



The Montana Department of
**Natural Resources
& Conservation**

Voluntary Wildlife Guidelines for Streamside Management Zones

Western Bluebird



Marten



Osprey



Introduction: Voluntary Wildlife Guidelines

When the 1991 Montana Legislature passed the Streamside Management Zone (SMZ) Law, it also directed the Department of Natural Resources and Conservation (DNRC) to develop voluntary, non-enforceable guidelines for managing wildlife habitat in the SMZ.

Many wildlife species make extensive use of SMZs, even though SMZs comprise only a small portion of the overall landscape. Wildlife depend on SMZs for food, cover, travel corridors, and nesting areas. Many species also use the SMZs during migration as resting and feeding areas.

The SMZ rules provide for the maintenance of the forest structure and species diversity needed by most wildlife species. However, to enhance these habitat components, guidelines are provided for voluntary implementation for timber harvesting.

Broken-topped trees and snags offer platforms for the large stick-nests of ospreys and some other raptors.

Hérons nest in colonies in cottonwood stands.



Open-cup nests of some songbirds and ducks are built in shrubs or on the ground, hidden by leaves and tall grass.

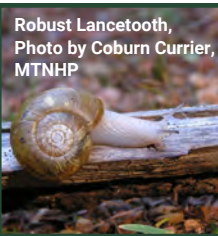
Other songbirds, wood ducks and owls make their homes in cavity nests left by woodpeckers.



In Montana, at least 47 bird species and 19 mammal species use cavities found in dead or defective trees.

Dead trees are commonly referred to as snags. Many species of wildlife that use snags actively defend them, precluding use by other animals. Large snags, either standing or fallen down into stream channels and onto the forest floor, provide essential habitat for fish, small mammals, reptiles, amphibians and birds.

Terrestrial snails and slugs that decompose organic matter, nutrients, contribute to soil formation, and provide calcium for birds' eggs, benefit from moist shaded areas with higher canopy cover.



Wildlife Leave-tree Recommendations

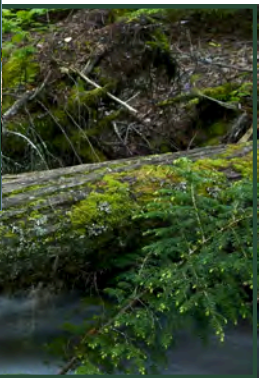
Management of SMZs to maintain a mixed forest stand composed of trees of different species and sizes will help to minimize or reduce adverse impacts to wildlife. In addition, mixed composition of SMZ leave trees will allow the standing live trees to provide future replacements for snags.

Deformed or defective trees, which are often non-merchantable, make excellent replacement snags. Snags and trees with holes in the trunk, visible nests, signs of rot, spike tops, or broken tops are particularly good trees to leave for wildlife. Larger snags, both in diameter and height, are generally more valuable to wildlife than smaller snags. Large snags benefit more species and stand longer than smaller snags.

Ideally, snags 21" in diameter at breast height (DBH) and downed logs 15" DBH are the gold standard. However, each species of wildlife seems to prefer a different snag height and diameter, and any size can be good for foraging. Therefore, it is desirable to leave snags of various sizes distributed in different patterns across the area (i.e. clumped, scattered, or evenly spaced). This varied pattern of distribution will help make snags available for the largest number of animals to use. Leaving both hard snags and decayed or soft snags is important. Hard snags are required for nests, whereas soft snags are important feeding sites.

Amphibians, reptiles, and fish rely on the pools and cover provided by trees that have fallen into streams.

Frogs and turtles rest on fallen trees and warm themselves in the sun.



The Importance of Snags to Wildlife

Voluntary Wildlife Guidelines

The following voluntary wildlife guidelines will help maintain wildlife habitat values when conducting timber sales in Streamside Management Zones (SMZs). These guidelines do not replace the existing SMZ law and rules; rather, they are meant to supplement.

1. To maintain wildlife habitat, minimize disturbance to shrubs and large dead and down logs on the forest floor within the SMZ.

2. To benefit select wildlife species, it may be desirable to leave more large trees and snags in addition to the minimum SMZ tree retention requirements. Consider clumping the additional wildlife leave trees.

3. Trees with visible evidence of wildlife use, such as nests, cavities, woodpecker holes, etc., should be left.

4. If safety permits, leave culls, snags, and hardwoods, especially those with broken tops and visible signs of rot.

If decisions must be made regarding which snags to cut, the following species are desirable, ranked from highest to lowest wildlife value:

Ponderosa Pine

Western Larch

Cottonwood

Aspen

Douglas-fir

Western Red Cedar

Grand Fir

All other species

5. To minimize disturbance of occupied songbird nests, directionally fall trees away from deciduous trees and snags and minimize disturbance of tall shrubs when skidding logs. Consult with a qualified wildlife biologist if you desire certain species or site-specific advice.

6. Per the Bald and Golden Eagle Protection Act, it is mandatory to retain all trees with bald and golden eagle nests, regardless of whether they are occupied or not. Additionally, leave all trees containing nests of other raptors, owls, cormorants, or herons standing and unharmed. Leave trees that are used as a perch near nests or feeding areas. Leave “screening” trees that protect nest trees from impacts of human activities and natural elements.

Plan timber harvest and road construction near active nests outside of the nesting season. Begin timber operations as far away as possible from active nest trees. Consult with a qualified wildlife biologist for species-and site-specific advice prior to harvesting.

Nesting Dates of Interest

Nesting dates of most Montana raptors are April 15 to August 15. Some noted exceptions are listed below:

American kestrel	April 15 - Aug 31
Bald eagle	Feb 1 - Aug 15
Golden eagle	Feb 28 - August 1
Great grey owl	March 30 - Aug 30
Great horned owl	Feb 1 - Sept 30
Long-eared owl	Feb 1 - July 30
Northern pygmy owl	Feb 30 - Nov 30
Northern saw-whet owl	Feb 30 - Aug 31
Short-eared owl	March 1 - Aug 1
Swainson’s hawk	March 30 - Aug 31
Northern goshawk	April 1 - Sept 1
Red-tailed hawk	March 1 - Sept 1

Nesting dates for herons, cormorants and songbirds are listed below:

Cormorant rookeries	April 1 - Aug 15
Heron rookeries	March 1 - Aug 1
Songbirds	May 1 - July 30

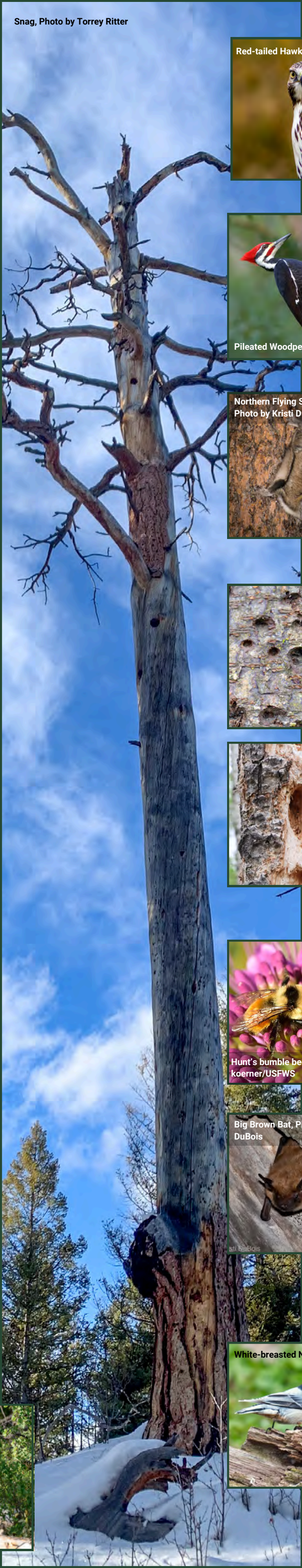
Bears tear into the soft wood of old snags to feed on carpenter ant colonies.



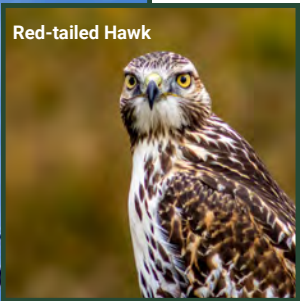
Black Bear

Deer and raccoons find shelter and food in the SMZ.

Snag, Photo by Torrey Ritter



Red-tailed Hawk



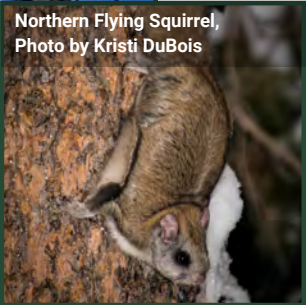
Raptors (hawks, eagles, and owls) use snags as perch sites for resting and spotting prey. Snags also serve as singing posts for many songbirds.

Pileated Woodpecker



Primary cavity nesters, such as wood-peckers, dig into the wood, creating new nesting holes each year.

Northern Flying Squirrel, Photo by Kristi DuBois



Secondary cavity nesters, including bluebirds, flycatchers, small owls, and squirrels occupy and modify abandoned woodpecker nesting holes to suit their needs.



Cracks in the bark provide access for microbes and insects that consume and tunnel through the wood.



Woodpeckers pound into the bark to feed on insects, especially carpenter ants. Evidence of their efforts ranges from a series of small feeding holes to larger, trough-like excavations.



Hunt's bumble bee, Photo by Tom koerner/USFWS

Crevices and loose bark on snags provide important habitat for pollinators.



Big Brown Bat, Photo by Kristi DuBois

As the bark continues to split and separate from the trunk, bats roost and small birds build nests under the overhanging loose bark.



White-breasted Nuthatch

Large snags are especially important to wildlife because they stand longer and provide more area for cavity nests and feeding. These snags are not easily replaced.

Live trees with broken tops are also very valuable as nesting sites.

Where to Get Additional Information

Wildlife habitat requirements vary from species to species. Habitat changes that benefit one species may affect other species. If you want to know more about what you can do to allow for wildlife needs, please seek additional information or planning assistance.

[Find your local DNRC Service Forester.](#)

[Contact Your Montana Fish, Wildlife, & Parks Regional Office.](#)

View additional information on the SMZ and BMPs at the [DNRC Forest Practices webpage.](#)

[View the Montana Field Guide](#) for information on distribution, status, and ecology of Montana's animals.

[Visit the Montana Natural Heritage Program's Map Viewer](#) to get reports on species.

[Visit MTForestInfo.org](#) for wildlife habitat management resources.

[Visit the G1-G2 Species Location Tool](#) for Supporting SFI Certified Timber Sourcing.

This publication was developed collaboratively by Montana DNRC and the Montana Forest Council's Committee for SFI.



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