



## Featured Species Habitat Management Guidance for Elk

**Latin Name:** *Cervus elaphus canadensis*

**Scope:** Northern Lower Peninsula

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

Elk were part of Michigan's historic fauna, but were extirpated from the state by about 1875. They were re-introduced into the current range in 1918 in the northern Lower Peninsula (NLP). By the mid-1960's elk were abundant enough to provide the base for a sizable tourist business, and establish a hunt, but were a cause for concern to local agricultural and forest resource managers (Moran 1973). Today, elk are still an important component of the landscape for tourism and the annual hunt draws over 35,000 applicants yearly for 100-400 permits. The problem is balancing the desire for large numbers of elk for tourism and hunting while minimizing the negative impacts of elk on agriculture and forestry and keeping them within the elk management area.

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

Ruhl (1984) found that elk used open areas and regenerating deciduous stands proportionately more than available. Walsh (2007) noted that mast crops, especially acorns, may affect habitat utilization. It is thought that providing better habitat within the elk range will reduce the numbers of elk becoming a nuisance off the range.

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

The goals of habitat management in the elk range are described in the 2007 Pigeon River Country Concept of Management:

- 1) Maintain 7-8 percent of the forest cover types managed by even aged management in the 0-9 year old age class;
- 2) Maintain the existing aspen component of the forest;
- 3) Increase the amount of opening and upland brush to 6-7 percent of the range;
- 4) Increase the oak mast producing component (red oak, white oak, and northern pin oak) where ecologically appropriate to offset the loss of beech mast; and
- 5) Manage for mixed pine-hardwood stands using natural regeneration.

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

The elk range boundary is described as bounded on the north by highway routes M-68 & M-33; on the east by M-33; on the south by M-32 & County Road 620 (Old State Rd.), Meridian Line Road, Beckett Road, Whitehouse Trail, and White Marsh Road; and on the west by US Interstate-75.

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

Aspen cuts, openings, and upland brush are managed as a dynamic mosaic with cuts creating openings that succeed to brush, then young forests, and eventually mature forests.

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

- 1) The goal for elk set by the NRC is 500-900 animals.
- 2) Cover types within elk range should include: 6-7% grass or upland brush; 26% aspen in a variety of age-classes; and an increase in hard mast producing trees.

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

- 1) An aerial survey every other year is currently used to monitor the elk population and gives us a snapshot of distribution.
- 2) Measurement of acres of aspen, openings, oak and upland brush on state land can be done through normal forest inventory procedures. Assessment of forest inventories should begin in 2015 and thereafter every five years.

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

American woodcock; black bear; eastern bluebird; golden-winged warbler; ruffed grouse; wild turkey; and white-tailed deer.

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

- Beyer, D.E. 1987. Population and Habitat Management of Elk in Michigan. Dissertation, Michigan State University, East Lansing, Michigan, USA
- Michigan Department of Natural Resources (DNR). 2007. A Concept of Management for the Pigeon River Country. Lansing, Michigan, USA
- Michigan Department of Natural Resources (DNR). 2012. Michigan Elk Management Plan. Lansing, Michigan, USA
- Moran, R.J. 1973. The Rocky Mountain Elk in Michigan. Michigan Department of Natural Resources, Wildlife Division Report 267, Lansing, Michigan, USA
- Ruhl, J.D. 1984. Elk Movements and Habitat Utilization in northern Michigan. Thesis, Michigan State University, East Lansing, MI, USA