



Featured Species Habitat Management Guidance for Red-shouldered Hawk

Latin Name: *Buteo lineatus*

Scope: Statewide

Rationale - *why we value the species and the problem for the species:*

The red-shouldered hawk (RSH) is listed as a state-threatened species and SGCN (Michigan DNR 2015). It is a USFWS, Region 3, conservation priority as a rare/declining species (1999). Although Michigan RSH populations are currently stable, they have not recovered from the “big cut” and early timber practices. It is thought that past declines were probably caused by the loss of forest cover, fragmentation of forests and the loss of preferred nest trees.

Habitat Need - *the cause & effect relationship between habitat and species and its primary limiting habitat need:*

Red-shouldered hawks nest in contiguous, mature, closed canopy, hardwood or mixed forests. Breeding territories average 225-438 acres (Jacobs and Jacobs, 2002). Bednarz and Dinsmore (1981) recommend maintaining woodlands averaging 304 acres of floodplain forest and 173 acres of upland forest within 3200 feet of a nest. Nesting habitat consists primarily of well-stocked pole or saw-timber stands with a closed canopy (80 - 100%) and basal area of at least 98 square feet/acre. Nests are usually found in deciduous trees with a mean DBH of 23 inches (Weber et al., 2007).

Habitat Objectives - *the treatment or management to address the primary limiting habitat need:*

The DNR Woodland Raptor Guidelines identify the following habitat objectives (MDNR, 2015):

- 1) (a) Active RSH nests will be buffered with a five-chain radius protection zone, in which there will be no cutting or new road construction; (b) an additional five-chain zone will be established, in which there will be no management activity from: February 15 to July 1 in the SLP, March 15 to July 15 in the NLP, and April 1 to July 30 in the UP; (c) within this 10-chain zone retain at least one-third of residues as per the Woody Biomass harvesting Guidance (MDNR IC4069 2010).
- 2) Inactive RSH nests will be protected with a one-chain no harvest buffer.
- 3) In uneven-aged management, (a) encourage large contiguous blocks (usually >300 acres comprised of one or more stands) of relatively mature, northern hardwood and mixed hardwood-conifer with moderate (about 70%) canopy closure; (b) retain as within-stand retention (MDNR IC4119 2012) mature trees for future nests, existing stick nests, snags, and coarse woody debris. Where possible retain a minimum of one large-diameter deciduous tree (other than beech) per 5 acres, and with a preference for multi-crotched trees high in the canopy.
- 4) In even-aged management, apply Within-Stand Retention Guidance, retaining patches of several large-diameter deciduous trees (especially multi-crotched trees high in canopy).
- 5) Manage prey base by maintaining appropriate levels of coarse woody debris as per Within-Stand Retention Guidance (MDNR IC4119 2012).

Priority Geographic Areas – *the specific geographic areas where we should focus management for the species:*

Current and recent nest sites recorded by the Michigan Natural Features Inventory; the Gaylord, Newberry, and Pigeon River Country Forest Management Units; Manistee County; Allegan SGA; and the 16 Regional State Forest Management Plan Management Areas (3 WUP, 5 EUP, and 8 NLP), which list RSH as a featured species.

Priority Landscapes – *the landscape, setting, or cover-type where we should focus management within the areas above:*

Deciduous or mixed deciduous-conifer stands with or adjacent to floodplains or wetlands.

Population Goal - *the goal for the species, its habitat, or a stakeholder's actions:*

Maintain or increase number of RSH pairs in priority landscapes.

Evaluation Method - *the monitoring method to measure progress towards the goal above:*

1) Because the BBS is not likely to adequately assess RSH populations, propose monitoring populations in priority geographic areas every 5 years using call playbacks. 2) Propose assessing the amount of preferred forests and the degree of fragmentation in mature hardwood and mixed hardwood stands every 10 years.

Incidental Species – *other species which may benefit from management for this species:*

American marten; northern goshawk; pileated woodpecker; and red-headed woodpecker.

References - citation for documents referenced in this guidance:

- Bednarz, J.C. and J.J. Dinsmore. 1981. Nest-site and habitat of red-shouldered and red-tailed hawks in Iowa. *Wilson Bull.* 94:31-45.
- Jacobs, J.P. and E.A. Jacobs. 2002. Conservation Assessment for Red-shouldered Hawk (*Buteo lineatus*) National Forests of North Central States. U.S. Dept. of Agri. Forest Service Eastern Region. 100pp.
- Michigan Department of Natural Resources. 2010. Michigan Woody Biomass Harvesting Guidance. IC4069. Michigan Department of Natural Resources, Lansing, MI. 39pp.
- Michigan Department of Natural Resources. 2015. Woodland Raptor Guidelines (final) Michigan Department of Natural Resources, Lansing, MI. 4 pp.
- Michigan Department of Natural Resources. 2012. Within-Stand Retention Guidance. IC4119. Michigan Department of Natural Resources, Lansing, MI. 18pp.
- Michigan Department of Natural Resources (DNR). 2015. Michigan Department of Natural Resources (DNR) online list of Frequently Asked Questions on the 2009 Revision of the State Endangered Species List. < http://www.michigan.gov/dnr/0,1607,7-153-10370_12141-213610--_00.html >. Accessed 9 Sept. 2015.
- Weber, C., D. Cuthrell, and J. Cohen. 2007. Microhabitat characteristics of the Red-shouldered Hawk in managed hardwood forests in Northern Lower Michigan. Report to the Michigan Depart. Of Natural Resources, Forest, Mineral, and Fire Management Division. MNFI report 2007-03. 19 pp. + appendices.