



Featured Species Habitat Management Guidance for Black-throated Blue Warbler

Latin Name: *Setophaga caerulescens*

Scope: Northern Lower Peninsula

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

The Black-throated blue warbler (BTBW) is a Michigan Species of Greatest Conservation Need (Michigan DNR 2015; Eagle et al. 2005), a United States Fish and Wildlife Service Region 3 Resource Conservation Priority (US Fish and Wildlife Service 2008), and a Partners in Flight Priority Bird Species (Mattson et al. 2009). U.S. Geological Survey Breeding Bird Survey data indicates a non-significant population increase in Michigan, though results are based on very small sample sizes and low detection rates (Sauer et al. 2014). The BTBW is of conservation importance in Michigan because of its limited range and low densities in suitable habitat. Associations of the bird with larger stand size and diverse vertical forest structure, especially in relation to forest management, are critical to conserving Michigan populations, focused in the northern Lower Peninsula (NLP).

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

BTBW is an area sensitive species (i.e. densities increase exponentially with increasing patch size) mainly occurring in mesic deciduous forest tracts > 50 years in age, > 250 acres in size, with a dense understory layer for nesting and foraging (Holmes et al. 2005).

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

- 1) Maximize forest interior by:
 - a. Increasing the portion of forest over 250 acres;
 - b. Minimizing edges (concentrating openings, oil and gas development, roads, and pipelines along the forest or stand edge); and
 - c. Providing canopy gaps through single tree and group selection harvest practices.
- 2) Managing stands to maintain or promote a well-developed shrub understory and limit over browsing by deer.

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

The 7 Regional State Forest Management Plan Management Areas (Benzie Moraines, Benzie Outwash, Chandler Hills, Emmet Moraines, Jordan Valley, Pigeon River Country, and Williamsburg Moraines), which identify BTBW as a featured species.

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

State forest lands containing mesic deciduous forest hardwoods.

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

Maintain stable BTBW breeding populations in priority landscapes as indicated by continued presence in occupied stands over the course of the planning cycle. Maintain at least 80% occupancy over the planning cycle.

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

Propose identifying adequate sample of breeding-season occupied stands in priority landscapes and monitor on an annual basis. Breeding season surveys should be conducted in early June, between 05:30am and 10:00am. In addition, annually monitor for breeding season presence in at least 50% of sample points randomly selected from northern hardwood stands in which a selection harvest was conducted between 5 and 10 years previous.

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

American marten, black bear, and northern goshawk.

References - citation for documents referenced in this guidance:

- Eagle, A.C., E.M. Hay-Chmielewski, K.T. Cleveland, A.L. Derosier, M.E. Herbert, and R.A. Rustem, eds. 2005. Michigan's Wildlife Action Plan. Michigan Department of Natural Resources. Lansing, Michigan. 1592 pp.
- Holmes, Richard T., N. L. Rodenhouse and T. S. Sillett. 2005. Black-throated Blue Warbler (*Dendroica caerulescens*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <http://bna.birds.cornell.edu/bna/species/087>
- Matteson, S., K. Kreitinger, G. Bartelt, G. Butcher, D. Sample, and T. Will. 2009. Partners in Flight Bird Conservation Plan for The Boreal Hardwood Transition (Bird Conservation Region 12 — U.S. Portion). Version 1.0. Partners in Flight.
- Michigan Department of Natural Resources (DNR). 2015. 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 09 Sept. 2015.
- Sauer, J. R., J. E. Hines, J. E. Fallon, K. L. Pardieck, D. J. Ziolkowski, Jr., and W. A. Link. 2014. The North American Breeding Bird Survey, Results and Analysis 1966 - 2012. Version 02.19.2014. USGS Patuxent Wildlife Research Center, Laurel, MD.
- U.S. Fish and Wildlife Service. 2008. Birds of Conservation Concern 2008. United States Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, Virginia. 85 pp.