

NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

STRUCTURES FOR WILDLIFE

(No.)

CODE 649

DEFINITION

A structure installed to replace or modify a missing or deficient wildlife habitat component.

PURPOSE

To provide structures, in proper amounts, locations and seasons to:

- Enhance or sustain non-domesticated wildlife; or
- Modify existing structures that pose a hazard to wildlife.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies to all lands where planting or managing vegetation fails to meet the short-term needs of the species or guild under consideration. And in addition, where a State-approved wildlife habitat assessment identifies the need to:

- Provide loafing, escape, nesting, rearing, roosting, perching and/or basking habitat. Examples are nesting islands, nesting boxes, roosting boxes, rock piles, perching structures and brush piles.
- Modify existing structures to minimize the risks of injury or mortality to wildlife.

Do not use this practice to:

- Install new structures or modify existing structures for the control of nuisance animal species.
- Install new structures or modify existing structures for the benefit of captive, feral, or domesticated animals.

CRITERIA

General Criteria Applicable to all Purposes

Construct and install wildlife structures when the State-approved habitat appraisal method identifies limiting habitat component(s) that cannot be provided within the desired time period with implementation of a vegetation management strategy.

Use the following criteria to design, install or modify structures for wildlife.

- Select the location of structures to meet the needs of the targeted species and not subject individuals to increased risks of injury or mortality.
- Select materials that are durable and safe for wildlife. Avoid caustic, dangerous, debilitating, and/or irritating materials. If the structure is exposed to sunlight, utilize ultraviolet resistant materials and/or coatings made with non-toxic substances for additional protection from deterioration due to sunlight exposure.
- Construct habitat structures to withstand normal environmental conditions and meet the needs of the targeted wildlife for the target period of time.
- Locate structures with access capability if monitoring or management of the structure is needed.

Additional Criteria for Wildlife Brush Piles:

Provide nesting habitat, resting areas, concealment and protection from predators and protective cover against harsh weather conditions by providing loosely formed brush piles. Provide den sites for additional species using densely packed piles of logs, rocks, or boulders.

Refer to *MN Biology Job Sheet #15 - "Wildlife Brush Piles"* for additional specifications.

Additional Criteria for Snake Hibernacula:

In the winter, snakes hibernate and are incapable of long migrations and therefore must find suitable hibernaculum in the vicinity of their summer habitat. Hibernacula provide a secure den with low temperatures that remain above freezing over winter.

Refer to *MN Biology Technical Note #16, "Riparian Habitat Guide"* for design specifications.

Additional Criteria for Artificial Nesting

Structures: Apply this component to construct nest boxes (blue bird, waterfowl, and bat), roost poles, platforms, and other artificial structures for cavity or roost nesting species.

Include design, specifications and construction plans that are consistent with the following references:

- *"Woodworking for Wildlife: Homes for Birds and Mammals" (Biology Technical Note #6),*
- *"Construction and Use of Duck Nest Structures" (Biology Technical Note #7)*
- Other designs specified by a technical agency.

Additional Criteria for Woody Habitat (Drops):

Install structural woody cover in lakes where shallow water habitat for amphibians, reptiles and fish. Locate tree drops in the shallow or littoral areas to provide basking sites for turtles and snakes and cover for newts, lizards and small fish.

Refer to *MN Biology Job Sheet #19 "Tree Drops for Fish Habitat"* for specifications.

CONSIDERATIONS

Consider the following, prior to implementation of this standard and mitigation measures as appropriate.

- Potential negative impacts to target species and non-target species through an increase in predation, disease transmission, nest parasitism or other means.
- Modify existing onsite and offsite barriers, or other conservation structures that inhibit safe daily and seasonal movement of wildlife.
- Consider the establishment of native habitat to supplement and/or eventually replace installed habitat structures.
- Risks associated with the use of structures by non-target, nuisance, or predator species.
- Safe passage strategies for non-target species, and road crossings.
- Select appropriate color, orientation and exposure to support thermal regulation.

PLANS AND SPECIFICATIONS

Develop plans and specifications for wildlife structures within the criteria of this standard. Within the plan, describe the biological and physical requirements for applying the practice.

Specify the number, location, spacing, quantities, dimensions, materials and timing of installation of new or modification of existing structures.

Develop specifications for construction and installation of habitat structures by following State technical notes or job sheets.

OPERATION AND MAINTENANCE

Provide an operation and maintenance plan for structures being installed or modified.. Consider the needs of the target and associated species. As a minimum, the O&M will include a schedule (timing, frequency, duration) to:

- Conduct needed maintenance of structures such as removal of old nesting materials, nests of non-target species, or undesirable debris.
- Monitor condition and/or usage of structures.
- Install, modify and/or monitor during the season of year or time of day to minimize disturbance to wildlife.
- Remove abandoned structures if determined as being potentially detrimental to the target species.

REFERENCES

USDA, Natural Resources Conservation Service and Wildlife Habitat Council. 2008. Artificial Nesting Structures. Fish and Wildlife Habitat Management Leaflet No 20 (revised) Washington, D.C.

Tuttle, M. D. and D. Hensley. 1993. The bat builder's handbook (2000 revision). Bat Conservation International, Austin, Texas.

USDA–NRCS. MN Biology Job Sheets. EFOTG. <http://efotg.sc.egov.usda.gov/treemenuFS.aspx>

USDA-NRCS. MN Wildlife Guide Sheets [Wildlife Guide Sheets | NRCS](#)

USDA–NRCS. MN Biology Technical Notes [Biology Technical Notes | NRCS](#)

Woodworking for Wildlife, MDNR- Wildlife. 2009.