

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

UPLAND WILDLIFE HABITAT MANAGEMENT

(acre)

CODE 645

DEFINITION

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

PURPOSE

To treat upland wildlife habitat concerns identified during the conservation planning process that enables movement, or provides shelter, cover, and 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

All landscapes where suitable wildlife habitat can be developed or improved for the desired wildlife species or community that has been selected by the decision maker for management.

CRITERIA

General Criteria Applicable to all Purposes

Management Goals

- Determine if wildlife will be the primary planning objective or secondary to other landuse and management objectives.
- Select individual wildlife species to be targeted and provide specific habitat requirements or manage for wildlife communities by providing diverse habitat that is beneficial to several species.

Wildlife Habitat Appraisal or Evaluations

- Habitat development and management necessary, to achieve the purpose(s), shall be based on a suitable habitat evaluation that addresses the quality of habitat for the selected wildlife species or community. The evaluation will identify factors that are limiting the quality of habitat by establishing a value or score for habitat criteria or elements in individual fields, entire operating units, or for home ranges that may overlap several fields or land uses.
- The evaluation will result in a quality rating or habitat suitability index (HSI) score of 0.5 or greater on a 0.0 to 1.0 scale or provide at least 50 percent of the optimum habitat conditions (whichever is applicable) for all habitat elements within the evaluation area.
- If the evaluation indicates a score of less than 0.5 or less than 50 percent of optimum conditions for any habitat element, alternatives will be recommended to reduce or eliminate the factors that are limiting habitat and bring the score up to 0.5 or provide 50 percent of optimum habitat.
- If the evaluation indicates that all habitat elements presently meet the minimum value of 0.5 or 50 percent of optimum habitat conditions, alternatives will be recommended that will further improve habitat conditions by continuing to reduce limiting factors and raise the overall value.

- Wildlife habitat evaluations may be conducted using any of the following procedures: Habitat appraisal guides developed by the Natural Resources Conservation Service (NRCS), Guides developed by Oklahoma State University Cooperative Extension Service, or Wildlife Resource Self Assessment Questionnaires developed for the Conservation Security Program and/or other NRCS programs.
- Habitat appraisal guides for commonly managed Oklahoma wildlife species are available electronically in Section I of the eFOTG under Part B, "Reference Materials/Oklahoma NRCS Computer Tools, Forms, Appraisal and Evaluation Guides/Oklahoma Wildlife Appraisal and Evaluation Guides.
- The standard for Upland Wildlife Habitat Management will be considered applied when all evaluated habitat elements meet a minimum score of 0.5 or greater on a 0.0 to 1.0 scale or 50 percent of the optimum conditions for the selected wildlife species or community.
- As indicated by the wildlife habitat evaluations, certain habitat elements may be inadequate to meet the requirements of the managed wildlife species or community. Identify the types, amount, and distribution of habitat elements that are limiting and determine actions necessary to achieve the management objectives.
- All decisions and actions needed to remove limiting factors and improve habitat values shall be included as part of a comprehensive conservation plan or in a wildlife management plan.

Habitat Elements

The following habitat elements will be considered when assessing wildlife habitat and will be used as the basis for establishing minimum habitat values. Not all may apply to every habitat type.

Food

- Type (seeds, hard and soft mast, browse, forage, etc.)

- Amount (acres, or percentage within home range or evaluation area)
- Seasonal Availability (time of year that food is available)

Cover

- Type (nesting, protective, brood-rearing, etc.)
- Amount (acres or percentage within home range or evaluation area)
- Seasonal Availability (time of year that cover is available)

Water

- Quality
- Amount
- Seasonal Availability

Interspersion and Distance to Other Habitat Elements

- Crops (grain and forage)
- Herbaceous Plants for Food and Cover (Grasses, Forbs, and Legumes)
- Woody Plants for Food and Cover (trees and shrubs)
- Water

Criteria for Development and Management of Habitat Elements

Food

Herbaceous Food Producing Plants

- Herbaceous plants consist of native and introduced grasses, forbs, and legumes that provide a diversity of forage, seeds, and fruits essential to wildlife.
- Refer to the habitat assessment or management guide to determine the amount and types of herbaceous plants and plant parts that are important food sources for the wildlife species or community to be managed.
- Utilize native herbaceous plants as the primary source of food for wildlife.
- Maintain desired food plants and plant

successional stages by manipulating vegetation with prescribed burning, mechanical, biological, or chemical methods.

- Protect forbs and legumes that benefit native pollinators, upland wildlife, and provide insect food sources for grassland birds by limiting herbicide applications to “spot” treatments instead of using broadcast and aerial application methods.
- Maximize the allowable percentages of important wildlife forbs, legumes, and grasses in range seeding and pasture planting mixtures when establishing new stands. Refer to Oklahoma Biology Technical Notes OK-24 and OK-31 for a list of herbaceous plants best suited for wildlife food.
- Allow important seed producing plants to mature and make seed before removing top growth.
- Agricultural crops and food plots may be used to supplement the seasonal food requirements for some wildlife species and communities. Refer to habitat assessments or management guides to determine the cropping practices, size of food plots or unharvested crop areas and types of plants that are beneficial to the targeted wildlife species.
- Locate food plots or unharvested grain in close proximity to other habitat elements such as nesting cover and woody cover.
- Oklahoma NRCS practice standards that should be used as appropriate to establish and/or maintain required herbaceous food plants include: Range Planting (550), Prescribed Grazing (528), Restoration and Management of Declining Habitats (643), Prescribed Burning (338), Early Successional Habitat Development and Management (647), Conservation Cover (327), and Residue Management (329, 345, and 346).

Woody Food Producing Plants (Including Trees, Shrubs, and Vines)

- Trees, shrubs, and vines provide hard mast (acorns and nuts), soft mast (fruits, berries, light seed, etc.), and browse (twigs, leaves, and stems) that are essential to habitat requirements for many wildlife species.
- Emphasize the use of native trees, shrubs, and vines when establishing woody plants for food.
- Refer to habitat assessments or management guides to determine the amount and types of woody plants that provide mast and browse that are important food sources for the wildlife species or community to be managed.
- Insure that important food producing trees, shrubs, and vines are protected when controlling brush and/or using prescribed burning or chemical treatments to treat other resource concerns.
- Some introduced trees and shrubs provide mast and browse that will meet seasonal food requirements for wildlife and may be planted if the plants are neither invasive nor noxious.
- Oklahoma NRCS practice standards that should be used to establish and/or maintain required woody food producing plants include: Tree/Shrub Establishment (612), Brush Management (314), Riparian Forest Buffer (391), Prescribed Grazing (528), Hedgerow Planting (422), Windbreak/Shelterbelt Establishment (380), Use Exclusion (472), Restoration and Management of Declining Habitats (643), and Forest Stand Improvement (666).

Herbaceous Cover (Including Grasses, Forbs, and Legumes)

- Herbaceous plants are used for nesting cover, brood rearing habitat, fawning cover, bedding areas, and protection from predators and weather.

- Utilize native warm season grasses as the primary source of herbaceous cover.
- Introduced warm season grasses, cool season grasses, and agricultural crops will not meet all of the herbaceous cover requirements for most individual species targeted for management in Oklahoma, but can be used to meet or supplement some herbaceous cover requirements when properly managed.
- The height, density, and extent of herbaceous cover will be based on criteria contained in the habitat appraisal or management guide for the selected wildlife species or community.
- Avoid mowing, haying, cultivation, or other types of disturbance on areas of designated herbaceous cover during nesting/fawning season between April 1 and June 30.
- Utilize residue management practices when cropland is planned to either meet or supplement the cover requirements for a wildlife species or community.
- Oklahoma NRCS practice standards that should be used as appropriate to establish and/or maintain required herbaceous cover include: Range Planting (550), Prescribed Grazing (528), Restoration and Management of Declining Habitats (643), Prescribed Burning (338), Use Exclusion (472), Riparian Herbaceous Cover (390), and Residue Management (329, 345, and 346).
- Introduced woody plants are acceptable for cover when the amount and composition meet the requirements of the managed wildlife species or community and the plants are neither invasive nor noxious.
- The height, density, and extent of woody cover will be based on criteria contained in the habitat appraisal or management guide for the selected wildlife species or community.
- Insure that adequate amounts and types of woody cover are protected when controlling brush and/or using prescribed burning or chemical treatments to treat other resource concerns.
- Oklahoma NRCS practice standards that should be used to establish and/or maintain required woody cover include: Tree/Shrub Establishment (612), Brush Management (314), Riparian Forest Buffer (391), Prescribed Grazing (528), Hedgerow Planting (422), Windbreak/Shelterbelt Establishment (380), Prescribed Burning (338), Use Exclusion (472), Restoration and Management of Declining Habitats (643), and Forest Stand Improvement (666).

Woody Cover (Including Trees and Shrubs)

- Trees and shrubs provide nest and roost sites for birds, overhead and screening protection from predators and protection from extremes in weather such as heat, cold and snow.
- Emphasize the use of native trees and shrubs when establishing and managing woody cover habitat.
- Water will be provided in accordance with the criteria described in the habitat appraisal or management guide for the wildlife species or community.
- Provide at least one permanent water source within the home range of wildlife species that require open surface water such as provided by springs, tanks, ponds, lakes, and streams.
- Account for the daily water requirements of all wildlife and domestic animals anticipated to utilize the water source to insure an adequate supply.

- Oklahoma NRCS practice standards that should be used as appropriate to develop and maintain adequate water sources for wildlife include: Watering Facility (614), Pond (378), and Water Well (642).

Interspersion and Home Range

- All required habitat elements must be available within the designated home range in order for populations of the managed wildlife species to utilize the habitat.
- Where fields, farms, or management units are smaller than the home range size of the targeted species or some habitat elements are missing, minimum habitat values and requirements can still be met if missing elements are available on adjacent lands and all practical measures have been taken to meet habitat requirements of the species on lands controlled by the decision maker.
- Concentrate wildlife management efforts in areas where basic habitat components already occur in close proximity to each other or establish missing habitat elements within the designated home range by plantings, manipulation of vegetation, and water development.

CONSIDERATIONS

- Consider obtaining technical assistance from NRCS or Oklahoma Department of Wildlife Conservation biologists for additional practices and management techniques.
- Consider that all land uses provide habitat for wildlife, but there is variability in the quality and composition of habitat elements. Some land uses may provide one or more habitat elements or provide seasonal benefits.
- Opportunities to provide habitat as a secondary use of land devoted primarily to crop and livestock production or urban uses should be encouraged.
- Consider that grazing, haying, cropping, mowing, cultivation, chemical use and other practices on lands primarily used for other purposes can have impacts on wildlife and

associated habitats. Adjustments in timing and farming techniques can be made to either avoid adverse impacts or result in secondary benefits to wildlife.

- Consider that habitat management for a targeted species may have positive or negative impacts on other wildlife species and communities including declining species and threatened and endangered species. Include these considerations in the planning process.
- Consider maximizing habitat corridors and using practices to link similar habitats when planning and developing upland habitat.
- Consider problems of habitat fragmentation when using this practice by developing large blocks of habitat instead of edge which leads to predation and parasitism by some species.
- Consider that wildlife population control (hunting, trapping, etc.) in coordination with state and federal wildlife agencies may be necessary to protect and maintain certain habitats.
- Consider the potential economic benefits derived from recreational uses of lands with good quality habitat and abundant wildlife populations.

PLANS AND SPECIFICATIONS

Plans and specifications for this practice shall be prepared for each site and based on developing or improving habitat elements that are presently limiting the quality of habitat as determined by the habitat evaluations and/or management guides for the targeted wildlife species or communities.

Plans and specifications shall be recorded using approved specification sheets, job sheets, technical notes, or narrative documentation in the conservation plan, wildlife management plan, or other acceptable documentation.

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 upland wildlife habitat at a minimum shall include monitoring and management of structural and vegetative measures.

The primary method of monitoring the plan and assessing the habitat changes will consist of periodic habitat evaluations using the same procedures as those used during the planning process to establish baseline conditions.

REFERENCES

Oklahoma Natural Resources Conservation Service Biology Technical Note 24, Establishing Wildlife Food and Cover Crops

Oklahoma Natural Resources Conservation Service Biology Technical Note 31, List of

Forbs, Legumes, Trees and Shrubs Best Suited for Wildlife

Oklahoma Natural Resources Conservation Service Biology Technical Notes on Wildlife Habitat Assessments for Commonly Managed Wildlife Species

Natural Resources Conservation Service, Biology Technical Notes, Wildlife Habitat Management Leaflets. Available on internet at: www.nrcs.usda.gov/technical/biology.html

Oklahoma Cooperative Extension Service, Bobwhite Quail Habitat Evaluation and Management Guide, Publication E-904

Oklahoma Cooperative Extension Service, White-Tailed Deer Habitat Evaluation and Management Guide, Publication E-979

Oklahoma Cooperative Extension Service, Wildlife Management Notes for Individual Species