

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.

Refer to Terrestrial Natural Communities of Nebraska (Version IV – March 9, 2010), (Biology Technical Note #65), for more detailed information on plant communities considered rare or declining. The following plant communities are listed as either critically imperiled or imperiled (S1 or S2):

Wetland Forest and Woodland Communities

- Eastern Cottonwood-Dogwood Riparian Woodland
- Cottonwood-Diamond Willow Woodland
- Cottonwood Riparian Woodland
- Peachleaf Willow Woodland

Upland Forest and Woodland Communities

- Red Oak-Basswood-Ironwood Forest
- Oak-Hickory-Ironwood Forest
- Bur Oak-Basswood-Ironwood Forest
- Mesic Bur Oak Forest and Woodland
- Dry-Mesic Bur Oak Forest and Woodland
- Sandstone Upland Bur Oak Woodland
- Paper Birch Springbranch Canyon Forest
- Basswood-Ironwood Springbranch Canyon Forest
- Green Ash-Elm-Hackberry Canyon Bottom Woodland

- Ponderosa Pine Forest
- Dry-Mesic Ponderosa Pine Woodland

Upland Shrubland Communities

- Buffaloberry Shrubland
- Skunkbush Sumac Shrubland

Wetland Herbaceous Communities

- Prairie Fen
- Sandhills Fen
- Eastern Cordgrass Wet Prairie
- Eastern Sedge Wet Meadow
- Eastern Saline Meadow
- Northern Cordgrass Wet Prairie
- Sandhills Wet Meadow
- Western Subirrigated Alkaline Meadow
- Wheatgrass Playa Grassland
- Western Sedge Wet Meadow
- Playa Wetland
- Spikerush Vernal Pool
- Cattail Shallow Marsh
- Eastern Saline Marsh
- American Lotus Aquatic Wetland
- Water-lily Aquatic Wetland

Upland Herbaceous Communities

- Upland Tall-grass Prairie
- Dakota Sandstone Tall-grass Prairie
- Lowland Tall-grass Prairie
- Missouri River Valley Dune Grassland
- Missouri River Floodplain Terrace Grassland
- Southern Sand/Gravel Prairie
- Northern Loess/Shale Bluff Prairie
- Sandhills Mesic Tall-grass Prairie
- Silver Sagebrush Shrub Prairie
- Greasewood Shrub Prairie

Upland Sparely Vegetated Communities

- Riverine Gravel Flats

Conservation practice standards are reviewed periodically and updated if needed. To obtain the current version of this standard, contact your Natural Resources Conservation Service [State Office](#) or visit the [Field Office Technical Guide](#).

RESTORATION AND MANAGEMENT (643)-2

CRITERIA

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.

Refer to the Restoration and Management of Rare or Declining Habitats Design Procedures (643DPA for prairie and 643DPB for woodland and forest) for additional information.

Restorations associated with Wetland Herbaceous Communities listed above will often require use of the Wetland Restoration (657) or Wetland Wildlife Habitat Management (644) standard for additional guidance.

Only high quality and ecologically adapted native plant materials will be used. When feasible, only local ecotypes will be used. Seed or seedlings that are local ecotype must have originated from within the following mileage restrictions: South – 250 miles, North – 150 miles, East and West – 200 miles; and must have resulted from only natural selection (no artificial breeding or selection for traits). Mixtures which contain greater than 25% plant materials (by seeds or seedlings per unit area) that do not meet these requirements are not considered local ecotype.

Native sources from within 100 miles on similar soil types are preferred.

When local ecotype sources are not feasible to use, select 'source identified class' seed or, if applicable, varieties that have local origins (i.e., Garden County Sand Bluestem, Nebraska 28 Switchgrass, etc.).

Site preparation, planting dates and methods, and plant material care and handling shall optimize vegetation survival and growth. Refer to the Herbaceous Vegetation Design Procedures (550 DP) and/or Tree/Shrub Planting Procedures Guide (380 TPP) for additional information.

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 Prescribed Burning (Code 338) practice standard.

Rotate management activities throughout the site for increased benefits to habitat conditions.

The harvest of native plant material from similar local plant communities to augment seedlings/plantings is encouraged where practical. Once established, the restored site may serve as a source of native plant material for future nearby restorations.

To meet the quality criteria requirements for wildlife habitat (food, water, cover, etc.) in Section III of the FOTG, the planned system must provide a total rating of 0.5 or higher for the conservation treatment unit. Rating shall be recorded using Rangeland, Woodland, or Riparian Habitat Evaluation Worksheets (NE-CPA-35, NE-CPA-36, and NE-CPA-43

respectively) or a suitable species-oriented habitat evaluation tool.

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

Tree and Shrub Establishment – Code 612

Prescribed Burning – Code 338

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, prescribed burning, forest stand improvement, and other management activities will be planned and managed (including access control) as necessary to achieve and maintain the intended purpose.

Vegetation management and maintenance activities shall not be conducted during critical life stages of fish and wildlife except when necessary to achieve the desired habitat condition.

Habitat conditions should be evaluated and compared to reference conditions 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.

Kuchler, A.W. 1964 Potential Natural Vegetation of the Conterminous United States. American Geography Society, Special Publication 36. Second edition (revised), 1975.

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.

Kaul, R., D. Sutherland, and S. Rolfsmeier. 2006. The Flora of Nebraska. School of Natural Resources, University of Nebraska-Lincoln. 966 pp.

Rolfsmeier, S. and G. Steinauer. 2010. Terrestrial Natural Communities of Nebraska (Version IV – March 9, 2010). Nebraska Game and Parks Commission, 223 pp.