



Featured Species Habitat Management Guidance for White-Tailed Deer

Latin Name: *Odocoileus virginianus*

Scope: Statewide

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

White-tailed deer are a cultural keystone species (Garibaldi and Turner 2004) and the most highly valued game species in Michigan, with the largest number of participants and stakeholder groups. In 2013, 662,000 hunters spent 9.2 million days afield hunting deer (Frawley 2014). Deer are most limited by overwinter survival. Mortality in severe winters has exceeded 100,000 (30%) in the UP and 80,000 (15%) in the NLP (Langenau 1996). Habitat is generally not limiting in the SLP, where a milder climate and better year-round nutrition support more abundant and productive deer (Ozoga et al. 1994). The greatest challenge in the SLP is providing adequate hunting access, where the human population is densest but only 3% of land is in public ownership (Donovan et al. 2004).

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

UP & NLP: 60 to 90% of deer migrate to wintering complexes (Nelson and Mech 1981; Van Deelen 1995; Sitar et al. 1998). This behavior is less pronounced in the NLP (Beyer et al. 2010). The most used wintering complexes are conifer-dominated stands with >50% canopy closure, within 400 yards of hardwood browse (Ozoga 1968; Verme 1973; Morrison et al. 2003). Nutritious spring forage, particularly in spring breakout areas adjacent to wintering complexes, is critical to recovery from winter stress and to support the last trimester of pregnancy (Beyer et al. 2010). SLP: Abundant fall food and escape cover on public lands can increase deer use and quality deer hunting.

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

UP and NLP: Habitat priorities in priority wintering complexes should include timber sales and non-commercial treatments prescribing: (a) ≥50% of total forest cover in primary conifer (hemlock & white-cedar) ≥35 ft tall with >50% (ideally ≥70%) canopy closure; (b) mixed stands of secondary conifer cover (white spruce, black spruce, balsam fir, & white pine) ≥35 ft tall; (c) winter forage adjacent to conifer cover as regenerating hardwoods (red maple, aspen, yellow birch, ash, oak) or palatable shrubs (dogwood, crabapple, elderberry, high-bush cranberry, sumac, hazel) (Ozoga et al. 1994, Beyer et al. 2010); (d) access to hardwood winter browse by maintaining a mature mesic conifer components within adjacent hardwood stands or sheltered travel corridors ≥5 chains in width between conifer cover and browse; (e) spring breakout areas with herbaceous openings or open hardwood stands on southern exposures adjacent to wintering complexes; and (f) in the NLP emphasize widely distributed hardwood browse (c & e above) over thermal cover. SLP: Provide fall foods (mast or food plots) and dense escape cover or bedding areas (regenerating forests, brush, and warm-season grasses) that attract deer to state wildlife/game areas.

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

UP and NLP: High and medium snowfall zones with average accumulation >15 inches; the 70 Regional State Forest Management Plans Management Areas (18 WUP, 19 EUP, and 33 NLP) and the 15 WLD Project Areas (4 UP, 11 NLP), which identify white-tailed deer as a featured species. SLP: State lands open to hunting, (excluding managed waterfowl & pheasant areas); and the 48 WLD Project Areas (18 SELP, and 30 SWLP), which identify white-tailed deer as a featured species.

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

UP: (a) known wintering complexes and (b) areas where regionally significant wintering habitat occurs. NLP: (a) major river corridors; (b) areas with the greatest potential for thermal cover (Felix et al. 2004); and (c) mixed hardwood-conifer stands of significant size which provide access for widely distributed deer to shelter and food at the same time. Give higher priority to state lands, followed by other public lands, and finally private lands. SLP: wherever possible.

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

UP and NLP: improved condition of deer utilizing managed wintering complexes.

SLP: improved sighting rates of deer and hunter satisfaction on state wildlife/game areas.

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

UP: develop condition index (yearling beam diameter) for bucks associated with managed wintering complexes. NLP counties with the largest proportion of actively managed state forest: trends in condition indices following treatments. SLP: develop surveys of hunter satisfaction and deer sighting rates. Compare difference between managed and unmanaged areas.

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

American marten; Blackburnian warbler; gray jay; red crossbill; snowshoe hare; spruce grouse; and wild turkey.

References - *citation for documents referenced in this guidance:*

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