

**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD**

**WETLAND WILDLIFE HABITAT MANAGEMENT**

(acre)

**CODE 644**

**DEFINITION**

Retaining, developing, or managing habitat for wetland wildlife.

**PURPOSE**

To maintain, develop, or improve habitat for waterfowl, fur-bearers, or other wetland associated flora and fauna.

**CONDITIONS WHERE PRACTICE APPLIES**

On or adjacent to wetlands, rivers, lakes and other water bodies where wetland associated wildlife habitat can be managed. This practice applies to natural wetlands and water bodies as well as wetlands that may have been previously restored, enhanced, created.

**CRITERIA**

**General Criteria Applicable to All Purposes**

Identify species management goals and objectives.

Habitat development and management necessary to achieve the purpose(s), shall be based on a wildlife habitat appraisal or suitable habitat evaluation. The appraisal or evaluation procedure shall be used to determine a habitat suitability for either individual fields, home range areas, habitat type, or natural community; as well as to provide an overall evaluation for the entire property or operating unit.

Habitat Appraisal or Habitat Evaluation:

Wildlife habitat evaluations may be done using any of the following:

NRCS or other formally developed species specific models;

NRCS state developed wildlife habitat evaluation worksheets:

Minimum habitat requirements by species or species groups outlined below under "Criteria Applicable to Specific Species or Groups";

Wildlife habitat Quality Criteria contained in FOTG Section III

USFWS Habitat Evaluation Procedure Models (HEP);

The evaluation will result in a quality rating or habitat suitability index (hsi) that will consider the type, amount, and distribution of habitat elements required. The quality rating or hsi will be compared to the quality criteria in Section III of the FOTG

If the evaluation indicates a level below the acceptable quality, alternatives will be recommended that will result in the necessary changes in habitat elements or their management to improve the rating to the minimal acceptable level or above.

If the evaluation is at the minimum or above, alternatives will be recommended that will result in the necessary management to maintain or improve the existing habitat in its present state or toward optimum conditions.

**HABITAT ELEMENTS:**

The following habitat elements will be evaluated when assessing wildlife habitat. Not all may apply to every habitat type or species.

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.

**NE-T.G. Notice 512  
Section IV  
NRCS-May 2002**

1. Food
  - a. Type
  - b. Amount
2. Cover
  - a. Type
  - b. Amount
3. Water
  - a. Quality
  - b. Quantity
  - c. Accessibility
  - d. Seasonal availability
4. Interspersion and Distance to:
  - a. Crops
  - b. Grasses and or legumes
  - c. Shrubs
  - d. Trees
  - e. Water
  - f. Openings
5. Migration
  - a. Routes
  - b. Season of use
  - c. Corridors

As indicated by the wildlife habitat evaluation, certain habitat elements may be weak or missing. For the desired species, identify the types, amount, 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 a management plan.

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

Livestock grazing or haying, when used, shall be managed to maintain or improve vegetation structure and composition for the intended purpose.

Vegetation used will be adapted to the local soil/site conditions. Native plant will be used whenever possible.

Management measures shall be provided to control invasive species and noxious weeds.

Spraying or other control of noxious weeds or shall be done on a "spot" basis to protect forbs and legumes that benefit native pollinators and other wildlife.

The landowner shall obtain all necessary local, state and federal permits that apply.

#### **Criteria Applicable to Specific Species or Groups**

Provide minimum habitat requirements as follows for one or more of the species or groups of species, or in accordance with a species habitat model.

#### **Criteria for Breeding Dabbling Ducks (Teal, Mallard, Pintail, Gadwall, Shoveler, etc.)**

Pair Cover. Shallow water areas provided by temporary and seasonal wetlands are need to attract dabbling ducks to an area in the spring and to provide an early food source. Provide at least one acre of shallow water within .5 miles of nesting cover. These areas may occur as separate basins or as the shallow zone of a deeper wetland.

Brood Cover. Semi-permanent and permanent wetland or ponds provide deeper water areas that will generally retain water throughout the summer with emergent vegetation. These wetlands provide a summer food source as well as escape cover. Provide at least one acre within .5 mile of nesting cover.

Nesting Cover. Provide at least one acre of herbaceous cover that is 10 inches or taller from early April through July 15. Scattered clumps or patches of taller grass, forbs or low growing shrubs within such cover areas are frequently preferred nest sites.

Avoid the use of chemicals that could eliminate wetland plants or aquatic organisms important in waterfowl diets.

#### **Criteria for Migratory Dabbling Ducks and Geese**

Loafing areas. Provide at least .5 acre of shallow water area per quarter section in most years from February through April 15. Shallow water (1 to 10 inches deep) is provided by temporary and seasonal wetlands, ponded fields and pastures. Ponded cropland fields

that have been spring or fall tilled are of less benefit than no-till fields.

**Feeding Areas.** Provide at least 40 acres of growing winter wheat or rye or mulch till (30% or more ground cover) or no till corn, oats, or millet within 1 mile of loafing areas. Or provide at least 3 acres of seasonal or semi-permanent wetlands with at least 25% of the wetlands water surface unobscured by emergent vegetation.

Avoid the use of chemicals that could eliminate wetland plants or aquatic organisms important in waterfowl diets.

#### **Criteria for Wood Ducks**

**Brood Cover.** Provide a minimum of 10 acres of semi-permanent or permanent wetlands, perennial streams, ponds or lakes. Dense emergent vegetation or overhanging shrubs, or trees must cover a minimum of 25% of the water surface. Ideal overhead cover provides a dense canopy cover of 50-75% of the water surface with crowns 2-4 feet above the water surface.

**Nesting Cover.** Provide tall trees capable of providing suitable cavities or constructed nest boxes no further than 150 feet from Brood cover. Because natural cavities must have an entrance of at least 4 inches, an inside diameter of approximately 8 inches and cavity depth must be at least 24 inches; trees will be a minimum of 12 inches in diameter at a height of approximately 20 feet. Cavities located 30 feet or more above the ground are preferred.

Avoid the use of chemicals that could eliminate wetland plants or aquatic organisms important in waterfowl diets.

#### **Criteria for Amphibians and Reptiles**

**Wetland.** Establish and maintain a buffer zone of native wetland plants around the wetland edge. This buffer should be a minimum of 50 feet wide. Maintain natural water level fluctuations. Do not introduce non-native plants or animals including fish. If the site supported some trees in its native plant community, it is beneficial to place logs and other woody debris in the wetland.

Upland. Establish and maintain a native upland plant community a minimum of 500 feet wide around the wetland.

Avoid the use of chemicals that could eliminate wetland plants or aquatic organisms important in waterfowl diets.

## **CONSIDERATIONS**

Consider that manipulations of habitat may impact more than the desired kinds of wildlife. These possible affects shall be evaluated and taken into consideration during the planning process.

This practice may be used to promote the conservation of declining species, including threatened and endangered species.

For species requiring large blocks of habitat, consider addressing habitat fragmentation.

Consider habitat linkages and habitat corridors when developing wildlife habitat. Vegetative buffers should be included as needed to benefit the wetland and the wildlife using it.

Consider effects of movement of dissolved substances on groundwater and on downstream surface waters.

Consider effects that hazardous materials, expected or known to occur on the site, may have on wildlife or human use.

Where feasible, consider utilizing prescribed burning instead of mowing.

Biological control of undesirable plant species and pests (e.g., using predator or parasitic species) should be implemented where available and feasible.

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

Consider effects of management on non-target fish and wildlife species and threatened and endangered species.

Consider effects of livestock grazing on runoff, infiltration, and wetland vegetation.

Consider using artificial nesting structures that are designed for the region.

Consider the impact of increased wildlife use on adjacent lands (e.g., crop depredation).

Consider effect of volumes and rates of runoff, infiltration, evaporation, and transpiration on the water budget.

Consider effects on downstream flows or aquifers that would impact other water uses or users.

Consider adjacent wetlands or water bodies that contribute to wetland system complexity and diversity, decrease habitat fragmentation, and maximize use of the site by wetland-associated wildlife.

Consider effects on movement of sediment and soluble and sediment-attached substances carried by runoff and/or wind.

Consider manipulation of water levels through draw downs and flooding to manage vegetation and create favorable conditions for shorebirds and other wetland species.

Consider using an appropriate Hydrogeomorphic model (HGM) or functional assessment procedure to identify missing components needed to improve wetland functioning.

## PLANS AND SPECIFICATIONS

Plans and specifications for this practice shall be prepared for each site. Plans and specifications shall be recorded using approved specification sheets, job sheets, or narrative documentatin in the conservation plan to describe the requirements for applying the practice to achieve its intended use.

Document how habitat needs will be met for the desired species of wildlife such as: required seasonal depth of water types and sizes of structures required; desired plant species and the means of establishing and maintaining them.

## OPERATION AND MAINTENANCE

The purpose of operation, maintenance and management is to insure that the practice functions as intended over time.

A plan for operation and maintenance of wildlife habitat at a minimum should include

monitoring and management of structural and vegetative measures. Haying and livestock grazing plans will be developed to allow the establishment, development, and management of wetland and associated upland vegetation for the intended purpose and to minimize wildlife disturbance.

## REFERENCES

- Payne, Neil F. 1992. Techniques for Wildlife Habitat Management of Wetlands. McGraw-Hill, Inc. 549pp.
- Midwestern Wetland Flora: Field Office Guide to Plant Species. U.S.D.A. Soil Conservation Service, Midwest National Technical Center, Lincoln, Nebraska. No date.
- U.S. Department of Agriculture Natural Resources Conservation Service, Nebraska Biology Technical Note No. 33 – Land Management Guides for Select Wildlife Species, 1980.
- U.S. Department of Agriculture Natural Resources Conservation Service, Nebraska Biology Technical Note No. 47 – Best Management Practices for Rainwater Basin Wetlands, 1994.
- U.S. Department of Agriculture Natural Resources Conservation Service, Nebraska Biology Technical Note No. 66 – Wetland Water Depths Used by Selected Wildlife Species and Groups, 2000.
- U.S. Department of Agriculture Natural Resources Conservation Service, Wildlife Habitat Management Institute – Fish & Wildlife Habitat Management Leaflets . <http://www.ms.nrcs.usda.gov/whmi/techno-tes.htm>
- U.S. Department of the Interior Fish and Wildlife Service, Waterfowl Management Handbook, 1988.