previous years, please visit Bird Conservancy's Rocky Mountain Avian Data Center (RMADC) at <http://rmbo.org/v3/avian/ExploretheData.aspx>. Instructions for using the RMADC are available at <http://rmbo.org/v3/avian/ExploretheData/HowToGuide.aspx>. Results from all strata and biologically meaningful combinations of strata, termed "superstrata", can be queried on the RMADC, including estimates by state, BCR, National Forest, and forest region for areas with full IMBCR coverage. Current field protocols can be downloaded at <http://rmbo.org/v3/avian/DataCollection.aspx>. For raw data access or requests, please contact Jen Timmer, Conservation Delivery Biologist at Bird Conservancy of the Rockies: [jennifer.timmer@birdconservancy.org](mailto:jennifer.timmer@birdconservancy.org).

Figure 1: Planned surveys within the 4FRI project area in 2022

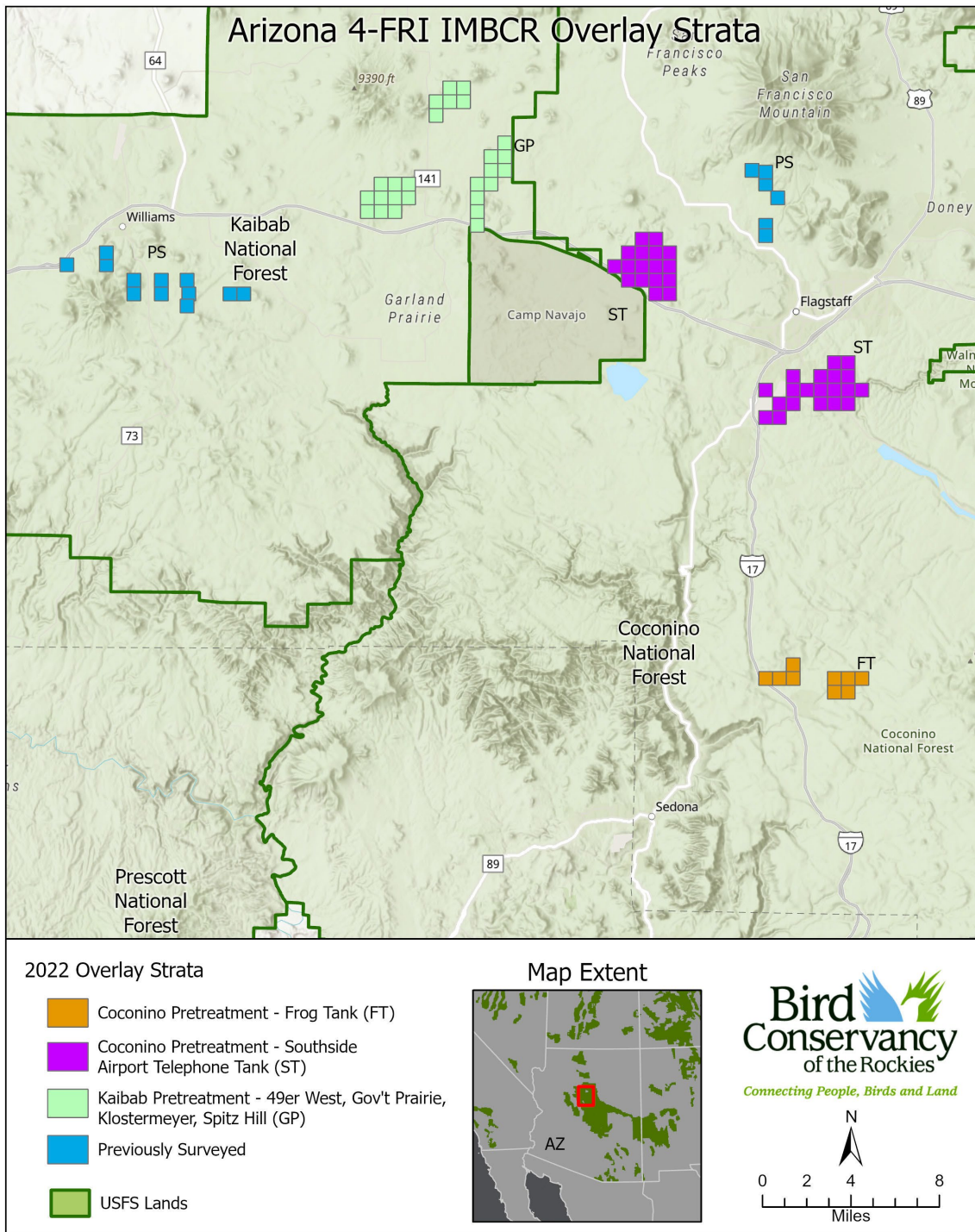


Table 1: Summary of effort for 2022 IMBCR surveys conducted by Bird Conservancy of the Rockies in USFS Region 4 by stratum

Stratum	Stratum Name	Planned Surveys	Completed Surveys
AZ-FFRI-FT	Coconino Pretreatment - Frog Tank	5	4
AZ-FFRI-GP	Kaibab Pretreatment - FW GP KL SH	15	12
AZ-FFRI-PS	Previously Surveyed	18	10
AZ-FFRI-ST	Coconino Pretreatment - Southside Airport Telephone Tank	12	8
<b>Total</b>		<b>50</b>	<b>34</b>

Table 2: Species and number of individuals recorded by Bird Conservancy staff during the 2022 field season.

Species	AZ-FFRI-FT	AZ-FFRI-GP	AZ-FFRI-PS	AZ-FFRI-ST	Total
Acorn Woodpecker	4	6	41		51
American Crow	1	15	8	3	27
American Robin	14	120	52	42	228
Ash-throated Flycatcher			15	19	34
Band-tailed Pigeon	2		1		3
Black-chinned Hummingbird			1		1
Black-headed Grosbeak	3	9	38	4	54
Black-throated Gray Warbler			4		4
Broad-tailed Hummingbird*	14	12	13	12	51
Brown Creeper*	3	3		6	12
Brown-headed Cowbird*	4	12	14	24	54
Bushtit			1		1
Cassin's Finch			1		1
Cassin's Kingbird		3	1		4
Chipping Sparrow*	4	11	10	9	34
Common Nighthawk	1	21	5	2	29
Common Poorwill		1			1
Common Raven	23	69	26	37	155
Cordilleran Flycatcher*	1	8	5	18	32
Dark-eyed Junco*	31	182	120	148	481
Downy Woodpecker		1	2		3
Dusky Flycatcher	1	6	3	1	11
Evening Grosbeak			1		1
Grace's Warbler*	21	28	19	28	96
Gray Flycatcher	9	1	4		14
Hairy Woodpecker*	19	17	32	17	85
Hepatic Tanager	2	8	5	2	17
Hermit Thrush*	16	3	6	11	36
House Finch	4	2	1	2	9
House Wren*		2	21	14	37
Hutton's Vireo			1		1

Species	AZ-FFRI-FT	AZ-FFRI-GP	AZ-FFRI-PS	AZ-FFRI-ST	Total
Lesser Goldfinch	11	4		23	38
Mallard			5		5
Mountain Chickadee*	53	160	89	160	462
Mourning Dove*		18	10	10	38
Northern Flicker*	12	64	33	71	180
Northern Goshawk				2	2
Olive-sided Flycatcher		1			1
Osprey			2	1	3
Painted Redstart			2		2
Pine Siskin		15	1	16	32
Pinyon Jay		4			4
Plumbeous Vireo	30	43	36	62	171
Purple Martin	8	8	4	6	26
Pygmy Nuthatch*	64	135	94	214	507
Red Crossbill	1		2	21	24
Red-breasted Nuthatch			1		1
Red-faced Warbler	2		1		3
Red-tailed Hawk		1	3	5	9
Rock Wren			1		1
Ruby-crowned Kinglet				1	1
Say's Phoebe		1		1	2
Scott's Oriole	1				1
Spotted Sandpiper			3		3
Spotted Towhee	2	2	7	2	13
Abert's Squirrel	1	2	3	2	8
Steller's Jay*	13	108	66	58	245
Townsend's Solitaire		8		3	11
Turkey Vulture			2	1	3
Vesper Sparrow		7			7
Violet-green Swallow*	19	64	51	58	192
Virginia's Warbler			6		6
Warbling Vireo		5	6		11
Western Bluebird*	43	66	58	60	227
Western Tanager*	9	25	64	37	135
Western Wood-Pewee*	1	70	125	76	272
White-breasted Nuthatch*	31	86	63	57	237
Wild Turkey			2		2
Williamson's Sapsucker		1			1
Yellow-rumped Warbler	34	47	30	36	147
<b>Total</b>	<b>512</b>	<b>1485</b>	<b>1221</b>	<b>1382</b>	<b>4600</b>

\*4FRI focal species (White et al. 2019)

## Literature Cited

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