



Featured Species Habitat Management Guidance for American Bittern

Latin Name: *Botaurus lentiginosus*

Scope: Statewide

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

The American bittern (AB) is listed in Michigan as a species of special concern and SGCN (Michigan DNR 2015). It is also listed as a priority species by the UMRGLR Joint Venture. The Breeding Bird Survey (BBS) has documented for Michigan an average decline of 5.1% per year between 1966-2007 (Sauer et al. 2008). The loss and degradation of wetlands suitable for nesting is the major cause of these declines (Gibbs et al. 1992).

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

Breeding habitat is primarily shallow wetlands and adjacent upland grasslands. AB are most frequently located in wetlands with open water in the center, a band of emergent vegetation around periphery, and idle grassland in the adjacent uplands (Weber 1978; Weber et al. 1982). Wetlands with nests had on average: water depths of 4 inches; vegetation stem densities > 100 stems/m²; and vegetation height in excess of 40 inches (Gibbs et al. 1992). Nests in upland grasslands were found in vegetation 12 to 40 inches in height and were within 330 feet of water (Dechant et al. 2003). Suitable wetlands are between 10 and 450 acres in size, with wetlands greater than 25 acres being used more frequently than smaller wetlands (Gibbs et al. 1992).

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

- 1) Maintain hemi-marshes, with open water surrounded by emergent vegetation. Optimal hemi-marsh sites for AB are > 10 acres with the emergent vegetation portions having average water depths of 4 inches and a 4 to 1 ratio of adjacent grassland to hemi-marsh.
- 2) Maintain wetland/upland complexes of > 50 acres (Dechant et al. 2003).
- 3) Maintain water levels throughout breeding season (April – August).

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

The UMRGL Region Joint Venture priority waterfowl breeding and non-breeding areas; the DNR managed waterfowl/wetland areas around Saginaw Bay, Lake St. Clair, and Lake Erie (Fish Point SWA, Nayanquing Pt. SWA, Pt. Mouillee SGA, Quanicassee SWA, St. Clair Flats SWA, St. John's Marsh SWA, Tobico Marsh Unit of Bay City SRA, Wigwam Bay SWA, Wildfowl Bay SWA); and the 7 Regional State Forest Management Plan Management Areas (Kinross Bog, Muniscong Bay, Waishkey Bay, Au Sable Outwash, Manistee River Valley, Ogemaw Hills, and Upper Muskegon) and 18 WLD Project Areas which identify American bittern as a featured species.

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

Lakes, ponds, impoundments, or floodings, with marshes and adjacent grasslands.

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

The American bittern population goal for Michigan set by the Upper Mississippi River and Great Lakes Region Joint Venture is 906 birds (Soulliere et al., 2007). Of these 695 should be in BCR 12, 209 should be in BCR 23, and 2 should be in BCR 22.

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

Annually evaluate statewide AB population trends in BBS and North American Marsh Bird Surveys.

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

Eastern fox snake; mallard; and ring-necked pheasant.

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

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- Michigan Department of Natural Resources (DNR). 2015. Michigan Department of Natural Resources (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 9 Sept. 2015.
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