

**NATURAL RESOURCES CONSERVATION SERVICE**  
**CONSERVATION PRACTICE STANDARD**  
**UPLAND WILDLIFE HABITAT MANAGEMENT**

(Ac.)

**CODE 645**

**DEFINITION**

Provide and manage upland habitats and connectivity within the landscape for wildlife.

**PURPOSE**

To manage food, cover, and/or shelter in proper amounts, locations, and times to sustain wild animals that inhabit uplands during a portion of their life cycle.

**CONDITIONS WHERE PRACTICE APPLIES**

This management practice may be applied on upland (i.e., non-wetland) areas where habitat will be actively managed for nesting, feeding, resting, and/or protective cover and travel corridors for upland wildlife, such as songbirds, game birds, rabbits, deer, and squirrels.

This practice does not apply to preserving natural areas, such as shrub lands, forests, and riparian corridors, where no active management or periodic maintenance is planned.

**CRITERIA**

Upland wildlife habitat management shall consist primarily of managing vegetation to provide the quantity, quality, and distribution of upland habitat elements that will best meet the client's objectives. For the desired species, identify the types, amount, and distribution of habitat elements and the management actions necessary to achieve the management objectives.

Where habitat is lacking or less than optimum, apply this practice alone or in combination with other supporting Delaware conservation practice

standards to provide habitat for nesting, feeding, resting and/or protective cover, and travel corridors, as needed. Applicable standards include, but are not limited to, Conservation Cover (327), Conservation Crop Rotation (328), Field Border (386), Forage and Biomass Planting (512), Forage Harvest Management (511), Forest Stand Improvement (666), Hedgerow Planting (422), Residue and Tillage Management (329 and 345), Riparian Herbaceous Cover (390), Riparian Forest Buffer (391), and Tree/Shrub Establishment (612).

Habitat development and management shall be based on the results of a habitat appraisal. The appraisal shall be used to determine a quality rating or Habitat Suitability Index (HSI) for an individual field, land unit, or ecological community.

If an evaluation determines that the current habitat quality is less than 0.5 (on a scale of 0 to 1), recommendations shall be made to improve the existing habitat so that the planned (future) condition will have a quality rating of 0.5 or more.

If an evaluation determines that the current condition is equal to or greater than 0.5, recommendations shall be made to maintain the existing habitat in its present condition or improve it towards optimum conditions.

Vegetative manipulations to restore plant diversity and provide for wildlife habitat shall be accomplished by mowing, burning, disking, selective cutting, prescribed grazing, planting of annual food plots, or a combination of these methods, as appropriate. Managing for native plant species shall be a priority when feasible. No plant listed by the state of Delaware as an invasive species shall be established. Artificial

nest structures shall be provided when natural sites are insufficient for the desired species.

Contamination by pesticides, herbicides, and other chemicals shall be avoided. If weed control is necessary, preference shall be given to mechanical rather than chemical methods, whenever feasible. Frequent monitoring of the habitat area and adjacent areas should minimize the need to control invasive plant species. Noxious weeds shall be controlled as required by state law. Invasive species and nuisance species shall be controlled to the extent feasible.

All areas managed for upland wildlife habitat shall be protected, insofar as practicable, from the adverse effects of agricultural, commercial, and residential activities. Livestock and other domestic animals shall be managed or excluded as appropriate from designated habitat areas.

Management and maintenance activities shall be conducted at times when there will be minimal disturbance of wildlife and their habitat, especially during the nesting season of the desired wildlife species. For Delaware, the primary nesting season is April 15 through August 15.

For additional information concerning specific design and management criteria for selected wildlife species, refer to fact sheets and other publications (see the References section of this standard), or contact the Delaware Private Lands Biologist for assistance.

*Note: Specific programs may dictate criteria in addition to, or more restrictive than those specified in this standard.*

## **CONSIDERATIONS**

Consider the following habitat elements when assessing existing and planned wildlife habitat:

1. Food – Types of food, quantity, quality, distribution, and seasonal availability;
2. Cover – Types of cover (for nesting, brood rearing, fawning, resting, roosting, escape from predators, summer shade, winter protection, travel corridors), quantity, quality, and distribution;

### **3. Interspersion and Connectedness - Distance and connections to food, cover, and water.**

Assess site conditions including surrounding land uses, soils, residual herbicides or other contaminants (to the extent known), available water sources, and existing vegetation on the site and in adjacent areas, including any noxious weeds which may be present.

Consider the positive and negative impacts that deer, groundhogs, and other upland wildlife may have on the successful management of the site as well as on surrounding areas. Also consider the potential for attracting nuisance wildlife into an area. The improved habitat that results from the implementation of this practice may lead to increased crop depredation by wildlife on adjacent cropland.

Consider the effects of periodic management on plants and plant diversity, including the potential for invasion by undesirable and invasive species. Soil disturbance, if used with this practice, may increase the potential of invasion by unwanted species.

Consider the effects of management on non-targeted species, especially threatened and endangered species and other species of concern.

Consider the use of biological control methods in place of mechanical or chemical treatments to manage vegetation (e.g., services provided by grazers).

Consider the effects of management actions on compliance with federal and state hunting regulations (e.g., baiting).

Identify and evaluate any constraints such as economic feasibility, management options, and regulatory and program requirements.

## **PLANS AND SPECIFICATIONS**

Plans and specifications for this practice shall be prepared in accordance with the previously listed criteria. Plans and specifications shall contain sufficient detail to ensure successful implementation of this practice, and may be recorded in narrative form, on Implementation

Requirements (IR) worksheets, or other approved forms.

At a minimum, develop plans and specifications based on the habitat requirements for individual upland wildlife species or groups of species.

The appropriate fact sheet(s) and completed 645 IR worksheet can serve as the plan and specifications for this practice.

The following items shall be addressed, as appropriate:

1. Upland wildlife species, or groups of species, for which habitat will be maintained, developed, or improved;
2. Desired vegetation types, plant species, and the methods of establishing and maintaining them.

#### **OPERATION AND MAINTENANCE**

An Operation and Management (O&M) plan shall be prepared and is the responsibility of the client to implement. The appropriate fact sheet(s) and IR worksheet may serve as the management plan, as well as supporting documentation, and shall be reviewed with and provided to the client.

At a minimum, the following components shall be addressed in the O&M plan, as applicable:

1. Inspect the management area periodically (at least annually) to determine whether the desired vegetation is present in suitable quantity, quality, and distribution to meet the objectives of the project;
2. On areas to be maintained in perennial herbaceous vegetation, spot mow or burn infrequently (not more than once every 2 to 3 years) if needed to reduce encroachment of trees and shrubs. To protect ground-nesting wildlife, do not mow or burn between April 15 and August 15;
3. Control noxious weeds and other invasive plants by spot treatment, using mechanical methods or approved herbicides. Control of noxious weeds is required by state law. Noxious weed control can be conducted during the primary nesting season (April 15 to

August 15), but may require prior approval if the site is enrolled in a financial assistance program. Contact your local weed control specialist concerning recommendations for spot-treating the weed problem;

4. Nuisance animals such as groundhogs may be removed in accordance with state game regulations;
5. Avoid the use of pesticides on the site to prevent harm to wildlife, including pollinators;
6. Protect the management area from wildfire and damage from livestock and equipment traffic, to the extent feasible;
7. Describe the acceptable uses (e.g., flash grazing, cropping, timber production, hunting, nature preserve, etc.) and time of year or frequency of use restrictions, if any. *Pay particular attention to 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. Extent of practice in acres, field number where the practice is located, and the location of the practice marked on the conservation plan map;
2. Assistance notes. The notes shall include dates of site visits, name or initials of the person who made the visit, specifics as to alternatives discussed, decisions made, and by whom;
3. Copy of the HSI rating (Habitat Evaluation Worksheet);
4. Completed IR worksheet, and copy of the appropriate fact sheet(s) or other specifications and management plans.

## REFERENCES

1. Martin, Alexander C., Herbert S. Zim, and Arnold L. Nelson. 1951. *American Wildlife and Plants: A Guide to Wildlife Food Habits*. Dover Publications, New York. 500 pages.
2. Maryland Cooperative Extension. *Wildlife Management Fact Sheets*.  
<https://extension.umd.edu/tags/wildlife-management>
3. USDA, Natural Resources Conservation Service. *Conservation Practice Standards*. Delaware Field Office Technical Guide, Section IV.
4. USDA, Natural Resources Conservation Service. *Fish and Wildlife Habitat Leaflets and Technical Notes*.  
<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/plantsanimals/fishwildlife/pub/>
5. U.S. Fish and Wildlife Service, Chesapeake Bay Field Office, with the Natural Science Center and Adkins Arboretum. 1995. *Native Plants for Wildlife Habitat*. Annapolis, MD.