



Featured Species Habitat Management Guidance for Bobolink

Latin Name: *Dolichonyx oryzivorus*

Scope: Statewide

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

The bobolink is a Species of Greatest Conservation Need (Eagle 2005; Michigan DNR 2015). Breeding Bird Survey data for Michigan indicates an average annual decline in bobolinks of 4.6% per year over the past 46 years (Sauer et al. 2014). Declines are thought to be due to a loss and degradation of suitable nesting habitat caused by the conversion of grassland to other cover types and changes in grassland agricultural practices such as harvesting during the breeding season and multiple harvests per year (Martin and Gavin 1995). Declines have been correlated to declines in acres of forages such as alfalfa, oats, hay, and pastures (Dechant 2003).

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

Preferred nesting habitat is described as:

- 1) Moderate to tall (7 - 30") grasslands;
- 2) With moderate (.5 to 3.5") deep litter;
- 3) High percent grass cover, moderate percent forb cover; and
- 4) Without the presence of woody vegetation (Dechant et al. 2003).

The presence of forbs improves insect diversity for food; however they prefer high grass-to-forb ratios and avoid high forb-to-grass ratios (Martin and Gavin, 1995; Dechant 2003). Bobolink abundance increased as hayfields aged; old hayfields (> 3 years old) had sparser, patchy vegetation with a high litter cover (Dechant 2003) and fields with relatively low amounts of total vegetative cover (Martin and Gavin 1995). Although breeding territories range from 1 to 6 acres, bobolink do not occupy grasslands until they reach the 25 to 75 acre size (Dechant 2003). The bobolink is an area sensitive species because density increases with patch size; 75-acre fields support twice as many males per 100 meter transect as 25-acre fields (Martin and Gavin 1995).

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

- 1) Increase grassland field size (to a minimum of 75 acres) and decrease the amount of forest or agricultural edge so as to reduce the area to edge ratio.
- 2) Mow or burn patches every 2-3 years to prevent woody vegetation. Avoid mowing or burning during the breeding/fledging seasons (May through July), which results in near total loss of eggs and nestlings. Treatments can be done several weeks prior to arrival of migrants in the spring.
- 3) Mow or burn no more than one third of grassland patches per year to allow for undisturbed refugia where birds can nest while disturbed areas recover.

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

The entire State of Michigan.

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

Grassland complexes larger than 75 acres. Grasslands adjacent to alfalfa, small grain, or pasture. Prairies, CRP lands, waterfowl production areas, hayfields, old fields, or wet meadows. Shrubland which can be converted to open grassland types.

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

The goal is to increase the number bobolink.

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

Annually assess statewide population trends in Breeding Bird Survey data.

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

Eastern bluebird; eastern cottontail; ring-necked pheasant; sharp-tailed grouse; and upland sandpiper.

References - citation for documents referenced in this guidance:

- Dechant, J.A., M.L. Sondreal, D.H. Johnson, L.D. Igl, C.M. Goldade, A.L. Zimmerman, and B.R. Euliss. 2003. Effects of management practices on grassland birds: Bobolink. Northern Prairie Wildlife Research Center, Jamestown, ND. 24 pages.
- 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. <http://www.michigan.gov/dnrwildlifeactionplan>
- Martin, S.G. and T.A. Gavin. 1995. Bobolink (*Dolichonyx oryzivorus*). in The Birds of North America, No. 176. (A. Poole and F. Gill, eds.) The Academy of Natural Sciences, Philadelphia, PA and The American Ornithologists' Union, Washington, D.C.
- 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. 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.