

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

RESTORATION AND MANAGEMENT OF DECLINING HABITATS

(Acre)

CODE 643

DEFINITION

Restoring and managing rare and declining habitats and their associated wildlife species to conserve biodiversity.

PURPOSE

- Restore and manage unique or declining land or aquatic, native habitats.
- Provide habitat for rare and declining species.
- To restore, conserve, and manage native plant communities
- Increase native plant community diversity.

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

**CONDITIONS WHERE PRACTICE
APPLIES**

Sites that previously or currently support a rare or declining habitat targeted for restoration or management. Iowa habitats deemed rare and in decline for the purposes of this practice include,

- Prairie
- Savanna
- Fen
- Sedge and Wet Meadow
- Forest/woodland

For the purposes of this standard, **reconstruction** refers to the *restoration* of native plant communities where such a community does not currently exist, or within areas that have been seeded to native vegetation, but need to be enhanced to reflect a natural community. A **remnant** is recognized as a *natural* habitat with presettlement components and diversity still intact.

CRITERIA

The below listed criteria are to be followed regardless of habitat class being restored. Specific criteria by habitat class can be found within the specifications for this standard.

General Criteria Applicable to all Purposes

- Restoration and management will be conducted upon set objectives. The impacts of restoration and management activities will be monitored to ensure that stated ecological objectives are being met.
- A pre-treatment floristic assessment of the targeted habitat will be documented to provide a baseline for comparison with post-treatment and reference habitat assessments.
- High quality, well protected, like-type plant communities found within the same Common Resource Area (CRA) and on the same or similar soil series should be used as a reference in developing seeding requirements for a reconstruction.
- Only high quality and ecologically adapted plant materials will be used. When feasible, only local ecotypes will be used.
- Preference will be given to seed acquired from nearby natural/remnant habitats.
- Species to be seeded will be adapted to the region, soil-site conditions, and will be suitable for the planned purpose.
- Seed collection will be conducted when the seed is ripe and will be handled, cleaned, and stored appropriately. The scarification/stratification needs of each species collected shall be addressed. Contact the Plant Materials Center for additional

- guidance on seed collection, preparation, and storage.
- Either a germ test or Tetrazolium TZ test must be used to determine PLS for locally collected and purchased seed. Seeding rates for the site will be based upon the results of these tests.
- Seeding rates will be adequate to accomplish the planned purpose with a mean coefficient of conservatism value (CC) of no less than 5.0 and a floristic quality index (FQI) of no less than 20.0.
- A minimum of 1 species from each functional group (cool season and warm season graminoid, legume, perennial and annual/biannual forb, hemi-parasitic plant, sedge, fern, shrub, tree, and vine) represented within like-type remnant communities will be included in seeding plans for reconstructions.
- Remnant sites with sufficient floristic quality will not be interseeded. To determine whether a site is of sufficient floristic quality, confer with experts and knowledgeable resource managers on the subject.
- If interseeding an already established *reconstruction* site is necessary, seeding plans will reflect the species diversity and composition found on high quality like-type remnants in the area, and upon recommendations within the habitat classifications contained within this standard's specifications. Herbicide, light disking, or fire treatments may be required to set back existing vegetation prior to interseeding.
- Site preparation, planting dates and methods, and plant material care and handling shall optimize vegetation survival and growth. Refer to [Conservation Cover, Practice Code 327](#).
- Timing and use of equipment will be appropriate for the site, soil, and weather conditions.

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

CONSIDERATIONS

The below listed considerations are applicable regardless of habitat class being restored. Specific considerations by habitat class can be found within the specifications for this standard.

General Considerations Applicable to all Purposes

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

The management of reconstructed and remnant sites should include as much area as possible to protect the integrity (genetics, composition, diversity, etc.) of the site and to provide habitat for species requiring large home ranges.

Areas too large to be restored in their entirety can be restored/enhanced in small segments over several years with the use of temporary cover crops in un-seeded areas. Such restoration should begin in a west to east direction to reduce encroachment of undesirable vegetation from un-restored areas. Some undesirable plants may encroach along waterways and should be addressed accordingly.

Providing a buffer of acceptable land use will protect the site from potentially damaging offsite impacts.

Vegetative manipulations to restore plant and/or animal diversity can be accomplished by prescribed burning, mechanical, biological, or chemical methods, or by a combination of the four.

In many cases threatened, endangered, or species of concern will benefit from the restoration of declining habitats. Management for such species may be developed carefully as

not to hinder the biodiversity and natural process of the community being restored.

Ensure both vertical and horizontal structure within the plant community are restored/reconstructed.

Seeding a site differentially based upon microtopographical differences in soils and moisture regimes will provide for a more diverse plant community and will improve the chances of a successful seeding.

Planting forb seed in the fall and graminoid seed the following spring will reduce competition by tall grasses and allow for cold-moist stratification of forb seed.

To be included in a reconstruction, conservative plant species may need to be planted rather than seeded.

Plant materials centers and commercial growers should be encouraged to develop plant materials for habitat reconstructions.

Herbicide residues may negatively impact seedings and may require the use of cover crops pending safe planting conditions.

Hydrologic regime refers to groundwater dynamics, soil saturation, and periods of low flow, not just to overbank flooding and ponding.

Management Considerations Applicable to all Purposes

If included as a management technique, haying and grazing should be planned and managed as necessary to achieve and maintain the intended purpose. Refer to [Prescribed Grazing Practice Code 528A](#).

Mowing/haying may be used as an alternative to grazing and burning but will not emulate the effects of either aforementioned process.

Duff from mown sites may need to be removed, burned, or mulched if too dense.

Brush control (mechanical, chemical or by hand) on weedy pasture sites and within woodlands should be accomplished prior to burning.

Varying the proportion, location, size, frequency, intensity, and timing (spring, summer, winter, fall) of management will add complexity to a restored/enhanced site.

Historically, sites on west or south facing slopes; dry sites; sites on the west side of water bodies; and sites bordered by prairies burned more regularly and with greater intensity.

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

PLANS AND SPECIFICATIONS

Specifications for this practice have been prepared for each habitat class. Specifications are recorded using approved specifications sheets and job sheets. Narrative statements provided within acceptable documents may be used to supplement information within the standard specification and job sheets upon approval.

The habitat classifications contained within this standard's specifications were derived from a document titled, *Plant Communities of the Midwest*, published by NatureServe. These habitat classifications may be used to help resource managers identify remnant habitats or to help guide the reconstruction of a particular habitat class.

OPERATION AND MAINTENANCE

The following actions shall be carried out to insure that this practice functions as intended throughout its expected life. These actions include normal repetitive activities in the application and use of the practice (operation), and repair and upkeep of the practice (maintenance).

O & M CRITERIA

General Criteria Applicable to all Purposes

- Rotate periodic planned management or other treatments to mimic natural disturbance types and regimes, with no more than 1/3 of the restored/managed area treated per year.
- Habitat conditions should be evaluated on a regular basis in order to adapt conservation plans and scheduled maintenance to ensure the desired habitat conditions result.
- Management measures must be provided to control invasive species and noxious weeds to less than 5-10% of the vegetative cover. Compliance with state noxious weed laws must be met. Refer to [Conservation Cover Practice Code 327](#) and [Brush Management Practice Code 314](#).
- When possible, weed control will be completed on a “spot” basis to protect native forbs and legumes that benefit pollinators and other wildlife. Refer to [Conservation Cover Practice Code 327](#) and [Brush Management Practice Code 314](#).
- Management practices and activities shall not disturb cover during the primary nesting period of May 1 – August 1. Exceptions may be granted for periodic burning or mowing when necessary to maintain the health of the community. Mowing may be allowed during the establishment period to control weeds.
- Haying, grazing and other management activities will be planned and managed (including exclusion) as necessary to achieve and maintain the intended purpose(s).
- All habitat manipulations will be planned and managed according to soil capabilities and recommendations to avoid excessive soil loss and compaction.

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