

USDA  
NATURAL RESOURCES  
CONSERVATION SERVICE

MARYLAND CONSERVATION  
PRACTICE STANDARD

**RESTORATION AND  
MANAGEMENT OF RARE OR  
DECLINING HABITATS**

CODE 643  
(Reported in Acres)

**DEFINITION**

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

**PURPOSE**

Provide habitat for rare or declining species.

**CONDITIONS WHERE PRACTICE  
APPLIES**

This practice may be applied on any land use that previously supported or currently supports native and recognized rare, declining, threatened, or endangered species and habitats targeted for restoration and management.

This practice does not apply to:

1. Establishment or management of habitat for general wildlife purposes (i.e., where specific species or types of habitat are not targeted);
2. Where the targeted habitat or wildlife species are not rare, declining, threatened, or endangered;
3. Where the primary resource concern is something other than *fish and wildlife* or *natural plant communities*.

**CONSIDERATIONS**

Assess the potential for successful implementation as it relates to size, location, adjacent land use and condition, and availability of the targeted wildlife species to populate or be introduced to the site.

Assess site conditions including surrounding land uses, soils, residual herbicides (to the extent known), available moisture during the growing season, and existing vegetation on the site and in adjacent areas, including any noxious weeds which may be present.

Vegetative manipulations to restore plant and/or animal diversity can be accomplished by prescribed burning or mechanical, biological or chemical methods, or any combination thereof.

When making site and plant species selection, consider the maintenance and management activities (e.g., burning, disking) required for achieving the client's objectives. Also consider the client's limitations (e.g., equipment, time) for implementing the required management.

Consider potential effects on non-target rare wildlife, plants, and habitats.

Take note of other constraints such as economic feasibility, access, visual aspects, and program and regulatory requirements. *State and local laws and regulations may restrict or require permits or approvals for removal of existing vegetation on a site. Laws pertaining to forest conservation, wetland protection, critical area protection, stream buffers, and erosion and sediment control may be applicable.*

**CRITERIA**

All necessary local, state, and federal permits shall be obtained by the landowner (or designee) before starting restoration or management of the site. Consult with the Maryland Department of Natural Resources, the U.S. Fish and Wildlife Service, and other agencies and organizations as appropriate to develop guidelines and specifications for conserving declining habitats.

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

A pre-treatment assessment of the targeted habitat shall be documented to provide a baseline for comparison with post-treatment habitat assessment.

The site will be of sufficient size, or in a landscape-level matrix of habitat of sufficient size, to provide the ecological functions of the habitat type and/or support the needs of the targeted species.

Methods used for restoration or management shall be designed to protect the soil, plant, and water resources, and existing targeted species and habitats. As appropriate, undisturbed areas shall be conserved on a sufficient extent of the area to sustain disturbance-intolerant species.

Contamination by pesticides, herbicides, and other chemicals shall be avoided. Use of fertilizers and chemicals shall not compromise the intended purpose of the practice. If weed control is necessary, preference shall be given to mechanical rather than chemical methods, whenever feasible. Noxious weeds shall be controlled as required by state law.

Control undesirable invasive plant species and nuisance species to the extent feasible. Frequent monitoring of the habitat area and adjacent areas should minimize the need to control invasive species. When possible, control will be done on a “spot” basis to protect native forbs and legumes that benefit native pollinators and other wildlife.

Management practices and activities shall not disturb cover during the season of primary use for the targeted species or group of species. Exceptions may be allowed for periodic burning, selected herbicide techniques, selected mechanical removal or mowing when essential to maintain the health of the plant community.

Where planting is needed, native, regionally adapted plant materials, with preference to local ecotypes, shall be used whenever feasible. Species and seeding rate specifications will be prepared to achieve the desired habitat condition. Only viable, high quality seed and planting stock shall be used. The method of planting shall include hand or machine planting techniques, suited to achieving proper depths and placement for the selected plant species.

Site preparation and planting to establish vegetative cover shall be done at a time and manner to ensure survival and growth of selected species. Supplemental moisture shall be applied if needed to assure early survival and establishment of selected species.

Natural regeneration may be an option for establishing vegetation on sites where seeds or rootstocks of desired species are present, and the natural plant community will provide sufficient cover for the intended use. Natural regeneration is not a suitable option if there are significant site limitations (e.g., highly erodible soils, steep slopes, noxious weeds or other invasive species, etc.) which will inhibit establishment of the desired plant community.

Livestock shall be controlled or excluded as necessary so that vegetative cover can be established and maintained to meet its intended purpose.

*Note: Specific cost-sharing programs or other funding sources may dictate criteria in addition to, or more restrictive than, those specified in this standard.*

### **PLANS AND SPECIFICATIONS**

Plans and specifications for restoration and management of each habitat type shall be prepared in accordance with the previously listed criteria. Plans and specifications shall contain sufficient detail concerning site preparation, establishment, and management techniques to ensure successful installation of the practice. Documentation shall be in accordance with the section “Supporting Data and Documentation” in this standard.

### **OPERATION AND MAINTENANCE**

Job sheet(s) or site specific restoration and management plans shall be developed and provided to the client to assure performance of the practice as intended. At a minimum, the following components shall be addressed:

#### **Habitat Evaluation and Management**

Evaluate habitat conditions on a regular basis (at least annually) to determine whether the desired habitat is present in suitable quantity, quality, and distribution to meet objectives of the

project. Make timely adjustments to the management plan, and schedule maintenance to ensure the desired habitat condition.

Describe the extent of management needed to maintain vegetation in the desired species composition or age class (if applicable), or no management required (e.g., natural area). Plan haying, grazing, brush management, and other management activities (including exclusion) as necessary to achieve and maintain the intended purpose.

Do not conduct vegetation management and maintenance activities during the season of primary use for the targeted species or group of species, except when necessary to achieve the desired habitat condition;

Rotate management and maintenance activities to mimic natural disturbance regimes.

### **Nuisance Plants and Animals**

Describe the extent to which plant and animal pest species, including noxious weeds, will need to be controlled.

### **Acceptable Uses**

Describe the acceptable uses (e.g., grazing, hunting, etc.) and time of year/frequency of use restrictions, if any. Pay particular attention to cost-sharing program requirements as they relate to acceptable vs. restricted uses, and other management restrictions.

## **SUPPORTING DATA AND DOCUMENTATION**

The following is a list of the minimum data and documentation to be recorded in the case file:

1. Identify the rare or declining species and the type of habitat to be managed, field location, and extent of the practice. Also note the location of the practice on the conservation plan map;
2. Assistance notes documenting dates of site visits, name or initials of the person who made the visit, discussions with the client, specifics as to any alternatives discussed, decisions made, and by whom;

3. If applicable, plant species selected for establishment, seeding/planting rates, and planting dates;
4. Completed copy of the appropriate Job Sheet(s) or other specifications, and management plans.

## **REFERENCES**

1. Barbour, M.G., and W. D. Billings (eds.), 2000. *North American Terrestrial Vegetation*. Cambridge University Press, New York, Second Edition, 695 pp.
2. Brown, Melvin L. and Russell G. Brown, 1984. *Herbaceous Plants of Maryland*. University of Maryland, Port City Press, Baltimore.
3. Brown, Russell G. and Melvin L. Brown, 1972. *Woody Plants of Maryland*. University of Maryland, Port City Press, Baltimore.
4. Fish and Wildlife Service, Chesapeake Bay Field Office with the Natural Science Center and Adkins Arboretum, 1995. *Native Plants for Wildlife Habitat*. Annapolis, MD.
5. 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.
6. 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.
7. USDA, Natural Resources Conservation Service. *Conservation Practice Standards*. Maryland Field Office Technical Guide, Section IV.
8. USDA, Natural Resources Conservation Service, Maryland Biology Technical Resources website:  
<http://www.md.nrcs.usda.gov/technical/biology/biology.html>.