

# Habitat Model for Species: Greater Prairie-chicken

Alpha Code: GPCH Status: Resident

[Distribution Map](#)

[Habitat Map](#)

## Landcover Category

### **0 - Comments**

### Habitat Restrictions

### Comments

Prose, 1985	Minimum habitat: Model assumes 5.2 sq. km of grassland, pasture and hayland, or herbaceous wetland cover types, within a 20.7 sq. km area, with the smallest block being > 0.8 km wide.	From various literature, minimum contiguous cover; 10.4 sq. km.; 2,025-4, 050 ha with 33-40% grassland; 2.6 sq. km of high quality grassland; 5.2 sq. km of high quality grassland.
Ryan et al., 1998	No females monitored nested in prairie units <65 ha in either study area.	Mean brood ranges in mosaic was 379 ha and 219 ha in contiguous prairie.
Sample and Mossman, 1997	Large open landscapes with blocks of idle grassland > 250	
Samson, 1980	The size of a prairie island regularly able to hold a breeding population was 160 ha.	
Horak, 1980		Summary of optimum prairie chicken habitat.
Kirsch, 1974	Recommended 1,280 acres (518 ha) as a minimum for prairie chicken management units.	
Horak and Applegate, 1998	Grassland should ideally be no smaller than 320 acres (130 ha). Grain fields should be a minimum of 15 acres.	
[KS GAP]	65 ha minimum habitat area; Cultivated land (44) within 3990 m (4 km) of other habitats.	

### **17 - Tallgrass Prairie**

Prose, 1985		
Arthaud, 1970		adjoins farmland
Beauprez, 1994		
McKee and Mechlin, 1998		
Ryan et al., 1998		
Baicich and Harrison, 1997		Nest on ground in growing herbage, in the open or on the edge of marshes, bushes or scrub woodland.
Sample and Mossman, 1997		
Jackson et al., 1996		
The South Dakota Ornithologists' Union, 1991		
Gabrielson, 1914		
Samson, 1980		
Herkert, 1994		
Christisen and Krown, 1980		
Jones, 1963		
Kahl et al., 1985		
Horak, 1980		
Schroeder and Robb, 1993		
USDA-Soil Conservation Service, 1979		
Robel et al., 1970		
Baker, 1950		
Harrison, 1974		
Horak, 1985		
Briggs, 1968		
Kirsch, 1974		
Silvy, 1968		
Watt, 1969		
Horak and Applegate, 1998		
Applegate, 1998		Tallgrass Prairie is moderately grazed with scattered <i>Populus deltoides</i> , <i>Ulmus</i> , <i>Celtis occidentalis</i> , and <i>Maclura pomifera</i> with <i>Juniperus virginiana</i> .
U.S. Fish and Wildlife Service, 1955		
Finck, 1984		
Zimmerman, 1993		
Fretwell, 1973		
Baker, 1953		
Westemeier, 1980		
[KS GAP]	Map if >= 65 ha.	

## **18 - Sand Prairie**

Prose, 1985  
Mohler, 1952  
Beauprez, 1994  
Baicich and Harrison, 1997

Sample and Mossman, 1997  
Jackson et al., 1996  
Andrews and Righter, 1992  
Herkert, 1994  
Horak, 1980  
Baker, 1950  
Harrison, 1974  
Horak, 1985  
Watt, 1969  
Horak and Applegate, 1998  
U.S. Fish and Wildlife Service, 1955  
Westemeier, 1980  
[KS GAP]

Map if  $\geq 65$  ha.

Nest on ground in growing herbage, in the open or on the edge of marshes, bushes or scrub woodland.

## **19 - Sandstone Prairie - not mapped**

Horak, 1980  
Briggs, 1968  
[KS GAP]

Map if  $\geq 65$  ha.

## **20 - Western Wheatgrass**

Prose, 1985  
Beauprez, 1994  
Baicich and Harrison, 1997

Sample and Mossman, 1997  
Jackson et al., 1996  
The South Dakota Ornithologists' Union, 1991  
Herkert, 1994  
Jones, 1963  
Horak, 1980  
Schroeder and Robb, 1993  
USDA-Soil Conservation Service, 1979  
Baker, 1950  
Harrison, 1974  
Horak, 1985  
Briggs, 1968  
Kirsch, 1974  
Watt, 1969  
Horak and Applegate, 1998  
U.S. Fish and Wildlife Service, 1955  
Fretwell, 1973  
Westemeier, 1980  
[KS GAP]

Map if  $\geq 65$  ha.

Nest on ground in growing herbage, in the open or on the edge of marshes, bushes or scrub woodland.

## **22 - Mixed Prairie**

Prose, 1985  
Beauprez, 1994  
Ryan et al., 1998  
Baicich and Harrison, 1997

Sample and Mossman, 1997  
Jackson et al., 1996  
The South Dakota Ornithologists' Union, 1991  
Herkert, 1994  
Jones, 1963  
Horak, 1980  
Schroeder and Robb, 1993  
USDA-Soil Conservation Service, 1979  
Baker, 1950  
Harrison, 1974  
Horak, 1985  
Briggs, 1968  
Kirsch, 1974  
Watt, 1969  
Horak and Applegate, 1998  
U.S. Fish and Wildlife Service, 1955  
Fretwell, 1973  
Westemeier, 1980  
[KS GAP]

Map if  $\geq 65$  ha.

Nest on ground in growing herbage, in the open or on the edge of marshes, bushes or scrub woodland.

## **25 - Shortgrass Prairie**

Prose, 1985  
Beauprez, 1994  
Baicich and Harrison, 1997

Sample and Mossman, 1997  
Jackson et al., 1996  
Herkert, 1994  
Jones, 1963  
Baker, 1950  
Harrison, 1974  
Horak, 1985  
Briggs, 1968  
Watt, 1969  
Horak and Applegate, 1998  
U.S. Fish and Wildlife Service, 1955  
Fretwell, 1973  
Westemeier, 1980  
[KS GAP]

Map if  $\geq 65$  ha.

Nest on ground in growing herbage, in the open or on the edge of marshes, bushes or scrub woodland.

## **40 - Non-native Grassland**

Prose, 1985  
Arthaud, 1970  
Beauprez, 1994  
Ryan et al., 1998  
Baicich and Harrison, 1997  
  
Sample and Mossman, 1997  
Jackson et al., 1996  
Herkert, 1994  
Jones, 1963  
Horak, 1980  
Schroeder and Robb, 1993  
USDA-Soil Conservation Service, 1979  
Haukos and Church, 1995-1996  
Harrison, 1974  
Horak, 1985  
Briggs, 1968  
Kirsch, 1974  
Watt, 1969  
Horak and Applegate, 1998  
Klute and Robel, 1997  
Baker, 1953  
[KS GAP]

Map if  $\geq 65$  ha.

adjoins native tallgrass prairie

Nest on ground in growing herbage, in the open or on the edge of marshes, bushes or scrub woodland.

pasture

## **41 - CRP**

Prose, 1985  
Beauprez, 1994  
Baicich and Harrison, 1997  
  
Jackson et al., 1996  
Herkert, 1994  
Jones, 1963  
Baker, 1950  
Harrison, 1974  
Horak, 1985  
Briggs, 1968  
Watt, 1969  
Horak and Applegate, 1998  
U.S. Fish and Wildlife Service, 1955  
Klute and Robel, 1997  
Baker, 1953  
[KS GAP]

Map if  $\geq 65$  ha.

Nest on ground in growing herbage, in the open or on the edge of marshes, bushes or scrub woodland.

## **44 - Cultivated Land**

Prose, 1985	Optimum distance between cover types providing winter food and nesting cover in < 1.6 km (suitability reaches 50% at 4.0 km and 0% at 6.4 km).	cultivated grain, corn
Arthaud, 1970		adjoins native tallgrass prairie
Mohler, 1952		corn, sorghums, small grains
Beauprez, 1994		cereal grain, corn
Ryan et al., 1998		
Sample and Mossman, 1997		crops, small grains, fallow fields, alfalfa, legume hay
Andrews and Righter, 1992		cornfields
Christisen and Krown, 1980		fescue, milo
Horak, 1980		Booming grounds can be established on plowed fields, however, at least 80 acres of nesting cover in well-managed pastureland must be within 1/4 mile.
Schroeder and Robb, 1993		
USDA-Soil Conservation Service, 1979		
Robel et al., 1970		grain sorghum, oat fields
Baker, 1950		sorghum, fallow land
Haukos and Church, 1995-1996		
Horak, 1985		alfalfa, wheat, row crops, sorghum, soybean
Briggs, 1968		
Kirsch, 1974		cereal grain
Silvy, 1968		alfalfa, yellow sweetclover, wheat, smooth brome
Watt, 1969		wheat fields, grain sorghum, cultivated crops, oats, alfalfa
Horak and Applegate, 1998		alfalfa, row crop, grain fields
Baker, 1953		
[KS GAP]	Map cropland if within 4 km of a 65 ha grassland patch.	50% of HSI. Ranges are lower during breeding season and higher during the winter.

## **60 - Mixed Prairie-Disturbed Land**

Horak, 1980  
[KS GAP] Map if  $\geq 65$  ha.

## **92 - Ozark Limestone Glade - not mapped**

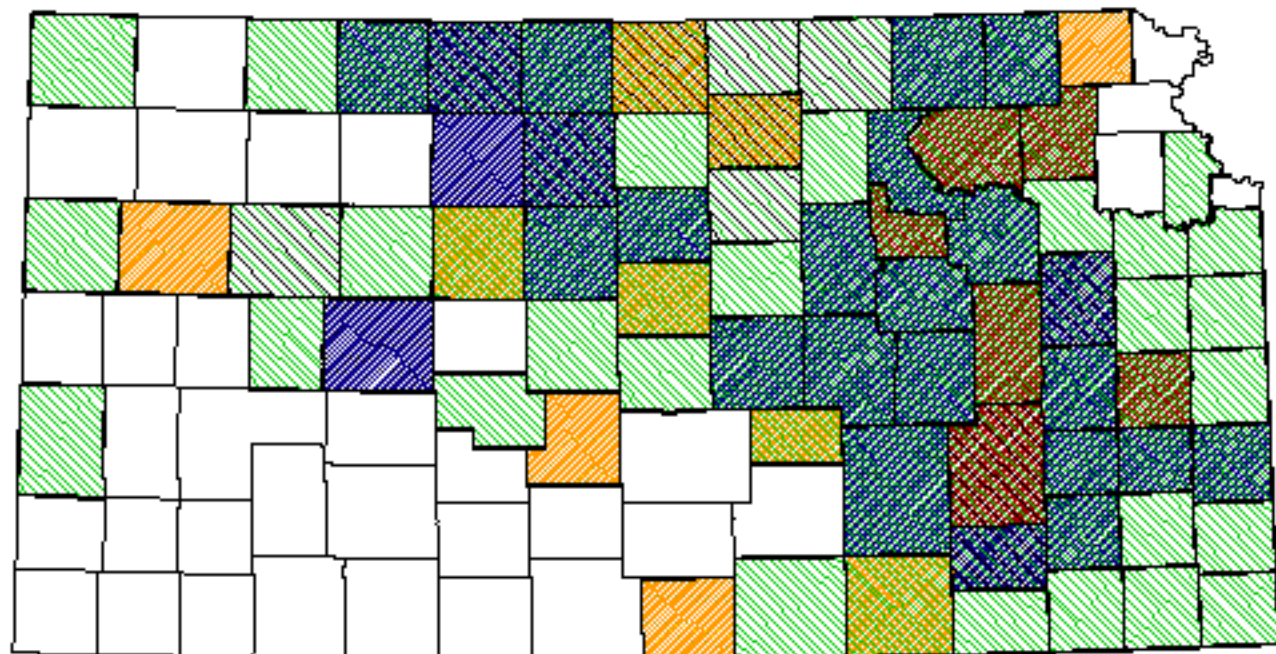
Baker, 1950

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# Greater Prairie-chicken





## Kansas Breeding Bird Atlas


 Confirmed Breeding

 Probable Breeding

 Possible Breeding

 Breeding Bird Survey

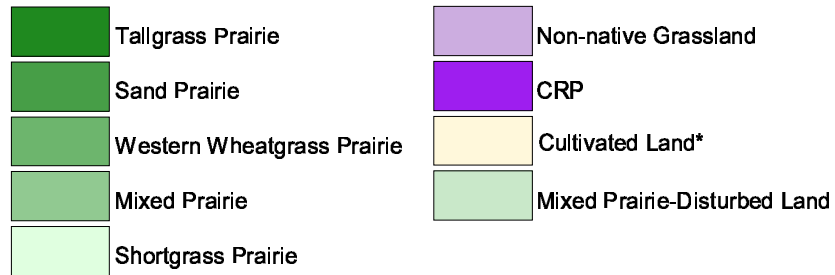
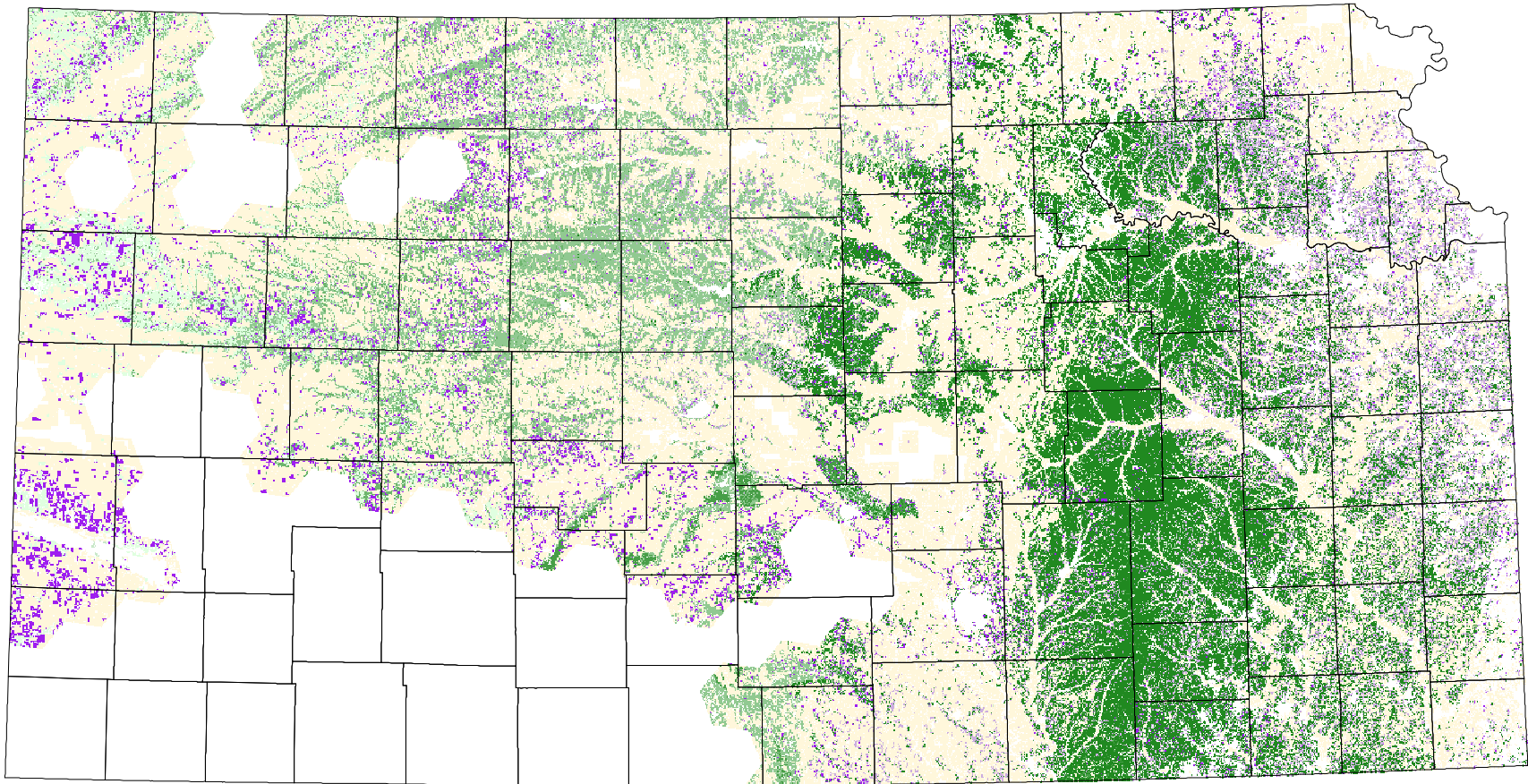
 *Birds of Kansas,*  
*Horned Lark (From KDWP)*

 Range from Johnsgard, 1998  
*The Birds of Nebraska*

### Habitat

All shaded counties will be included in the possible distribution of the species.

# Greater Prairie-chicken



\* if within > 65 ha grassland patch  
Minimum habitat = 65 ha