

PROJECT OVERVIEW

In partnership with Salt Lake City Trails & Natural Lands, Tracy Aviary is conducting community science bird monitoring projects at two sites along the Jordan River: 1) the Nature Preserve Area of the Regional Athletic Complex (RAC), and 2) the Jordan River Golf Course (JGC). Beginning in 2015, our goal for this study was to collect data on the avian community of these sites to better understand the birds that occur at the RAC and JGC, determine how the bird community differs between sites and over time, and identify the presence of species of conservation concern. Here, we summarize results from our 2019 field season.

Breeding season point count surveys:

During May – July of 2019, 7 community scientists conducted 5 breeding season point count surveys at the RAC and the Jordan River Golf Course (Figure 2). Point count surveys were conducted by pairs of community scientists between dawn and 10am. The ‘observer’ identified all birds seen and heard during a 6-minute period, and noted the number of individuals, distance, and direction. The ‘recorder’ wrote all of the observations on the datasheet, noted the minute during the survey (1-6) when the observation was made, and also noted weather and site variables, such as wind speed and cloud cover.

Non-breeding season group surveys:

Information from point count surveys was supplemented by 8 non-breeding group surveys conducted at each site in January, February, March, August, September, October, November, and December 2019. During non-breeding surveys, groups of volunteers led by a trained Tracy Aviary staff person walked a transect through the site and noted all birds seen and heard in the area.

2019 RESULTS

During 5 breeding season surveys at the RAC, we had 816 bird observations and detected 52 species (Figure 3, 4). During 8 non-breeding season surveys, we had 3,158 bird observations and detected 84 species. We had a total species list of 93 species at the RAC in 2019.

During 5 breeding season surveys at the JGC, we had 242 bird observations and detected 28 species (Figure 3, 4). During 5 non-breeding season surveys, we had 1,723 bird observations and detected 42 species. We had a total species list of 53 species at the JGC in 2019.

We’ve detected a total of 147 bird species at the RAC and JGC between 2015 and 2019 (complete list, pages 4 – 9).

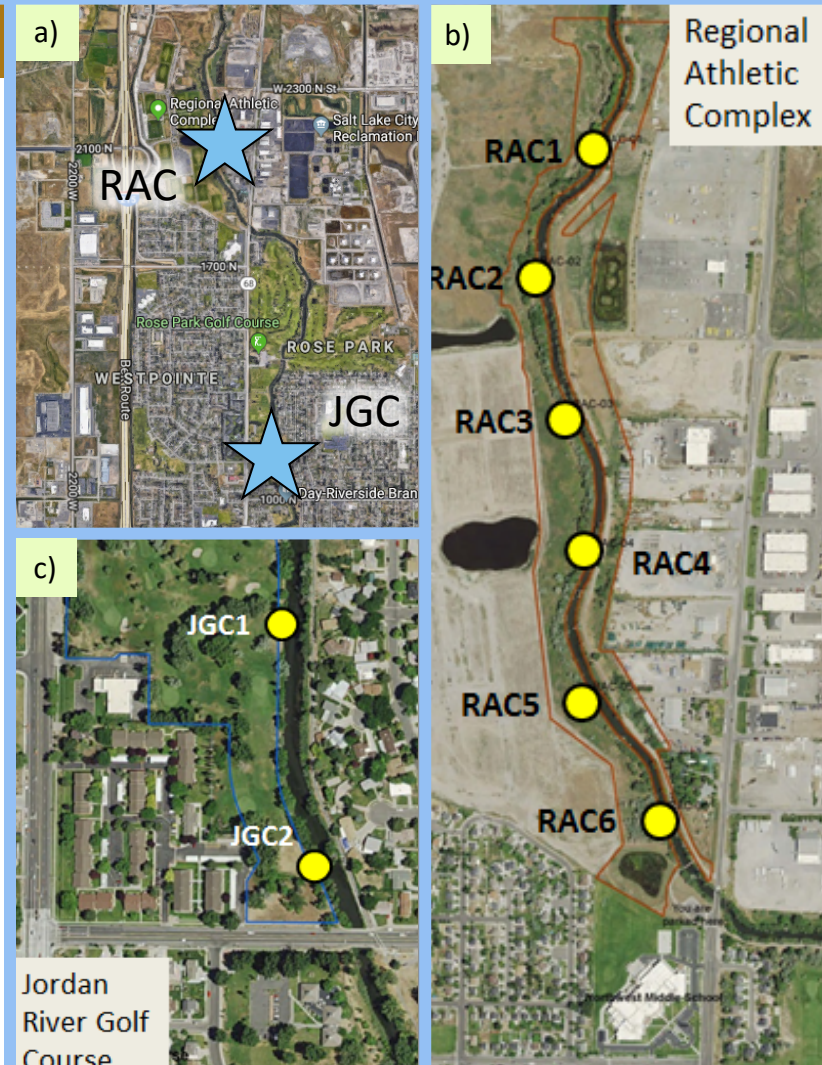


Figure 1. Map of the two study sites (a), 6 bird sampling points at the RAC (b), and 2 sampling points at JGC (c).



Figure 2. Tracy Aviary community scientists conducting breeding season and non-breeding season bird surveys at JGC/RAC.

PATTERNS OF BIRD COMMUNITY COMPOSITION ACROSS THE REGIONAL ATHLETIC COMPLEX AND THE JORDAN RIVER GOLF COURSE

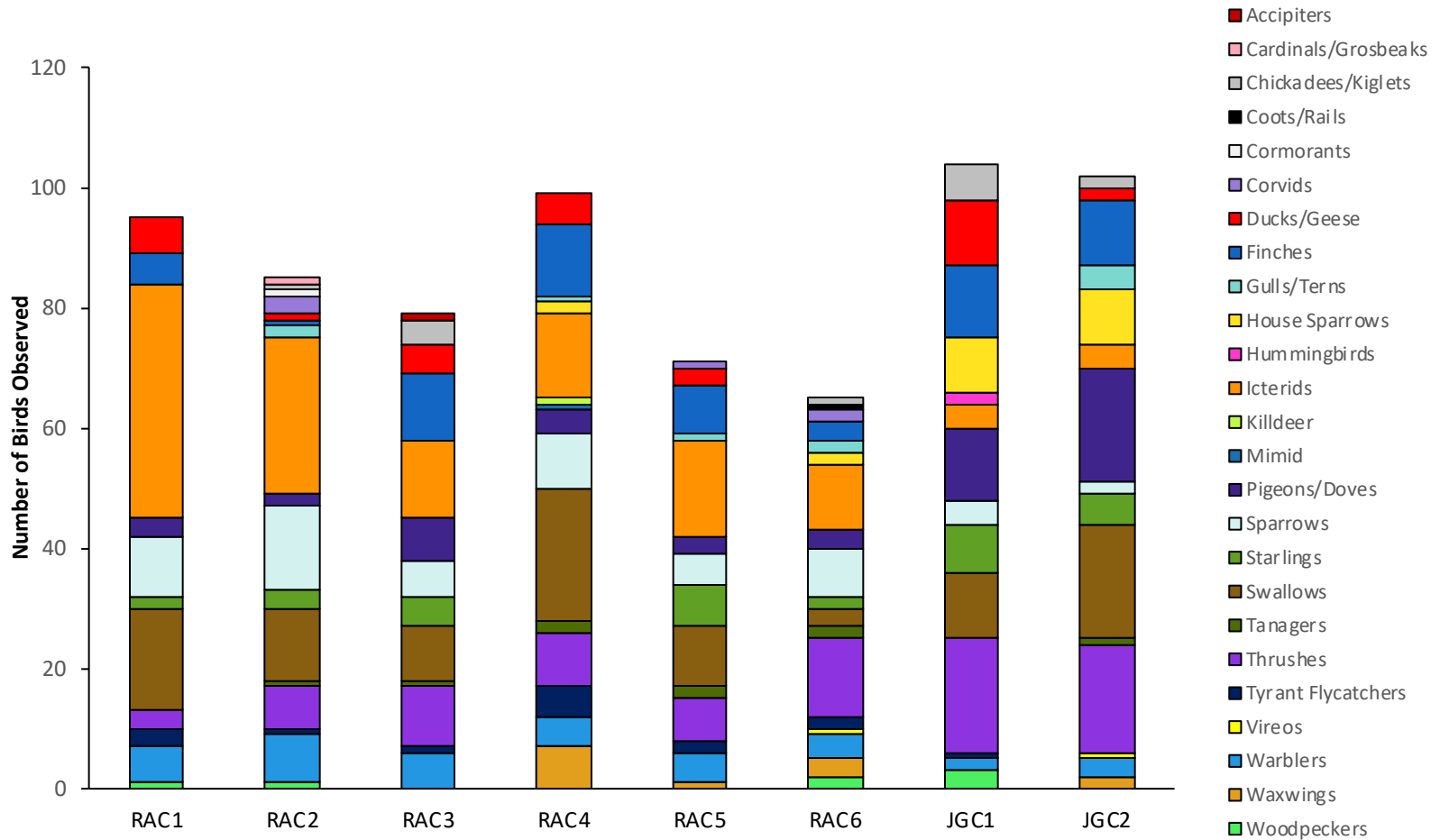


Figure 3. Number of birds from different families detected during 2019 breeding season surveys at RAC/JGC. Includes all detections within 125m of the point.

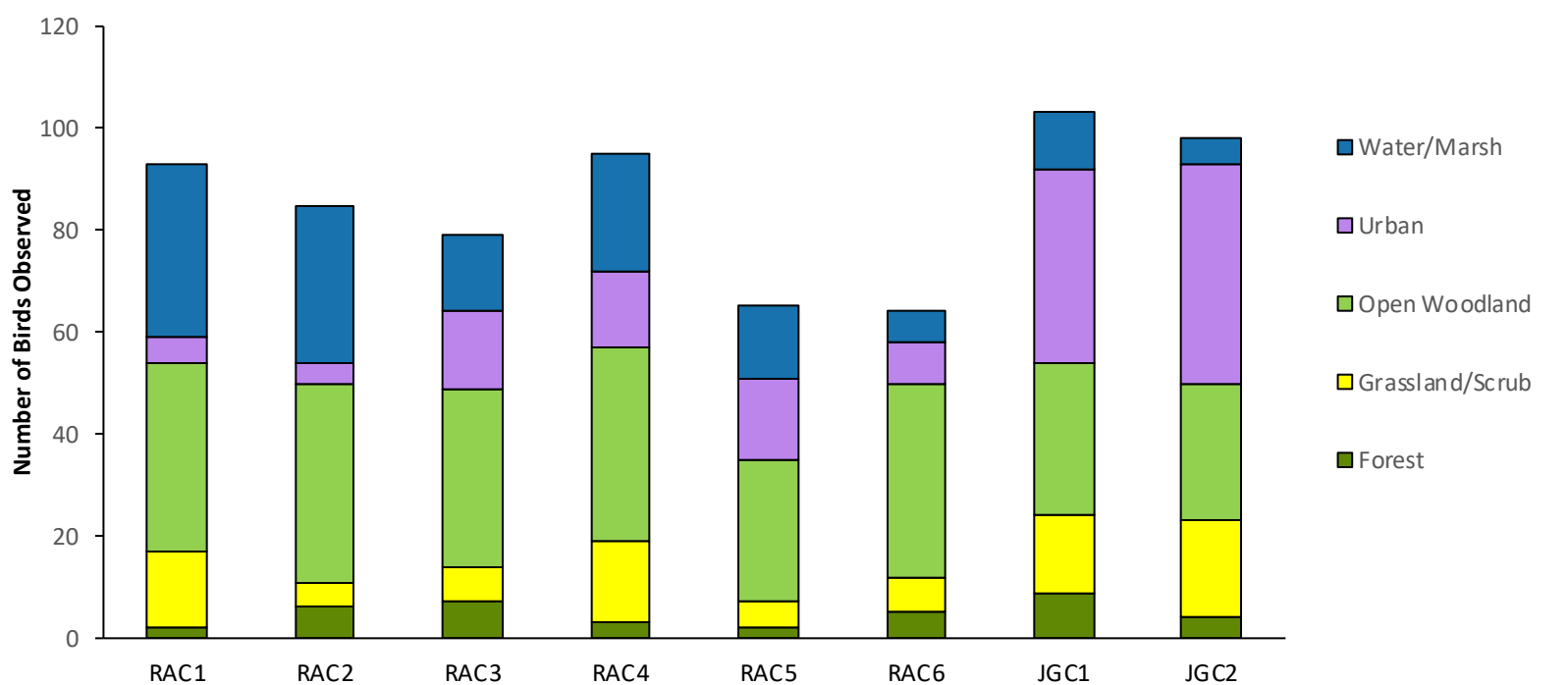
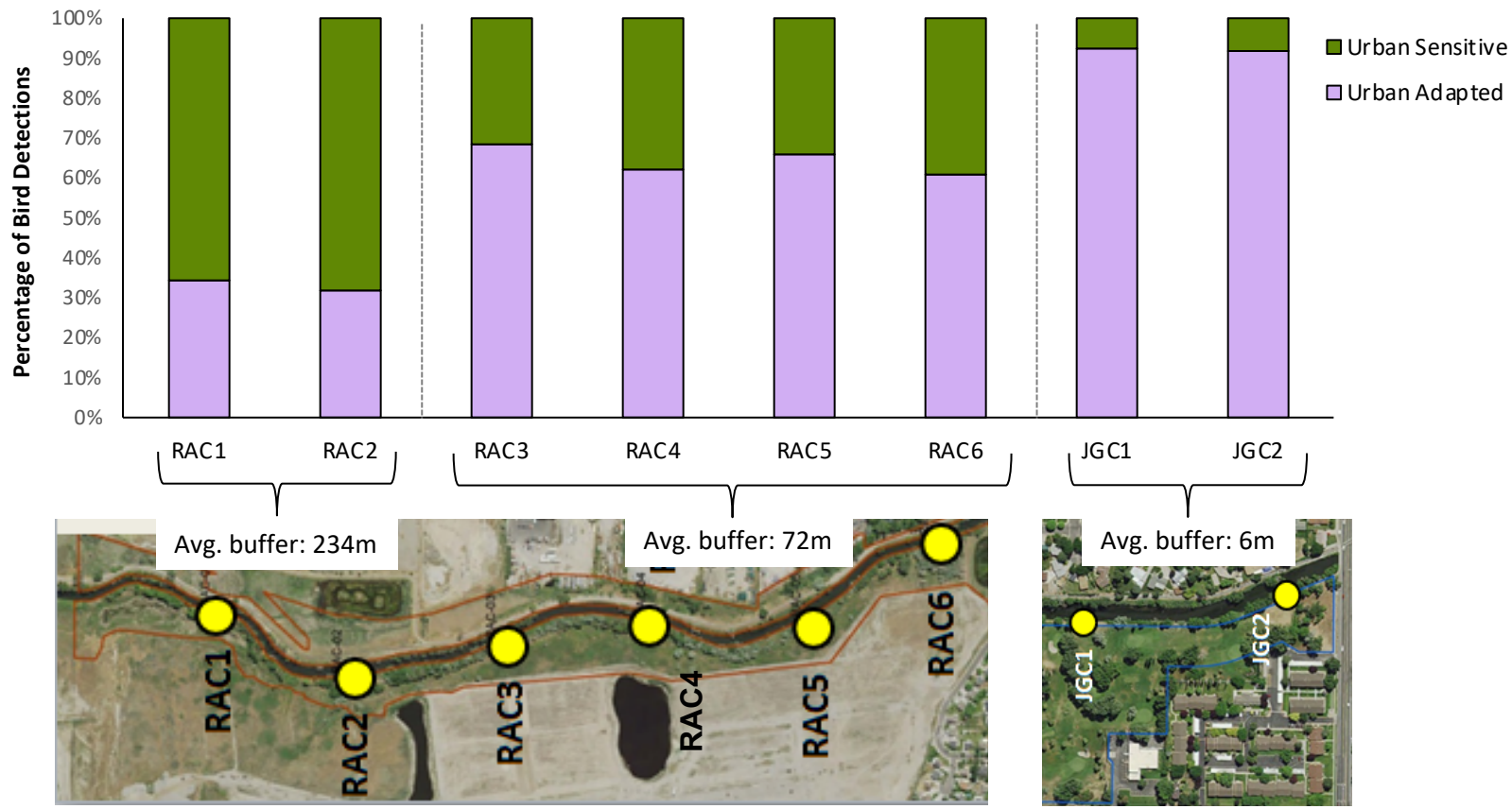


Figure 4. Proportion of birds from different habitat guilds detected during 2019 breeding season surveys at RAC/JGC. Includes all detections within 125m of the point.

PATTERNS OF BIRD COMMUNITY COMPOSITION ACROSS THE REGIONAL ATHLETIC COMPLEX AND THE JORDAN RIVER GOLF COURSE

THE BUFFER EFFECT


We classified all bird species into two broad categories based on their ability to adapt to human-altered landscapes. The first group, “Urban Adapted” species, are able to persist and/or thrive in urban landscapes (e.g., Rock Pigeons, American Robins, European Starlings). The second group, “Urban Sensitive” species, are birds that have significantly decreased populations in cities, or are completely unable to persist in urban landscapes (e.g., Western Kingbirds, Black-chinned Hummingbirds, Willow Flycatchers). We found differences in the proportions of Urban Adapted and Urban Sensitive birds detected at sampling points in the RAC and the Jordan River Golf Course, which correspond to differences in the amount of natural ‘buffer’ surrounding the sampling site vs. the proportion of developed land or other types of land use.




On average, there were 51.1% more detections of Urban Sensitive bird species at sampling points with large natural area buffer (~234m buffer), than the two small buffer points (~6m buffer), and 19% more Urban Sensitive birds detected at sampling points with medium buffers (~72m. buffer) than low buffer points.

SPECIES OF CONSERVATION INTEREST


In 2019, we documented several bird species of local conservation interest at the RAC and JGC:

➤ **Gray Catbird** 

The RAC appears to be the only place along the Jordan River that consistently supports Gray Catbirds during the breeding season. We have detected nesting catbirds each year since we began monitoring in 2015.

➤ **Willow Flycatcher** 

Willow Flycatchers are indicators of healthy riparian vegetation, and are currently rarely seen along the Jordan River. In 2019, we detected a Willow Flycatcher at point RAC6. We only detected this species at one other sampling site this year.

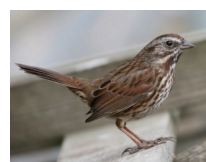
➤ **Nashville Warbler** 

We detected a Nashville Warbler at the RAC during fall migration. The Jordan River provides important migration stopover habitat for migrants - such as the Nashville Warbler – that are only here while moving between their nesting and wintering habitat.

REGIONAL ATHLETIC COMPLEX

COMPLETE LIST OF BIRDS DETECTED DURING BREEDING SEASON SURVEYS (BSS) AND NON-BREEDING SEASON SURVEYS (NBS) 2015-2018

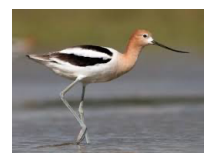
Species	Number of Observations (detections/survey)									
	2015		2016		2017		2018		2019	
	BSS	NBS	BSS	NBS	BSS	NBS	BSS	NBS	BSS	NBS
American Robin	9.8	15.8	12.3	32.8	10.3	10.6	13.4	7.9	10.8	16.4
Bullock's Oriole	5.4	0.2	8.8	0.1	8.3	0	12.6	0	9.8	0
Cliff Swallow	2	0	8	0	3	0.3	10.4	0	6.6	0.8
Song Sparrow	9.4	6.5	8.8	8.1	8.3	8.4	10.4	8.4	10	16
Brown-headed Cowbird	2	0	2.7	0.1	3.8	0	5.4	0	5	0
Yellow Warbler	3.4	0.5	3.5	1.9	4.3	1.9	5	2.5	4.8	2
Yellow-headed Blackbird	1.6	0	3.2	0	4.8	0.1	4.6	0.8	4.4	0.2
European Starling	7.6	596.7	4.8	602.4	4.2	107.8	3.8	500.1	4.8	198
Western Kingbird	2.4	0.3	4.7	0.1	2.3	0.8	3	1	2.8	1.2
Mourning Dove	7	7.5	7	5.8	3.5	3.4	2.4	1.8	3.2	2.2
House Finch	4.4	25	4.2	24.9	2.2	12.5	2.2	11.8	5.8	25.2
Northern Rough-winged Swallow	12.2	0	3.3	0.8	0.8	0.3	2.2	0.5	4.8	0.6
Black-billed Magpie	3	8.2	3.2	11.1	3.3	9.5	1.8	6.3	1.2	8.6
Lesser Goldfinch	2.4	3.2	0.5	5.9	0.7	3	1.8	1.8	1.2	19.6
Mallard	4.4	30.2	5	77.5	3.8	42	1.8	30.5	5	66.4
Black-capped Chickadee	1	8.5	2.8	8.9	0	4.4	1.6	3.5	1.4	9.2
Western Meadowlark	0.2	0	0.3	0	0.2	0.1	1.6	0	1	2.6
American Goldfinch	1	8.3	1.5	5.6	0.7	3.5	1.2	1.5	1.2	3
Downy Woodpecker	1.8	2.7	0.7	2.8	0.5	1.3	1	1.4	1.4	1.4
California Gull	0.8	29	2.3	1.8	0.5	2.6	0.8	9.4	0.8	16.8
California Quail	0.4	1.5	0	4.4	0.2	4	0.8	0.9	0.2	12.4
Great-tailed Grackle	0.8	0.2	2	0	1.7	0.3	0.8	0.6	0.4	0
House Sparrow	0.4	21.3	0.5	25.1	0.3	5	0.8	3.5	0.8	6.8
Western Tanager	1	0.5	1.5	2.1	1.2	0.4	0.8	0.3	1.6	1.2
Barn Swallow	1.4	1.7	1.2	4.4	1.2	0	0.6	2.1	2.6	5.2
Black-chinned Hummingbird	0	0.5	0.7	1.4	1.8	0.3	0.6	0.1	0	0.4
Cedar Waxwing	3	12.8	0.7	6.1	0.8	0.8	0.6	1.6	2.2	5.6
Common Yellowthroat	0.2	0	0	0.1	0.3	0	0.6	0.1	0.8	0.6
Forster's Tern	1	0.2	1	0	0.3	0.1	0.6	0.6	0.6	0
Franklin's Gull	3.2	21.3	21.5	3.6	1	3.5	0.6	5.8	1.8	8.8
Killdeer	3.6	2.2	2.2	1.3	1.5	0.4	0.6	0.8	0.4	1.6
Red-winged Blackbird	2.4	3.7	1.8	10.9	2.5	13.8	0.6	14.1	5.2	12.2
Ring-necked Pheasant	1	0.3	0.2	0.3	0.8	1	0.6	0.1	0	0.2
Western Wood-pewee	0	0	0.3	0.4	0	0	0.6	0.1	0	0
Eurasian Collared-Dove	1.6	22.2	1.8	38.4	0.7	13.8	0.4	6	1	13
Great Blue Heron	0	0.2	0	0.1	0.2	0.5	0.4	0.3	0.2	0.4
Yellow-rumped Warbler	0.2	6.5	2.8	5.4	1.2	1.5	0.4	2.5	1	15.4
American Coot	0.8	8.5	0.3	15.1	0	9.1	0.2	7.4	0.4	13
Bank Swallow	0	0	0.3	0.4	0	3.6	0.2	0.3	0	0
Black-crowned Night-Heron	0.2	0.2	0.3	0.5	0.3	0.1	0.2	0.8	0.2	0.4
Blue-gray Gnatcatcher	0.6	0.3	0	0.6	0.3	0.5	0.2	0.1	0	1.2
Canada Goose	4.8	86	2.2	78.8	0	28.5	0.2	29.8	2	23
Double-crested Cormorant	0.2	0.3	0.5	0	0	0	0.2	0.1	0.6	0.4
Gray Catbird	0.4	0.2	0.3	0	0.5	0.3	0.2	0.1	0.2	0.8
Wilson's Snipe	0	3.7	0	1.5	0	0.6	0	1.1	0	0.2



REGIONAL ATHLETIC COMPLEX

COMPLETE LIST OF BIRDS DETECTED DURING BREEDING SEASON SURVEYS (BSS) AND NON-BREEDING SEASON SURVEYS (NBS) 2015-2018

Species	Number of Observations (detections/survey)									
	2015		2016		2017		2018		2019	
	BSS	NBS	BSS	NBS	BSS	NBS	BSS	NBS	BSS	NBS
Rock Pigeon	0	16.8	0.3	19	0.3	4.5	0.2	2.5	1.2	9.8
Warbling Vireo	0.2	0.2	0	0.1	0.2	0	0.2	0.1	0.2	0
White-faced Ibis	4	0	1.3	1.8	0.2	9	0.2	6.5	2.6	27.8
Violet-green Swallow	0	0	0	0	0	0	0.2	0	0.4	0
American Avocet	1	1.3	0.2	1.3	0	0	0	0.8	0	0
American Crow	0	1.2	0.2	1.6	0	1.8	0	8.4	0	4.6
American Kestrel	0	0.5	0	1.1	0	0.6	0	0.5	0	0.6
American Pipit	0	1	0	0.4	0	0.1	0	1	0	0.2
American Tree Sparrow	0	0.2	0	0	0	0	0	0	0	0.2
American White Pelican	1.8	0	0.3	0	0	0	0	9.1	0	0
American Wigeon	0	0.5	0	0	0	0.1	0	0	0	0
Bald Eagle	0	0	0	0.1	0	0	0	0.1	0	0.2
Barn Owl	0	0	0.7	0	0	0	0	0	0	0
Belted Kingfisher	0.2	0.7	0	0.4	0	0.3	0	1.1	0	0.4
Black Phoebe	0	0	0.2	0	0	0	0	0	0	0
Black-headed Grosbeak	0	0	0.2	0.1	0.2	0.1	0	0	0.2	0.2
Black-necked Stilt	0.4	0	0.3	0	0	0	0	0.6	0	0
Blue-winged Teal	0	0.2	0	0.1	0	0	0	0	0	0
Brewer's Blackbird	0	0.3	0.5	1	0	0	0	0.4	0	0.4
Broad-tailed Hummingbird	0	0	0	0	0	0.1	0	0	0	0
Brown Creeper	0	0.8	0	0.9	0	0	0	0.3	0	0
Cackling Goose	0	0	0	0.1	0	0	0	0	0	0
Canvasback	0	0	0	0	0	0	0	0.3	0	0
Caspian Tern	0	0.3	0.2	0	0	0	0	0	0	0
Chipping Sparrow	0	0.8	0.8	0.5	0	0	0	0.1	0.2	0.2
Cinnamon Teal	0.2	0	0	0	0	0	0	0	0	1.2
Common Goldeneye	0	0	0	0.1	0	0.3	0	0.5	0	1
Common Merganser	0	0.2	0	0	0	0	0	0	0	0
Common Nighthawk	0	0	0	0.1	0	0	0	0.1	0	0.2
Common Raven	0	0.2	0.2	0	0.8	0.4	0	0	0	0.8
Cooper's Hawk	0	0.5	0	0.6	0.2	0.1	0	0.4	0.2	0.4
Cordilleran Flycatcher	0	0	0	0.1	0	0	0	0	0	0
Dark-eyed Junco	0	32.2	0	14.4	0	6.3	0	4.9	0	10.2
Dusky Flycatcher	0	0	0	0	0	0	0	0.1	0	0
Evening Grosbeak	0.2	0.2	0	0	0	0.1	0	0	0	0
Ferruginous Hawk	0	0	0	0	0	0	0	0.1	0	0
Gadwall	0.2	0.7	0.8	1.4	0	0.9	0	0.4	0	1.8
Golden Eagle	0	0	0	0	0	0	0	0.1	0	0
Great-horned Owl	0	0	0	0.3	0	0	0	0.3	0	0
Greater Yellowlegs	0	1.2	0	0.6	0	0.3	0	0.1	0	1.8
Green-winged Teal	0	0.2	0	0	0	0.3	0	0.5	0	2
Hammond's Flycatcher	0	0	0	0.1	0	0.1	0	0	0	0
Hermit Thrush	0	0	0	0.6	0	0.1	0	0.8	0	1.6
Herring Gull	0	0.5	0	0	0	0	0	0	0	0
Wilson's Warbler	0	0.5	0	0.6	0.8	0	0	0.1	0.4	0
Wood Duck	0	0.3	0	0.1	0	0	0	0	0	0.4
Hooded Merganser	0	0	0	0	0	0.5	0	0	0	0



REGIONAL ATHLETIC COMPLEX

COMPLETE LIST OF BIRDS DETECTED DURING BREEDING SEASON SURVEYS (BSS) AND NON-BREEDING SEASON SURVEYS (NBS) 2015-2018

Species	Number of Observations (detections/survey)									
	2015		2016		2017		2018		2019	
	BSS	NBS	BSS	NBS	BSS	NBS	BSS	NBS	BSS	NBS
House Wren	0.2	0	0	0	0	0	0	0	0	0
Lazuli Bunting	0.4	0.5	0	0.4	0	0.8	0	0.3	0.4	0.4
Lesser Scaup	0	0	0	0	0	1	0	0	0	0
Lincoln's Sparrow	0.2	0.3	0	0.1	0	0	0	0	0	0.8
Loggerhead Shrike	0	0	0	0	0	0.1	0	0	0	0
MacGillivray's Warbler	0.2	0.2	0.2	0.3	0	0.1	0	0.1	0	0.6
Marsh Wren	0	0.2	0	0	0	0	0	0.1	0	0.2
Merlin	0	0.3	0	0.3	0	0	0	0.1	0	0.2
Mountain Chickadee	0	0.3	0	0	0	0	0	0	0	0
Nashville Warbler	0	0	0	0.1	0	0	0	0	0	0.2
Northern Flicker	0	6.7	0	8.1	0	2.9	0	2.4	0	4.2
Northern Harrier	0	0	0	0.3	0	0.4	0	0	0	0.6
Northern Mockingbird	0	0	0	0	0	0	0	0.4	0	0
Northern Shoveler	0	1.2	0	0.1	0	0.3	0	0	0	2.4
Northern Shrike	0	0	0	0	0	0.1	0	0	0	0
Olive-sided Flycatcher	0	0.3	0	0	0	0.1	0	0	0	0
Orange-crowned Warbler	0	0.5	0	0.5	0	0	0	1.4	0	1.2
Pied-billed Grebe	0.2	1.5	0.3	1.3	0	1.4	0	1.4	0	0.8
Pine Siskin	0.2	0.3	0	0	0	0	0	0	0	0.6
Prairie Falcon	0	0	0	0	0	0	0	0.1	0	0
Red-breasted Nuthatch	0	0	0	0	0	0.1	0	0	0	0.2
Red-naped Sapsucker	0	0.2	0	0	0	0	0	0	0	0
Red-tailed Hawk	0	1.2	0	1.5	0	1.4	0	1.9	0.2	0.8
Ring-billed Gull	0	8.8	0	13.3	0	1.9	0	6	0	8
Ring-necked Duck	0	0	0	0	0	2.6	0	4.3	0	3.4
Ruby-crowned Kinglet	0	4.2	0	2.6	0	0.5	0	1.4	0.2	2.2
Rufous Hummingbird	0	0	0	0	0	0.1	0	0	0	0
Sandhill Crane	0	0	0.2	0	0	0	0	0	0	0
Say's Phoebe	0.2	0	0	0	0	0	0	0	0	0
Sharp-shinned Hawk	0	0.3	0.2	0.5	0	0.4	0	0	0	0
Snow Goose	0	0.2	0	0	0	0	0	0	0	0
Snowy Egret	0	0.2	0.2	0	0	0.1	0	0.8	0	0
Solitary Sandpiper	0	0	0	0.4	0	0.3	0	0.1	0	0
Sora	0	0	0	0.1	0	0	0	0	0	0.2
Spotted Sandpiper	0.6	0	0.2	0.1	0	0	0	0.3	0	0
Spotted Towhee	0.4	1.3	0.2	0.9	0	0.1	0	1.4	0	1.6
Swainson's Hawk	0	0.2	0.2	0	0	0	0	0	0	0
Townsend's Solitaire	0	0	0	0.1	0	0	0	0.1	0	0
Tree Swallow	0	0	2.5	0.3	0	0	0	0.8	0	0
Turkey Vulture	0	0	0.2	0	0	0.1	0	0.1	0.4	0
Vesper Sparrow	0	0.2	0.3	0	0	0	0	0	0	0
White-crowned Sparrow	1.4	7.7	0	5.6	0.5	5.1	0	8.4	0	11.6
Willow Flycatcher	0	0	0	0.3	0	0	0	0	0.4	0
Woodhouse's Scrub-Jay	0	0.7	0	1	0	0	0	0	0	0
Rough-legged Hawk	0	0	0	0	0	0	0	0.3	0	0
Lesser Yellowlegs	0	0	0	0	0	0	0	0	0	0.2
Harris's Sparrow	0	0	0	0	0	0	0	0	0	0.2
Savannah Sparrow	0	0	0	0	0	0	0	0	0	0.2



JORDAN RIVER GOLF COURSE

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	2015		2016		2017		2018		2019	
	BSS	NBS	BSS	NBS	BSS	NBS	BSS	NBS	BSS	NBS
American Robin	4.2	15.8	5.8	32.8	7.5	7.5	7	15.6	7.6	9
European Starling	2	596.7	5.8	602.4	4.8	4.8	4	403.1	2.8	154
Barn Swallow	2.4	1.7	3.8	4.4	3	3	3.2	6.6	5.4	0
House Sparrow	2	21.3	4.5	25.1	3.5	3.5	2.2	13.7	3.8	10.2
Mallard	1.6	30.2	4.2	77.5	3.8	3.8	2.2	30.9	2.8	24.2
House Finch	0.8	25	1.7	24.9	1.5	1.5	2	14.9	2.2	4.2
Yellow Warbler	0.8	0.5	1.2	1.9	1	1	2	0.7	0.8	0
Mourning Dove	2.4	7.5	1.2	5.8	1.7	1.7	1.4	0.9	0.8	0.4
Cliff Swallow	0.4	0	0.3	0	1.3	1.3	1.2	0	0.6	0
Lesser Goldfinch	1.4	3.2	1.8	5.9	0.8	0.8	1.2	3.9	2.6	1
Song Sparrow	0.2	6.5	0.8	8.1	0.3	0.3	1.2	1.6	1.4	0
Warbling Vireo	0.2	0.2	0.3	0.1	0.3	0.3	1.2	0.1	0.4	0
Black-capped Chickadee	0.8	8.5	1	8.9	0.3	0.3	1	3.7	1.8	2
Rock Pigeon	0	16.8	1.2	19	1.3	1.3	1	35.7	6.4	8.8
American Goldfinch	0.6	8.3	1	5.6	0.3	0.3	0.8	6.7	0	1.6
Eurasian Collared-Dove	0.8	22.2	2.3	38.4	1.5	1.5	0.8	14.6	1.8	3.6
Brown-headed Cowbird	0	0	0.2	0.1	1.3	1.3	0.6	0	1.4	0
Cedar Waxwing	0	12.8	0.8	6.1	0.2	0.2	0.6	2.3	0.6	1
Bullock's Oriole	0.4	0.2	0.7	0.1	0.5	0.5	0.4	0	0.4	0
Downy Woodpecker	0	2.7	0.8	2.8	0	0	0.4	1.4	0.6	0.4
Northern Rough-winged Swallow	0	0	0.5	0.8	0	0	0.4	0	0	0
Western Tanager	0	0.5	0.2	2.1	0.2	0.2	0.4	0.9	0.4	0
Western Wood-pewee	0.2	0	0	0.4	0	0	0.4	0	0.4	0
American Crow	0	1.2	0.2	1.6	0	0	0.2	9	0	3.8
Brewer's Blackbird	0	0.3	0	1	0	0	0.2	0	0	0
California Gull	0.4	29	0.7	1.8	1.8	1.8	0.2	1.4	0	3.2
Common Nighthawk	0	0	0	0.1	0	0	0.2	0.1	0	0
Cooper's Hawk	0	0.5	0	0.6	0	0	0.2	0	0	0.6
Double-crested Cormorant	0	0.3	0.7	0	0	0	0.2	0.3	0.2	0
Franklin's Gull	0.4	21.3	5.2	3.6	0	0	0.2	0.4	0	0
Killdeer	0	2.2	0.2	1.3	0	0	0.2	0.1	0	0
Red-winged Blackbird	0	3.7	0	10.9	0	0	0.2	0.7	0.2	12
Say's Phoebe	0	0	0	0	0	0	0.2	0	0	0
Western Kingbird	0	0.3	0	0.1	0	0	0.2	0	0	0
Yellow-headed Blackbird	0	0	0	0	0	0	0.2	0	0	0
American Avocet	0	1.3	0	1.3	0	0	0	0	0	0
American Coot	0.2	8.5	0	15.1	0	0	0	2.4	0	2.2
American Kestrel	0	0.5	0	1.1	0	0	0	0.3	0	0.2
American Pipit	0	1	0	0.4	0	0	0	0.1	0	0
American Tree Sparrow	0	0.2	0	0	0	0	0	0	0	0
American Wigeon	0	0.5	0	0	0	0	0	0	0	0
Bald Eagle	0	0	0	0.1	0	0	0	0	0	0
Bank Swallow	0	0	0	0.4	0	0	0	0	0	0
Belted Kingfisher	0	0.7	0	0.4	0.3	0.3	0	0.4	0	0.6



JORDAN RIVER GOLF COURSE

COMPLETE LIST OF BIRDS DETECTED DURING BREEDING SEASON SURVEYS (BSS) AND NON-BREEDING SEASON SURVEYS (NBS) 2015-2018

Species	Number of Observations (detections/survey)									
	2015		2016		2017		2018		2019	
	BSS	NBS	BSS	NBS	BSS	NBS	BSS	NBS	BSS	NBS
Black-billed Magpie	1.8	8.2	0.3	11.1	1.7	1.7	0	6.9	0	2
Black-chinned Hummingbird	0.2	0.5	0.2	1.4	0	0	0	0.6	0.4	0
Black-crowned Night-Heron	0	0.2	0	0.5	0	0	0	0	0	0
Black-headed Grosbeak	0	0	0.2	0.1	0	0	0	0	0	0
Blue-gray Gnatcatcher	0	0.3	0	0.6	0	0	0	0	0	0
Blue-winged Teal	0	0.2	0	0.1	0	0	0	0	0	0
Brown Creeper	0	0.8	0	0.9	0	0	0	0.1	0	0.2
Cackling Goose	0	0	0	0.1	0	0	0	0	0	0
California Quail	0.4	1.5	0	4.4	0	0	0	0	0	0
Canada Goose	0	86	0	78.8	0	0	0	23.4	0	59
Caspian Tern	0	0.3	0	0	0	0	0	0	0	0
Chipping Sparrow	0	0.8	0	0.5	0	0	0	0	0	0.6
Cinnamon Teal	0	0	0	0	0	0	0	0	0	0
Common Goldeneye	0	0	0	0.1	0	0	0	0	0	0
Common Merganser	0	0.2	0	0	0	0	0	0	0	0
Common Raven	0	0.2	0	0	0	0	0	0.3	0	0
Common Yellowthroat	0	0	0	0.1	0	0	0	0	0.2	0
Cordilleran Flycatcher	0	0	0	0.1	0	0	0	0	0	0
Dark-eyed Junco	0	32.2	0	14.4	0	0	0	18.3	0	16.6
Evening Grosbeak	0	0.2	0.3	0	0	0	0	0.4	0	0.6
Forster's Tern	0	0.2	0	0	0	0	0	0	0	0
Gadwall	0	0.7	0	1.4	0	0	0	0	0	0
Gray Catbird	0	0.2	0	0	0	0	0	0	0	0
Great Blue Heron	0	0.2	0	0.1	0.2	0.2	0	0.3	0	0.2
Great Horned Owl	0	0	0	0.3	0	0	0	0	0	0
Great-tailed Grackle	0	0.2	0	0	0	0	0	0	0	0
Greater Yellowlegs	0	1.2	0	0.6	0	0	0	0	0	0
Green-winged Teal	0	0.2	0	0	0	0	0	0	0	0
Hammond's Flycatcher	0	0	0	0.1	0	0	0	0.4	0	0
Hermit Thrush	0	0	0	0.6	0	0	0	0.4	0	0.2
Herring Gull	0	0.5	0	0	0	0	0	0	0	0
Lazuli Bunting	0	0.5	0	0.4	0	0	0	0	0	0
Lincoln's Sparrow	0	0.3	0	0.1	0	0	0	0	0	0
MacGillivray's Warbler	0	0.2	0	0.3	0	0	0	0.1	0	0
Marsh Wren	0	0.2	0	0	0	0	0	0	0	0
Merlin	0	0.3	0	0.3	0	0	0	0	0	0.2
Mountain Chickadee	0	0.3	0	0	0	0	0	0	0	0
Nashville Warbler	0	0	0	0.1	0	0	0	0	0	0



JORDAN RIVER GOLF COURSE

COMPLETE LIST OF BIRDS DETECTED DURING BREEDING SEASON SURVEYS (BSS) AND NON-BREEDING SEASON SURVEYS (NBS) 2015-2018

Species	Number of Observations (detections/survey)									
	2015		2016		2017		2018		2019	
	BSS	NBS	BSS	NBS	BSS	NBS	BSS	NBS	BSS	NBS
Northern Flicker	0	6.7	0	8.1	0	0	0	6	0	6.6
Northern Harrier	0	0	0	0.3	0	0	0	0	0	0
Northern Mockingbird	0	0	0	0	0	0	0	0.1	0	0
Northern Pintail	0	0	0	0	0	0	0	1	0	0
Northern Shoveler	0	1.2	0	0.1	0	0	0	0	0	0
Olive-sided Flycatcher	0	0.3	0	0	0	0	0	0.1	0	0
Orange-crowned Warbler	0	0.5	0	0.5	0	0	0	0.3	0	0
Pied-billed Grebe	0	1.5	0	1.3	0	0	0	1.1	0	0.4
Pine Siskin	0	0.3	0.5	0	0	0	0	0	0	0
Red-naped Sapsucker	0	0.2	0	0	0	0	0	0	0	0
Red-tailed Hawk	0	1.2	0	1.5	0	0	0	0.7	0	1.6
Redhead	0	0	0	0	0	0	0	0	0	0
Ring-billed Gull	0	8.8	0	13.3	0	0	0	1.6	0	2
Ring-necked Pheasant	0	0.3	0	0.3	0	0	0	0	0	0
Ruby-crowned Kinglet	0	4.2	0	2.6	0	0	0	4.7	0.2	0.4
Sandhill Crane	0	0	0	0	0	0	0	0	0	0
Sharp-shinned Hawk	0	0.3	0	0.5	0	0	0	0.3	0	0.4
Snow Goose	0	0.2	0	0	0	0	0	0	0	0
Snowy Egret	0	0.2	0	0	0	0	0	0	0	0
Solitary Sandpiper	0	0	0	0.4	0	0	0	0	0	0
Sora	0	0	0	0.1	0	0	0	0	0	0
Spotted Sandpiper	0	0	0	0.1	0	0	0	0	0	0
Spotted Towhee	0	1.3	0	0.9	0	0	0	2.7	0	2
Swainson's Hawk	0	0.2	0	0	0	0	0	0	0	0
Townsend's Solitaire	0	0	0	0.1	0	0	0	0	0	0
Tree Swallow	0	0	0	0.3	0	0	0	0	0	0
Vesper Sparrow	0	0.2	0	0	0	0	0	0	0	0
Western Meadowlark	0	0	0	0	0	0	0	0	0.2	0
White-crowned Sparrow	0	7.7	0.2	5.6	0	0	0	0	0	0
White-faced Ibis	0.2	0	0	1.8	0	0	0	0	0	0
Willow Flycatcher	0	0	0	0.3	0	0	0	0	0	0
Wilson's Snipe	0	3.7	0	1.5	0	0	0	0	0	0
Wilson's Warbler	0	0.5	0	0.6	0	0	0	0.4	0	0
Wood Duck	0	0.3	0	0.1	0	0	0	0	0	0
Woodhouse's Scrub-jay	0	0.7	0	1	0	0	0	0.7	0	0.2
Yellow-rumped Warbler	0	6.5	0.8	5.4	0.2	0.2	0	5.9	0.4	2.6
Pacific Wren	0	0	0	0	0	0	0	0	0	0.2



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