MICHIGAN DEPARTMENT OF NATURAL RESOURCES – www.michigan.gov/dnr
Wildlife Division

Featured Species Habitat Management Guidance for

Moose

Latin Name: *Alces alces* **Scope:** Upper Peninsula

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

Moose are highly valued by Michigan's citizens, hunters, and wildlife enthusiasts. The moose population continues to grow at a disappointedly slow rate in Michigan's Upper Peninsula (UP) though the reasons for this are unclear and may be related to habitat limitations and increasing temperatures making the animals less fit (Beyer 2014). Any possible future open hunting season may depend upon higher moose numbers.

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

Temperatures above 57 °F are known to stress moose (Beyer 2014). The metabolic costs of that stress and balancing the need to both feed and keep cool during summer may lower the reproductive fitness of female moose. Habitat improvements focusing on the maintenance of a balance of early successional aspen and northern hardwood stands along with protection and enhancement of suitable wetland habitats through the use of buffers may allow moose populations to grow more quickly (Franzmann and Schwartz 1997). Willow is an important browse species, as are submergent and emergent aquatic vegetation associated with summer feeding areas (OMNR 2010).

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

1) Maintain early successional aspen and northern hardwood browse adjacent to closed canopy lowland conifer swamps and the edges of lakes, bogs, and rivers.
2) Within stands, maintain hemlock which moose use as shade in the summer.
3) Use buffers along riparian and wetland edges to protect preferred food sources.

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

The 8 Regional State Forest Management Plan Management Areas (Covington-Ned Lake, Net River, Peshekee Highlands, Charcoal Grade, Cusino Complex, Seney-Manistique Swamp, Tahquamenon River Patterned Fens, and Whitefish-Vermillion Point), which list moose as a featured species.

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

Hardwood and aspen stands associated with closed canopy conifer swamps; edges of lakes, bogs, and river corridors.

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

General increase in population numbers.

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

Aerial surveys for moose every three years.

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

None identified.

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

Franzmann, Albert W. and Charles C. Schwartz, editors. 1197. Ecology and Management of the North American Moose. Wildlife Management Institute. 731 pp.

Beyer, D. 2014. Personal communication with Michigan Department of Natural Resources (DNR). Wildlife Specialist Dean Beyer regarding moose viability and population level trends in the Upper Peninsula.

OMNR. 2010. Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales. Toronto: Queen's Printer for Ontario. 211 pp.