

## Upland Wildlife Habitat Management (Acre) 645

### DEFINITION

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

### PURPOSES

Treating upland wildlife habitat concerns identified during the conservation planning process that enable movement, or provide shelter, cover, food in proper amounts, locations, and times to sustain wild animals that inhabit uplands during a portion of their life cycle.

### CONDITIONS WHERE PRACTICE APPLIES

Land where the decision maker has identified an objective for conserving a wild animal species, guild, suite, or ecosystem.

Land within the range of targeted wildlife species and capable of supporting the desired habitat.

### CRITERIA

#### A. General Criteria Applicable to All Purposes

The following habitat evaluation methods shall be used to identify habitat-limiting factors in the planning area.

Application of this practice alone, or in combination with other supporting and facilitating practices, shall result in a conservation system that will enable the planning area to meet or exceed the minimum quality criteria for wildlife habitat established below.

**A1.** When the client's objective is a specific wildlife species, the following habitat criteria will be used:

1. A habitat index rating of 0.75 or greater for the planned condition using either the U.S. Fish and Wildlife Service HSI Models **or**

2. The following habitat requirements:

#### Ring-Necked Pheasant, Upland Nesting Waterfowl

A favorable land use pattern (within 1 square mile) consists of 40-60% in grain or seed crops, 10-30% in grasses and legumes, 5-10% in brush and woods, and 15-30% in undisturbed herbaceous cover. Key habitat needs include safe and secure nesting and brood rearing areas and winter cover.

Nesting and brood rearing cover: A minimum of 15 acres of undisturbed (from April 15-July 15) nesting and brood rearing cover consisting of a mixture of grasses and forbs.

Winter cover (pheasants): A minimum of 15 acres of dense cattails, dense shrubs, or switchgrass planting.

#### Bobwhite Quail and Cottontail Rabbit

A favorable land use pattern (within 40 acres) consists of 25-40% in grains or seed crops, 25-40% in grasses and legumes, 15-25% in brush and woods, and 10-15% in undisturbed herbaceous cover. Key habitat needs include safe nesting and brood rearing areas and winter cover.

Nesting and brood rearing cover: A minimum of 2 acres of undisturbed (April 15-July 15) cover consisting of a mixture of grass, forbs, and shrubs.

Winter cover: A minimum of 2 acres of dense herbaceous wetlands, dense shrub thickets, switchgrass plantings, or brush piles.

#### White-Tailed Deer, Wild Turkey, Fox Squirrel

A favorable land use pattern (within 1 square mile) consists of 10-50% in cropland, hayland, or pastureland; 40-60% mixed woodland; 10-20% in old field or shrub; and 5-10% in wetlands. Key habitat needs include mast producing trees and travel corridors.

Food Sources: Mast producing trees or grain crops comprise 20% of the area.

Travel Corridors: Forested habitats are connected by riparian or travel corridors.

Ruffed Grouse, American Woodcock, Snowshoe Hare

A favorable land use pattern (within 1 square mile) consists of 75-90% in forests, of which 30% in early successional deciduous woodlands, 5-35% in old field, and 5-10% in shrub wetlands. Key habitat components include young second growth stands and aspen.

Food and cover: Early successional deciduous woodland and aspen comprise at least 30% of the area.

**A2.** When the landowner's objective is general wildlife, the Michigan Habitat Appraisal Evaluation will be used to assess habitat (Michigan Biology Technical Note 12). A minimum of .50 index value is needed to meet quality criteria.

**B. Additional Criteria Applicable to All Purposes**

As indicated by the wildlife habitat evaluation, certain habitat elements may be missing or limiting the population. For the desired species, identify the types, amounts, and distribution of habitat elements and management actions necessary to achieve the management objectives. The amount and kinds of habitat elements planned, their location, and management shall be identified in the plan.

Use vegetation adapted to the site that will accomplish the desired purpose. Preference shall be given to native species in order to reduce the introduction of invasive plant species and minimize the economic, ecological, and human health impacts that invasive species may cause. If native plant materials are not adaptable or proven effective for the planned use, then non-aggressive, non-native species may be used.

Site preparation, planting dates, and planting methods shall optimize vegetation survival and growth.

Vegetative manipulations to restore plant and/or animal diversity shall be accomplished by prescribed burning or mechanical, biological, or chemical methods, or a combination of the four. Disturbance to habitats shall be restricted during critical periods such as nesting, brood rearing, fawning, or calving seasons. Refer to the Grassland Activity Dates located in Section IV F of the Michigan Field Office Technical Guide (FOTG).

Management measures shall be specified to control invasive and noxious weeds. Biological control of undesirable plant species and pests shall be implemented where available and feasible.

To protect pollinating insects, pollen and nectar producing plants will be encouraged along with integrated pest management techniques. Spraying or other control of noxious weeds shall be done on a "spot" basis.

Manipulation of habitat may impact more than the desired kinds of wildlife. These possible effects will be evaluated and taken into consideration during the planning process. This practice will be used to promote the conservation of declining species, including federal or state threatened and endangered species.

**CONSIDERATIONS**

All land uses provide habitat for wildlife, but there is great variability in the condition of the land to support wildlife. A land use may provide one or more of the habitat elements necessary for a particular species during specific seasons of the year.

Regional Landscapes and Pre-settlement Vegetation

Natural ecosystems and landscapes vary significantly throughout the state. Pre-settlement Vegetation Maps, located in Section I of the FOTG, are a valuable tool which identifies the types of ecosystems which were present historically. Habitat manipulations and species objectives should be in harmony with natural landscape characteristics and ecosystem objectives.

Habitat Diversity

The interspersing or the intermixing of the various wildlife habitat components is habitat diversity. Numerous habitat types in small units provide a maximum amount of diversity and ecotone edge. This is beneficial for some wildlife species. The amount of habitat types providing food is generally correlated with higher wildlife population numbers, especially for game species. **However**, larger blocks of native habitats are more beneficial to some species including migratory songbirds (warblers, flycatchers, etc.) and other species of wildlife.

### Habitat Linkages

Linking fragment habitats or cover types with travel corridors or riparian corridors may greatly increase the use of an area by the desired species. In general, the larger the width of the corridor, the more valuable it is for wildlife species. See the Conservation Management Sheet on Corridor Development.

### Daily and Seasonal Ranges

Wildlife is not restricted by human property boundaries, so adjoining properties should also be considered when providing necessary habitat components. Home ranges vary by species but appropriate food, cover, and water must be present and in sufficient quantity and quality to be useable for the species' daily and seasonal needs.

### Population Control

Wildlife population control (hunting or trapping to reduce numbers) may be necessary to protect and maintain certain habitats. The landowner should contact the Michigan Department of Natural Resources and follow their recommendations.

## PLANS AND SPECIFICATIONS

This broad practice includes many components. These components include, but are not limited to, the following: **plantings** of trees, shrubs, grass, food plots, and wildflowers; **constructing** brush piles, birds boxes, bat houses, and nesting platforms; and **management** practices such as timber stand improvement, conservation tillage, and pesticide management. The specifications for this practice are found in other standards, national and Michigan conservation sheets, and in "**Managing Michigan's Wildlife: A Landowner's Guide**," available at: ([http://www.michigandnr.com/publications/pdfs/huntingwildlifehabitat/Landowners\\_Guide/index.htm](http://www.michigandnr.com/publications/pdfs/huntingwildlifehabitat/Landowners_Guide/index.htm)).

Plans and specifications shall be prepared in accordance with the criteria of this standard and shall describe the requirements for applying the practice to achieve its intended use. Plans and specifications shall be developed for the specific field site to meet the objectives of the landowner. Plans and specifications may include engineering plans, conservation sheets, technical notes, or narrative statements in conservation plans.

## OPERATION AND MAINTENANCE

Actions will be carried out to ensure that this practice functions as intended throughout its expected life. These actions include normal repetitive activities in the application and use of the practice such as prescribed fire or mowing, and repair and upkeep of the practice such as replacement of dead plants.

This practice will be inspected periodically and restored as needed to maintain the stated purpose. Additional operation and maintenance requirements will be developed on a site-specific basis to assure performance of the practice as intended.

## REFERENCES

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