

For: County Offices

**Practice CP25 and Technical Information for General Signup 26**

Approved by: State Executive Director



**1 Overview**

**A Background**

Counties were informed at the State CRP training that the state had submitted a request to be approved for practice CP25, Rare and Declining Habitat. The practice allows producers to re-establish the type of cover that was on the site at European Settlement. The state has been informed by telephone that practice CP25 has been approved for Oklahoma. NRCS has developed a Practice Standard 643, Restoration and Management of Declining Habitats for Practice CP25.

A "DRAFT" copy of the NRCS Technical Note Biology OK-30 was provided to counties at training to assist in developing information to provide producers during signup on practice covers. Technical Biology OK-30 has now been finalized.

**B Purpose**

This notice provides counties a copy of Practice Standard 643 and Technical Biology Note OK-30.

**2 Technical Information**

**A Practice CP25 and Practice Standard 643**

Practice CP25 will be available for producers located in the Mixed Grass Prairie Major Land Resource Areas (MLRA) 77E, 78C, 80A, and 82B, and the Tall Grass Prairie MLRA 112. A map of the MLRAs was provided at state CRP training and is located in Tab 18 of the training manual.

**Disposal Date:**  
December 1, 2003

**Distribution:**  
County Offices

**2 Technical Information (continued)**

**A Practice CP25 and Practice Standard 643 (continued)**

NRCS has developed Practice Standard 643, Restoration and Management of Declining Habitats to be utilized in conjunction with Practice CP25. A copy of the Practice Standard is provided in Exhibit 1. Applicable counties will need to discuss the 643 Standard with the DC to develop information for producers on the different plants required and suitable land in the county. Additional information is contained in OK Notice CRP-547, subparagraph 4 B.

**B Technical Note Biology OK-30**

Counties were provided a "DRAFT" version of Technical Note Biology OK-30 at state CRP training. NRCS has finalized Technical Note Biology OK-30 and a copy is provided in Exhibit 2.

Utilize the Technical Note Biology OK-30 to discuss practice information with producers and develop practice information according to OK Notice CRP-547, subparagraph 4 B.

**C Filing**

Practice Standard 643 and Technical Note Biology OK-30 should be retained in the CRP Training Handbook, Tab 18, for reference.

**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD**

**RESTORATION AND MANAGEMENT OF DECLINING HABITATS**

(acre)

**CODE 643**

**DEFINITION**

Restoring and conserving rare or declining native vegetated communities and associated wildlife species.

**PURPOSE**

- Restore land or aquatic habitats degraded by human activity
- Provide habitat for rare and declining wildlife species by restoring and conserving native plant communities.
- Increase native plant community diversity.
- Management of unique or declining native habitats.

Note: NRCS uses the term "wildlife" to include all animals, terrestrial and aquatic.

**CONDITIONS WHERE PRACTICE APPLIES**

On any landscape which once supported or currently supports the habitat to be restored or managed.

**CRITERIA**

**General Criteria Applicable to All Purposes**

- The minimum size of the restored area shall be 20 acres or all of the identified ecological site if less than 20 acres.
- All plantings will be in accordance with the Range Planting (550) or Tree/Shrub Establishment (612) standard and specification relative to the details of planting such as seedbed preparation,

nutrients, cover crops, origin of seed, timing, etc. Refer to Tables 1 - 15 of this standard for species selection and adaptation.

- Vegetative manipulations of existing communities to restore plant and/or animal diversity can be accomplished by prescribed burning, grazing, mechanical, biological or chemical methods, or a combination of them all.
- Refer to standards Prescribed Burning (338) and Prescribed Grazing (528A) for guidance on utilizing grazing and fire for restoration activities.
- Weed control may be needed to establish the base grasses.

**CONSIDERATIONS**

Confer with biologists of other agencies and organizations to develop guidelines and specifications for conserving declining habitats when needed.

Practices should be integrated where needed. An example would be where patches of a pasture are burned to attract grazing animals on a three-year rotation to provide different stages of succession within the same pasture.

**PLANS AND SPECIFICATIONS**

Specifications for this practice shall be prepared to describe each habitat type to be restored. Specifications shall be recorded using approved specifications sheets, job sheets, narrative statements in the conservation plan, or other acceptable documentation.

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.
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**NRCS, OK  
May 2003**

## **OPERATION AND MAINTENANCE**

Refer to the standard, Range Planting (550) for establishment criteria.

Prescribed burning, grazing management, and replanting may be done if needed to maintain the desired plant community.

To benefit insect food sources for grassland nesting birds, spraying or other control of noxious weeds will be done on a "spot" basis to protect forbs and legumes that benefit native pollinators and other wildlife.

Management practices and activities are not to disturb cover during the primary nesting period for a targeted animal species. Exceptions could be granted for periodic burning or mowing when

necessary to maintain the health of the plant community.

Where feasible prescribed burning will be utilized instead of mowing.

Any use of fertilizers, pesticides and other chemicals shall not compromise the intended purpose of this practice.

## **REFERENCES**

Bidwell, T. G. et.al. Ecology and Management of Lesser Prairie Chicken. Oklahoma State University, E-970.

Masters, Ron. S. Ditchkoff, S. C. Farley. No. 10 Edge and other Wildlife Concepts. Oklahoma State University, L-276

**Table 1. Basic Data For Calculating Mixtures**<sup>1/2 3/</sup>

Grass Species	Area Of Adaptation <sup>4/</sup>	Full Seeding Rate
alkali sacaton 'Saltalk'	Statewide	2.0
big bluestem 'Kaw' 'Rountree'	Statewide MLRA 116A, 117, 118, 119	6.0
big sandreed	Statewide	4.0
blue grama 'Lovington' 'Hachita'	Statewide Statewide	2.0
buffalograss 'Texoka' unhulled 'Bison'	Statewide Statewide	6.0
eastern gamagrass 'Pete' 'Iuka'	Statewide Except Panhandle Statewide	8.0
green sprangletop	Statewide	1.7
Indiangrass 'Lometa' 'Cheyenne' 'Llano' 'Osage' 'Rumsey'	Statewide Except Panhandle Statewide MLRA 70, 77 East 112, 116A, 117	4.5
little bluestem 'Aldous' 'Cimarron' 'Pastura'	MLRA 76, 80A, 84A, 84B, 112, 116A, 133B MLRA 70, 77, 78, 80A, 84A, 84B MLRA 70, 77, 78, 80A, 84A, 84B	3.4
plains bristlegrass <sup>5/</sup>	West	3.0
sand bluestem 'Woodward'	West	6.0
sand dropseed	P, NW, SW	1.0
sand lovegrass 'Mason' 'Bend'	Statewide Statewide	1.0
sideoats grama 'El Reno' 'Haskell'	Statewide Statewide	4.5
switchgrass 'Alamo'  'Blackwell' 'Grenville' 'Kanlow'	Bottomlands, Sub-Irrigated, Saline Sub-Irrigated Sites Where Annual Rainfall $\geq$ 25 Inches. Statewide MLRA 70, 77, 78 Bottomlands Only	3.0
tall dropseed	NW, SW, NE, SE	1.0
western wheatgrass 'Barton'	NW, SW	7.0

**Table 1 (Continued)**

<b>Native Forbs &amp; Shrubs <sup>6/</sup></b>	<b>Area Of Adaptation</b>		<b>Full Seeding Rate Per Acre</b>
Engelmann daisy	Statewide		4.0
Pitcher's sage	NW, SW, NE, SE		4.0
Maximilian sunflower <sup>6/</sup>	Statewide		2.0
awnless bush sunflower	Statewide		4.0
compass plant	NW, SW, NE, SE		2.0
gayfeather	Statewide		4.0
black sampson	Statewide		2.0
pale echinacea	NE, SE		2.0
upright prairie coneflower	Statewide		0.3 (2% max)
plains coreopsis	Statewide		0.3 (2% max)
sand sagebrush	Refer to Table 2, 3, 6, & 7		1.0
four-wing saltbush	West Of I-35 Except For Sands Or Wet Sites. In MLRA 77A, 77B, < WEG 86. Do not plant as a part of a mixture, plant as block or plot.		4.0 de-winged 10.0 winged
<b>Native Legumes <sup>6/</sup></b>	<b>Inoculum Type (Species Specific)</b>	<b>Area Of Adaptation</b>	<b>Full Seeding Rate (PLS Lb./Ac)</b>
leadplant	Amorpha Spec 1	Statewide	2.0
tephrosia	Tephrosia Spec 1	Statewide	4.0
prairie clover	F	Statewide	4.0
Illinois bundleflower	Desmanthus Spec 1	Statewide	4.0
roundhead lespedeza	EL	NW, SW, NE, SE	2.0
tickclover	EL	Statewide	2.0
trailing wildbean	Strophostyles Spec 1	Statewide	2.0
western indigo	EL	Statewide	2.0
catclaw sensitive briar	Amorpha Spec 1	Statewide	2.0
prairie acacia	EL	Statewide	2.0
partridge pea	EL	Statewide	4.0
least snoutbean	Rynchosia Spec 1	Statewide	2.0
other legumes	Use appropriate	Statewide	2.0

<sup>1/</sup> Based on full seeding rate of Pure Live Seed (PLS) per acre. Site adaptations and minimum and maximum percent of full seeding rates are reflected in Tables 2 - 15.

<sup>2/</sup> When seeding native harvest, the minimum percentages listed for each species in the range site Tables 2- 15 must be met.

<sup>3/</sup> Mixtures meet specifications when planted at not more than 5% below or 25% above the full rate for each individual species planted.

<sup>4/</sup> Cultivars are only approved if the species for that cultivar is listed in Tables 2 - 15. The seeding rates for the cultivars are the same as those for the species.

<sup>5/</sup> Tetrazolium tests (TZ) are approved for seed quality analysis.

<sup>6/</sup> Other native forbs, shrubs, and legumes may be used provided they are listed on the ecological site guide or range site technical guide in Section II of the FOTG that is appropriate for the area to be planted. Pro-rate the percentages in the mixture, assuming 2.0 lbs. per acre full seeding rate.

<sup>7/</sup> Do not exceed .1 lb. Maximilian sunflower per acre in mixture.

**Table 2. Panhandle <sup>8/</sup>***Ecological Sites: loamy prairie, sandy plains, limy sandy plains, loamy plains, and limy uplands*

Species	Min. Percent	Max. Percent
little bluestem	10	20
sand bluestem	10	40
switchgrass	5	25
Indiangrass	5	40
<b>Must include of the above and total</b>	<b>30</b>	<b>60</b>
sideoats grama	25	60
blue grama	10	40
buffalograss	0	20
sand lovegrass	5	20
sand dropseed	0	10
western wheatgrass	5	10
plains bristlegrass <sup>9/</sup>	0	10
forbs, legumes (minimum of 2 spp.)	5	10
sand sagebrush	5	10

<sup>8/</sup> Green sprangletop can be added at .5 to 1.0 lbs. per acre as a filler grass.<sup>9/</sup> Plains bristlegrass can be included for wildlife purposes.**Table 3. Panhandle***Ecological sites: deep sand, sandy bottomland, and dune*

Species	Min. Percent	Max. Percent
little bluestem	10	40
sand bluestem	15	40
Indiangrass	5	20
switchgrass	10	30
<b>Minimum of total of above</b>	<b>40</b>	<b>75</b>
sideoats grama	0	30
blue grama	10	25
sand lovegrass	10	20
sand dropseed	0	10
big sandreed	5	20
forbs, legumes (minimum of 2 spp.)	5	10
sand sagebrush	5	10

**Table 4. Panhandle <sup>8/</sup>***Ecological sites: hardland, shallow, very shallow*

Species	Min. Percent	Max. Percent
little bluestem	5	25
sand bluestem	0	15
Indiangrass	0	15
switchgrass	0	15
sideoats grama	25	60
blue grama	35	50
buffalograss	15	20
<b>Must total</b>	<b>85</b>	<b>100</b>
sand lovegrass	0	10
western wheatgrass <sup>10/</sup>	5	25
forbs and legumes (minimum of 2 spp.)	0	10

<sup>8/</sup> Green sprangletop can be added at .5 to 1.0 lbs. per acre as a filler grass.<sup>10/</sup> Hardland sites only.**Table 5. Panhandle***Ecological sites: loamy bottomland, moderately saline, subirrigated*

Species	Min. Percent	Max. Percent
little bluestem <sup>11/</sup>	10	30
sand bluestem <sup>11/</sup>	10	30
Indiangrass	10	20
switchgrass	10	40
<b>Mixture total</b>	<b>50</b>	<b>100</b>
blue grama <sup>12/</sup>	5	10
tall dropseed	0	10
alkali sacaton <sup>13/</sup>	15	40
eastern gamagrass <sup>14/</sup>	5	25
western wheatgrass	10	20
buffalograss <sup>12/</sup>	5	10
sideoats grama <sup>12/</sup>	5	10
forbs and legumes (minimum of 2 spp.)	5	10
Plums	1% of acreage	5% of acreage

<sup>11/</sup> Not required on moderately saline, subirrigated, wet meadow, or wetland type sites.<sup>12/</sup> Only on loamy bottomland.<sup>13/</sup> Applicable to moderately saline and alkali areas only.<sup>14/</sup> Applicable only to subirrigated or wetland type-sites.

**Table 6. Western <sup>8/</sup>**

*Ecological sites: loamy, loamy prairie, limy prairie, sandy plains, mixedland slopes, sandy prairie, limy sandy plains, loamy plains, blackclay prairie, sandy savanna, loamy savanna, eroded prairie, eroded sandy savanna, eroded savanna*

Species	Min. Percent	Max. Percent
little bluestem	15	30
big or sand bluestem	20	40
Indiangrass	10	40
switchgrass	5	25
sideoats grama	10	50
blue grama	10	30
buffalograss	0	20
sand lovegrass	5	10
tall dropseed	0	10
western wheatgrass	0	10
forbs and legumes (minimum of 2 spp.)	5	15
sand sagebrush <sup>15/</sup>	5	10
plum	0	1% of acreage

<sup>8/</sup> Green sprangletop can be added at .5 to 1.0 lbs. per acre as a filler grass.

<sup>15/</sup> Only include on vfls textured soils or coarser.

**Table 7. Western <sup>16/</sup>**

*Range sites: deep sand, deep sand savanna, sandy bottomland, and dune*

Species	Min. Percent	Max. Percent
little bluestem	20	30
big or sand bluestem	25	40
Indiangrass	10	25
Switchgrass	10	40
<b>Mixture total of above</b>	<b>65</b>	<b>80</b>
sideoats grama	0	15
blue grama	5	15
sand lovegrass	10	20
tall dropseed	0	10
big sandreed	5	20
forbs and legumes (minimum of 2 spp.)	5	10
sand sagebrush	5	10
Plum	1% of acreage	5% of acreage

<sup>16/</sup> Dune sites may not be practical to revegetate.

**Table 8. Western <sup>8/</sup>**

*Ecological sites: claypan prairie, red clay prairie, very shallow, shallow claypan, shallow prairie, hardland, shallow, red clay flats, gravely sandy, red shale, shallow clay prairie, shallow savanna, eroded clay, eroded shallow savanna, edgerock*

Species	Min. Percent	Max. Percent
little bluestem	15	40
big or sand bluestem	5	25
Indiangrass	5	20
switchgrass	5	25
sideoats grama	20	60
<b>Mixture total of above</b>	<b>50</b>	<b>80</b>
blue grama	20	35
buffalograss	10	20
sand lovegrass	0	10
western wheatgrass <sup>17/</sup>	5	20
alkali sacaton <sup>17/</sup>	0	50
forbs and legumes (minimum of 2 spp.)	5	10

<sup>8/</sup> Green sprangletop can be added at .5 to 1.0 lbs. per acre as a filler grass.

<sup>17/</sup> Shallow claypan sites only.

**Table 9. Western**

*Ecological sites: loamy bottomland, heavy bottomland, moderately saline, subirrigated, wet meadow*

Species	Min. Percent	Max. Percent
little bluestem <sup>11/</sup>	10	30
sand or big bluestem <sup>11/</sup>	20	30
Indiangrass	10	30
switchgrass <sup>18/</sup>	10	30
<b>Mixture total of above</b>	<b>50</b>	<b>100</b>
blue grama <sup>19/</sup>	0	10
tall dropseed	0	10
alkali sacaton <sup>20/</sup>	10	40
eastern gamagrass	5	25
western wheatgrass	5	20
buffalograss <sup>19/</sup>	5	5
sideoats grama <sup>19/</sup>	5	10
forbs and legumes (minimum of 2 spp.)	5	10

<sup>11/</sup> Not required on moderately saline, subirrigated, wet meadow, or wetland type sites.

<sup>18/</sup> Increase min. to 30% and max. to 70 % on sub-irrigated or wet meadow.

<sup>19/</sup> Only on loamy bottomland and heavy bottomlands.

<sup>20/</sup> Only on moderately saline.

**Table 10. Western***Ecological sites: alkali bottomland, saline subirrigated, and slickspot*

Species	Min. Percent	Max. Percent
little bluestem	5	20
sand or big bluestem	5	20
Indiangrass	5	20
switchgrass	10	30
tall dropseed	0	10
alkali sacaton	10	50
western wheatgrass <sup>21/</sup>	10	30
sideoats grama <sup>22/</sup>	0	10
blue grama	10	25
buffalograss	5	20
forbs and legumes (minimum of 2 spp.)	5	10

<sup>21/</sup> Not required on slickspot.<sup>22/</sup> Required only on slickspot.**Table 11. Eastern***Ecological sites: loamy prairie, sandy prairie, limy prairie, blackclay prairie, sandy savanna, loamy savanna, eroded prairie, eroded sandyland, eroded sandy savanna, and eroded savanna*

Species	Min. Percent	Max. Percent
little bluestem	10	30
big bluestem	20	40
Indiangrass	15	40
switchgrass	5	25
sideoats grama	5	10
<b>Minimum Total</b>	<b>80</b>	<b>100</b>
blue grama	0	15
buffalograss	0	5
tall dropseed	0	5
western wheatgrass	0	10
eastern gamagrass	10	20
forbs and legumes (minimum of 2 spp.)	10	15
plums	0	1% of acreage

**Table 12. Eastern <sup>16/</sup>***Ecological sites: deep sand, deep sand savanna, sandy bottomland, and dune*

Species	Min. Percent	Max. Percent
little bluestem	10	25
big bluestem	25	40
Indiangrass	15	30
switchgrass	15	20
<b>Minimum Total</b>	<b>70</b>	<b>100</b>
sideoats grama	0	10
sand lovegrass	10	20
tall dropseed	0	10
big sandreed	5	20
forbs and legumes (minimum of 2 spp.)	5	15
plum	1% of acreage	5% of acreage

<sup>16/</sup> Dune site may not be practical to revegetate.

**Table 13. Eastern**

*Ecological sites: claypan prairie, red clay prairie, very shallow, shallow claypan, shallow prairie, shallow, shallow clay prairie, shallow savanna, claypan savanna, eroded clay, eroded shallow savanna*

Species	Min. Percent	Max. Percent
little bluestem	20	50
big bluestem	5	25
Indiangrass	5	20
switchgrass	10	20
sideoats grama	10	30
<b>Mixture Total</b>	<b>50</b>	<b>100</b>
blue grama	5	10
buffalograss	10	20
tall dropseed	0	10
alkali sacaton <sup>23/</sup>	15	80
forbs and legumes (minimum of 2 spp.)	5	10

<sup>23/</sup> Applicable to shallow claypan sites only.

**Table 14. Eastern**

*Ecological sites: loamy bottomland, sandy bottomland, heavy bottomland, moderately saline, subirrigated, wet meadow*

Species	Min. Percent	Max. Percent
little bluestem <sup>24/</sup>	10	30
big bluestem	20	40
Indiangrass	10	30
switchgrass <sup>18/</sup>	10	30
<b>Mixture Total</b>	<b>60</b>	<b>100</b>
tall dropseed	0	10
alkali sacaton <sup>25/</sup>	10	20
eastern gamagrass	10	25
western wheatgrass	0	20
sideoats grama <sup>19/</sup>	0	10
forbs and legumes (minimum of 2 spp.)	5	10
Plum (except wet meadow)	1% of acreage	5% of acreage

<sup>18/</sup> Increase min. to 30% and max. to 70% on subirrigated or wet meadow type-sites.

<sup>19/</sup> Only on loamy bottomland and heavy bottomland.

<sup>24/</sup> Not required on wet meadow or wetland type-sites.

<sup>25/</sup> Applicable to moderately saline and alkali areas only.

**Table 15. Eastern**

*Ecological sites: alkali bottomland, saline subirrigated, and slickspot*

Species	Min. Percent	Max. Percent
little bluestem	5	20
big bluestem	5	20
Indiangrass	5	20
switchgrass	20	40
tall dropseed	0	10
alkali sacaton	20	50
western wheatgrass	5	30
sideoats grama <sup>21/</sup>	0	10
blue grama	5	20
buffalograss	5	20
forbs and legumes (minimum of 2 spp.)	5	10

<sup>21/</sup> Not required on slickspots.

**SAMPLE CALCULATION FOR COMPUTING RANGE MIXTURES**

Species	Seeding Rate	% Of Mix	Lbs. PLS / Ac	Total Acres	Total PLS
little bluestem	3.4	25	0.85	80	68
Indiangrass	4.5	25	1.12	80	90
sideoats grama	4.5	30	1.35	80	108
switchgrass	3.0	10	0.3	80	24
Illinois bundleflower	4.0	10	0.4	80	32
	<b>TOTAL</b>	<b>100</b>			



**Cover Subfactor Guidelines**  
**For**  
**CRP Sign-up 26**

**CP1 - Permanent Introduced Grasses And Legumes**

**N1a Approved Cover Mixes for CP1 Establishing Permanent Introduced Grasses and Legumes.** Consult Table 1 below for species selection and planting rates. Refer to Pasture and Hay Planting (512) standard and specifications for adapted grass species, planting rates, and establishment criteria. When mixtures are used, each grass should be at least 10% of the composition. Refer to Example 2 for "how to information" on seed mixture calculations.

CP1 Establishing permanent introduced grasses and legumes. Each base grass shall compose at least 10% of a mixture. Refer to Pasture and Hay Planting Standard (512)	Assigned Point Score
Planting of two to three introduced grass species. Compatible cool season species include mixtures of two or more species of smooth brome, meadow brome, fescue, orchardgrass, tall wheatgrass, and intermediate wheatgrass (Luna, Manska, pubescent) within their range of adaptation. Another compatible warm season grass mixture is yellow (Plains, WW Spar, Ironmaster, Ganada) and Caucasian introduced bluestems within their range of adaptation. Warm season grasses cannot be combined with cool season grasses, or vice-versa, to meet this requirement.	10
Mixture of at least 4 species, with at least 3 introduced grasses and at least 1 forb or legume species. Compatible species include mixtures of smooth brome, meadow brome, fescue, orchardgrass, tall wheatgrass, and intermediate wheatgrass (Luna, Manska, pubescent) within their range of adaptation. The mixture must also contain at least 30% of a forb and/or legume from Table 1. Up to 5% of the forbs and/or legumes can be annuals or biennials best suited for wildlife. {Native forbs and/or legumes can also be used in this category. The planting rates for natives shall be prorated from their full planting rate, depending upon their percentage in the mix, from Range Planting (550) Table 1, with no more than 5% annuals.}	40

**Table 1. Legumes For CP1 Best Suited For Wildlife**

Species 1/ 2/	Life Span 3/	Full Seeding Rate PLS Lbs./Ac	Inoculum Type 4/	Area Of Adaptation
alfalfa (can be the grazing varieties of alfalfa)	P	10	A	Statewide
birdsfoot trefoil	P	4	K	Fertile well drained soils, 26" rainfall or greater, can tolerate moderate salinity. Not persistent with warm season grasses.
'Cicer' milkvetch	P	12	Astragalus	Greater than 18" precipitation, tolerates slight acidity to moderate alkalinity.
red clover	B	10	B	NE, SE - heavy soils med-high fertility and fertile sandy loams high in available phosphorus.
sainfoin	P	20	F	Neutral to calcareous soils
white clover	P	10	B	SE, NE, first and second banks, clay and loamy soils and on more productive upland soils.
arrowleaf clover	A	7	O	NE, SE, well drained soil,
Austrian Winter Pea	A	40	C	Western part of the state, intolerant of low pH soils.
cowpeas	A	40	EL	Statewide
crimson clover	A	9	R	NE, SE - well drained soils except high

Species 1/ 2/	Life Span 3/	Full Seeding Rate PLS Lbs./Ac	Inoculum Type 4/	Area Of Adaptation
				calcareous.
hairy vetch	A	20	C	Statewide - well drained soils.
Korean lespedeza	A	12	EL	NE, SE
common lespedeza	A	12	EL	SE - acid soils.
rose clover	A	6	WR	18 - 25 inch rainfall, not on wet or poorly-drained soils.
sweetclover	A & B	5	A	Central, SW, NW - well drained soils.

1/ Legumes can be planted at the same time the base grass is planted.

2/ Use current soils test to determine if there are proper levels of phosphorus and potassium. Lime to raise pH to at least 6.0.

3/ A = Annual B = Biennial P = Perennial

4/ These inoculum types are specific to each species.

### CP2 - Establishment of Permanent Native Grasses

#### N1a Approved Cover Mixes for CP2, Permanent Native Grasses, Forbs, & Legumes.

Refer to Example 1, seed mixture calculations. All plantings under CP2 will be natives done according to the Range Planting (550) standard and specification or natives that are planted under the Pasture and Hay Planting (512) standard and specification. Refer to these standards for adapted species, seeding rates, and establishment criteria.

CP2 ESTABLISHMENT OF PERMANENT NATIVE GRASSES. (All Native plants) Select adapted native plants from the Range Planting (550) or Pasture and Hay Planting (512) standard and specification.	Assigned Point Score
A mixture of at least three native species, containing at least 80% of two grasses listed in (512) Table 1 and at least 10% of one forb or legume listed (550) Table 1.	20
A mixture of five or more native species containing at least 80% of 3 grasses and at least 10% of one forb or legume listed in (550) Table 1. No more than 2 percent can be annuals.	50

### CP3 Tree Planting (Pine)

Refer to CP4D, 50 point cover category, for native herbaceous plantings best suited for wildlife in pine plantings. CP3 plantings will be done according to Tree/Shrub Establishment (612) standard and specifications. Refer to Table 2 for shrubs species selection.

CP3 Tree planting	Assigned Point Score
Southern Pines (softwoods) - Solid stand of pines/softwoods (planted at more than 550 trees per acre.)	10
Southern Pines (softwoods) - Pines/softwoods planted at a rate of 500 to 550 per acre depending upon the sited index (state-developed standards) with 10 - 20 percent openings managed to a CP4D wildlife cover.  Openings for Southern pines are not to be less than a minimum of 2 acres or a maximum of 5 acres in size for fields of 20 acres and larger. Smaller fields will be pro-rated. Openings may include buffers on the interior of the field. Field edges (borders) may be used if they are irregular in shape and average 30 feet in width.	50
Natural regeneration of native herbaceous or shrubby vegetation with required maintenance	

CP3 Tree planting	Assigned Point Score
<p>may be permitted within open areas if it is consistent with NRCS technical standards, the Northern Bobwhite Conservation Initiative, and concurred with by State FWS or USFWS officials.</p> <p>Open areas of native grasses and/or shrub plantings (50 point cover category, CP4D) best suited for wildlife in the area shall be considered CP3 for EBI scoring and contract purposes.</p>	

**CP3a - Hardwood Tree Planting (Native)**

Table 2 includes a list of hardwood trees for both hard and soft mast producing species. Hardwood trees not included on this list will be treated as non-mast producing species and/or not among the best suited species for wildlife. CP3 plantings will be done according to Tree/Shrub Establishment (612) standard and specifications.

CP3a - Hardwood tree planting	Assigned Point Score
Solid stand of non-mast producing hardwood species	10
Solid stand of a single, hard mast-producing species	20
Mixed stand of hardwood species best suited for wildlife in the area.	30
Mixed stand (3 or more species) of hardwood species best suited for wildlife in the area.	50

**CP4B - Permanent Wildlife Habitat (Corridors) Non-Easement**

**N1a Approved Cover Mixtures for CP4B, Permanent Grasses, Forbs, Legumes, Trees and/or Shrubs.**

**General** - These corridors are intended to provide connecting links, or travel lanes between habitat types. Corridors may be from one to three chains (66-198 ft) in width. 30 - 60 percent of the acreage shall be planted to woody species. The remainder of the corridor acreage must be planted to herbaceous plants. Refer to the standard and specifications for Range Planting (550) to determine the minimum and maximum percentages of each native grass species to be included in the mixture and for information on zone of adaptability. If four-winged saltbush is selected, plant a 100% seeding rate on the acreage devoted to saltbush. Pro-rate the planting to the percent desired in the mixture. Tree and shrub plantings will be selected from the "Shrub" section of Tables 2, and planted in accordance with state standard and specifications Tree/Shrub Establishment (612). Refer to **Shrub Planting Specifications for CRP Plantings** listed under CP4D for plant densities. The only approved trees are those listed in the Ecological Site Description for the soil type. Refer to the standard and specifications for Pasture and Hay Planting (512) and Range Planting (550) Table 1, for information on forbs and legumes.

**Distribution of Shrub Plantings** - Each offer will have at least 5 individual planting locations or long connecting strips. Planting root sprouting species in a "plus" pattern will facilitate fill-in of the mott.

Strip plantings should be placed as evenly across the corridor as is practical considering factors such as prevailing winds, slope, contour, and soils to optimize erosion and wildlife benefits.

**Other** - Biologists of the Oklahoma Department of Wildlife Conservation should be consulted when developing plans for this CRP practice. Foresters with the Oklahoma Forestry Services Division should be consulted when developing trees and shrub planting plans.

CP4B - PERMANENT WILDLIFE HABITAT (CORRIDORS) NON-EASEMENT	Assigned Point Score
Mixed stand (Minimum of 4 species) of grasses, trees, shrubs, forbs, or legumes planted in mixes, blocks, or strips best suited for various wildlife species in the area.	40
Mixed stand (Minimum of 5 species) of either predominately native species including grasses, forbs, legumes, shrubs, or trees planted in mixes, block, or strips best suited to providing wildlife habitat. (Only native grasses are authorized)	50

**CP4D - Permanent Wildlife Habitat Non-Easement - Whole Field Plantings**

**General** - Tree and/or shrub plantings will be included on 10 - 30% of the acreage where needed to meet the specific needs of wildlife species and where adapted to the site. The remainder of the acreage must be planted to herbaceous plants. The herbaceous mixture must include at least 30% of the full seeding rate forbs and/or legumes selected from Tables 1, except that up to 5% of the forbs and/or legumes can be annuals or biennial. Pro-rate the planting to the percent desired in the mixture. Refer to the standard and specifications for Range Planting (550) to determine the minimum and maximum percentages of each native species to be included in the mixture and for information on zones of adaptability. Switchgrass may be increased to the full allowable percentage for wildlife purposes. If four-winged saltbush is selected, plant 100% seeding rate on the acreage devoted to saltbush. Refer to Table 1 in this document and the standard and specifications for Pasture and Hay Planting (512) for information on introduced legumes. Required tree and shrub plantings will be selected from the "Shrub" section of Table 2 and planted in accordance with state standard and specifications for Tree/Shrub Establishment (612). The only approved trees are those listed in the Ecological Site Description for the soil type.

**Distribution of Shrub Plantings** - Each offer will have at least 5 individual planting locations. Planting root sprouting species in a "plus" pattern will facilitate fill-in of the mott.

Strip plantings should be placed as evenly across the offer as is practical considering factors such as prevailing winds, slope, contour, and soils to optimize erosion and wildlife benefits. Block plantings should be distributed throughout the field to provide optimum interspersion and benefits to targeted wildlife species.

**Other** - Where appropriate, prescribed burning will be utilized for wildlife benefits. Other opportunities to improve wildlife habitat will also be considered and included where appropriate in the CPO. Examples include water development, strip disking, mowing (except during nesting season) and food plots. Biologists of the Oklahoma Department of Wildlife should be consulted when developing plans for this CRP practice. Foresters with the Oklahoma Forestry Services Division should be consulted when developing trees and shrub planting plans.

CP4D Establishment of Permanent Wildlife Habitat (Whole Field Planting) Old World Bluestems are not eligible for CP4 practices.	Assigned Point Score
• Mixture of at least 4 species of either grasses, trees shrubs, forbs, or legumes planted in mixes, block, or strips, best suited for various wildlife species in the area.	40
• Mixture of at least 5 species of either of predominately native species, including grasses, forbs, legumes, shrubs, or trees planted in mixes, blocks, or strips best suited to providing wildlife habitat. Only native grasses are authorized.	50

**Shrub Planting Specifications for CRP Plantings:**

**Bare Root Seedlings** - All species except four-winged saltbush will be planted at the following density.

	Normal Field Planting 2/		w/Weed Barrier 1/ 2/	
	Minimum	Maximum	Minimum	Maximum
Shrubs per acre	272	544	136	544

Cover Subfactor N1a, Sign-up 26  
Technical Note Biology OK-30

1/ No cost share is available for weed barrier or drip irrigation for shrub plantings. However, participants who install either of these components at their own cost can reduce the minimum number of required shrub plantings to the levels shown in the Weed Barrier column.

2/ Spacing may be adjusted to take advantage of sites such as natural drains, terrace channels, etc., as long as the required shrubs per acre are planted. Typical spacings are: 272 trees per acre = 8' X 20', 544 trees per acre = 8' X 10', and 136 trees per acre = 8' X 40'.

Site Preparation - Areas to be established in shrubs shall be prepared for planting in accordance with the Tree/Shrub (612) standard and specifications. Additionally, plant in terrace channels, or in furrows to optimize moisture conditions. Also refer to Job Sheet JS 612 01, Tree/Shrub Establishment.

Distribution of Shrub Plantings - No more than 1 percent of the required 5 percent to be planted in shrubs will be planted in a single strip or block planting. Each offer will have at least 5 individual planting locations. Planting root sprouting species in a "plus" pattern will facilitate fill-in of the mott.

Strip plantings should be placed as evenly across the offer as is practical considering factors such as prevailing winds, slope, contour, and soils to optimize erosion and wildlife benefits. Block plantings should be distributed throughout the field to provide optimum interspersation and benefits to targeted wildlife species.

Establishment Criteria - Stands will be considered adequate when populations of 120 trees per acres have been established. Replanting will be required as needed to achieve 120 trees per acre. Stand evaluation for establishment shall be done at the end of the first growing season.

**Table 2. WOODY SPECIES BEST SUITED FOR WILDLIFE (Introduced And Native)**

SHRUB SPECIES	
American plum	Chickasaw (sand) plum
skunkbush sumac	chokecherry
western white honeysuckle	bush lespedeza (bicolor)
leadplant	indigobush
four-wing saltbush (Not on CP3)	hawthorn
autumn olive	deciduous holly
HARD MAST TREE SPECIES	
bur oak	pin oak
willow oak	water oak
Shumard oak	overcup oak
sawtooth oak	northern red oak
southern red oak	white oak
black walnut	pecan
blackjack oak	post oak
liveoak	hickory
Chinkapin oak	
SOFT/NON MAST TREE SPECIES	
hackberry	mulberry
green ash	lacebark elm
sugar maple	black locust
chittamwood	black cherry
red maple	redbud
sugarberry	

Cover Subfactor N1a, Sign-up 26  
 Technical Note Biology OK-30

May 2, 2003

### CP10 - Vegetative Cover (Grass Already Established)

CP10 Vegetative cover - grass already established. Score this item based on the original planted cover type. 1/	Assigned Point Score
Solid stand of one to three species of introduced grasses {listed in the Pasture and Hay Planting (512) standard and specification.}	30
Solid stand containing at least 80% of one to three species of native grasses {listed in the Range Planting (550) standard and specification.}	40
A mixture of five or more native species containing at least 80% of 3 grasses that are listed in the Range Planting (550) standard and specification and at least 10% of one forb, shrub, or legume. No more than 2 percent can be annuals. Acceptable forbs, shrubs, and legumes are those listed on the Ecological Site Guides or the Range Site Technical Guide.	50
For stand enhancements, when forbs, shrubs and/or legumes are being added to an existing stand of native grasses according to Job Sheet JS-550-02, use 20% of the full seeding rate. No more than 4 percent can be annuals. (Refer to Example 3)	50

#### 1/ Sampling Procedures on Existing CRP Grasses

If the participant feels that sufficient grasses, forbs, shrubs and/or legumes exist to meet the desired point requirements, although they were not seeded into the original plantings, the following sampling procedure is prescribed:

Sampling will consist of crossing each field with a frequency transect. One transect will be run along a north-south axis, the other along an east-west axis, roughly in the center of the field. Each transect should contain 100 observations with a 20" X 20" frame placed on the ground at each fifth step. After each line has been done, average the results to get overall frequency. In cases where fields are too small to accommodate the above procedure, adjust the steps between observations to achieve at least 30 observations per transect line. Retain transect results in the CRP contract folder, supporting records.

All sampling must be done prior to the signing of the CRP-1 so that needed planting may be scheduled in the CPO.

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### CP11 - Vegetative Cover - Trees Already Established

Refer to the plant species information described under CP3A for stand enhancements. A 50 point cover of native grasses and/or shrubs may be planted within the 15 - 20 percent openings under practice CP4D.

CP11 Vegetative Cover - Trees - Already Established	Assigned Point Score
Solid stand of pine/softwood or solid stand of nonmast producing hardwood species.	10
Solid stand of a single hard mast-producing species.	20
Mixed stand (2 species) of hardwoods best suited for wildlife in the area.	30
Mixed stand (3 or more species) of hardwoods best suited for wildlife species in the area.	50
Pine/softwood established at, or thinned as needed, to provide 15 to 20 percent openings of native herbaceous and/or shrub plantings or natural regeneration best suited for wildlife in the area. Tree thinning, if required or recommended by the State Forester, must be completed within 3 years of the CRP-1 effective date. Trees must be removed from the site.	50

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**CP12 - Food Plots**

This practice allows for the establishment and maintenance of annual and/or perennial wildlife food plots within CRP fields. In order to receive 5 points under CRP Ranking Factor N1b - Wildlife Enhancement, producers must establish food plots in accordance with the following guidance: Plant species will be selected from the approved list of plants best suited for use in wildlife food plots, Tables 3, 4, 5, and 6. Total acreage of CP12 shall not exceed 5 % of the acreage offered. The minimum acreage of food plots will be .25 acres or 2 percent of the contract acres, whichever is greater. The maximum acreage of individual food plots will be 5 acres. The size, location, and type(s) of plants in food plots should be based on the food requirements of the targeted wildlife species and not be immediately adjacent to one another. Food plots should provide plants that differ from those found on nearby cropland and hayland fields.

CP12 Wildlife Food Plot	Assigned Point Score
Wildlife food plots are small non-cost-shared plantings within a larger area. Wildlife food plots will never be the predominant cover.	NA

**Approved List Of Plants Best Suited For Wildlife Food Plots (Cp12)****Table 3. Annual Plants (Warm Season) 1/**

grain sorghum (milo, maize)	Proso millet
corn	German millet
mungbean	browntop millet
soybean	annual lespedeza (Korean, Kobe)
cowpeas	annual sunflower (black oil, graystripe, etc.)
Oriental pea (Game bird)	

**Table 4. Annual Plants (Cool Season) 1/**

wheat	hairy vetch
oats	Austrian winter peas
annual rye	pasture mix (small grains, rye, vetch)
	Sweetclover (biennial)

1/ Food plots will be established and maintained throughout the contract life. Refer to Technical Note Biology OK-24 and Wildlife Upland Habitat Management (645) standard for information on establishing plants for wildlife food.

**Table 5. Perennial Plants (Warm Season) 2/**

Illinois bundleflower	trailing wildbean
roundhead lespedeza	least snoutbean
tickclover	Maximilian sunflower
partridge pea ( reseeding annual)	awnless bushsunflower
alfalfa	

**Table 6 Perennial Plants (Cool Season)**

white clover (biennial and perennial)	red clover (biennial and perennial)
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2/ With the exception of alfalfa, all warm season perennial food plots will include a mixture of at least 2 species. Each species should compose at least 25% of the mixture. The seeding rate for each species will be based on their percentage in the food plot mix. Refer to Tables 1 of this technical note and Range Planting (550) Table 1 for information on establishing perennial plants best suited for wildlife. Alfalfa can be planted alone at the full seeding rate not to exceed 50 percent of the required acreage. It may also be planted in mixtures with other eligible plants. It should be noted that alfalfa is not a long-lived perennial. Stand re-establishment and/or conversion to annual food plants may be required on acreage planted to alfalfa during the period of a CRP contract. The remainder of required food plot acreage will consist of either approved annuals, approved cool season perennials, or a mix of approved warm season perennials meeting the requirements described in this footnote.

**CP25 - Rare and Declining Habitat Restoration**

CP25 Rare and Declining Habitat Restoration	Assigned Point Score
This practice is available only for the habitat types associated with the MLRAs shown below. Seeding or planting will be best suited for wildlife in the area. Planting will be based on the Restoration And Management Of Declining Habitats standard and specification (643).	50

**Eligible Habitats for Restoration Under CP25.**

Habitat Type	Associated MLRAs	Estimated Loss
Mixed Grass Prairie	77E, 78C, 82B, and 80A	>80%
Tall Grass Prairie	112	>90%

**CRP Establishment Considerations**

Establishment criteria will be evaluated on the base grass along with documentation that forbs and/or legumes were included in the planting. This is due to the nature of forbs and legumes to be somewhat cyclic based on weather events.

**Planting Alternatives**

Several choices for establishment of permanent cover are being offered due to the need to carry out weed control to establish the base grass, the availability of seeds, and the potential for forbs and legumes to be injured from carry-over cropland herbicides. These choices may change as program policy is revised. In all cases, the establishment of the base grasses is the primary objectives.

Some alternatives are:

- Plant all the grasses, forbs, and legumes together, using mowing or an approved herbicide that is compatible with forbs and legumes.
- Plant all the base grass the first year, use regular herbicides to establish, then drill the forbs and legumes the second year prior to March 31. Prior to planting the forbs and legumes, cover modification may be needed in the form of mowing or prescribed burning to allow the drill the place the forb and legume seed in direct contact with the soil. (Refer to Range Planting Job Sheets 550 02 & 03 for additional information.)

**EXAMPLE 1  
Calculation Worksheet For Seed Mixtures**

Species	Full PLS Seeding Rate	Percent Of Mix	Lbs. PLS/Ac For Each Species	Acres To Be Planted	Total PLS Lbs.
<b>GRASSES</b>					
big bluestem	6.0	20	1.2	60	72
little bluestem	3.4	15	.51	60	30.6
Indiangrass	4.5	20	.9	60	54
switchgrass	3.0	15	.45	60	27
sideoats grama	4.5	10	.45	60	27
blue grama	2.0	10	.2	60	12
<b>FORBS &amp; LEGUMES</b>					
Illinois bundleflower	4.0	5	.2	60	12
partridge pea	4.0	2	.08	60	4.8
Maximilian sunflower	2.0	3	.06	60	3.6
		100			

**EXAMPLE 2**  
**Calculation Worksheet for Seed Mixtures**

Species	Full PLS Seeding Rate	Percent Of Mix	Lbs. PLS/Ac For Each Species	Acres To Be Planted	Total PLS Lbs.
<b>GRASSES</b>					
orchard grass	6	30	1.8	60	108
bromegrass	12	30	3.6	60	216
<b>FORBS &amp; LEGUMES</b>					
birdsfoot trefoil	4	35	1.4	60	84
cowpeas	40	5	2	60	120
				60	
				60	
		100			

**EXAMPLE 3**  
**Calculation for Stand Enhancement Plantings on Native Grasses**

Species	Full PLS Seeding Rate	Percent Of Mix	Lbs. PLS/Ac Of Each Species	Acres To Be Planted	Total PLS Lbs.
<b>FORBS &amp; LEGUMES</b>					
Illinois bundleflower	4.0	10	.4	60	24
partridge pea	4.0	4	.16	60	9.6
Maximilian sunflower	2.0	6	.12	60	7.2
		20			

