

Grassland Bird Migration Monitoring in Missouri 2016



**MISSOURI RIVER
BIRD OBSERVATORY**

Report to the Missouri Department of Conservation





INTRODUCTION

The Missouri River Bird Observatory (MRBO) has worked with the Missouri Department of Conservation (MDC) to examine prairie bird use on many of the MDC's grassland Conservation Areas (CAs) since 2012. While the bulk of MRBO's work has focused on assessing prairie bird populations during the breeding season, additional work since 2013 has addressed the spring and fall migration seasons. Unlike many other migratory species, which become more generalist in habitat selection during migration, grassland-obligate birds continue to require high-quality grassland habitat during stopover and wintering. Results from migration monitoring may be used in consideration of timing of management actions and therefore be of benefit to the grassland bird guild during species' full life-cycles.

In partial fulfillment of
Grant Agreement #311
Amendment #2



In this report we present data that has been compiled from several spring migration seasons from 2013 through 2016 on Mora CA and Bruns Tract within the Cole Camp and Green Ridge focus areas. Data are based on bird banding operations coupled with daily observations by sight and sound. We also present the results of 2016 fall migration surveys from Linscomb Wildlife Area and Wah'Kon-Tah Prairie CA. These data are based on line-transect surveys from repeat visits to each Area throughout the fall.

All data from migration monitoring reveal various species' timing of spring and fall arrivals and departures. Banding data can reveal this phenology, and also provides information on return rates, age, sex, and condition. Surveys provide a larger-scale snapshot of habitat use within study sites as well as phenology. The phenology of bird migration is an important consideration for land managers as the timing of their actions can influence habitat availability to birds during migration, influence settlement during the breeding season, and determine available resources for fall migrants and wintering residents.

STUDY AREAS



Figure 1. Spring (Mora CA, Bruns Tract) and fall (Linscomb WA, Wah'Kon-Tah Prairie CA) migration monitoring sites.

SPRING MIGRATION MONITORING OVERVIEW

Each year from early April to mid-May, MRBO operates two migration-monitoring stations in the Cole Camp Conservation Opportunity Area and nearby Green Ridge focus area. Information obtained reveals arrival time of breeding birds, departure time of winter residents, site fidelity and small-scale habitat use of all migrating birds in grasslands. Spring monitoring was accomplished on Mora Conservation Area from 2013 through 2016 and on the Bruns Tract from 2014 to 2016.

In 2016, each banding station was operated 14 days during the period of 1 April to 10 May. This duration allowed us to document the first of the incoming migrants and conclude when passage migrants have moved on and breeding birds remain in the area. Mora and Bruns Tract banding stations each have 12 mist-nets that are operated for a maximum of 5 hours each morning. In 2016 each banding station was also operated during one evening period for 1.5 hours.

Operators of the Bruns Tract and Mora spring migration stations kept a daily log of all birds seen or heard at each site. These data are a standard addition to banding stations that increase the amount of available data for sites where bird captures are low. Spring arrival timing of short-distance migrants such as Grasshopper and Henslow's Sparrows varies from year to year for some species

depending on weather. Long-term migrants arrive later, with the exception of Dickcissel. We have compiled all years of records and indicate arrival times of key grassland-obligates species (Figure 2).

Spring departure timing of winter residents takes place in late April and the first week of May for the majority of species. LeConte's Sparrows typically leave before May (Figure 3).

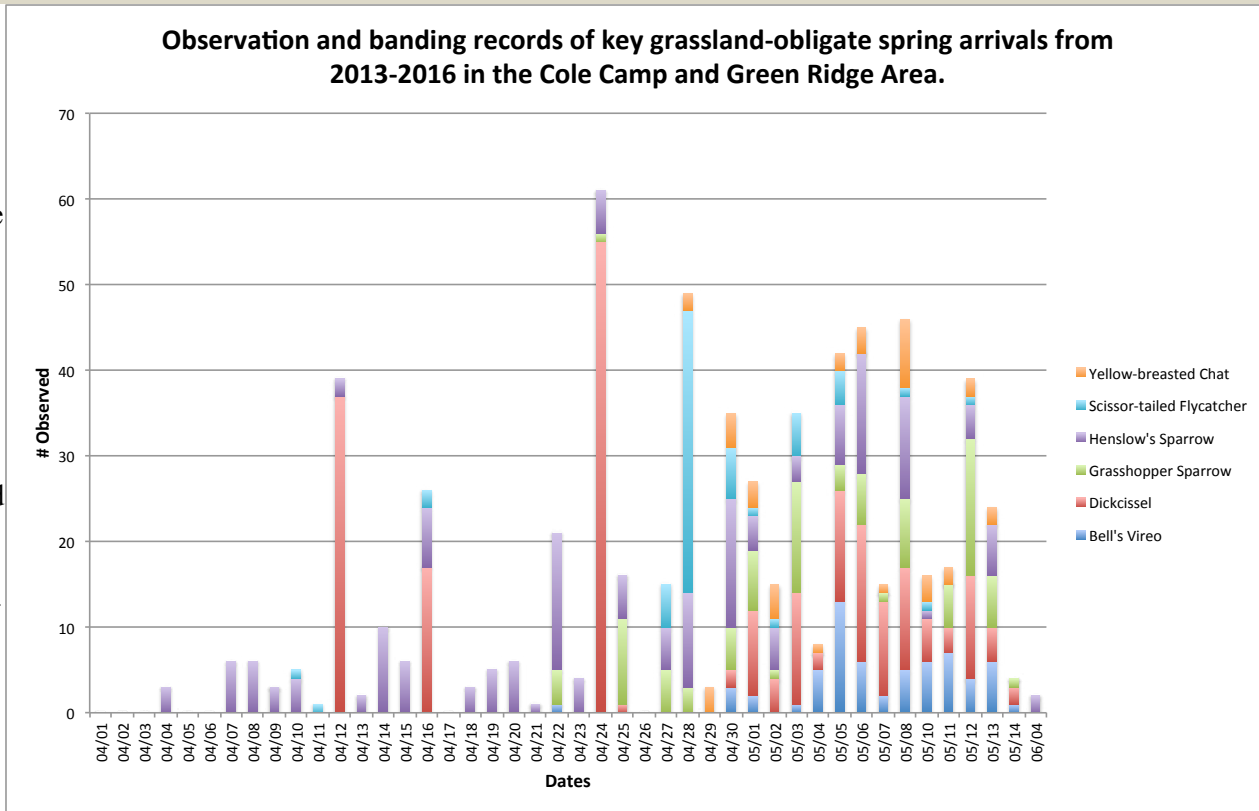


Figure 2. Key grassland-obligate breeding season arrivals during Spring 2013-2016. Henslow's Sparrow, Bell's Vireo, and Dickcissel arrive up to three weeks earlier than other species.

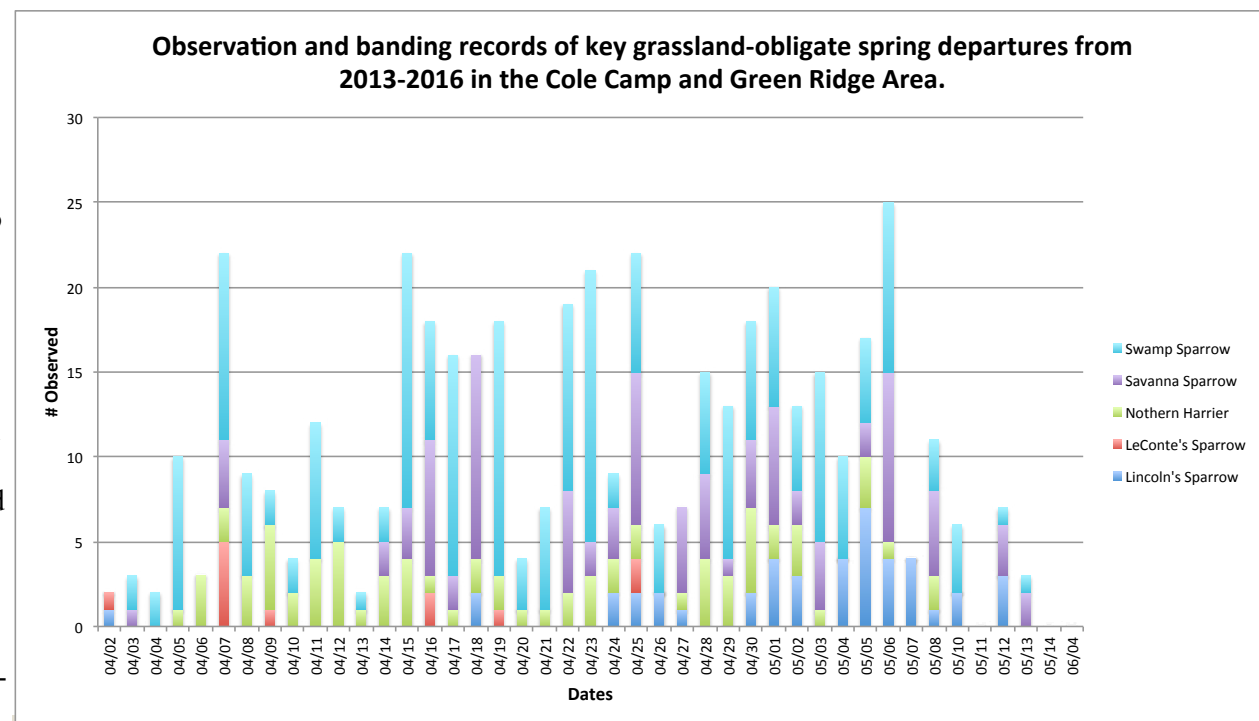
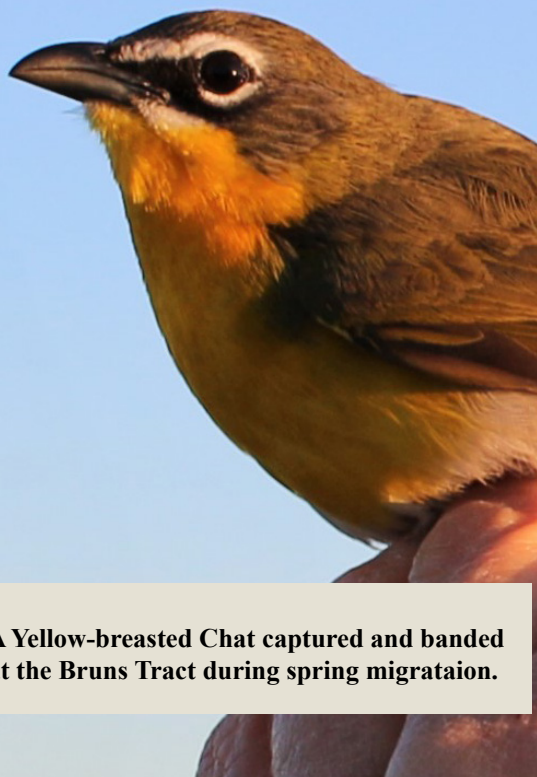


Figure 3. Key grassland-obligate wintering species departures during Spring 2013-2016.

BRUNS TRACT — SPRING MIGRATION



A Yellow-breasted Chat captured and banded at the Bruns Tract during spring migration.

In general, the captures, observations, and overall diversity of birds increased at Bruns Tract in 2016. Captures were significantly higher than in previous years, in part due to higher numbers of American Goldfinch, Brown Thrasher and Swamp Sparrow. Eastern Meadowlark, Bell's Vireo, and Yellow-breasted Chat captures and observations remained similar to previous years at this site. Notable decreases occurred in both captures and observations of Dickcissel and Savannah Sparrow. Grasshopper Sparrows remained relatively scarce, though observations resulted in a slightly higher number than in 2015.

Only one Henslow's Sparrow was captured but observations remained consistent with 2015 and were higher than 2014, indicating that the population of this species in the central portion of Bruns Tract has remained stable.

Sora, an unusual capture for the prairie.



Table 1. New bandings and returns of grassland-obligate species at the Bruns Tract banding site in 2014 to 2016.

Species	2014	2015		2016		
	New Captures	New Captures	Returns from 2014	New Captures	Returns from 2015	Returns from 2014
Bell's Vireo		5		5		
Dickcissel	10	14	1	7		2
Eastern Meadowlark	2	6		6	1	1
Field Sparrow	1			6		
Grasshopper Sparrow	8			2		
Henslow's Sparrow		1		1		
Lincoln's Sparrow	4	4		2		
Northern Bobwhite		1				
Savannah Sparrow	15	10		7	1	
Sedge Wren		1				
Swamp Sparrow	7	7		22	2	
Wilson's Snipe				2		
Yellow-breasted Chat		3		3		
Total	47	52	1	63	4	3

Additional highlights from the Bruns Tract

Banding: More birds were captured in 2016 (146 individuals) than in 2015 (99 individuals). Banding data for grassland obligate species are provided above.

» **Non-target species for which captures increased:**

- » American Goldfinch: 1 in 2014, 13 in 2015, 19 in 2016
- » Brown Thrasher: 1 in 2014, 1 in 2015, 10 in 2016
- » Common Yellowthroat: 7 in 2014 and 2015; 10 in 2016
- » Northern Cardinal: 0 in 2014, 4 in 2015, 7 in 2016
- » Red-winged Blackbird: 3 in 2014, 6 in 2015, 13 in 2016
- » Swamp Sparrow: 6 in 2014, 7 in 2015, 18 in 2016
- » White-crowned Sparrow: 1 in 2014, 1 in 2015, 7 in 2016

» **Species for which captures decreased:**

- » Dickcissel (10 in 2014, 11 in 2015, 7 in 2016)
- » Savannah Sparrow (15 in 2014, 10 in 2015, 7 in 2016)

» **New species captured in 2016:** Myrtle Warbler, Northern Waterthrush, Sora, White-throated Sparrow.

Observations: 70 species were documented at Bruns in 2016, compared with 54 species in 2015. The total number of observations slightly higher in 2016 (1,224 in 2015 and 1,292 in 2016)

» **Notable increases:**

- » Field Sparrow: 6 in 2014, 10 in 2015, 28 in 2016
- » Wilson's Snipe: 0 in 2014, 3 in 2015, 22 in 2016

» **Notable decreases:**

- » Bobolink: 12 in 2014, 18 in 2015, 1 in 2016
- » Savannah Sparrow: 26 in 2014, 24 in 2015, 10 in 2016

» **New species observed in 2016:** Merlin, Short-eared Owl.

BRUNS TRACT — SPRING MIGRATION

Table 2. All birds documented by sight and sound at the Bruns Tract spring migration banding station in 2016.

Species	Total	Species	Total	Species	Total
Accipiter sp.	1	Eastern Towhee	1	Red-winged Blackbird	248
American Crow	10	Empidonax sp.	1	Ruby-throated Hummingbird	2
American Goldfinch	74	Field Sparrow	28	Savannah Sparrow	10
American Kestrel	1	Fish Crow	16	Scissor-tailed Flycatcher	7
American Robin	2	Grasshopper Sparrow	3	Sedge Wren	6
American Woodcock	6	Gray Catbird	13	Short-eared Owl	6
Baltimore Oriole	1	Gray-cheeked Thrush	1	Song Sparrow	4
Barn Swallow	45	Great Blue Heron	14	Sora	1
Barred Owl	1	Great Horned Owl	5	Swallow sp.	2
Bell's Vireo	11	Great-tailed Grackle	1	Swamp Sparrow	35
Belted Kingfisher	1	Henslow's Sparrow	65	Traill's Flycatcher	1
Blue-gray Gnatcatcher	1	Killdeer	12	Tree Swallow	11
Bluejay	6	Lincoln's Sparrow	2	Turkey Vulture	44
Blue-winged Teal	2	Marsh Wren	2	Unknown Shorebird	64
Bobolink	1	Merlin	1	Upland Sandpiper	4
Brown-headed Cowbird	35	Mourning Dove	20	White-crowned Sparrow	7
Brown Thrasher	52	Northern Bobwhite	21	White-throated Sparrow	1
Clay-colored Sparrow	1	Northern Cardinal	24	Wild Turkey	4
Cliff Swallow	9	Northern Flicker	3	Wilson's Snipe	22
Common Grackle	8	Northern Harrier	7	Yellow-breasted Chat	10
Common Yellowthroat	37	Northern Mockingbird	5	Yellow-rumped Warbler	4
Cooper's Hawk	1	Northern Rough-winged Swallow	1	Total	1292
Dickcissel	31	Northern Waterthrush	4		
Double-crested Cormorant	109	Red-tailed Hawk	4		
Eastern Meadowlark	99				

Below: A few of the birds documented at the Bruns Tract during spring migration in 2016. (left to right): Brown Thrasher, Eastern Meadowlark, and Wilson's Snipe.



MORA CONSERVATION AREA — SPRING MIGRATION

The 2016 season monitoring results revealed a continuation in the downward trend in use for many grassland-obligate bird species at Mora CA. However, Le Conte's and Henslow's Sparrow were observed after a one and two-year absence, respectively, at the banding site. Song, Field, and Swamp Sparrow numbers remained approximately consistent with previous years. The northernmost section of the banding station, which had the thickest and most forb-dense vegetation, was mowed before the 2016 season, creating more heterogeneous structures.

In 2016 there were no Dickcissels banded at Mora and few were observed. However, it was a banner year for non-grassland obligate species. Several new species were documented at the station including two kettles of Broad-winged Hawks noted on separate dates. Solitary Sandpiper, Wilson's Warbler, Orange-crowned Warbler, Double-crested Cormorant and Bobolink were also documented. Several species saw a significant increase in observations including American Woodcock, Northern Waterthrush, Blue Jay, and Cedar Waxwing. Avian monitoring data suggest that succession is taking place on and near this banding site.

Additional highlights from Mora CA

Banding: In general, a similar amount of captures occurred in 2016 (n=92) and 2015 (n=90). Banding data for grassland obligate species are provided below.

- » **Non-target species for which captures increased:**
 - » Northern Waterthrush: 0 in 2013 and 2014, 1 in 2015, 10 in 2016
 - » Swamp Sparrow: 9 in 2013, 18 in 2014, 7 in 2015, 17 in 2016
 - » White-crowned Sparrow: 1 in 2013, 0 in 2014 and 2015, 5 in 2016
- » **Notable decreases in captures:**
 - » American Goldfinch: 32 in 2015, 11 in 2016
 - » Henslow's Sparrow: 12 in 2013, 0 in 2014, 2015 and 2016
- » **New species captured in 2016:** Nashville Warbler, Gray-checked Thrush, Downy Woodpecker.

Observations: Overall numbers of birds detected by sight and sound increased along with diversity in 2016. A total of 1,876 individuals of 92 species were documented this year, compared with 689 individuals of 68 species documented in 2015.

- » **Notable increases:**
 - » American Woodcock: 1 in 2013, 0 in 2014 and 2015, 10 in 2016
 - » Blue Jay: 47 in 2013, 32 in 2014, 117 in 2015, 346 in 2016
 - » Cedar Waxwing: 22 in 2013, 8 in 2014, 0 in 2015, 146 in 2016
 - » Eastern Meadowlark: 28 in 2014, 17 in 2015, 41 in 2016
 - » Henslow's Sparrow: 57 in 2013, 0 in 2014 and 2015, 20 in 2016
- » **Notable decreases:**
 - » Grasshopper Sparrow: 13 in 2013, 1 in 2014, 0 in 2015 and 2016
- » **New species observed in 2016:** Broad-winged Hawk, Bobolink Solitary Sandpiper.

Table 3. New bandings and returns of grassland-obligate species at the Mora CA banding site from 2013 to 2016.

Species	2013			2014			2015			2016		
	New Captures	New Captures	Returns from 2013	New Captures	Returns from 2014	Returns from 2013	New Captures	Returns from 2015	Returns from 2014	Returns from 2013		
Bell's Vireo	1		1	4		1	2			1		
Dickcissel	1	2		1								
Eastern Meadowlark	1			3			1					
Field Sparrow	27	14	1	18	1	1	17	1		1		
Grasshopper Sparrow	3	1										
Henslow's Sparrow	12											
LeConte's Sparrow	1	3					1					
Lincoln's Sparrow			4		2	2	3					
Savannah Sparrow	5	1		2			1					
Sedge Wren	3						1					
Yellow-breasted Chat	1											
Total	55	48	2	28	3	4	26	1	0	2		

MORA CONSERVATION AREA — SPRING MIGRATION

Table 4. All birds documented by sight and sound at the Mora CA spring migration banding station in 2016.

Species	Total	Species	Total	Species	Total
Accipiter sp	2	Double-crested Cormorant	28	Red-bellied Woodpecker	16
American Crow	27	Downy Woodpecker	9	Red-shouldered Hawk	2
American Goldfinch	109	Eastern Bluebird	1	Red-tailed Hawk	13
American Robin	7	Eastern Kingbird	4	Red-winged Blackbird	177
American Woodcock	10	Eastern Meadowlark	41	Rock Pigeon	1
Baltimore Oriole	1	Eastern Phoebe	3	Ruby-crowned Kinglet	1
Barn Swallow	33	Eastern Towhee	38	Ruby-throated Hummingbird	4
Barred Owl	1	Field Sparrow	73	Savannah Sparrow	3
Bell's Vireo	8	Gray Catbird	15	Scissor-tailed Flycatcher	1
Belted Kingfisher	1	Gray-cheeked Thrush	1	Sedge Wren	7
Black-capped Chickadee	1	Great Blue Heron	11	Sharp-shinned Hawk	1
Blue-gray Gnatcatcher	7	Hairy Woodpecker	3	Solitary Sandpiper	2
Blue Jay	346	Henslow's Sparrow	20	Song Sparrow	8
Blue-winged Teal	4	Indigo Bunting	9	Sora	2
Blue-winged Warbler	2	Killdeer	4	Swamp Sparrow	51
Bobolink	8	Le Conte's Sparrow	1	Tree Swallow	7
Broad-winged Hawk	29	Lincoln's Sparrow	3	Tufted Titmouse	7
Brown-headed Cowbird	75	Marsh Wren	1	Turkey Vulture	58
Brown Thrasher	19	Mourning Dove	47	Unknown Raptor sp	3
Canada Goose	25	Myrtle Warbler	2	Unknown Swallow sp	1
Carolina Chickadee	2	Nashville Warbler	3	Upland Sandpiper	2
Carolina Wren	16	Northern Bobwhite	6	White-breasted Nuthatch	1
Cedar Waxwing	146	Northern Cardinal	60	White-crowned Sparrow	6
Chickadee sp	2	Northern Flicker	32	White-eyed Vireo	10
Chimney Swift	9	Northern Harrier	9	White-throated Sparrow	5
Cliff Swallow	2	Northern Mockingbird	1	Wild Turkey	7
Common Grackle	88	Northern Parula	1	Wilson's Snipe	3
Common Nighthawk	1	Northern Rough-winged Swallow	1	Wilson's Warbler	1
Common Yellowthroat	32	Northern Waterthrush	11	Yellow-billed Cuckoo	1
Cooper's Hawk	3	Orange-crowned Warbler	1	Yellow-breasted Chat	10
Dickcissel	8	Osprey	2	Total	1876



Typically a woodland bird, this Gray-cheeked Thrush was captured and banded at Mora Prairie Conservation Area during spring migration.



Lincoln's Sparrow is a passage migrant and winter resident that is often found in woodland edge and shrub habitat.

FALL MIGRATION MONITORING OVERVIEW

Since 2013, MRBO has conducted line-transect surveys on a variety of Missouri prairies during fall migration (approximately 1 September — 15 November). Previous fall migration study sites have included Hi-Lonesome Prairie, Hartwell, Ionia Ridge, Mora, Bryson’s Hope and Paintbrush Prairie CAs, as well as Bruns Tract and Dunn Ranch. Within these properties, from 2013 to 2015 MRBO surveyors documented and obtained spatially explicit information for over 18,966 individual birds.

In 2016, MRBO initiated fall migration surveys on two new sites, Linscomb WA and Wah’ Kon-tah Prairie CA. Linscomb WA is undergoing restoration and data will be used to assess how the restoration effects habitat use by and density of migrants. Migration surveys at these sites added an enormous amount of data to the study, with 19,117 birds documented in 2016 alone (14,781 at Wah’Kon-Tah and 4,336 at Linscomb).

We have compiled all migration data to date to collectively display departure times of key grassland-obligates species (Figure 4) and arrival timing of winter residents (Figure 5). The majority of fall departure begins at the beginning of September and continues through the first week of October. Peak activity occurs on our grasslands in mid-September. We note that Dickcissels and Henlow’s Sparrows remain longer than other most other grassland birds. On average, the majority of fall arrivals of winter residents take place in the beginning of October, with peak arrival occurring after the second week of October (Figure 5).

Additionally, densities were generated for all bird species documented as well as subsets of grassland obligate species. These density measures allow us to assess overall changes in bird use of sites over time and paint a broad picture of migrant use of each area. Overall density for an area provides a picture of trends over time, but not of the precise portions of an area where migrants concentrated their activity. To address this, online maps are available to show locations of individual species (Figure 7). All migration data are available through ArcGIS Online at <https://mrbo.maps.arcgis.com> in several formats, including time-aware maps filtered by species.

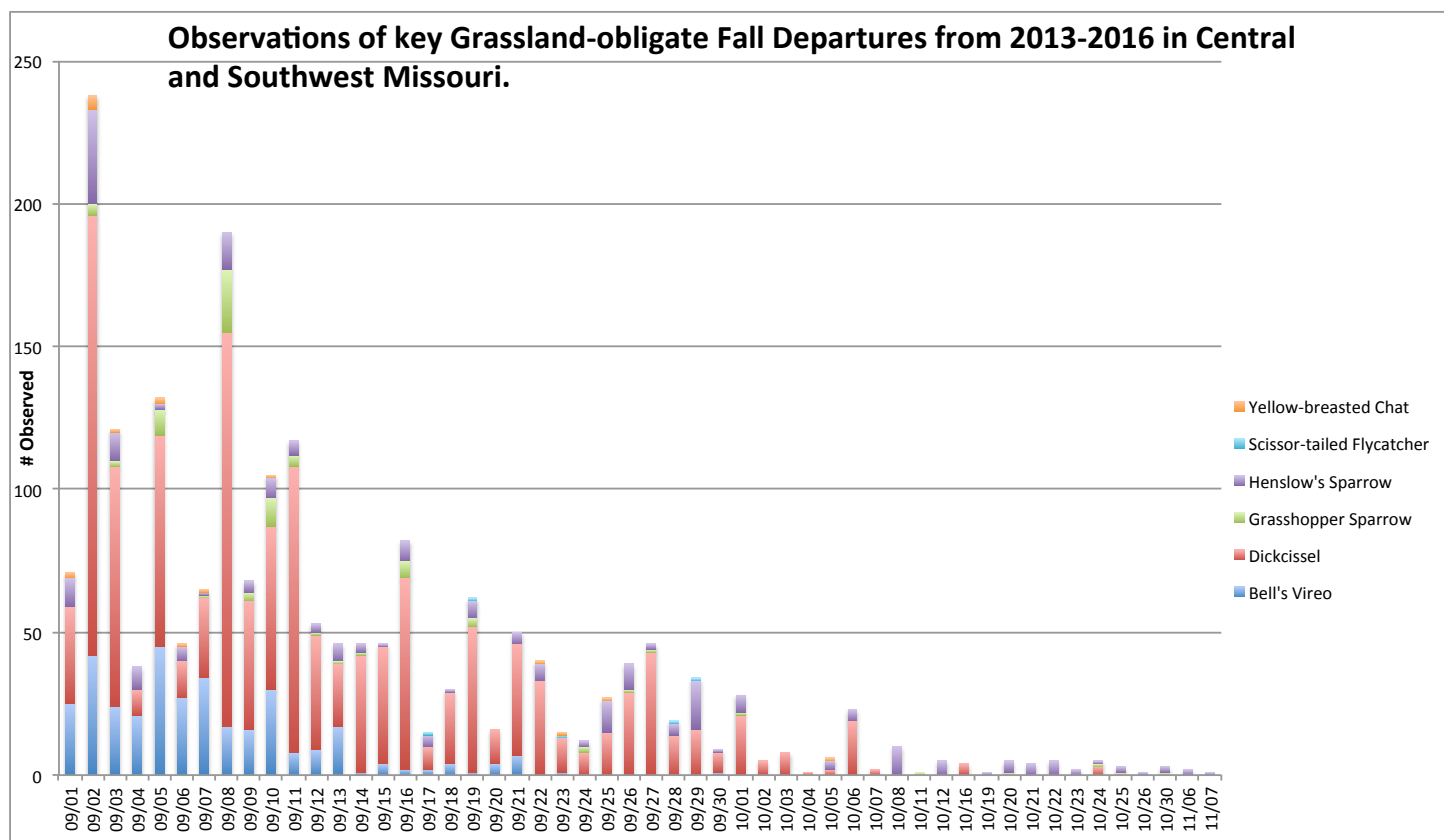


Figure 4. Observations of key grassland-obligate breeding season departures during fall 2013-2016.

FALL MIGRATION MONITORING- SURVEY RESULTS

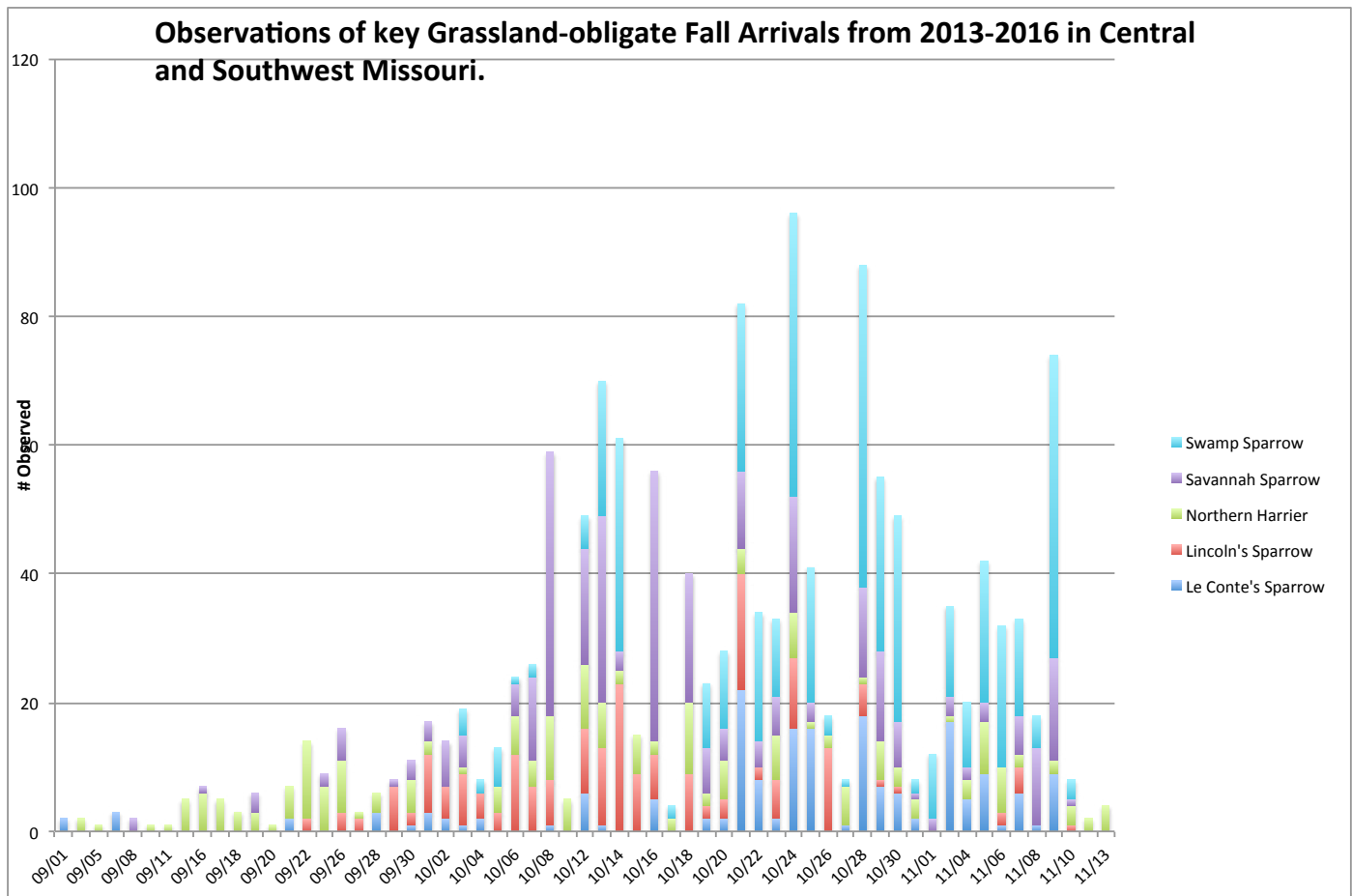


Figure 5. Observations of key grassland-obligate winter resident arrivals during fall 2013-2016.

Species	Linscomb WA		Wah'Kon-tah Prairie CA	
	n	D	n	D
All Species	4336	4.971	14781	10.019
All Target Species	534	0.578	2398	1.535
Bell's Vireo	24	0.016	146	0.058
Bobolink	16	-	106	0.044
Common Nighthawk	0	-	0	
Dickcissel	72	0.084	436	0.302
Eastern Meadowlark	8	-	582	0.192
Field Sparrow	244	0.379	452	0.415
Grasshopper Sparrow	0	-	5	-
Greater Prairie-Chicken	0	-	18	-
Henslow's Sparrow	1	-	74	0.057
Le Conte's Sparrow	49	0.068	91	0.075
Loggerhead Shrike	2	-	1	-
Meadowlarks - All	37	0.021	848	0.288
Northern Bobwhite	46	0.104	97	0.13
Savannah Sparrow	34	0.046	67	0
Sedge Wren	9	-	55	0.052
Upland Sandpiper	0	-	0	-

Table 5. Number of observations (n) and estimated density (D) of target species documented at Linscomb WA and Wah'Kon-Tah Prairie CA during fall migration, 2016.

FALL MIGRATION MONITORING— MAPPING

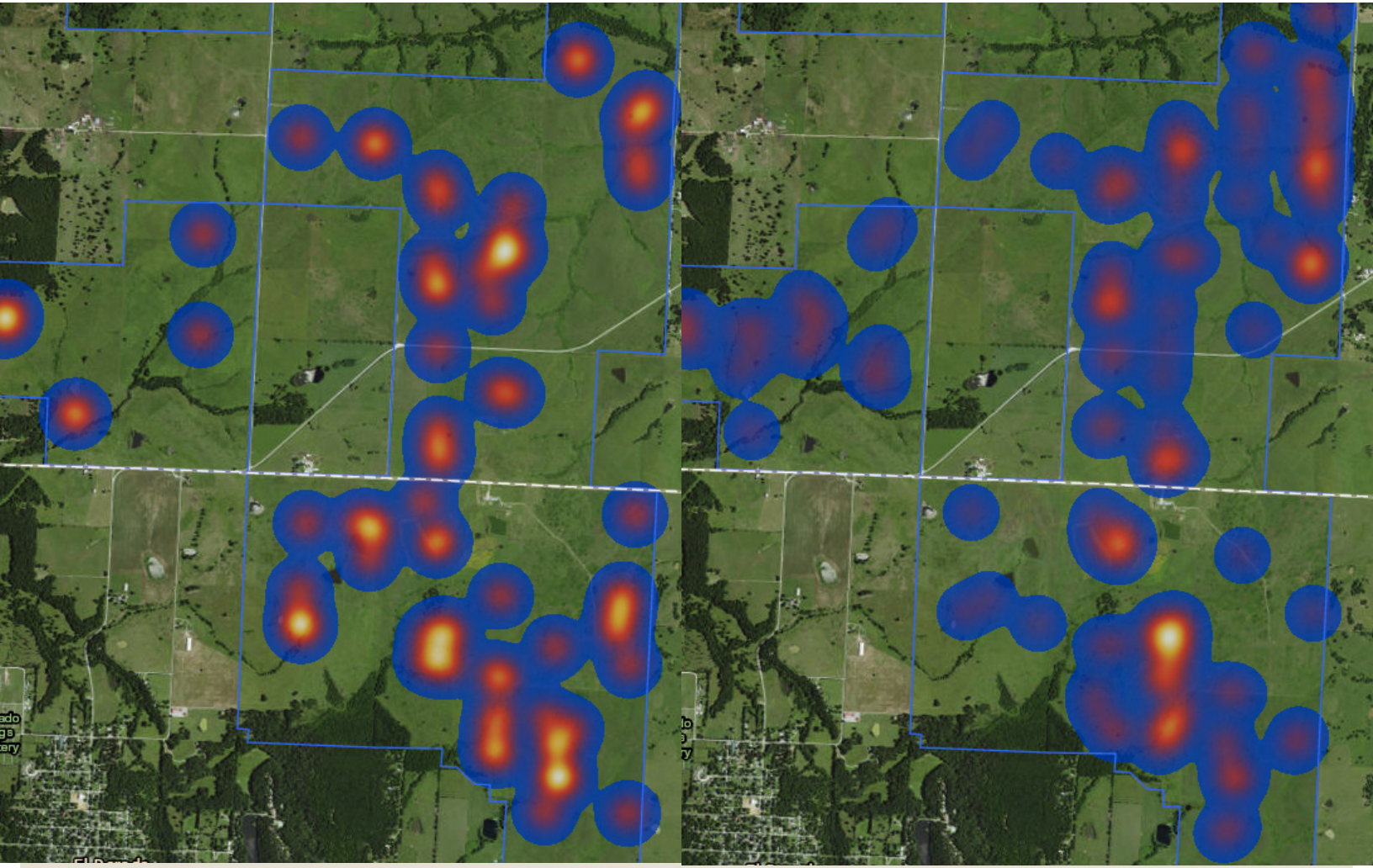
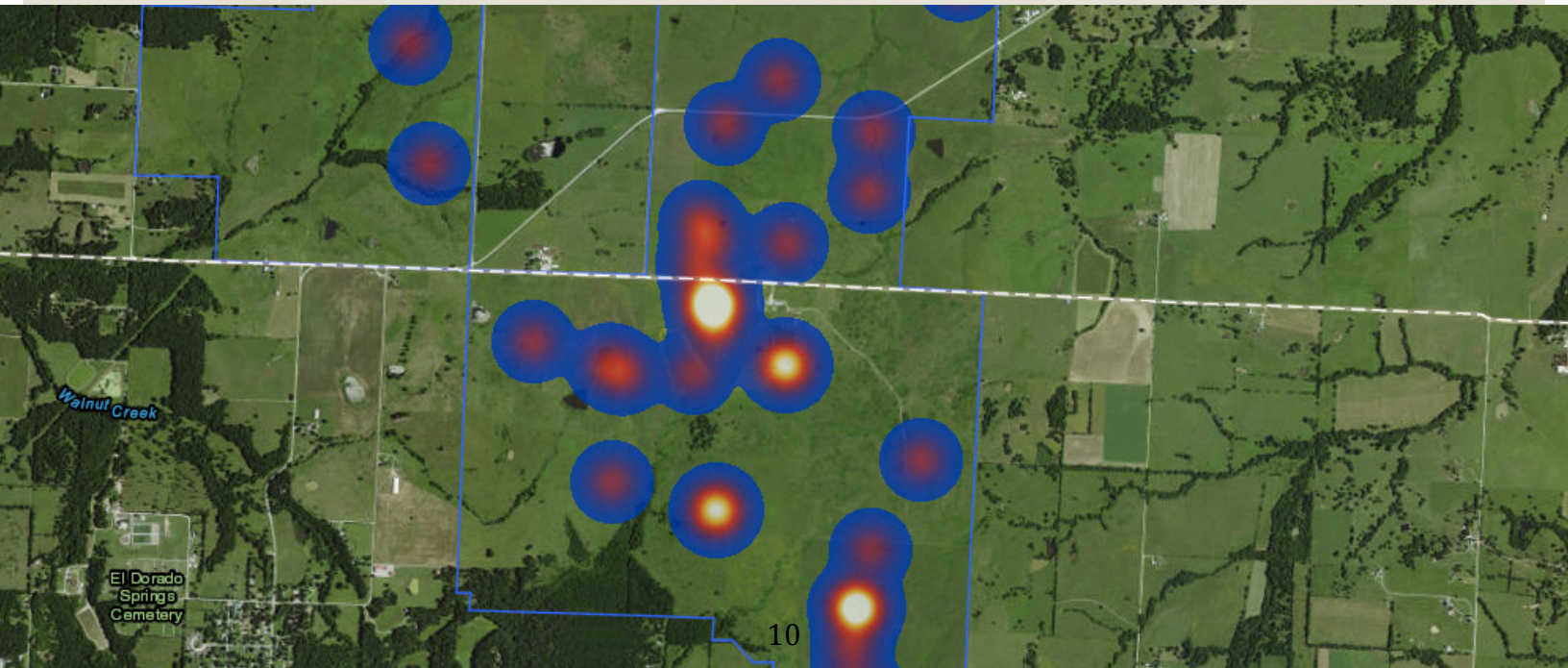


Figure 6 (above). A heatmap of Henslow's Sparrow localized occupancy at Wah' Kon-Tah Prairie CA during fall migration in 2016 (left) and during breeding season (right).

Figure 7 (below). A heatmap of Bobolink localized occupancy at Wah' Kon-Tah Prairie CA during fall migration in 2016. Detections were filtered, removing all "Flyover" detection types in order to show birds actually using the habitat and not those flying over.



MIGRATION DATA AND MAPS VIA ARCGIS ONLINE (AGOL)

All fall migration survey results from 2014-2016 and all that take place in the future will be available spatially and in tabular form via ArcGIS Online (AGOL). Spatially explicit locations of individual birds were documented in 2016 using Collector for ArcGIS using an iPad in the field. This allows seamless transition to ArcGIS Online (AGOL) and its various mapping features. MRBO's > 100,000 grassland bird detections are available to Area Managers and other MDC staff via AGOL. Additionally, MRBO has worked with Managers and GIS/IT staff to collaborate on documenting and sharing management activity in AGOL that can be used in conjunction with bird data to view the effects of management on bird use.

There are a nearly infinite number of map views and applications (apps) available that be created quickly in AGOL. The image above shows a typical comparison app (Fig. 8). It contains side-by-side heatmaps of Henslow's Sparrows and Eastern Meadowlarks in 2016. Webapps such as these are yet another way managers can use to quickly assess how where different species use the habitat they provide.

Maps can be generated for all detections and the spatially-explicit bird location data can be explored in a variety of other ways. Detailed instructions are provided in a supplemental report, ["A Manual for Accessing MRBO's Grassland Bird Data Using ArcGIS Online"](#).

In addition to the instructions, there are a few steps to creating "time-aware" maps. With the map open, select the bird detection layer options and click "enable time animation" (Fig. 9). Then use the window at the bottom of the map to adjust time animation settings (Figs. 10-11).

Please contact ethan.duke(@)mrbo.org for comments or questions.

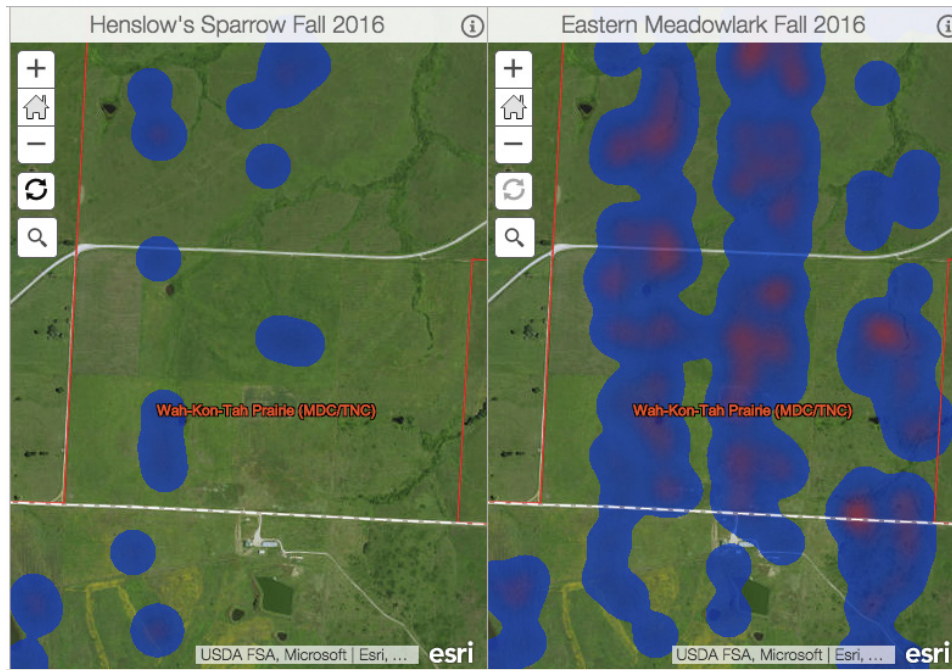


Figure 8. Example of the comparison app showing heatmaps for Henslow's Sparrow and Eastern Meadowlark during fall migration.

Figures 10-11: Filter (above) and time settings (below) for creating and using time-aware maps.

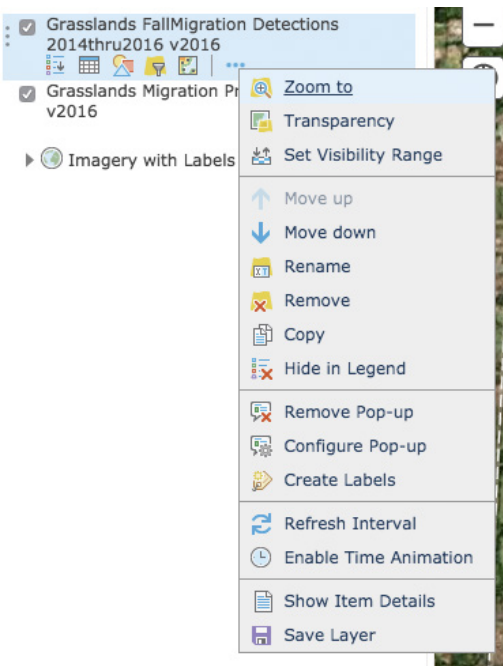


Figure 9. How to access time-enable settings for a layer.

STATEWIDE GRASSLAND INITIATIVES FOR 2017

We have interacted extensively with Area Managers, private landowners, Resource Science Division (RSD) and IT/GIS staff to further refine MRBO's reporting of monitoring results. After providing area managers with MRBO user accounts in ArcGIS in 2016, we will be transitioning to granting access to MRBO data to those with MDC ArcGIS Online accounts. End users such as MDC Managers can use bird survey data in countless formats in context to their own management assessment practices. All bird data on public lands is available without login credentials, while private lands data requires permissions and is not sharable.

Spring migration monitoring will take place at Linscomb WA using bird banding and daily observations. Banding/observation sites will be selected to facilitate the examination of the restoration progress. Area Manager Matt Hill has been instrumental in providing us with up-to-date management information. Biologist Joe Coy will assist with determining the banding site locations.

Breeding season surveys will continue throughout the state (please see sidebar, *right*) with refined site selection criteria. In 2016, we transitioned to a two-years-on/one-year-off sampling framework. Thus, several sites that were not surveyed in 2016 are coming back into this year's sample, while sites that have been surveyed in a number of consecutive years will skip a year of surveys. Exceptions to this include prairies where RSD patch-burn grazing studies are on-going as well as sites undergoing active restoration. In general, survey sites are selected based on the following criteria:

- » a continued focus on sites within Comprehensive Conservation Strategy Priority Geographies and grassland Conservation Opportunity Areas
- » integration with the Resource Science Division's long-term patch-burn grazing study
- » inclusion of sites undergoing or slated to undergo significant grassland restoration within the next five years
- » private tracts with landowner indicating interest in conservation-based grazing management.
- » sites with on-going studies conducted by Area Managers

Sites with concurrent RSD vegetation surveys will undergo two rounds of bird surveys annually.

Nest Productivity Assessment on Patch-Burn Grazing Units: MRBO will continue a nest productivity study of patch-burn grazing units in 2017. Approaches will include nest-searching, nest monitoring, and productivity analyses for grassland obligate birds in PBG study units. Each patch will be approached as an experimental unit (e.g., burned grazed, burned ungrazed, unburned grazed, and unburned ungrazed). Units will receive equal effort in nest-searching. This will provide useful information on the response of nesting productivity in addition to bird densities in prescribed fire and grazing treatments.

Fall Migration Surveys are slated to continue with study sites to be advised by MDC staff.



2017 BREEDING SEASON SURVEY SITES

Grand River Grasslands CCS & Surrounds

Dunn Ranch (TNC)
Private Lands (1)

Upper Osage Grasslands CCS

Linscomb WMA
Schell-Osage CA
Taberville CA
Wah'Kon-tah Prairie CA
Private Lands (1)

Cole Camp/Green Ridge CCS

Bruns Tract
Bryson's Hope
Drovers Prairie CA
Friendly Prairie CA
Grandfather Prairie CA
Hartwell CA
Ionia Ridge Prairie CA
Kearn (W.R.) Memorial CA
Paint Brush Prairie CA
Hi-Lonesome Prairie CA
Private Lands (3)

Golden Area

Cook Meadow Prairie (TNC)
Golden Prairie CA

Southern Missouri

Coyne/Penn/Welch (MPF)
Diamond Grove Prairie CA
Horse Creek Prairie CA
Indigo Prairie CA
Kickapoo Prairie CA
Niawathe Prairei CA
Providence Prairie CA
Shelton Memorial CA
Sloan (Dr. O.E. & Eloise CA
Stony Point Prairie
Talbot CA
Private Lands (3)

