

**NATURAL RESOURCES CONSERVATION SERVICE**  
**CONSERVATION PRACTICE STANDARD**  
**RESTORATION AND MANAGEMENT OF RARE**  
**OR DECLINING HABITATS**

(Ac.)

CODE 643

**DEFINITION**

Restoring, conserving, and managing unique or diminishing native terrestrial and aquatic ecosystems.

**PURPOSE**

To return aquatic or terrestrial ecosystems to their original or usable and functioning condition and to improve biodiversity by providing and maintaining habitat for fish and wildlife species associated with the ecosystem.

**CONDITIONS WHERE PRACTICE APPLIES**

Sites or areas that once supported or currently support a unique, dwindling, or imperiled native plant and animal community.

In South Dakota (SD), 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 (MLRAs) 102A, 102B, 102C, and 56. The mixed grass prairie ecoregion covers all of the remaining MLRAs except 62.

**CRITERIA**

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 greater prairie chickens, sharp-tailed grouse, long-billed curlews, and others. Details regarding habitat requirements for key interest species can be found in Biology Technical Note No. 15 or you may contact a SD NRCS biologist for assistance.

If the practice is planned for wildlife utilize the SD-CPA-19, Wildlife Habitat Appraisal Guide (WHAG), to meet wildlife quality criteria. Provide required habitat in proportion to the other habitats available for the designated species.

**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, found in Section I of the South Dakota Technical Guide (SDTG). If the historical climax community for the ecological site or range site lists less than eight grass species or less than seven forb species, use the appropriate numbers of species for the site or contact the state biologist or state rangeland management specialist for assistance.

If the ecological site is a wetland then refer to the Wetland Vegetation Establishment Guide for species selection. Specific guidance for seeding dates, rates, depth, seedbed preparation, seeding equipment and calibration, seed requirements, species selection, use of cover and companion crops, management and protection during establishment and stand evaluations are included in Range Technical Note No. 4 and the Wetland Vegetation Establishment Guide.

Restoration and Maintenance by Use of Management Activities.

Refer to Biology Technical Note No. 15, Sections IV, V, and VI for management and maintenance information.

All necessary local, state, and federal permits shall be obtained by the landowner (or designee) prior to the restoration.

Methods used shall be designed to protect the soil resource from erosion and compaction.

Invasive plant and animal species and noxious weeds shall be controlled. When possible, control will be limited to that necessary to control undesirable species while still protecting habitat that benefit native pollinators and other fish and wildlife species that depend on the site for food, cover, and water.

Undisturbed areas shall be conserved on a sufficient extent of the area to sustain disturbance-intolerant species.

Plant species and seeding rate specifications will be prepared to achieve desired habitat condition.

Only high quality and ecologically adapted plant materials will be used. When feasible, only local ecotypes will be used.

Site preparation, planting dates and methods, and plant material care and handling shall optimize vegetation survival and growth.

A pretreatment assessment of the targeted habitat will be documented to provide a baseline for comparison with post-treatment habitat conditions. Goals or success criteria will be established using reference sites for guidance and comparison. Where no such reference site exists, use ecological site description or historic data to establish restoration goals.

Use of fertilizers, pesticides and other chemicals shall not compromise the intended purpose of this practice

## **CONSIDERATIONS**

Confer with other agencies and organizations to develop guidelines and specifications to conserve declining habitats.

Vegetative manipulations to restore plant and/or animal diversity can be accomplished by prescribed burning or mechanical, biological or chemical methods, or a combination of the four. Where prescribed burning is conducted it shall follow all guidelines delineated in the

Conservation Practice Standard Prescribed Burning (338).

Consider how land use and habitat in the associated landscape may influence the ability to achieve restoration and management objectives.

Consider the likelihood of being able to maintain or establish important ecological disturbances such as burning, flooding or grazing.

Consider how the short- and long-term effects of climate change may influence the ability to achieve restoration and management objectives.

Generally, the size of the restored or managed habitat should be large enough to support populations of all species associated with the targeted habitat.

Other conservation practices that will facilitate the restoration and management of rare and declining habitats include:

Fence – Code 382;

Access Control – Code 472;

Range Planting – Code 550;

Brush Management – Code 314;

Prescribed Burning – Code 338.

Upland Wildlife Habitat Management – Code 645

## **PLANS AND SPECIFICATIONS**

Specifications for this practice shall be prepared. Specifications shall be recorded using approved specifications sheets and job sheets. Narrative statements in the conservation plan or other acceptable documentation may provide supplemental information to the specifications and job sheets.

## **OPERATION AND MAINTENANCE**

Haying, grazing, and other management activities will be planned and managed (including exclusion) as necessary to achieve and maintain the intended purpose.

Vegetation management and maintenance activities shall not be conducted during the nesting season except when necessary to achieve the desired habitat condition.

Habitat conditions should be evaluated on a regular basis to adapt the conservation plan and schedule maintenance to ensure the desired habitat condition.

Management and maintenance activities should be rotated to mimic natural disturbance regimes.

## REFERENCES

- Barbour, M.G., and W. D. Billings (eds.). 2000. North American Terrestrial Vegetation. Cambridge University Press, New York, Second Edition, 695 pp.
- Duebbert, H. F., E. T. Jacobson, K. F. Higgins, and E. B. Podoll. 1981. Establishment of Seeded Grasslands for 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.
- Kuchler, A.W. 1964. Potential Natural Vegetation of the Conterminous United States. American Geography Society, Special Publication 36. 116 pp. + map Second edition (revised), 1975.
- 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.
- Noss, R.F., E.T. LaRoe III, and J.M. Scott. 1995. Endangered Ecosystems of the United States: A Preliminary Assessment of Loss and Degradation. Biological Report 28; National Biological Service, Washington, D.C.