

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE SPECIFICATION GUIDE SHEET**

RESTORATION AND MANAGEMENT OF DECLINING HABITATS

**(ac.)
CODE 643**

Where Practice Applies in South Dakota

In South Dakota the plant communities to be addressed using this standard are Tall grass prairie and Mixed grass prairie. The Tall grass prairie ecoregion includes Major Land Resource Areas (MLRA) 102A, 102B, 102C, and 56. The Mixed grass prairie ecoregion covers all of the remaining MLRA's except 62.

Designation of Species for Which this Habitat is Planned

The minimum size area for establishing this practice is five acres, although larger units of grassland are needed for most grassland bird species of concern, such as sharp-tailed grouse and greater prairie chickens. Details regarding habitat requirements for key interest species can be found in the Upland Wildlife Habitat Management (645) standard or you may contact a South Dakota NRCS biologist for assistance.

Identify on the SD-CPA-26 the species or group of species for which this habitat is being developed.

Restoration by Establishment of Native Perennial Vegetation

Plant at least eight native grass species and seven native forbs and/or shrubs for the appropriate ecological or range sites, as found in Tables 6A and 6B of Range Technical Note No. 4, in Section I of the South Dakota Technical Guide (SDTG). If the ecological or range site lists less than eight grass species or less than seven forb and shrub species, use the appropriate numbers of species for the site or contact the state biologist or state rangeland management specialist. Other native species identified in the appropriate ecological site descriptions in Section II, of the SDTG, may be included in the seeding.

Specific guidance for seeding dates, rates and depth, seedbed preparation, seeding equipment and calibration, seed requirements, species selection, use of cover and companion crops, management and protection during the establishment period, and stand evaluations is included in Range Technical Note No. 4.

Restoration and Maintenance by Use of Management Activities

Periodic disturbance by fire and grazing were essential in maintaining the climax plant communities in the Northern Great Plains, and similar disturbances are needed to maintain habitat values once these prairie habitats are re-established. Fire and grazing can also be used to restore degraded plant communities that have never been broken, if there is still an existing, though repressed, native plant component.

Without periodic disturbance, these prairie plant communities begin to deteriorate. Typical signs of a deteriorating plant community are excessive accumulation of plant residues that are reducing plant vigor, lack of seed heads, and invading species or shifting plant community composition. Excess accumulation of plant litter is a common problem observed with seeded herbaceous cover. Another common problem is invasion of the plant community with smooth brome grass, Kentucky bluegrass, cheatgrass, and others.

Management of grassland habitats should be scheduled when litter buildup and/or plant community composition shift is causing a loss of habitat. This may be documented by tracking the visual obstruction readings for the site, with annual readings documented using form SD-CPA-57. Management should be scheduled when the average visual obstruction reading for the field has dropped below the minimum height required as herbaceous habitat for the species identified on the SD-CPA-26.

Management Intervals

Tall Grass Prairie Management intervals

Habitat management for fully established tall grass prairie typically consists of letting the native grass stand grow for approximately five years, and then using grazing, burning, or clipping and removal of residues to eliminate the buildup of plant litter or adjust for other identified problems with plant community characteristics or composition. Management scheduled at shorter intervals will be approved by a South Dakota NRCS biologist, and will have appropriate documentation of the precise habitat problem.

Mixed grass prairie management intervals

Habitat management for fully established mixed grass prairie typically consists of letting the native grass stand grow for five years in MLRA's 53B, 53C, 55B, and 55C, and for 7 years in MLRA's 54, 58D, 60A, 61, 63A, 63B, 64, 65, and 66. After that period, use grazing, burning, or clipping and removal of residues to eliminate the buildup of plant litter or adjust for other identified problems with plant community characteristics or composition. Management scheduled at shorter intervals will be approved by a South Dakota NRCS biologist, and will have appropriate documentation of the precise habitat problem.

Management Techniques

Where disturbance by fire or grazing is not possible, clipping and removal of the residues may be used instead to mimic the natural disturbance regime. Management should be timed to avoid the primary nesting season, which is April 15 through August 1. If management can be completed prior to August 15, some fall regrowth may occur to provide some winter habitat.

Management to address plant community composition must be timed to adversely impact the growth of problem plants and enhance the development of the desired plant species. This level of management may require disturbance of habitat during the primary nesting season. Any management during the primary nesting season will require appropriate documentation of the environmental effects and tradeoffs on the SD-CPA-52 and concurrence from a NRCS biologist.

Grazing

Grazing will be planned to address the precise habitat problems at the site. Timing, duration, and intensity of grazing will all be considered in determining the appropriate means to address the site specific plant community problem.

High intensity –short duration graze: Used to remove litter and target the grazing impact on a particular plant species and release nutrient for the desired plant species.

Average intensity – short duration graze: used to remove litter where there is no need to alter the plant community.

Low intensity – long duration graze: remove litter but leave a mosaic of varied plant heights.

Prescribed Burning

Prescribed burning is usually planned for spring dates and will often result in loss of early season nesting cover values. Any prescribed burn will be accomplished according to the conservation practice standard Prescribed Burning (338), and the South Dakota implementation and documentation requirements. The need for and expected benefits of this management shall be documented on the SD-CPA-52.

Spring burns prior to May 1: reduce excess litter and remove cool season invading plants, especially cheatgrass.

Spring burns May 1 to May 20: help reduce the invasion of Kentucky bluegrass and smooth brome grass.

References

Duebbert, H.F., E.T. Jacobson, K.F. Higgins, and E. B. Podoll. 1981. Establishment of seeded grasslands for wildlife habitat in the prairie pothole region. U.S. Fish Wildl. Serv., Spec. Sci. Rep.-Wildl. No. 234.

Higgins, K. F., and W. T. Barker. 1982. Changes in seeded nesting cover in the prairie pothole region. U.S. Fish Wildl. Serv., Spec. Sci. Rep.-Wildl. No. 242.

Higgins, K. F., D. E. Naugle and K. J. Forman. 2002. A case study of changing land use practices in the Northern Great Plains, U.S.A.: An uncertain future for waterbird conservation. *Waterbirds* 25 (Special Publication):42-50.

Naugle, D. E., K. F. Higgins and K. K. Bakker. 2000. A Synthesis of the Effects of Upland Management Practices on Waterfowl and Other Birds in the Northern Great Plains of the U.S. and Canada. College of Natural Resources, University of Wisconsin-Stevens Point, WI. Wildlife Technical Report 1. 28 pp.