

Upper Mississippi River and Great Lakes Region Joint Venture

Joint Venture Description and Priorities

The Upper Mississippi River and Great Lakes Region Joint Venture (Joint Venture) encompasses all or portions of ten states and six Bird Conservation Regions (BCRs) (Figure 1). It contains unique and important wetland bird habitats, including the nation's only inland coastal area – the Great Lakes – as well as floodplains and interior wetlands associated with four major river systems – the lower Missouri, upper Mississippi, Illinois, and Ohio. Landscape cover in the north and east is heavily forested and comprised of thousands of glacial lakes, herbaceous and forested wetlands, and beaver ponds. Agriculture dominates vast areas in the west and south, much of which was once tall-grass prairie. Here, river floodplain wetlands dominate and few natural basins exist; this area has experienced the greatest degree of regional wetland loss. Priority species across the region include Lesser Scaup, American Black Duck, Greater Prairie-chicken, American Woodcock, American Bittern, Yellow Rail, Piping Plover, Common Tern, and Henslow's Sparrow.



Conservation Design Approach

The Need. Joint Venture partners undertake strategic planning to prioritize target areas and formulate habitat objectives linked to population objectives. Conservation design is an essential part of this process because it results in products that provide specific guidance to help wildlife professionals and others make effective landscape management decisions. Joint Venture partners believe these products will not only improve bird habitat conservation decisions, but also accountability for those decisions. In essence, conservation design allows Joint Venture partners to scientifically determine “what, where, when, and how much” conservation effort is required to achieve explicitly stated goals. For these products to be effective, however, they need to be understandable by all involved stakeholders.

The Tools. Products most commonly take the form of decision-support maps based on multiple biological and spatial data inputs and associated biological models. Specific examples of decision-support tools used by Joint Venture partners include simple abundance and distribution maps based on survey data (Figure 2) or landscape suitability index maps that integrate survey data with spatial data and a habitat suitability model (Figure 3). Because of the visual power of maps, the quality of spatial data and model information is of primary concern.

The Benefits. The JV has recently developed better conservation design capabilities and tools that are being incorporated into a revised Implementation Plan. State-level planners and wildlife

Conservation Design

managers overseeing multi-county regions should find these bird-habitat planning products useful. The information being presented in the revised Implementation Plan is expected to have cross-programmatic value, especially with environmental reviews, land acquisition and conservation easements, and land-use policy development.

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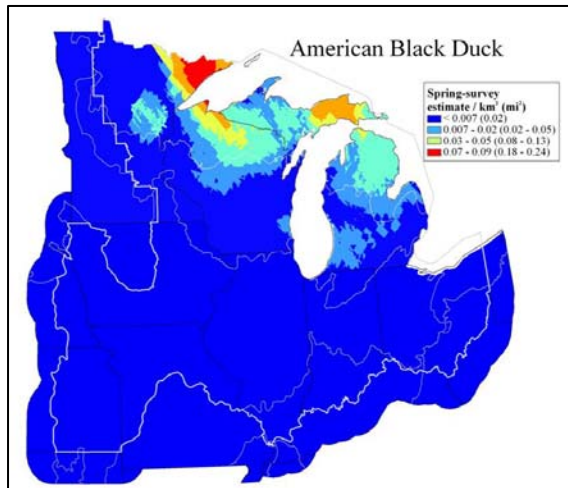


Figure 2. Black duck breeding abundance and distribution based on interpolations of average density estimates from the aerial Spring Waterfowl Population and Habitat Survey, 1996-2005, and special black duck surveys, 1991-1993.

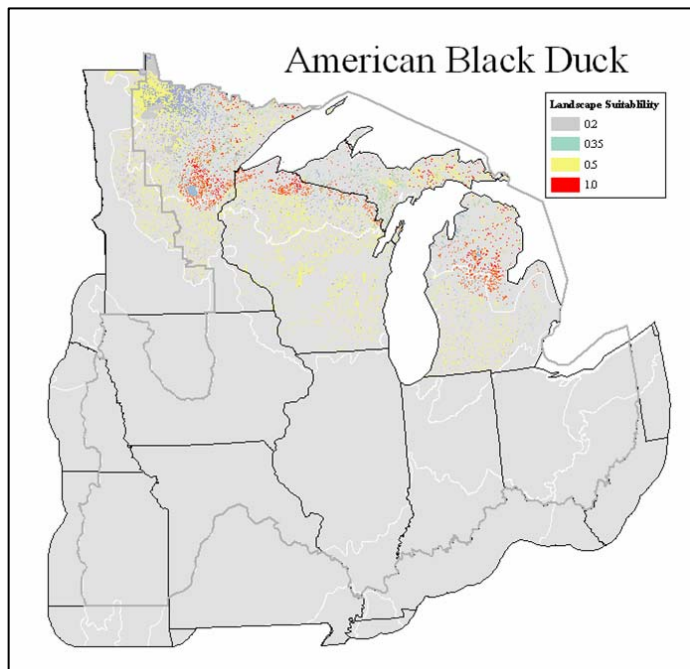


Figure 3. Landscape suitability index for breeding black ducks. Scores closer to 1.0 represent greater value for Black Ducks.

Biological model output options	LSI score
Emergent marsh and littoral aquatic areas and palustrine forested and scrub-shrub deciduous wetlands >5 ha.	1.0
Riverine systems	0.7
Palustrine forested and scrub-shrub conifer and lake/pond aquatic bed and unconsolidated shore >5 ha.	0.5
Lake/pond unconsolidated bottom and lake/rocky shore.	0.4