

TECHNICAL NOTES

BIOLOGY TECHNICAL NOTE OK-34

November 18, 2011

TO: All Offices

FROM: Steven J. Glasgow
State Resource Conservationist

RE: Revised Lesser Prairie Chicken Habitat Evaluation Form

The standard for Upland Wildlife Habitat Management (645) requires the use of a habitat evaluation form to address the quality of habitat for targeted wildlife species. In order to meet the standard, the evaluation form must show that the wildlife management plan will result in a habitat suitability index (HSI) score of 5 or greater on a 0 to 10 scale or provide at least 50 percent of the optimum habitat value (whichever is applicable) for all habitat elements within the evaluation area.

As a result of increased efforts in the last few years by NRCS to improve habitat for the lesser prairie chicken (LEPC), NRCS has had the opportunity to conduct a large number of habitat evaluations within the current range of the LEPC in northwestern Oklahoma. These evaluations have been based on the Habitat Evaluation Guide for the Lesser Prairie Chicken, E-1014, published by Oklahoma State University (OSU). In addition to the evaluation form, this publication contains information on the life history and habitat requirements of LEPC.

While conducting the evaluations, it was noted that in some situations, the OSU evaluation form resulted in HSI scores that would not meet the NRCS 645 standard when applied to lands that were known to have populations of LEPC or on lands that appeared to be suitable LEPC habitat. Examples of issues with the OSU evaluation form include: (1) Nesting cover criteria that would require native grasses to be greater than 15 inches in height in order to meet minimum nesting cover requirements and (2) Fragmentation criteria that would prevent a fenced quarter section (160 acres) from meeting minimum fragmentation requirements, prevent tracts with a vertical structure less than 1 mile away from meeting minimum fragmentation criteria, and prevent tracts with an oil or gas well less than ½ mile away from meeting minimum fragmentation criteria. These limitations would in many cases prevent NRCS from providing program cost-share assistance and/or developing wildlife management plans to improve habitat on lands within the current known range of the LEPC.

In order to address these issues, NRCS has revised the OSU evaluation guide to be more consistent with the requirements of the 645 standard and to provide greater opportunities for NRCS to work with landowners to improve habitat within high priority areas of the LEPC current range. The below revised LEPC evaluation guide form is being transmitted as Biology Technical Note OK-34 and will be posted under Technical Notes in Section 1 of the eFOTG. The life history and habitat requirement information found in the OSU LEPC publication can still be used as a reference guide and will be retained under Reference Materials in Section 1 of the eFOTG.

Lesser Prairie-chicken Habitat Evaluation Form

Name: _____

Legal Description: _____

Size of Available Habitat (acres): _____

Vegetative Cover Types within available habitat (assign percent coverage):

<i>Vegetation Cover Type</i>	<i>Percent</i>
Native Prairie	
Native Shrubland	
Wooded (including tree rows, riparian areas, windbreaks, and farmstead shelterbelts)	
Other (includes cropland or introduced pastureland that will be converted to native habitat)	

HABITAT REQUIREMENTS: Essential habitat components needed for survival and propagation of lesser prairie chicken individuals and populations. These components include (A) Nesting Habitat, (B) Brood Habitat, (C) Food Sources, (D) Protective Cover, and (E) Fragmentation Level. Circle the lowest applicable value for each category. Enter the score from each box on the summary page at the end of this evaluation.

A. NESTING HABITAT: Native Warm Season Grasses and/or Low Growing Shrubs.

- | | |
|--|--------------|
| 1. <u>Nesting Cover Quantity</u> - Native Warm Season Grasses | <u>Value</u> |
| >75 percent of evaluated area is composed of native warm season grasses. | 10 |
| 50 to 75 percent of area is comprised of native warm season grasses. | 8 |
| 25 to 50 percent of area is comprised of native warm season grasses. | 6 |
| <25 percent of area is comprised of native warm season grasses. | 2 |
| Evaluated area does not have native warm season grasses | 0 |

2. Nesting Cover Quality – Height of Native Warm Season Grasses and Presence of Shrubs/Woody Plants
Note: Combine scores for Parts A. and B. to obtain value for the nesting cover quality criteria.

- | | |
|--|------------------|
| A. Average Height of Native Warm Season Grasses for nesting cover | <u>Sub Value</u> |
| Average height of native grasses is > than 15 inches during the nesting season | 10 |
| Average height of native grasses is 12 to 15 inches during the nesting season | 8 |
| Average height of native grasses is 9 to 12 inches during the nesting season | 6 |
| Average height of native grasses is 6 to 9 inches during the nesting season | 4 |
| Average height of native grasses is 4 to 6 inches during the nesting season | 2 |
| Average height of native grasses is < 4 inches during the nesting season | 0 |

- | | |
|---|------------------|
| B. Presence of Native Low Growing Shrubs and Woody Plants used for nesting cover | <u>Sub Value</u> |
| <i>Note: Allowable plants include: Shinnery Oak, Sand Sagebrush, Sand Plum, Sumac, and Yucca.</i> | |
| < 5 percent canopy cover of allowable low growing shrubs/woody plants on evaluation area | 0 |
| 5 to 10 percent canopy cover of allowable low growing shrubs/woody plants on evaluation area | 2 |
| 10 to 30 percent canopy cover of allowable low growing shrubs/woody plants | 4 |
| >30 percent canopy cover of allowable low growing shrubs/woody plants | 2 |

- | | |
|---|--------------------|
| C. Composite Score for Nesting Cover Quality Component (Part A. + Part B. Sub Values) | <u>Value</u> |
| | 14 12 10 8 6 4 2 0 |

B. BROOD HABITAT: Native herbaceous vegetation in early stages of plant succession with abundant broadleaf forbs. The presence of low growing shrubs also contributes to the quality of brood habitat. These areas typically have high insect densities which are the primary sources of food for young birds. An open understory and relatively high percent of bare ground provide young birds with travel corridors and access to insects and seeds.

1. <u>Brood Cover Quantity</u> - Evaluate the area for forbs, legumes, and insect abundance during the brood season between May 1 and August 31.	<u>Value</u>
> 20 percent of the herbaceous plants in the evaluation area are forbs/legumes	10
10 percent to 20 percent of the herbaceous plants in evaluation area are forbs/legumes	6
< 10 percent of the herbaceous plants in evaluation area are forbs/legumes	4
None of the herbaceous vegetation in evaluation area are forbs/legumes	0
2. <u>Brood Screening Cover</u> – Estimate the percentage of the ground obscured by vegetation above height of 12 inches.	<u>Value</u>
Canopy cover > 30 percent above a height of 12 inches.	10
Canopy cover 20 percent to 30 percent above a height of 12 inches.	6
Canopy cover 10 percent to 20 percent above a height of 12 inches.	4
Canopy cover < 10 percent above a height of 12 inches.	2
3. <u>Grass, Forb, and Legume Accessibility</u> – Estimate the percentage of bare ground (this component is an indicator of how easily young birds can travel through the habitat and access the insects and seeds in brood habitat areas.	<u>Value</u>
> 30 percent bare ground	10
20 percent to 30 percent bare ground	8
10 to 20 percent bare ground	6
< 10 percent bare ground	2
No bare ground	0
4. <u>Brood Habitat Location</u> – Proximity of brood habitat to nesting cover, and protective shrub cover.	<u>Value</u>
Brood habitat, nesting cover, and shrubs are interspersed together in same area.	10
Brood habitat < one-fourth mile from nesting cover and shrubs.	8
Brood habitat between one-fourth mile and one-half mile from nest cover and shrubs.	5
No brood habitat within one-half mile of nest cover and shrubs	0

C. FOOD SOURCES – Seeds, leaves, and fruits of native herbaceous and woody plants and insects.

1. <u>Food Abundance</u> – Abundance of plants that produce seeds and foliage, and support insect populations used as food sources by lesser prairie chickens.	<u>Value</u>
> 30 percent of plants in evaluation area are food producing grasses, forbs, legumes and/or shrubs	10
20 to 30 percent of plants in evaluation area are food producing grasses, forbs, legumes and/or shrubs	8
10 to 20 percent of plants in evaluation area are food producing grasses, forbs, legumes and/or shrubs	6
< 10 percent of plants in evaluation area are food producing grasses, forbs, legumes and/or shrubs	4
No food producing grasses, forbs, legumes and/or shrubs in evaluation area	0
2. <u>Food Accessibility</u> – Estimate the percentage of bare ground (this component is an indicator how easily lesser prairie chickens can travel through the habitat and access seed, foliage, and insects in food producing areas.	<u>Value</u>
> 30 percent bare ground	10
20 percent to 30 percent bare ground	8
10 to 20 percent bare ground	6
< 10 percent bare ground	2
No bare ground	0

D. PROTECTIVE COVER – Low growing shrubs and woody plants that provide shade in summer and protection from cold and snow in winter. Common shrubs that meet protective cover requirements include: Shinnery Oak, Sand Sagebrush, Sand Plum, Sumac, and Yucca. Trees do not meet the requirements for protective cover.

1. Presence of Native Low Growing Shrubs and Woody Plants (< 3 feet tall)	<u>Value</u>
Shrub canopy cover is 20 percent or > of the evaluation area	10
Shrub canopy cover 10 percent to 20 percent of the evaluation area	8
Shrub canopy cover 5 percent to 10 percent of the evaluation area	6
Shrub canopy cover is < 5 percent the evaluation area	4
No shrub cover within evaluation area	0

E. FRAGMENTATION LEVEL: Manmade features and infrastructure can result in lesser prairie chickens avoiding what is otherwise suitable habitat. The density and configuration of these features provides a relative indicator of potential impact on future habitat use by chickens.

1. <u>Fences</u> – Evaluate the potential for fence collisions within the evaluation area.	<u>Value</u>
No fences are located within ½ mile of known leks	10
All fences within ½ mile of known lek sites are marked	8
Fences within ½ mile of known leks are marked in identified high risk locations	6
No fences within ½ mile of known lek sites are marked	0
2. <u>Trees</u> – Evaluate the impact of trees within the evaluation area.	<u>Value</u>
No trees present with exception of major riparian areas.	10
Trees are confined to the perimeter of evaluated area in windbreaks and farmstead plantings	8
Trees are scattered throughout evaluation area at density < 10 trees per ¼ section	5
Trees are scattered throughout evaluation area at density > 10 trees per ¼ section	0
3. <u>High Power Transmission Lines</u> (Do not include single pole electric utility lines along roads and highways)	<u>Value</u>
No transmission lines present within evaluated area	10
Transmission lines present along perimeter and evaluated area is at least 160 acres in size <u>or</u>	
Transmission lines present that dissect the evaluated area into units 160 acres or > in size	5
Transmission lines present along perimeter and evaluated area is < 160 acres in size <u>or</u>	
Transmission lines present that dissect the evaluated area into units <160 acres in size	0
4. <u>Stand-Alone Vertical Structures</u> (Includes wind turbines, communication towers, tank batteries, and oil and gas wells. Do not include working windmills for stock water or farmsteads located along the perimeter of the evaluated area.	<u>Value</u>
No stand-alone vertical structures present within the evaluated area.	10
Stand-alone vertical structures present at avg. density of 1 structure or < per 160 acres of evaluated area	5
Stand-alone vertical structures present at avg. density of > 1 structure 160 acres of evaluated area	0

F. EVALUATION SCORES

Insert the lowest value for each of the 5 evaluated habitat components below. All evaluated elements must have either a present value or planned value of 5.0 or greater in order to meet the requirements of the NRCS standard for Upland Wildlife Habitat Management (645).

Nesting Habitat ____ Brood Habitat ____ Food Sources ____ Protective Cover ____ Fragmentation Level ____

The lowest score (value) for each of the 5 evaluated habitat components represents the limiting factor(s). Management plans should be developed to address the limiting factors in order to improve the overall habitat for LEPC.