

# Conservation Estate Portfolio for the Grasshopper Sparrow (*Ammodramus savannarum*)

## Bird Conservation Region 23 (Prairie Hardwood Transition)



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[http://www.birds.cornell.edu/AllAboutBirds/BirdGuide/Grasshopper\\_Sparrow\\_dtl.html](http://www.birds.cornell.edu/AllAboutBirds/BirdGuide/Grasshopper_Sparrow_dtl.html)

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## Preface

Mapped patterns in the distribution and abundance of rare or focal species can be useful in identifying priority areas for conservation. We have modeled and mapped rare bird abundance in the upper midwestern United States for more than a dozen species of conservation concern. Our work has focused on the Prairie Hardwood Transition (Bird Conservation Region 23). This portfolio describes the conservation context of one species in the Prairie Hardwood Transition. We outlined areas of peak predicted abundance relative to federal, tribal, and state managed lands. This juxtaposition of predicted relative abundance and land management authorities is the conservation estate for this focal species. Identifying these land management authorities relative to areas in which the species is most abundant may help to focus conservation resources in those areas in which they may do the most good.

## Data References

Major Cities depicted using data acquired from the National Atlas of the United States web site (<http://nationalatlas.gov/mld/citiesx.html>). Major cities were determined to be those that had a population in 2000 of greater than 5,000 persons.

Major Roads depicted using data acquired from the National Atlas of the United States web site (<http://nationalatlas.gov/mld/roadtrl.html>). Roads were determined to be Major if they were classified as *Principal Highway* or *Limited Access Highway* according to the data field "Feature".

States data were created by Geographic Data Technology, Inc. This data was published by Environmental Systems Research Institute (ESRI) and made available for distribution.

Counties data were acquired from the National Atlas of the United States web site (<http://www.nationalatlas.gov/mld/countyp.html>).

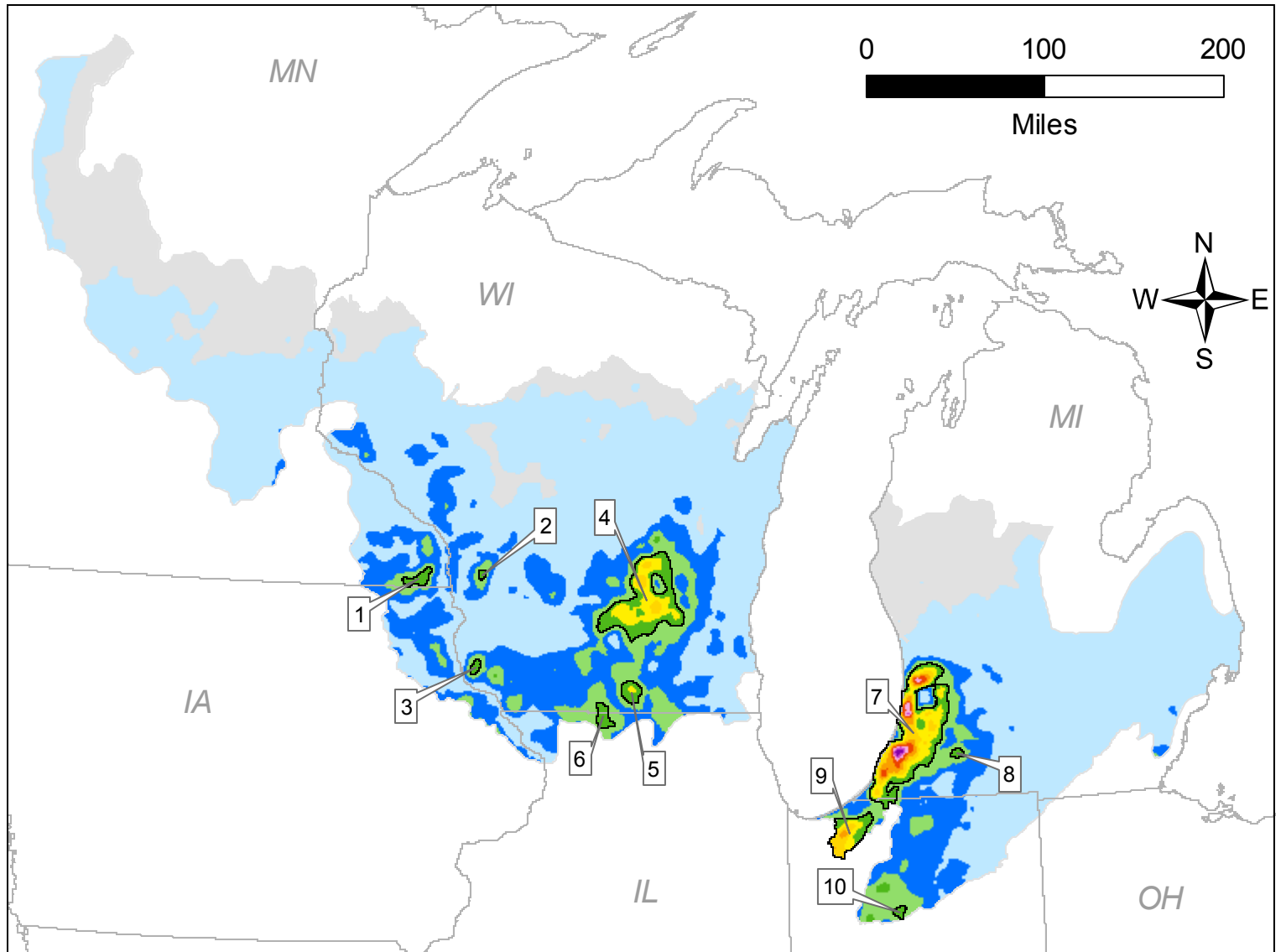
Federal and State lands depicted using Protected Areas Database, version 4: (<http://www.consbio.org/cbi/projects/PAD/index.htm>). Federal and State lands were identified based upon the data field "Owner".




Tribal lands depicted using data acquired from the National Atlas of the United States web site (<http://www.nationalatlas.gov/mld/indlanp.html>).

## Methodology

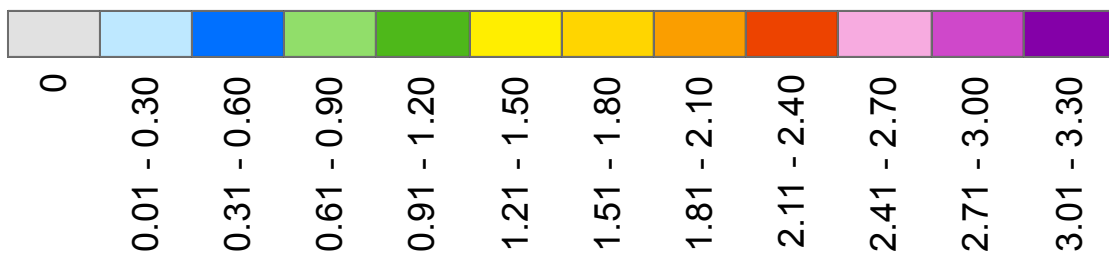
For detailed methodology on avian abundance modeling, see: [http://www.umesc.er.usgs.gov/terrestrial/migratory\\_birds/bird\\_conservation\\_methods.html](http://www.umesc.er.usgs.gov/terrestrial/migratory_birds/bird_conservation_methods.html)

# Predicted Relative Abundance and 10-Highest Peaks of Predicted Relative Abundance for the Grasshopper Sparrow



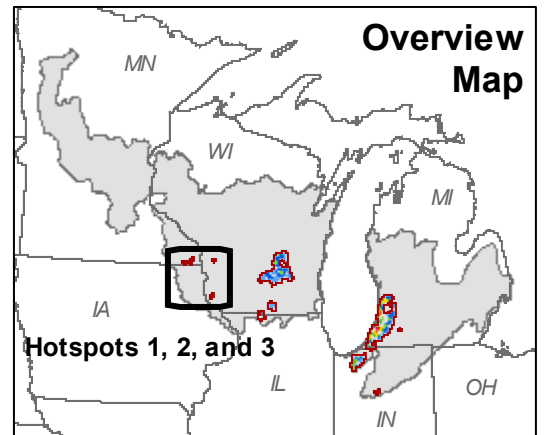
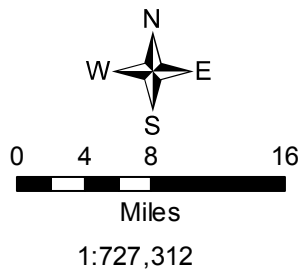
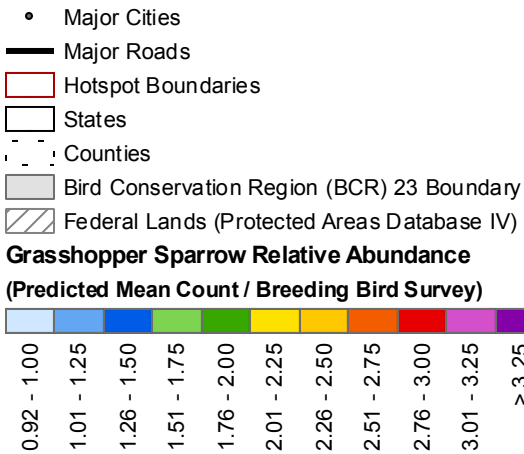
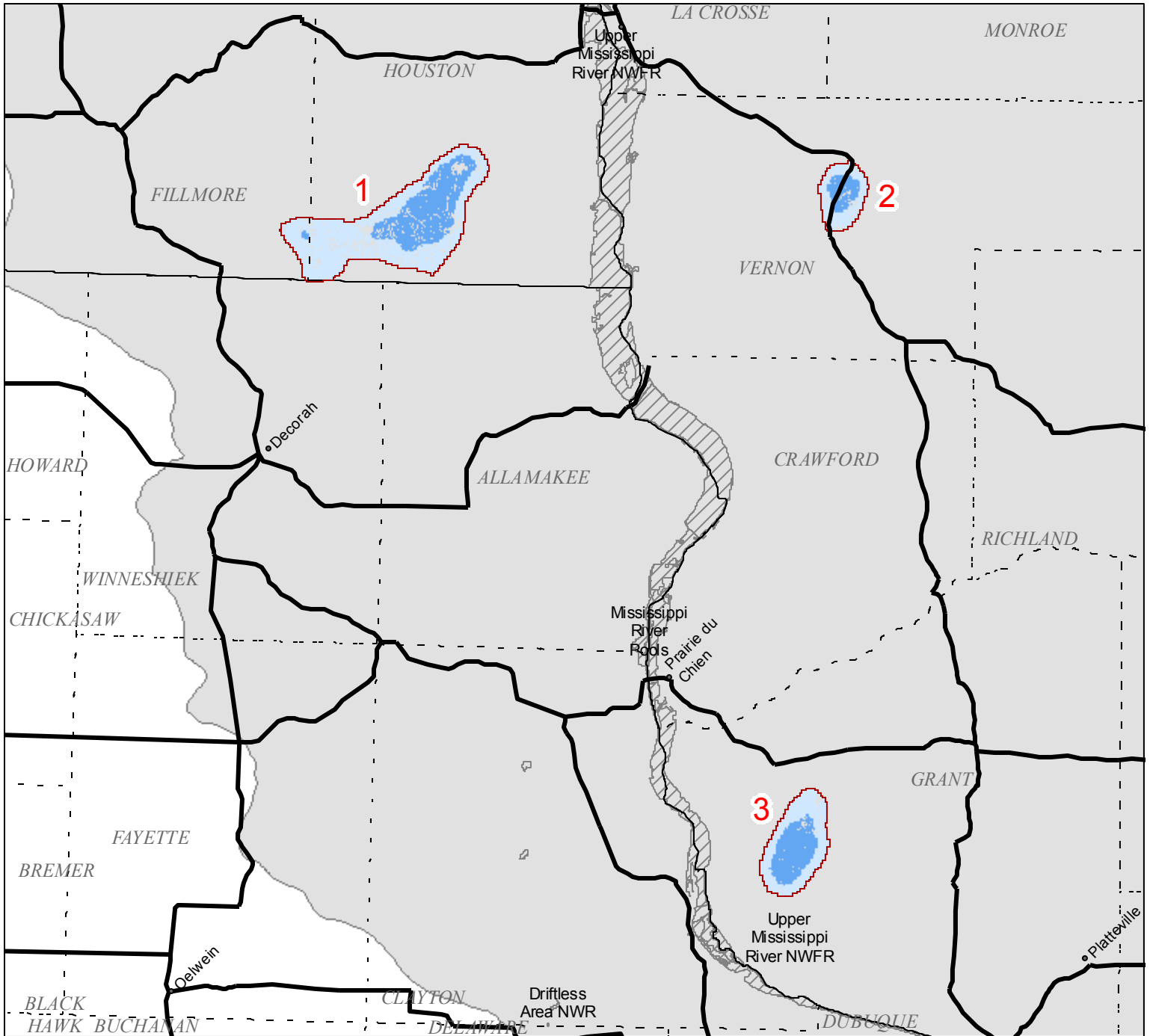
-  Top 10 Hotspots
-  States
-  Bird Conservation Region (BCR) 23 Boundary

Grasshopper Sparrow Relative Abundance  
(Predicted Mean Count / Breeding Bird Survey)



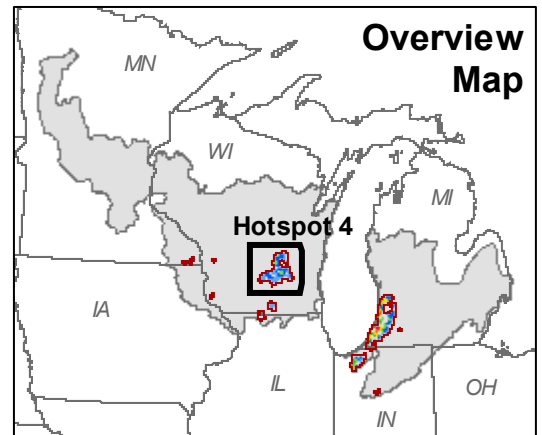
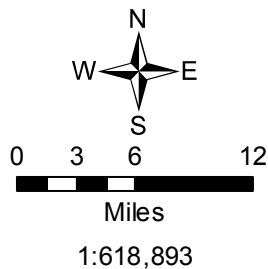
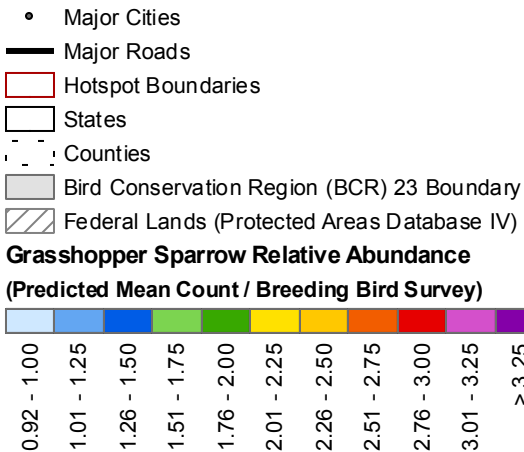
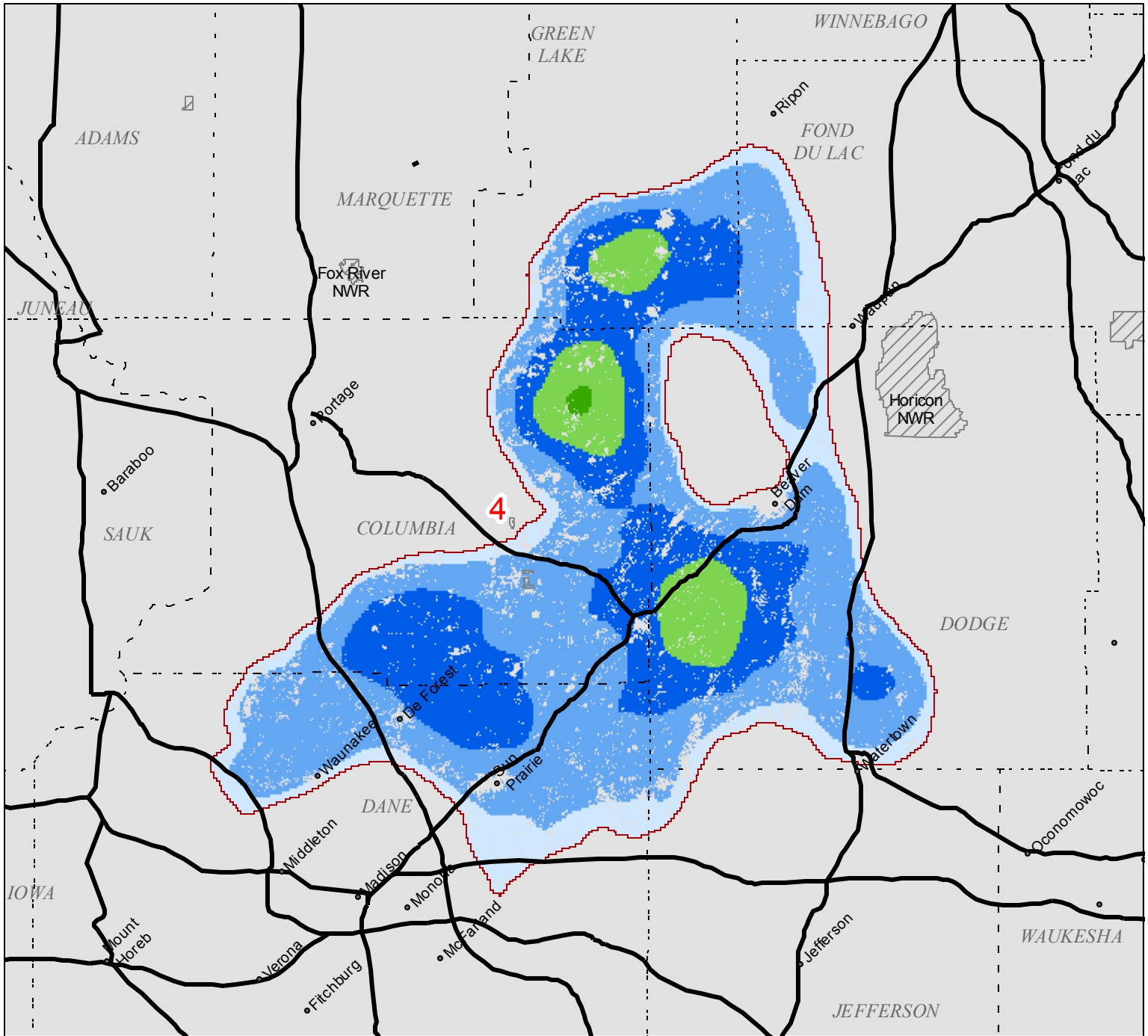
# Grasshopper Sparrow (GRSP) Predicted Relative Abundance Overlaid with Federal Lands

Hotspots 1, 2, and 3



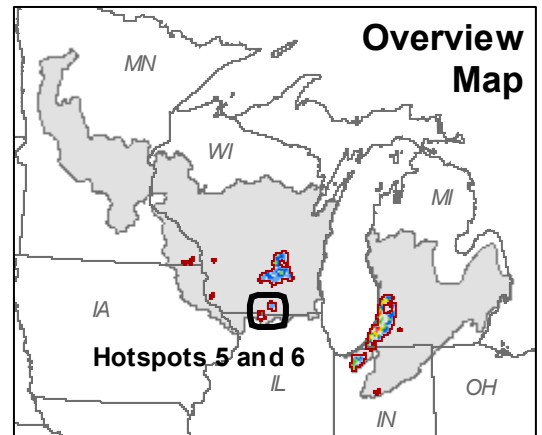
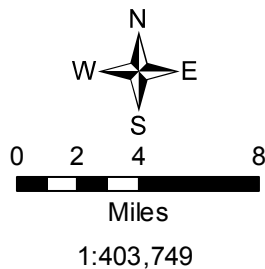
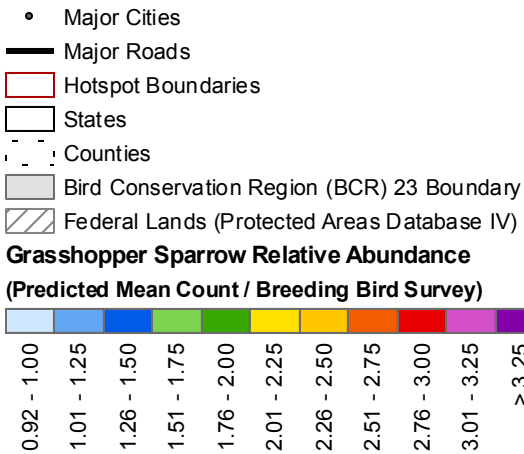
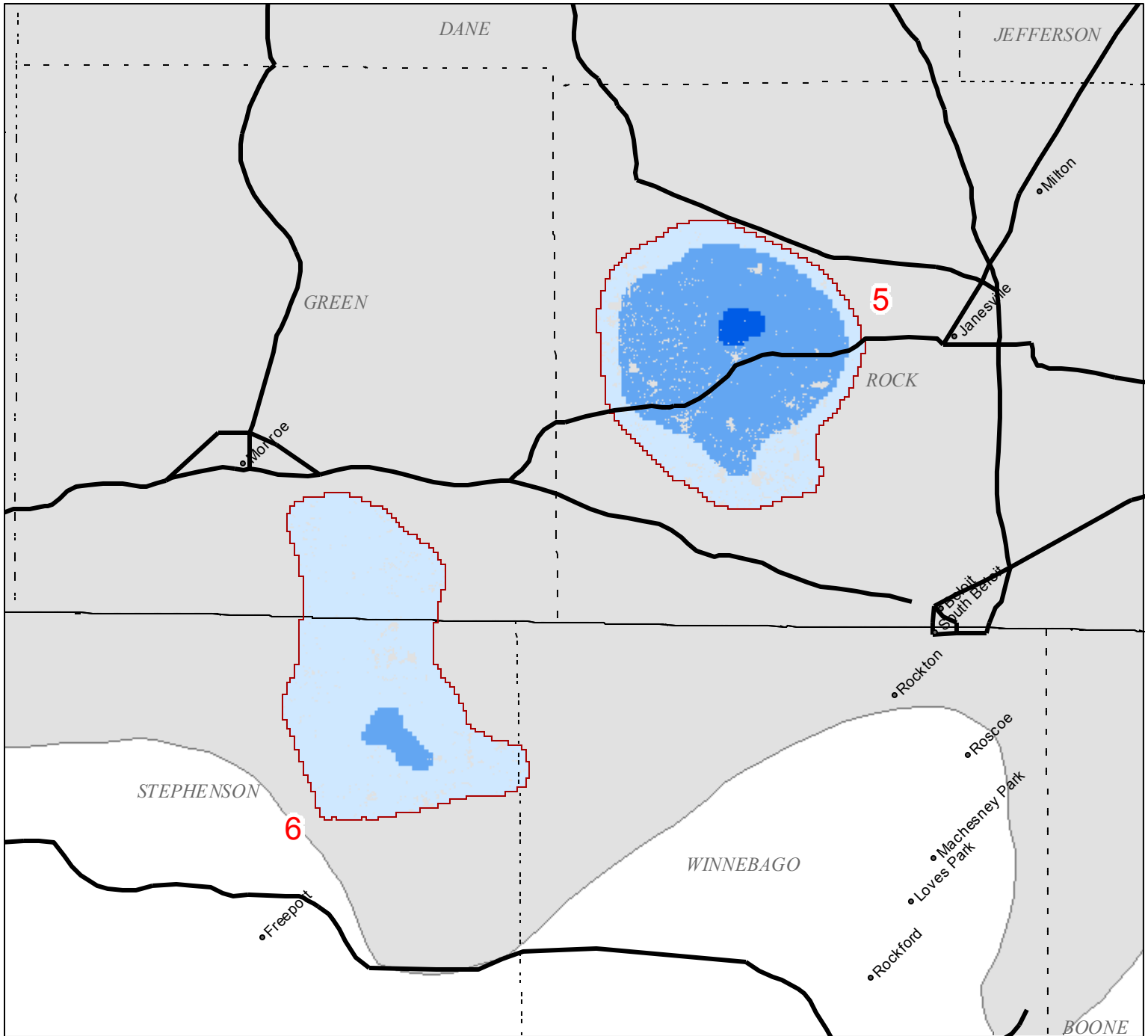
# Grasshopper Sparrow (GRSP) Predicted Relative Abundance Overlaid with Federal Lands

Hotspot 4



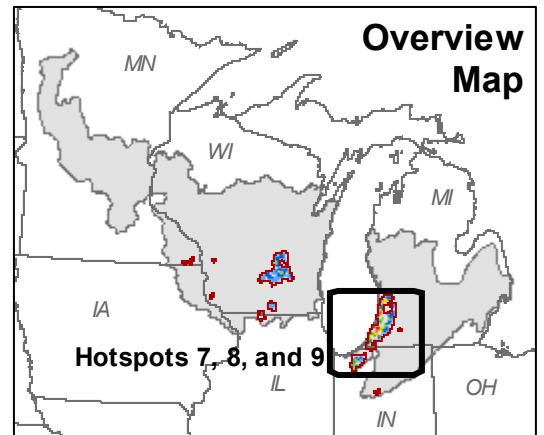
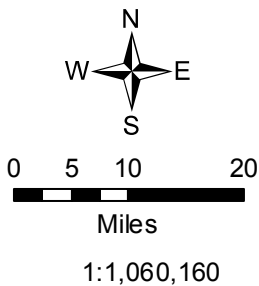
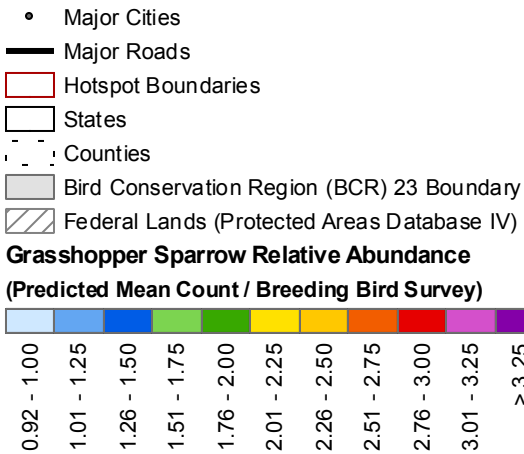
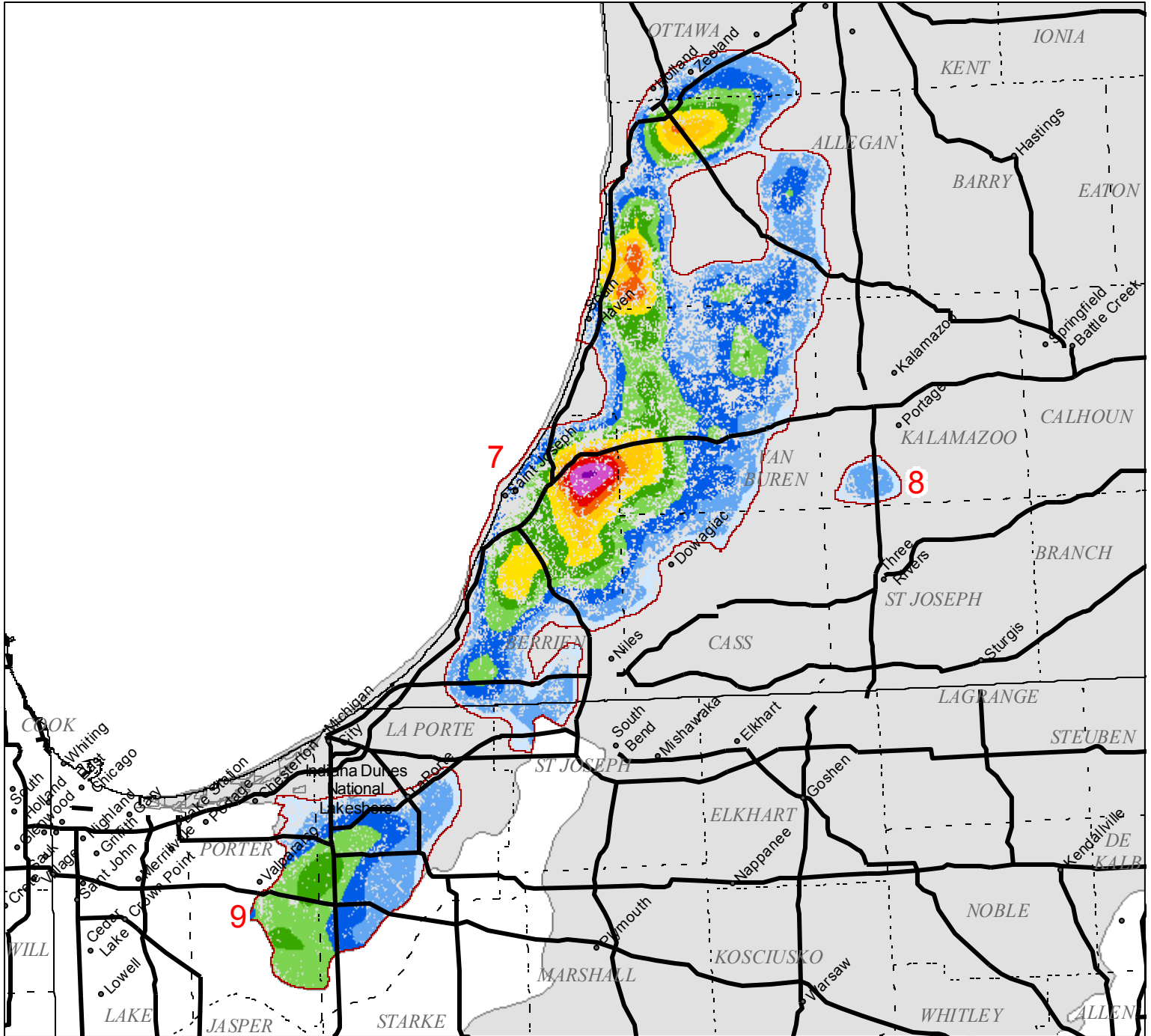
# Grasshopper Sparrow (GRSP) Predicted Relative Abundance Overlaid with Federal Lands

Hotspots 5 and 6



# Grasshopper Sparrow (GRSP) Predicted Relative Abundance Overlaid with Federal Lands

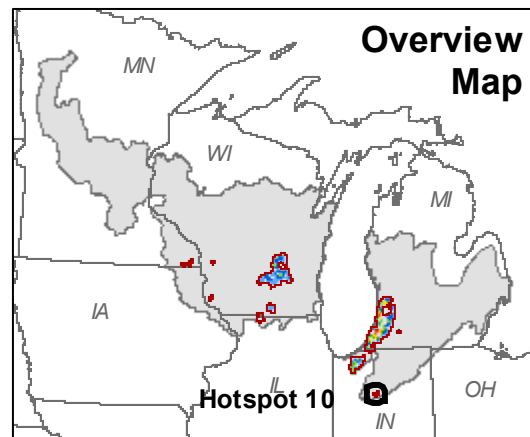
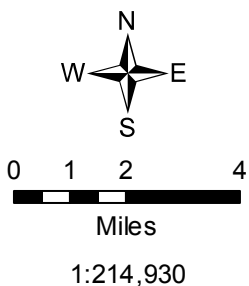
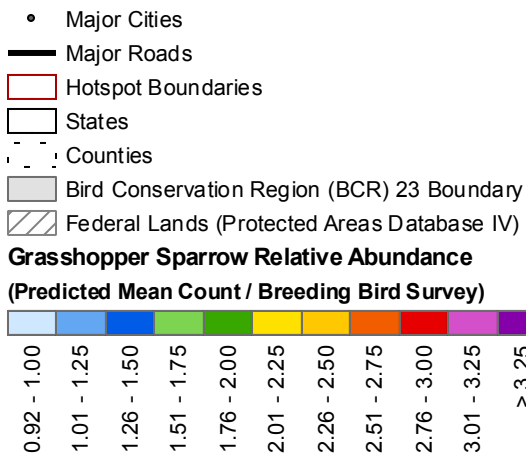
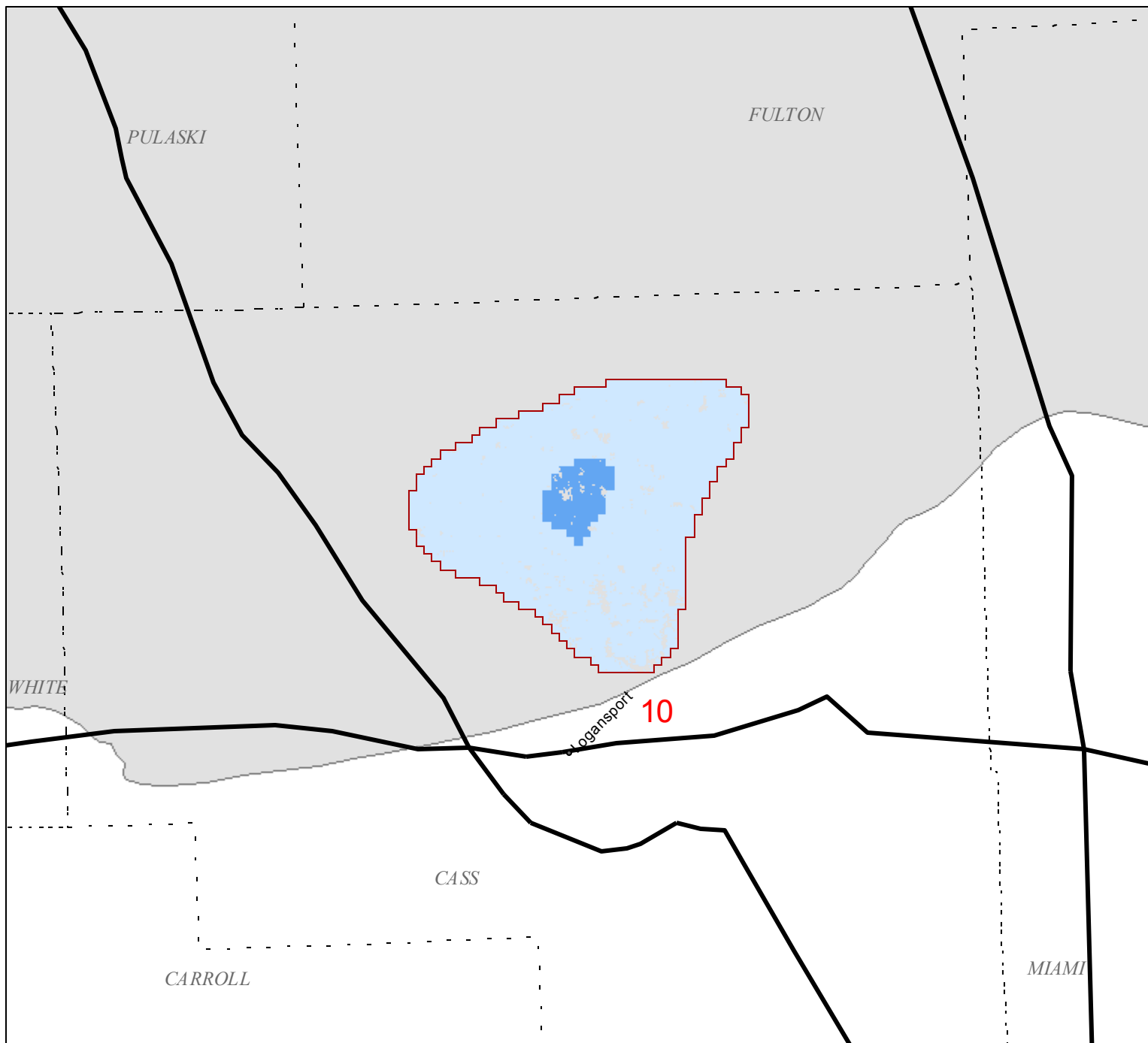
## Hotspots 7, 8, and 9





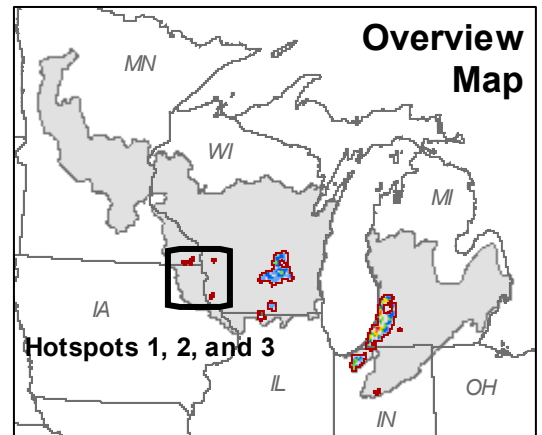
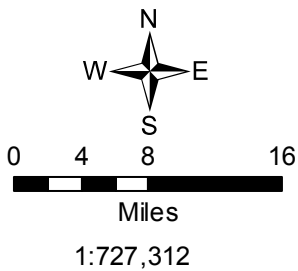
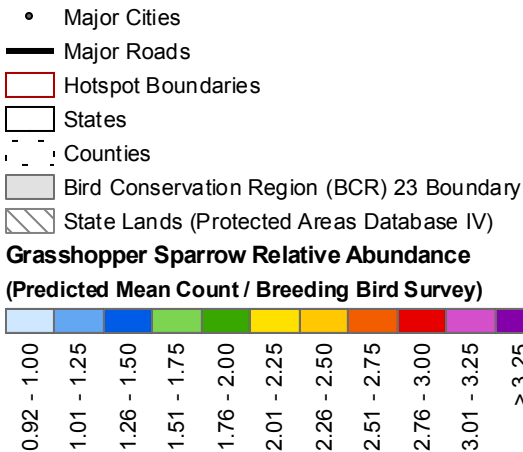
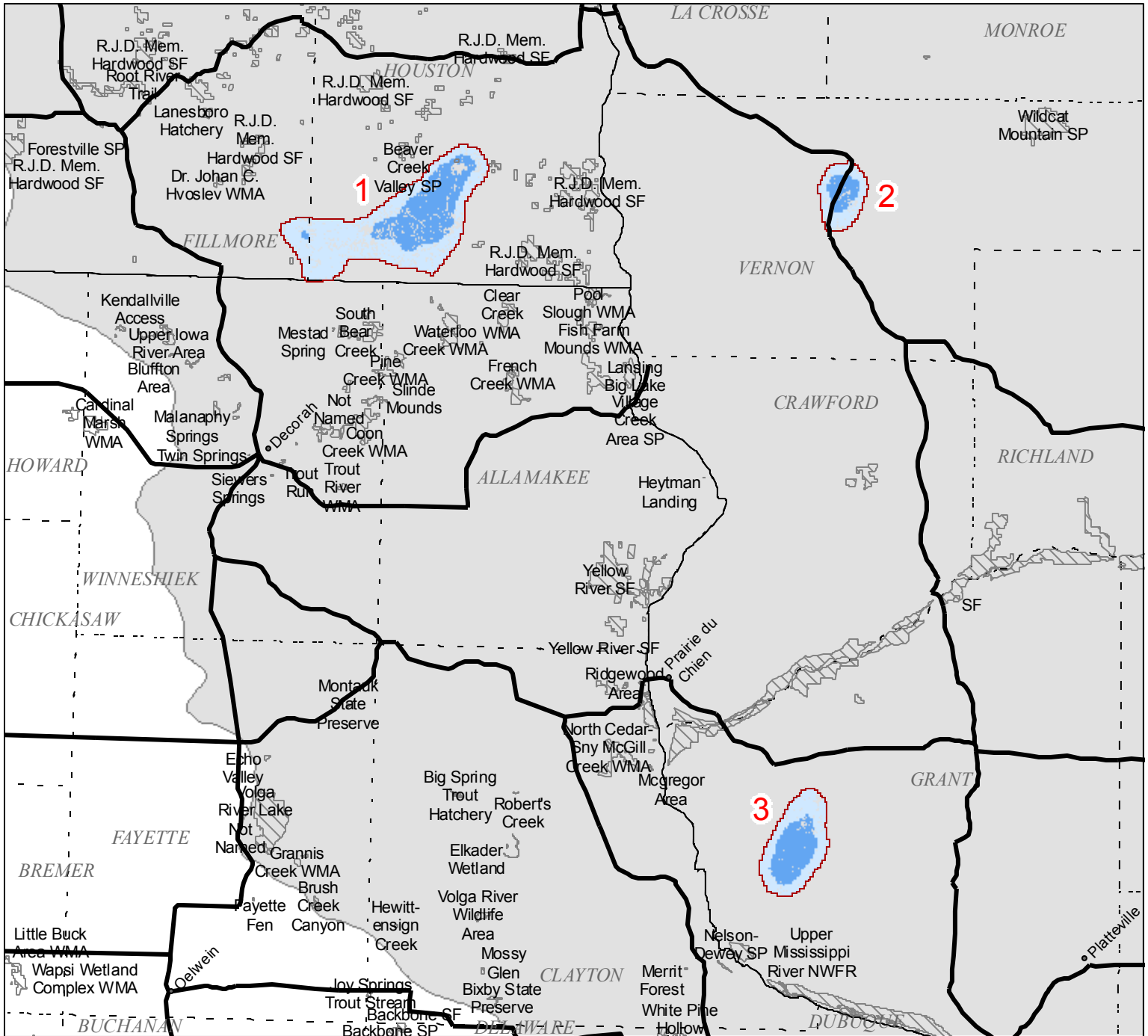
# Grasshopper Sparrow (GRSP) Predicted Relative Abundance Overlaid with Federal Lands

Hotspot 10



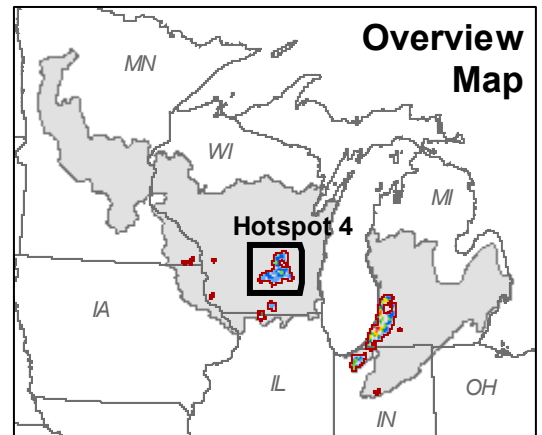
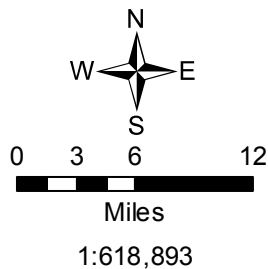
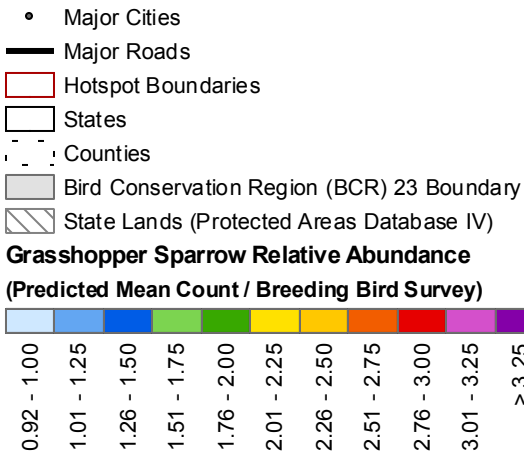
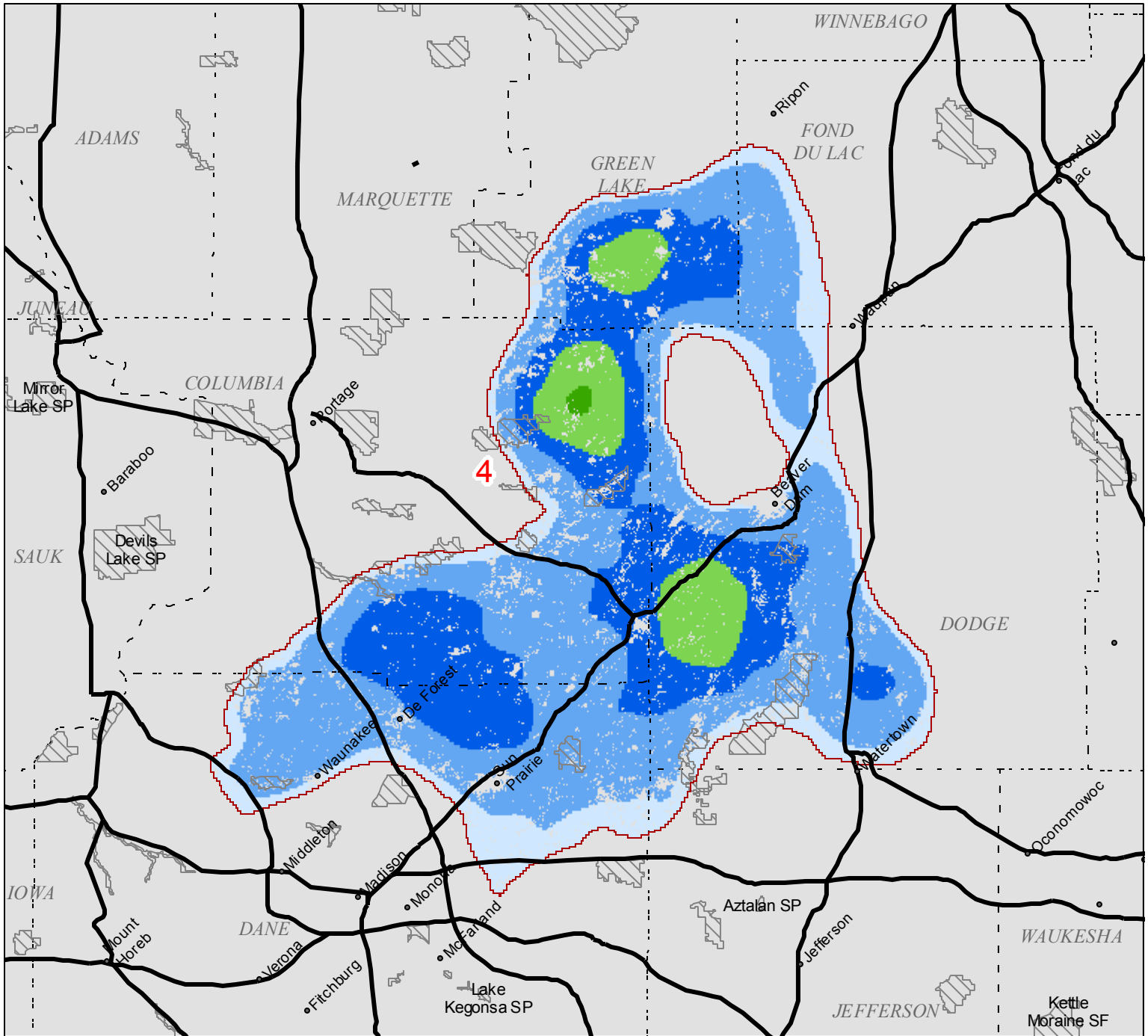
# Grasshopper Sparrow (GRSP) Predicted Relative Abundance Overlaid with State Lands

Hotspots 1, 2, and 3



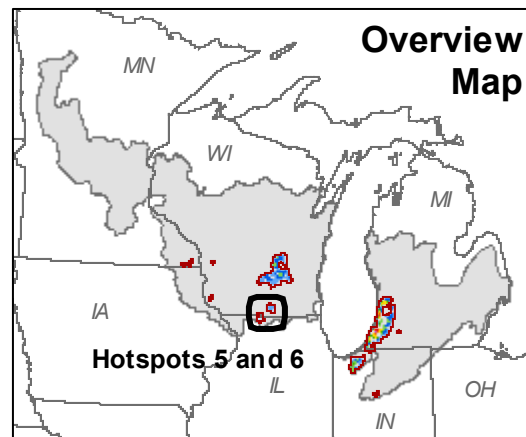
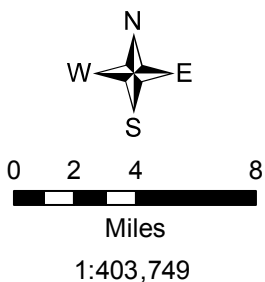
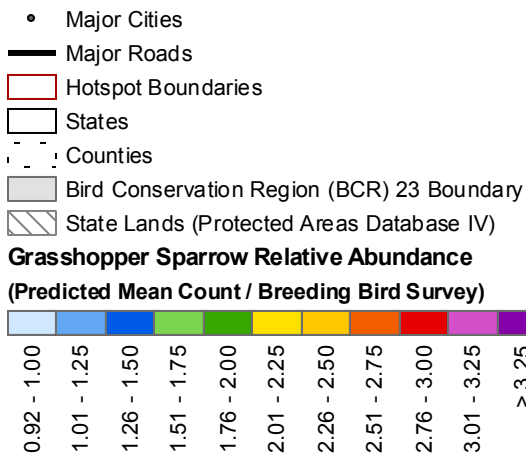
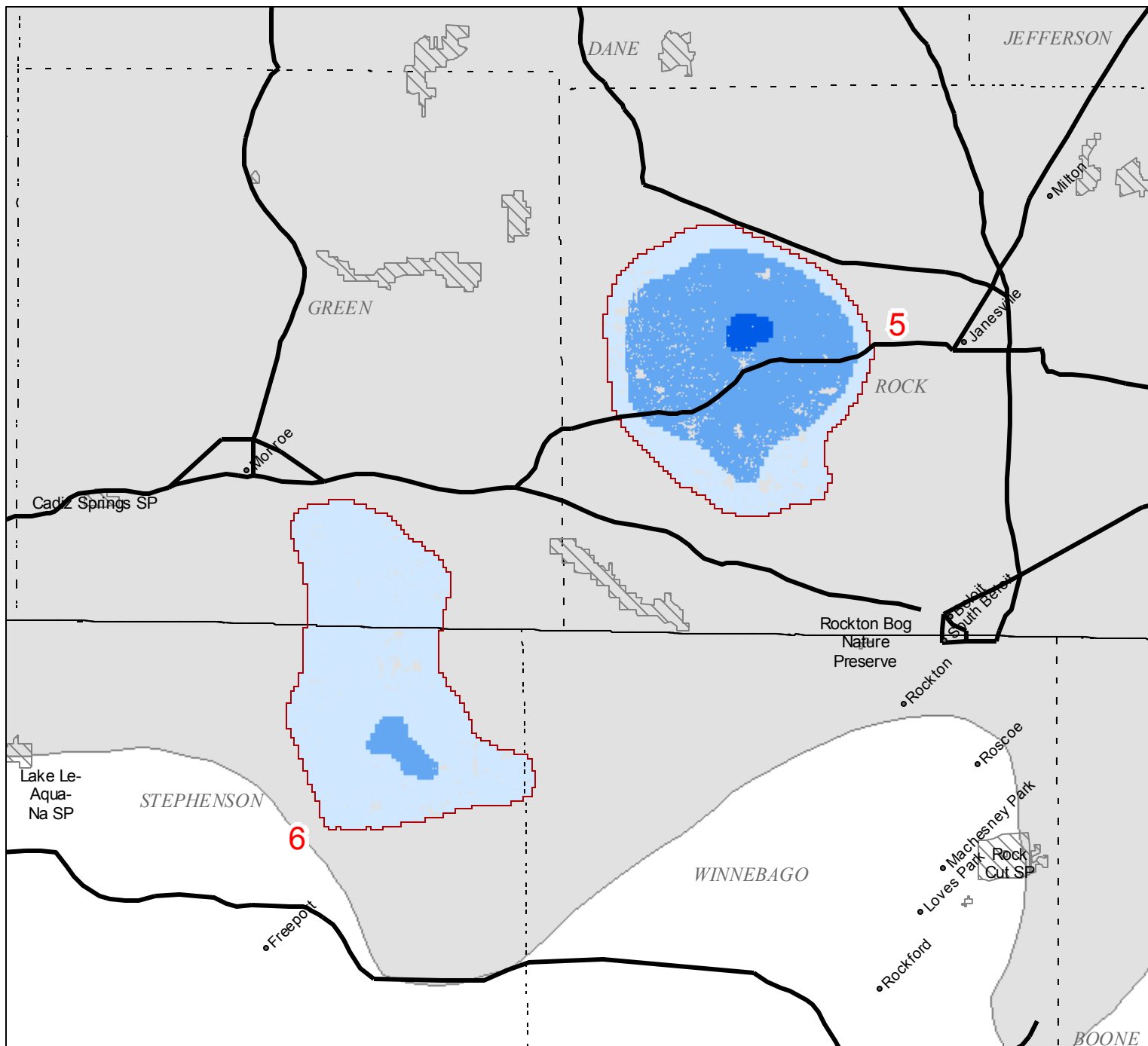
# Grasshopper Sparrow (GRSP) Predicted Relative Abundance Overlaid with State Lands

Hotspot 4



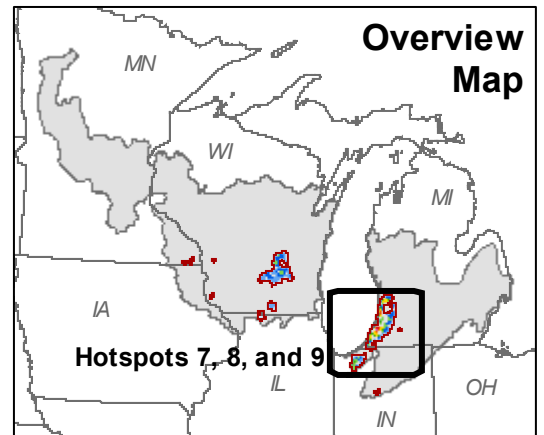
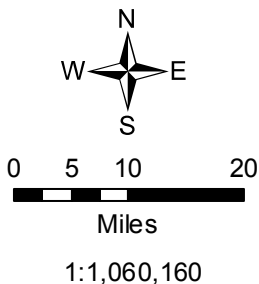
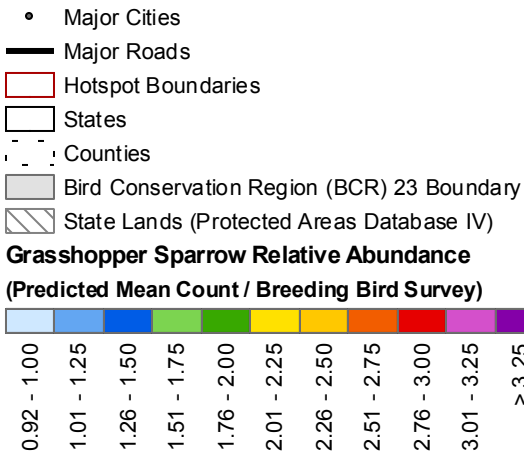
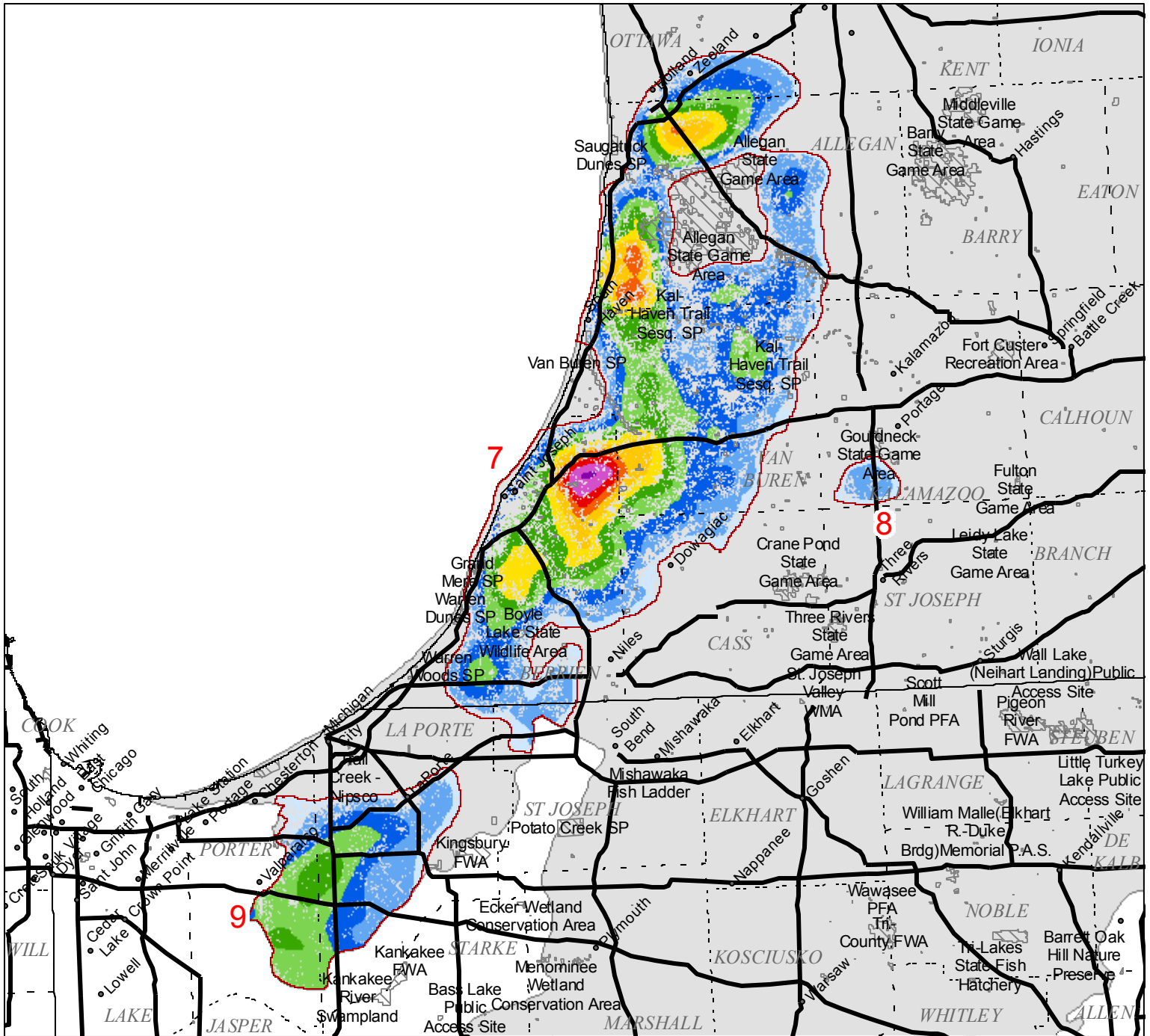
# Grasshopper Sparrow (GRSP) Predicted Relative Abundance Overlaid with State Lands

## Hotspots 5 and 6



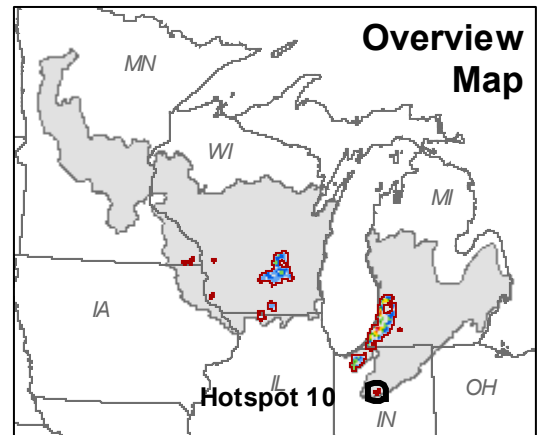
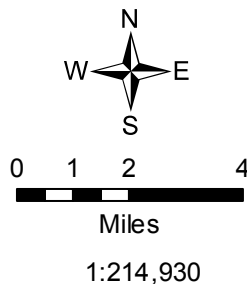
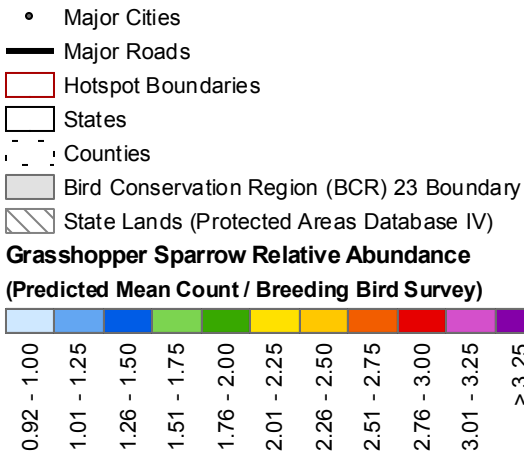
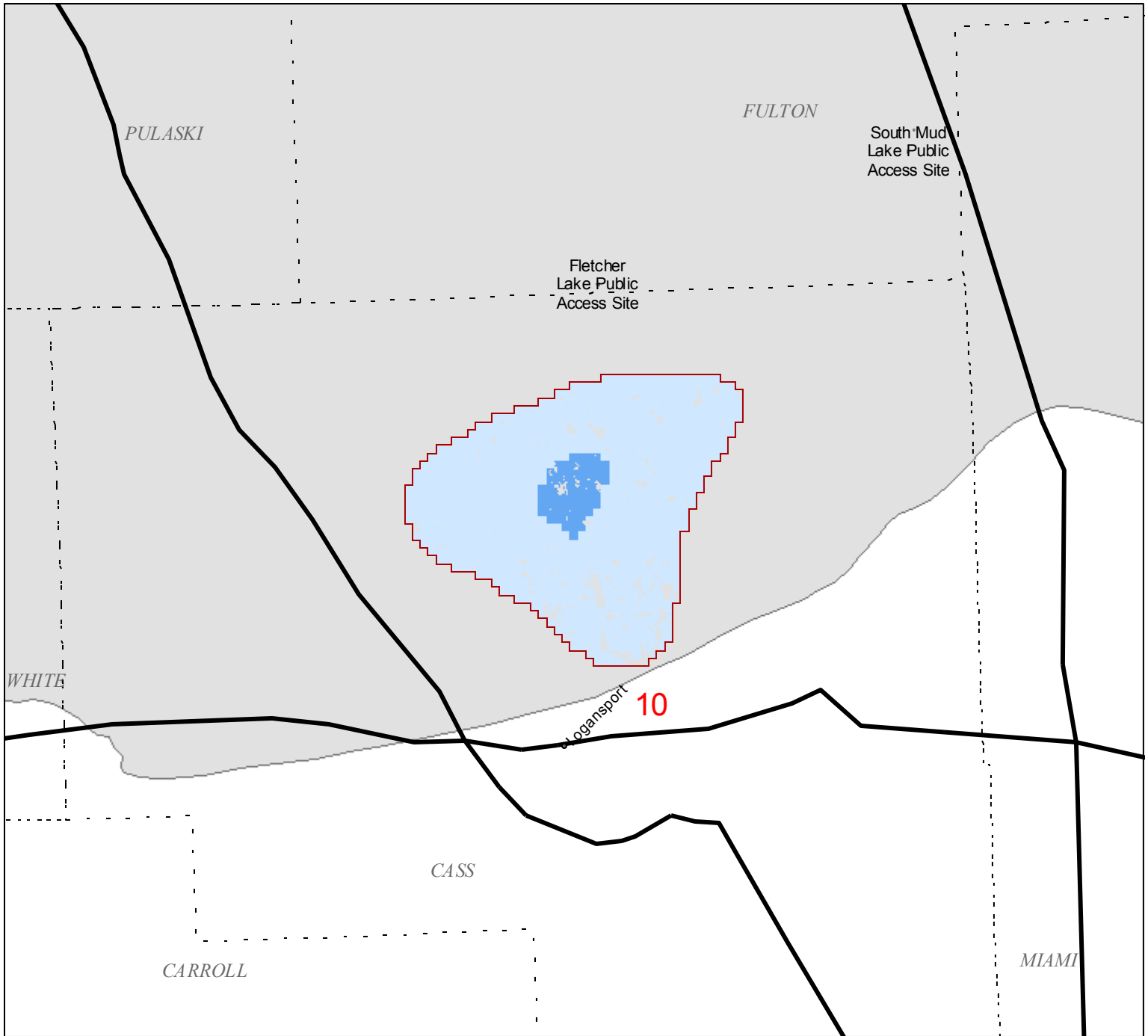
# Grasshopper Sparrow (GRSP) Predicted Relative Abundance Overlaid with State Lands

Hotspots 7, 8, and 9



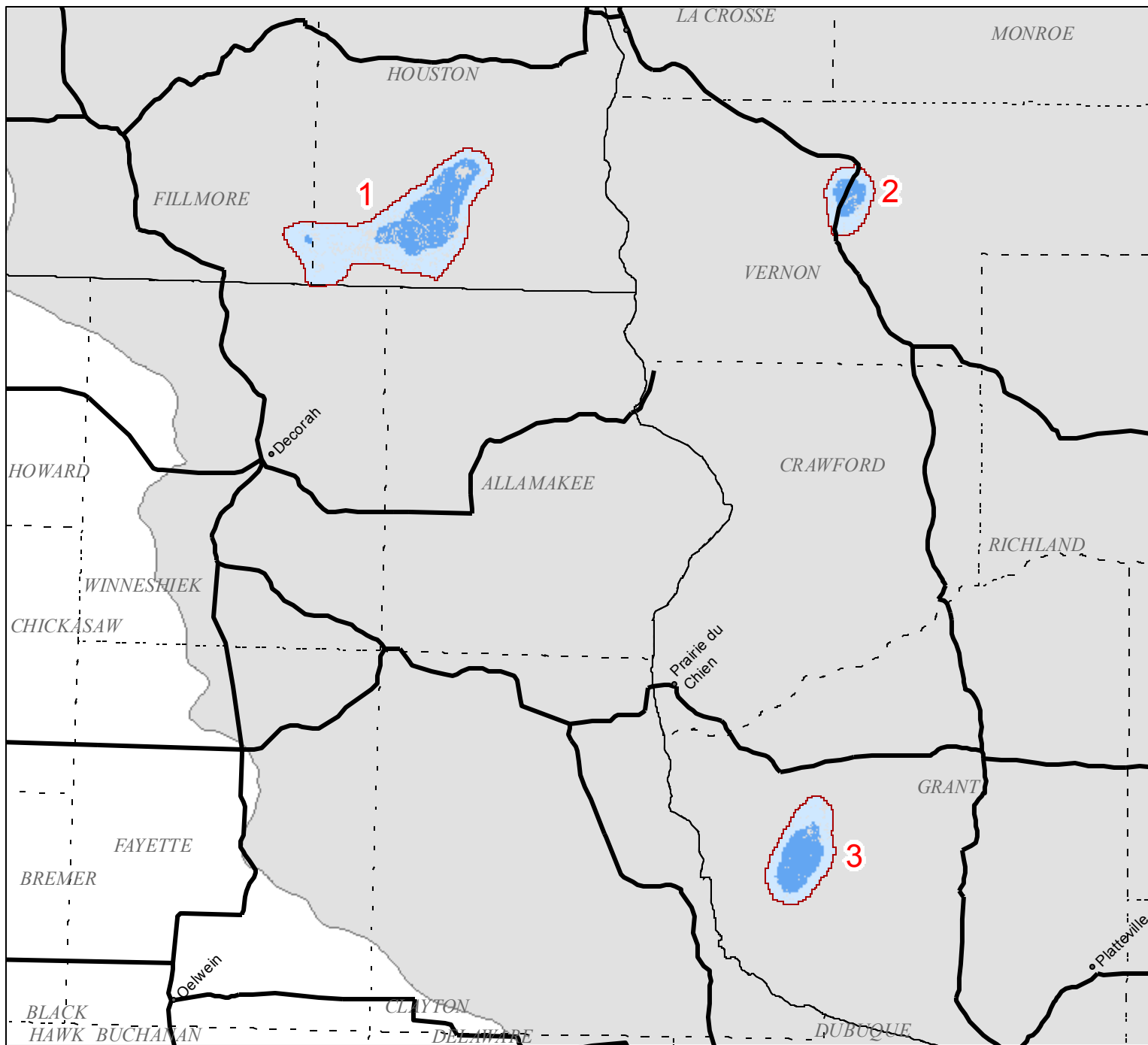
# Grasshopper Sparrow (GRSP) Predicted Relative Abundance Overlaid with State Lands

Hotspot 10



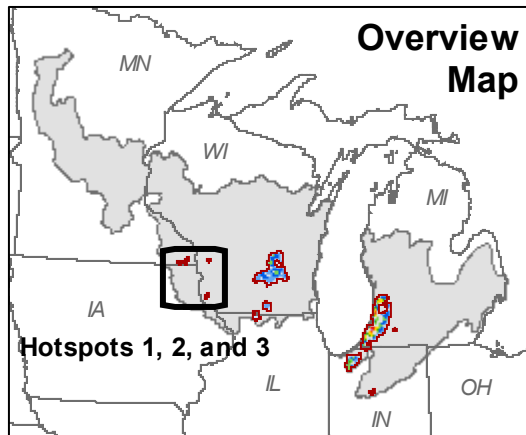
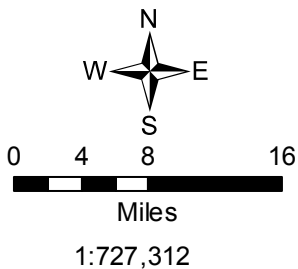
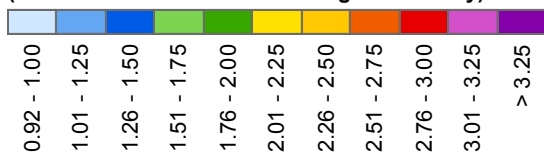
# Grasshopper Sparrow (GRSP) Predicted Relative Abundance Overlaid with Tribal Lands

Hotspots 1, 2, and 3



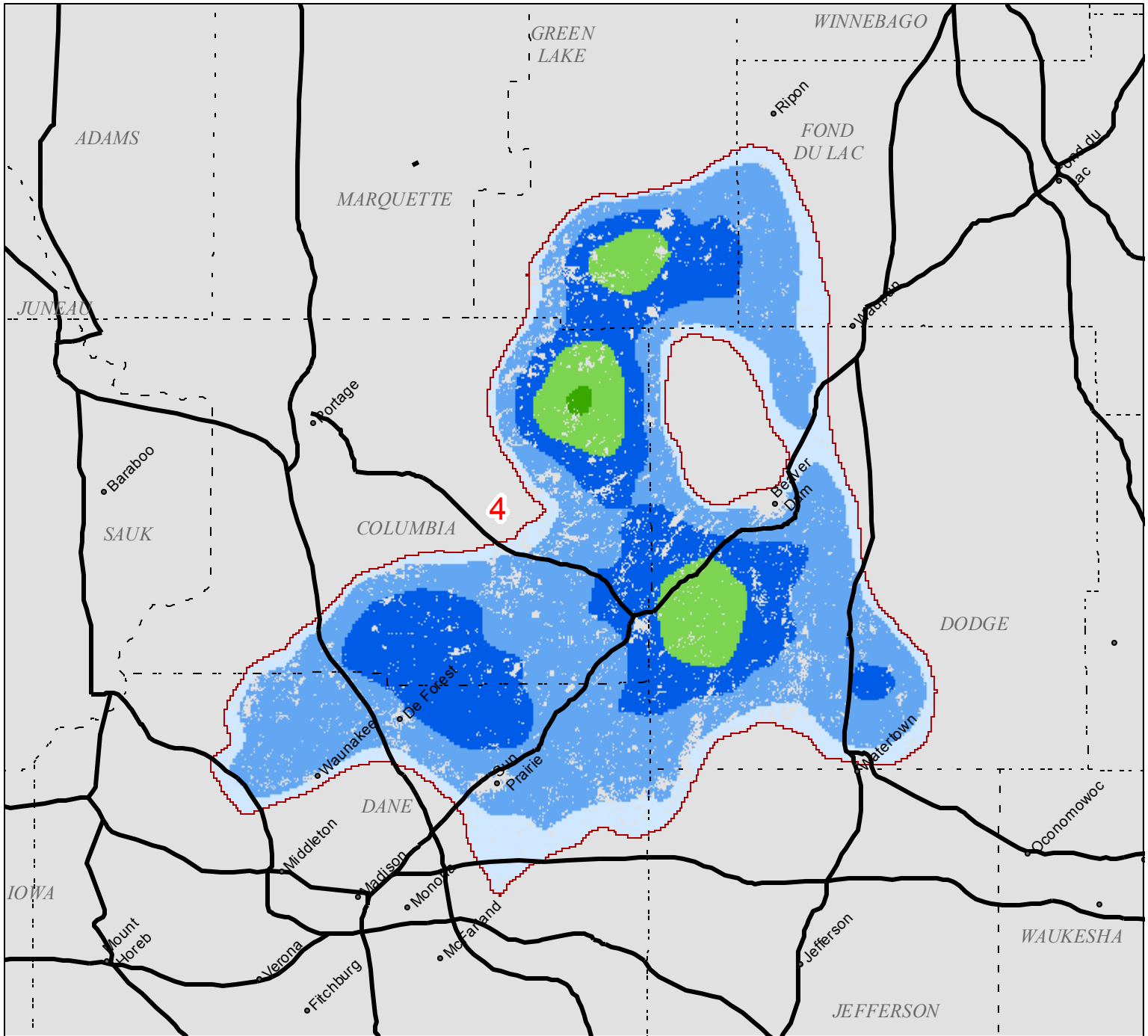
- Major Cities
- Major Roads
- ▭ Hotspot Boundaries
- ▭ States
- ▭ Counties
- ▭ Tribal Lands
- ▭ Bird Conservation Region (BCR) 23 Boundary

**Grasshopper Sparrow Relative Abundance**  
(Predicted Mean Count / Breeding Bird Survey)



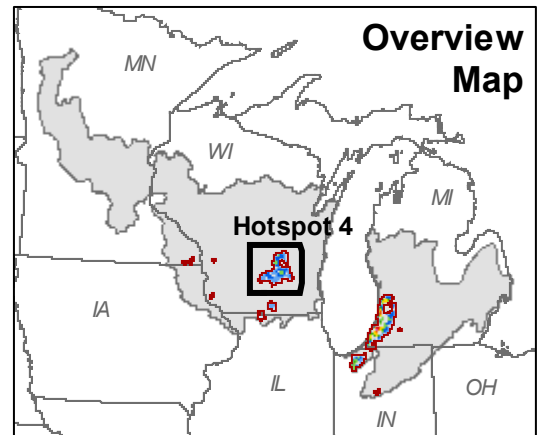
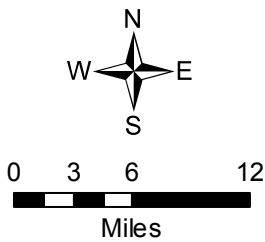
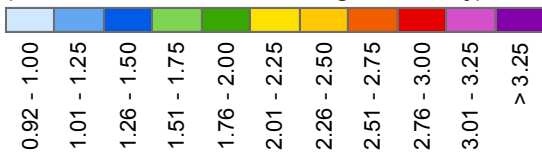
# Grasshopper Sparrow (GRSP) Predicted Relative Abundance Overlaid with Tribal Lands

Hotspot 4



- Major Cities
- Major Roads
- ▭ Hotspot Boundaries
- ▭ States
- ▭ Counties
- ▨ Tribal Lands
- ▭ Bird Conservation Region (BCR) 23 Boundary

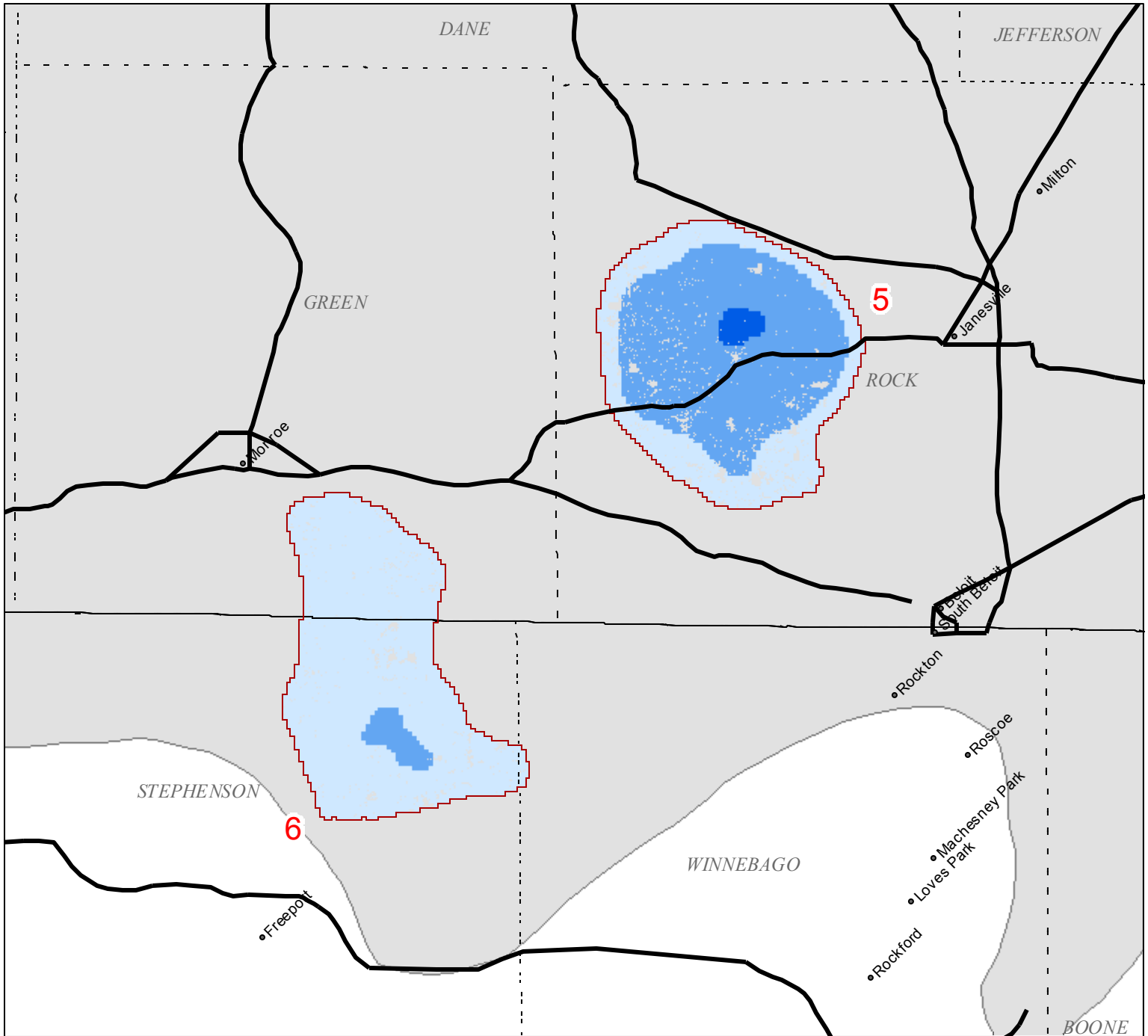
**Grasshopper Sparrow Relative Abundance**  
(Predicted Mean Count / Breeding Bird Survey)





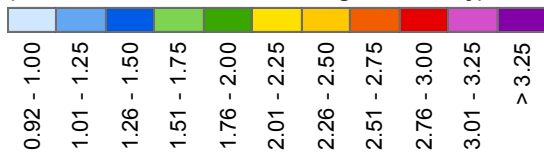
# Grasshopper Sparrow (GRSP) Predicted Relative Abundance Overlaid with Tribal Lands

## Hotspots 5 and 6

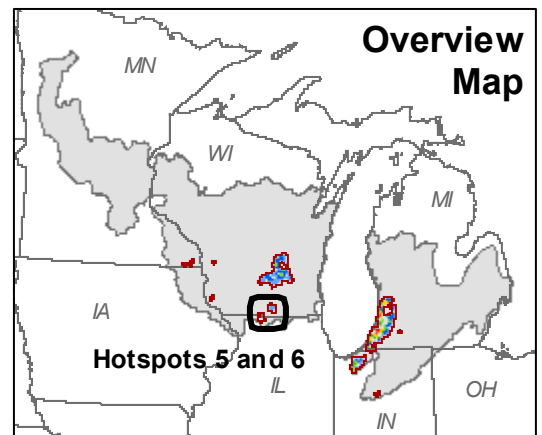


- Major Cities
- Major Roads
- ▭ Hotspot Boundaries
- ▭ States
- - - Counties
- ▨ Tribal Lands
- ▭ Bird Conservation Region (BCR) 23 Boundary

### Grasshopper Sparrow Relative Abundance (Predicted Mean Count / Breeding Bird Survey)

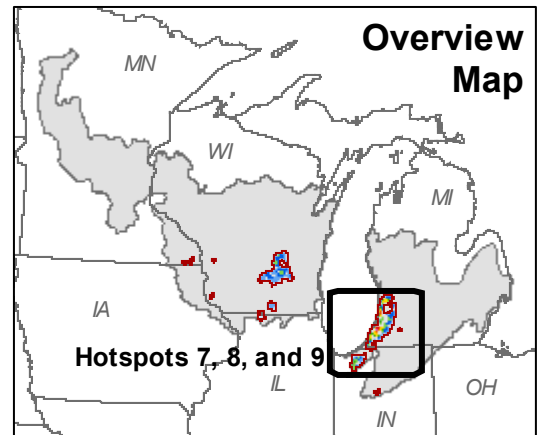
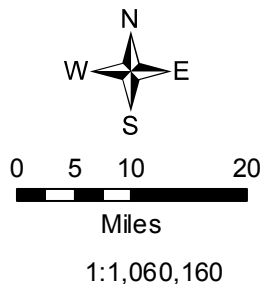
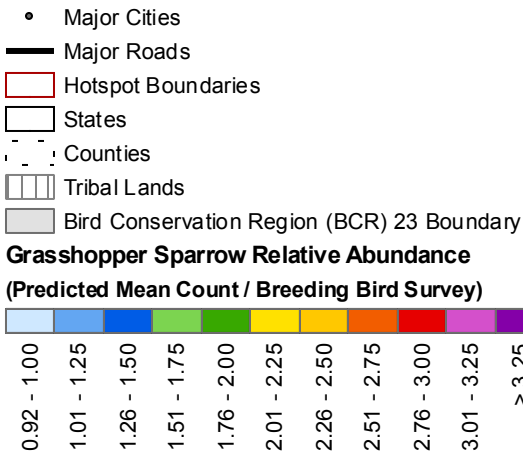
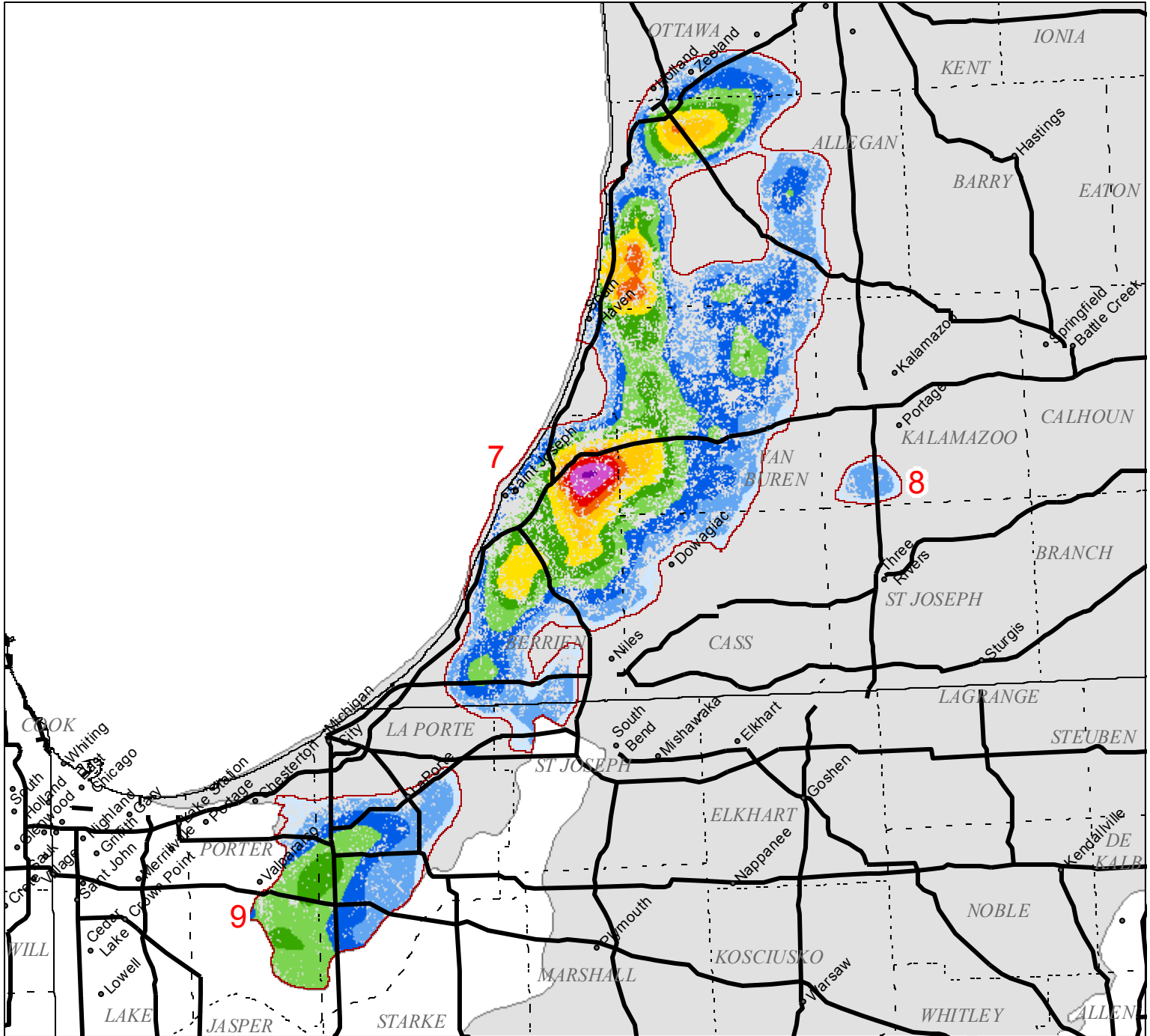


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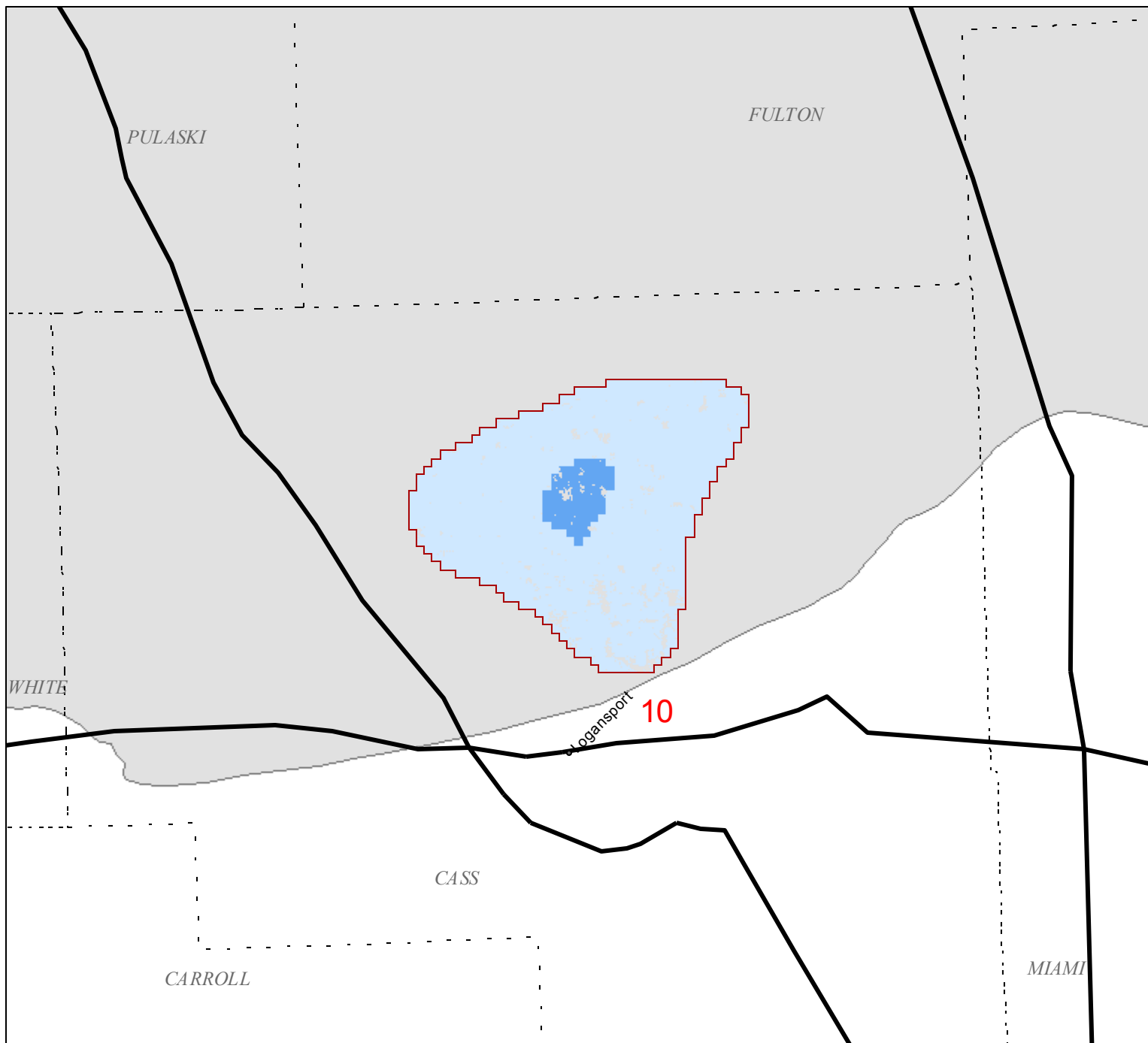
# Grasshopper Sparrow (GRSP) Predicted Relative Abundance Overlaid with Tribal Lands

## Hotspots 7, 8, and 9



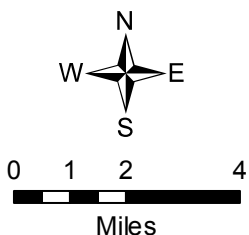
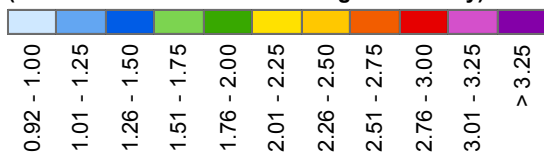
# Grasshopper Sparrow (GRSP) Predicted Relative Abundance Overlaid with Tribal Lands

Hotspot 10

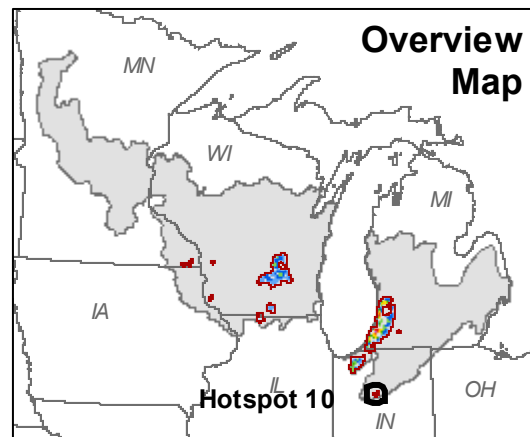


- Major Cities
- Major Roads
- ▭ Hotspot Boundaries
- ▭ States
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- ▭ Bird Conservation Region (BCR) 23 Boundary

**Grasshopper Sparrow Relative Abundance**  
(Predicted Mean Count / Breeding Bird Survey)



1:214,930



**Grasshopper Sparrow Predicted Relative Abundance Summary by Hotspot  
Federal Managed Lands Versus Lands Not Under Federal Management**

Description	Area (sq km)	Mean Predicted Count / Breeding Bird Survey				SD	Sum*	Percent Area Managed/ Unmanaged	Percent Sum* Managed/ Unmanaged
		Min	Mean	Max	Range				
Hotspot 1 - Unmanaged by Federal	216.99	0.00	0.84	1.11	1.11	0.35	203,565	100.00	100.00
Hotspot 1 - Managed by Federal	0.00								
Hotspot 2 - Unmanaged by Federal	43.29	0.00	0.88	1.06	1.06	0.30	42,471	100.00	100.00
Hotspot 2 - Managed by Federal	0.00								
Hotspot 3 - Unmanaged by Federal	82.71	0.00	0.95	1.11	1.11	0.23	86,975	100.00	100.00
Hotspot 3 - Managed by Federal	0.00								
Hotspot 4 - Unmanaged by Federal	3,047.90	0.00	1.09	1.79	1.79	0.39	3,704,870	99.96	99.97
Hotspot 4 - Managed by Federal	1.21	0.00	0.87	1.13	1.13	0.45	1,166	0.04	0.03
Hotspot 5 - Unmanaged by Federal	289.26	0.00	1.00	1.28	1.28	0.27	322,789	100.00	100.00
Hotspot 5 - Managed by Federal	0.00								
Hotspot 6 - Unmanaged by Federal	252.18	0.00	0.93	1.01	1.01	0.17	259,734	100.00	100.00
Hotspot 6 - Managed by Federal	0.00								
Hotspot 7 - Unmanaged by Federal	4,170.23	0.00	1.01	3.30	3.30	0.83	4,693,380	100.00	100.00
Hotspot 7 - Managed by Federal	0.00								
Hotspot 8 - Unmanaged by Federal	82.44	0.00	0.87	1.17	1.17	0.38	79,264	100.00	100.00
Hotspot 8 - Managed by Federal	0.00								
Hotspot 9 - Unmanaged by Federal	889.78	0.00	1.18	1.91	1.91	0.58	1,162,970	99.95	99.99
Hotspot 9 - Managed by Federal	0.47	0.00	0.23	0.98	0.98	0.41	121	0.05	0.01
Hotspot 10 - Unmanaged by Federal	91.35	0.00	0.91	1.03	1.03	0.21	92,565	100.00	100.00
Hotspot 10 - Managed by Federal	0.00								

**SUMMARY**

Total Area Unmanaged (sq km)	9,166.13	Sum* Total Unmanaged	10,648,584
Total Area Managed (sq km)	1.68	Sum* Total Managed	1,287
Total Area (sq km)	9,167.81	Total Sum*	10,649,871

Total Area Unmanaged %	99.98	Sum* Total Unmanaged %	99.99
Total Area Managed %	0.02	Sum* Total Managed %	0.01

\* Sum refers to the cumulative predicted relative abundance values for each cell (900 sq meters) in each managed category.

A note on interpretation: If the "Total Area Unmanaged" and "Sum\* Total Unmanaged" exceeds that of their respective Managed cells, this indicates a majority of the area and population is outside of direct governmental jurisdiction. If the "Sum\* Total Managed %" is less than the "Total Area Managed %", this indicates that the conservation estate does a poorer job than a random placement of managed lands. Conversely, if the "Sum\* Total Managed %" exceeds that of the "Total Area Managed %", then the conservation estate does a better job than a random placement of the conservation estate.

**Grasshopper Sparrow Predicted Relative Abundance Summary by Hotspot  
State Managed Lands Versus Lands Not Under State Management**

Description	Area (sq km)	Mean Predicted Count / Breeding Bird Survey				SD	Sum*	Percent Area Managed/ Unmanaged	Percent Sum* Managed/ Unmanaged
		Min	Mean	Max	Range				
Hotspot 1 - Unmanaged by State	216.83	0.00	0.84	1.11	1.11	0.35	203,430	99.92	99.93
Hotspot 1 - Managed by State	0.16	0.00	0.74	1.04	1.04	0.46	135	0.08	0.07
Hotspot 2 - Unmanaged by State	43.29	0.00	0.88	1.06	1.06	0.30	42,471	100.00	100.00
Hotspot 2 - Managed by State	0.00								
Hotspot 3 - Unmanaged by State	82.71	0.00	0.95	1.11	1.11	0.23	86,975	100.00	100.00
Hotspot 3 - Managed by State	0.00								
Hotspot 4 - Unmanaged by State	2,961.49	0.00	1.10	1.79	1.79	0.38	3,629,760	97.13	97.94
Hotspot 4 - Managed by State	87.62	0.00	0.78	1.63	1.63	0.53	76,271	2.87	2.06
Hotspot 5 - Unmanaged by State	289.26	0.00	1.00	1.28	1.28	0.27	322,789	100.00	100.00
Hotspot 5 - Managed by State	0.00								
Hotspot 6 - Unmanaged by State	252.18	0.00	0.93	1.01	1.01	0.17	259,734	100.00	100.00
Hotspot 6 - Managed by State	0.00								
Hotspot 7 - Unmanaged by State	4,090.88	0.00	1.02	3.30	3.30	0.83	4,625,720	98.10	98.56
Hotspot 7 - Managed by State	79.35	0.00	0.77	3.18	3.18	0.80	67,664	1.90	1.44
Hotspot 8 - Unmanaged by State	82.44	0.00	0.87	1.17	1.17	0.38	79,264	100.00	100.00
Hotspot 8 - Managed by State	0.00								
Hotspot 9 - Unmanaged by State	889.39	0.00	1.18	1.91	1.91	0.58	1,162,900	99.90	99.98
Hotspot 9 - Managed by State	0.86	0.00	0.20	1.08	1.08	0.41	194	0.10	0.02
Hotspot 10 - Unmanaged by State	91.35	0.00	0.91	1.03	1.03	0.21	92,565	100.00	100.00
Hotspot 10 - Managed by State	0.00								

**SUMMARY**

Total Area Unmanaged (sq km)	8,999.82	Sum* Total Unmanaged	10,505,609
Total Area Managed (sq km)	168.00	Sum* Total Managed	144,264
Total Area (sq km)	9,167.82	Total Sum*	10,649,872

Total Area Unmanaged %	98.17	Sum* Total Unmanaged %	98.65
Total Area Managed %	1.83	Sum* Total Managed %	1.35

\* Sum refers to the cumulative predicted relative abundance values for each cell (900 sq meters) in each managed category.

A note on interpretation: If the "Total Area Unmanaged" and "Sum\* Total Unmanaged" exceeds that of their respective Managed cells, this indicates a majority of the area and population is outside of direct governmental jurisdiction. If the "Sum\* Total Managed %" is less than the "Total Area Managed %", this indicates that the conservation estate does a poorer job than a random placement of managed lands. Conversely, if the "Sum\* Total Managed %" exceeds that of the "Total Area Managed %", then the conservation estate does a better job than a random placement of the conservation estate.

**Grasshopper Sparrow Predicted Relative Abundance Summary by Hotspot  
Tribal Lands Versus Lands Not Under Tribal Management**

Description	Area (sq km)	Mean Predicted Count / Breeding Bird Survey				SD	Sum*	Percent Area Managed/ Unmanaged	Percent Sum* Managed/ Unmanaged
		Min	Mean	Max	Range				
Hotspot 1 - Unmanaged by Tribal	216.99	0.00	0.84	1.11	1.11	0.35	203,565	100.00	100.00
Hotspot 1 - Managed by Tribal	0.00								
Hotspot 2 - Unmanaged by Tribal	43.29	0.00	0.88	1.06	1.06	0.30	42,471	100.00	100.00
Hotspot 2 - Managed by Tribal	0.00								
Hotspot 3 - Unmanaged by Tribal	82.71	0.00	0.95	1.11	1.11	0.23	86,975	100.00	100.00
Hotspot 3 - Managed by Tribal	0.00								
Hotspot 4 - Unmanaged by Tribal	3,049.11	0.00	1.09	1.79	1.79	0.39	3,706,030	100.00	100.00
Hotspot 4 - Managed by Tribal	0.00								
Hotspot 5 - Unmanaged by Tribal	289.26	0.00	1.00	1.28	1.28	0.27	322,789	100.00	100.00
Hotspot 5 - Managed by Tribal	0.00								
Hotspot 6 - Unmanaged by Tribal	252.18	0.00	0.93	1.01	1.01	0.17	259,734	100.00	100.00
Hotspot 6 - Managed by Tribal	0.00								
Hotspot 7 - Unmanaged by Tribal	4,170.23	0.00	1.01	3.30	3.30	0.83	4,693,380	100.00	100.00
Hotspot 7 - Managed by Tribal	0.00								
Hotspot 8 - Unmanaged by Tribal	82.44	0.00	0.87	1.17	1.17	0.38	79,264	100.00	100.00
Hotspot 8 - Managed by Tribal	0.00								
Hotspot 9 - Unmanaged by Tribal	890.25	0.00	1.18	1.91	1.91	0.58	1,163,090	100.00	100.00
Hotspot 9 - Managed by Tribal	0.00								
Hotspot 10 - Unmanaged by Tribal	91.35	0.00	0.91	1.03	1.03	0.21	92,565	100.00	100.00
Hotspot 10 - Managed by Tribal	0.00								

**SUMMARY**

Total Area Unmanaged (sq km)	9,167.82	Sum* Total Unmanaged	10,649,864
Total Area Managed (sq km)	0.00	Sum* Total Managed	0
Total Area (sq km)	9,167.82	Total Sum*	10,649,864

Total Area Unmanaged %	100.00	Sum* Total Unmanaged %	100.00
Total Area Managed %	0.00	Sum* Total Managed %	0.00

\* Sum refers to the cumulative predicted relative abundance values for each cell (900 sq meters) in each managed category.

A note on interpretation: If the "Total Area Unmanaged" and "Sum\* Total Unmanaged" exceeds that of their respective Managed cells, this indicates a majority of the area and population is outside of direct governmental jurisdiction. If the "Sum\* Total Managed %" is less than the "Total Area Managed %", this indicates that the conservation estate does a poorer job than a random placement of managed lands. Conversely, if the "Sum\* Total Managed %" exceeds that of the "Total Area Managed %", then the conservation estate does a better job than a random placement of the conservation estate.

## Grasshopper Sparrow Predicted Relative Abundance Summary by State Federal Managed Lands Versus Lands Not Under Federal Management

Description	Area (sq km)	Mean Predicted Count / Breeding Bird Survey				SD	Sum*	Percent Area Managed/ Unmanaged	Percent Sum* Managed/ Unmanaged
		Min	Mean	Max	Range				
IA - Unmanaged by Federal	6,982.18	0.00	0.25	0.94	0.94	0.21	1,950,470	96.80	99.65
IA - Managed by Federal	230.67	0.00	0.03	0.60	0.60	0.07	6,909	3.20	0.35
IL - Unmanaged by Federal	3,208.05	0.00	0.41	1.01	1.01	0.30	1,452,420	96.68	99.69
IL - Managed by Federal	110.30	0.00	0.04	0.25	0.25	0.07	4,457	3.32	0.31
IN - Unmanaged by Federal	13,070.80	0.00	0.41	1.91	1.91	0.37	5,998,760	99.68	99.92
IN - Managed by Federal	41.35	0.00	0.11	0.98	0.98	0.24	4,965	0.32	0.08
MI - Unmanaged by Federal	57,537.80	0.00	0.15	3.30	3.30	0.36	9,561,360	98.06	100.00
MI - Managed by Federal	1,139.19	0.00	0.00	0.02	0.02	0.00	0	1.94	0.00
MN - Unmanaged by Federal	49,220.50	0.00	0.05	1.11	1.11	0.13	2,623,060	98.73	99.65
MN - Managed by Federal	635.37	0.00	0.01	0.45	0.45	0.05	9,277	1.27	0.35
OH - Unmanaged by Federal	110.41	0.00	0.03	0.06	0.06	0.02	3,597	100.00	100.00
OH - Managed by Federal	0.00								
WI - Unmanaged by Federal	96,519.50	0.00	0.18	1.79	1.79	0.28	19,597,500	99.00	99.72
WI - Managed by Federal	976.24	0.00	0.05	1.13	1.13	0.14	54,525	1.00	0.28

### SUMMARY

Total Area Unmanaged (sq km)	226,649.24	Sum* Total Unmanaged	41,187,166
Total Area Managed (sq km)	3,133.12	Sum* Total Managed	80,133
Total Area (sq km)	229,782.36	Total Sum*	41,267,299

Total Area Unmanaged %	98.64	Sum* Total Unmanaged %	99.81
Total Area Managed %	1.36	Sum* Total Managed %	0.19

\* Sum refers to the cumulative predicted relative abundance values for each cell (900 sq meters) in each managed category.

A note on interpretation: If the "Total Area Unmanaged" and "Sum\* Total Unmanaged" exceeds that of their respective Managed cells, this indicates a majority of the area and population is outside of direct governmental jurisdiction. If the "Sum\* Total Managed %" is less than the "Total Area Managed %", this indicates that the conservation estate does a poorer job than a random placement of managed lands. Conversely, if the "Sum\* Total Managed %" exceeds that of the "Total Area Managed %", then the conservation estate does a better job than a random placement of the conservation estate.

## Grasshopper Sparrow Predicted Relative Abundance Summary by State State Managed Lands Versus Lands Not Under State Management

Description	Area (sq km)	Mean Predicted Count / Breeding Bird Survey				SD	Sum*	Percent Area Managed/ Unmanaged	Percent Sum* Managed/ Unmanaged
		Min	Mean	Max	Range				
IA - Unmanaged by State	7,046.34	0.00	0.25	0.94	0.94	0.22	1,946,080	97.69	99.42
IA - Managed by State	166.51	0.00	0.06	0.73	0.73	0.12	11,301	2.31	0.58
IL - Unmanaged by State	3,278.40	0.00	0.40	1.01	1.01	0.31	1,451,480	98.80	99.63
IL - Managed by State	39.95	0.00	0.12	0.64	0.64	0.17	5,396	1.20	0.37
IN - Unmanaged by State	12,948.40	0.00	0.42	1.91	1.91	0.37	5,985,680	98.75	99.70
IN - Managed by State	163.72	0.00	0.10	1.08	1.08	0.16	18,037	1.25	0.30
MI - Unmanaged by State	56,466.40	0.00	0.15	3.30	3.30	0.36	9,441,720	96.23	98.75
MI - Managed by State	2,210.56	0.00	0.05	3.18	3.18	0.22	119,636	3.77	1.25
MN - Unmanaged by State	48,427.60	0.00	0.05	1.11	1.11	0.13	2,606,250	97.14	99.01
MN - Managed by State	1,428.22	0.00	0.02	1.04	1.04	0.06	26,087	2.86	0.99
OH - Unmanaged by State	101.07	0.00	0.03	0.06	0.06	0.02	3,481	91.54	96.78
OH - Managed by State	9.34	0.00	0.01	0.04	0.04	0.01	116	8.46	3.22
WI - Unmanaged by State	94,536.00	0.00	0.18	1.79	1.79	0.28	19,355,100	96.96	98.49
WI - Managed by State	2,959.68	0.00	0.09	1.63	1.63	0.22	296,863	3.04	1.51

### SUMMARY

Total Area Unmanaged (sq km)	222,804.21	Sum* Total Unmanaged	40,789,791
Total Area Managed (sq km)	6,977.98	Sum* Total Managed	477,435
Total Area (sq km)	229,782.19	Total Sum*	41,267,226

Total Area Unmanaged %	96.96	Sum* Total Unmanaged %	98.84
Total Area Managed %	3.04	Sum* Total Managed %	1.16

\* Sum refers to the cumulative predicted relative abundance values for each cell (900 sq meters) in each managed category.

A note on interpretation: If the "Total Area Unmanaged" and "Sum\* Total Unmanaged" exceeds that of their respective Managed cells, this indicates a majority of the area and population is outside of direct governmental jurisdiction. If the "Sum\* Total Managed %" is less than the "Total Area Managed %", this indicates that the conservation estate does a poorer job than a random placement of managed lands. Conversely, if the "Sum\* Total Managed %" exceeds that of the "Total Area Managed %", then the conservation estate does a better job than a random placement of the conservation estate.



### Grasshopper Sparrow Predicted Relative Abundance Summary by State Tribal Managed Lands Versus Lands Not Under Tribal Management

Description	Area (sq km)	Mean Predicted Count / Breeding Bird Survey				SD	Sum*	Percent Area Managed/ Unmanaged	Percent Sum* Managed/ Unmanaged
		Min	Mean	Max	Range				
IA - Unmanaged by Tribal	7,212.85	0.00	0.24	0.94	0.94	0.22	1,957,380	100.00	100.00
IA - Managed by Tribal	0.00								
IL - Unmanaged by Tribal	3,318.35	0.00	0.40	1.01	1.01	0.31	1,456,870	100.00	100.00
IL - Managed by Tribal	0.00								
IN - Unmanaged by Tribal	13,112.10	0.00	0.41	1.91	1.91	0.37	6,003,720	100.00	100.00
IN - Managed by Tribal	0.00								
MI - Unmanaged by Tribal	58,154.70	0.00	0.15	3.30	3.30	0.36	9,557,660	99.11	99.96
MI - Managed by Tribal	522.27	0.00	0.01	0.01	0.01	0.00	3,696	0.89	0.04
MN - Unmanaged by Tribal	47,959.20	0.00	0.05	1.11	1.11	0.13	2,624,670	96.20	99.71
MN - Managed by Tribal	1,896.59	0.00	0.00	0.09	0.09	0.01	7,666	3.80	0.29
OH - Unmanaged by Tribal	110.41	0.00	0.03	0.06	0.06	0.02	3,597	100.00	100.00
OH - Managed by Tribal	0.00								
WI - Unmanaged by Tribal	96,268.00	0.00	0.18	1.79	1.79	0.28	19,635,800	98.74	99.92
WI - Managed by Tribal	1,227.65	0.00	0.01	0.12	0.12	0.03	16,209	1.26	0.08

#### SUMMARY

Total Area Unmanaged (sq km)	226,135.61	Sum* Total Unmanaged	41,239,697
Total Area Managed (sq km)	3,646.51	Sum* Total Managed	27,572
Total Area (sq km)	229,782.12	Total Sum*	41,267,268

Total Area Unmanaged %	98.41	Sum* Total Unmanaged %	99.93
Total Area Managed %	1.59	Sum* Total Managed %	0.07

\* Sum refers to the cumulative predicted relative abundance values for each cell (900 sq meters) in each managed category.

A note on interpretation: If the "Total Area Unmanaged" and "Sum\* Total Unmanaged" exceeds that of their respective Managed cells, this indicates a majority of the area and population is outside of direct governmental jurisdiction. If the "Sum\* Total Managed %" is less than the "Total Area Managed %", this indicates that the conservation estate does a poorer job than a random placement of managed lands. Conversely, if the "Sum\* Total Managed %" exceeds that of the "Total Area Managed %", then the conservation estate does a better job than a random placement of the conservation estate.