PRACTICE SPECIFICATION

EARLY SUCCESSIONAL HABITAT DEVELOPMENT/MANAGEMENT

LOW DENSITY SEEDING

1. SCOPE

Ring-necked pheasant, gray (Hungarian) partridge, bobwhite quail, and mourning doves are popular wildlife species that require or benefit from good quality early successional habitat. Establishing grasses, legumes, and/or forbs at lower than normal seeding rates can be a useful technique for providing habitat for these wildlife species.

2. SEEDBED PREPARATION

Fields or areas that have excessive gullies, mounds, hummocks, or are too rough may be in need of mechanical conservation measures and should be shaped as necessary to establish a suitable cover crop and to establish a stand of desired plants. Low density seedings will utilize a cover crop if soil loss is expected to exceed T the growing season of or after the seeding operation is completed. If soil and site conditions allow, seeding may be conducted into a clean tilled seedbed.

3. COVER CROPS

When preparing a cover crop, refer to the Cover Crop (340) standard for additional information and other appropriate cover crops.

(1) Drill grain sorghum or forage sorghum at the rate of 10 to 15 pounds per acre or hybrid sudangrass at the rate of 15 to 25 pounds per acre in rows not to exceed 20 inches, between June 1 and July 15. If more growth is produced than desirable, or if sorghum will produce mature seed, the cover will be clipped to not less than approximately 6 to 8-inch stubble height and should be removed from the field if there is excessive mulch.

(2) In Vegetative Zones III and IV, and on Silty and Clayey sites in Vegetative Zone I and II, grain sorghum or forage sorghum may be planted at the rate of 4 to 8 pounds per acre in rows up to 42 inches wide. Grain harvest is permitted if stubble is left approximately 18 inches high. (Refer to Nebraska Vegetative Zone Map, Section I-MAPS).

4. CROP STUBBLE

In all vegetative zones, any crop stubble may be used, providing there is adequate cover to protect the seedlings and soils from wind and water erosion.

5. SMALL GRAIN STUBBLE

Allelopathic effects may be present in certain small grain fields. If a known effect exists, a cover crop other than small grain should be planted.

6. METHODS OF GRASS SEED PLANTING:

The planting operation shall be on the contour, where practical.

The best type of seeding equipment is a grass drill equipped with double disc furrow openers with depth bands and packer wheels. Fluffy and free-flowing grass seeds will be planted directly into the prepared seedbed without additional preparation (may need a coulter ahead of drill if using no-till). The grass drill should be operated as near to the contour as practical.

7. PLANTING DEPTHS

Grass drills must be able to be adjusted to plant the seed to a depth of not less than 0.25 inch and not more than 1 inch.

8. PLANTING DATES

Seeding dates may be adjusted 1 to 2 weeks from normal planting dates when climatic conditions dictate.

- Dominantly warm season mixture: November 1 to May 31 (optimum March 1 to May 20), unless the soil temperature is less than 55 degrees.

- Approximately equal proportions of cool- and warm-season grasses or a legume/grass mixture: November 1 to May 15 (optimum March 1 to May 15).

- Legume mixture with no grasses: August 15 to September 15 and November 1 to May 15.

- Dominantly cool-season mixture: August 1 to September 15 and November 1 to April 15.

Seed labeling, quality, and seed testing will be in accordance with the Nebraska Seed Law.

- It is unlawful for any person to sell, offer for sale, expose for sale, or transport for sale any agricultural seed within Nebraska, unless the required test to determine the percentage of germination has been completed within a 12 month period or 6 months between states, exclusive of the calendar month in which the test was completed.

- A copy of current analysis of germination and purity must be furnished regardless of who grows or sells the seed.

- Legume seed of introduced species shall be inoculated in accordance with the directions on the inoculant container. Use the correct inoculant for each legume species

9. SEED SOURCE

Grass seed must meet the distance (mileage) requirements for common/native ecotype seed or certified variety restrictions in accordance with Section II Pastureland and Hayland Interpretations “Seed and Forb Seed Source Requirements” and “Certified Perennial Grass Varieties Recommended for Nebraska” Extension publication EC90-120. Legume seed that meets the above distance requirements is preferred but not required.

Seeding mixtures and seeding rates for different range site groups.

The minimum seeding rate of perennial grass, legume, and/or forb species in total is 10 pure live seeds per square foot (PLS/Sq.Ft). Native forbs will make up no more than 50% (by PLS/Sq.Ft) of a mixture. When computing seed mixtures refer to Section II Pastureland and Hayland

Interpretations, Table 1, A Guide for Use When Computing Seed Mixture by the Pure Live Seed Method. Tolerance of 5% is allowed from seeding sheet minimum requirements.

Selected species must be adapted to the site as documented in Section II Rangeland Interpretations or Pastureland and Hayland Interpretations or Section IV Range Planting (550) or Pasture and Hay Planting (512). Existing seeding mixtures (including single species) for wildlife habitat, rangeland, pasture and/or hayland can be modified to meet this standard by reducing the rates. It is suggested that rates be adjusted proportionately by species. However, depending on the purpose and objectives, the proportion of legumes in the mixture can be increased.

10. WEED CONTROL

This practice seeks to encourage the growth of early successional plants (weeds); excessive weed competition may in rare instances prevent establishment of seeded species.

In those rare cases, weeds threatening stand establishment will be controlled by mowing and/or spraying with labeled herbicides (herbicides must not compromise the desired plant composition). Mowing should not be conducted beyond the first full growing season after seeding.

A wick applicator may be used for applying a non-selective translocated herbicide. An analysis of potential weed competition will be made prior to seeding in order to recommend appropriate weed control strategy. All chemicals used must be registered, handled, and applied in accordance with product label directions. For application guidelines refer to the Guide for Herbicide Use in Nebraska, Section II - Water Quantity and Quality.

When broadleaf weeds threaten seeding establishment because of severe shading, they may be mowed or shredded or sprayed with labeled herbicides. Mowing or shredding must be discontinued by mid July. The height of mowing or shredding must be above the height of the seeded grasses. It is better to mow to high than too low.

Weedy grasses such as foxtail, barnyardgrass, sandbur, annual bromes, crabgrass, or other annual grasses should not be mowed or shredded. Shredding may cause these annual grasses to stool out causing more competition to seeded grasses. Pre or post-emergent herbicides may be

appropriate for some native grass and forb seedings (refer to the product label), however desirable annual early successional plants will likely be reduced.

11. OPERATION AND MAINTENANCE

Control noxious and other undesirable plant species as needed.

Monitor wildlife use to determine practice success and to better prescribe future habitat management activities.

Consider the use of disking, prescribed burning and other vegetation management techniques to set back succession when perennial species dominate the stand and desired early successional habitat quality has declined.