Ohio All-Bird Conservation Plan

Executive Summary

OHIO BIRD CONSERVATION INITIATIVE

Over the last 15 years, conservation plans have been developed for waterbirds, waterfowl, shorebirds, and landbirds at both national and regional scales. This Ohio All-Bird Conservation Plan of the Ohio Bird Conservation Initiative (OBCI) has been "stepped-down" from conservation plans developed by the Upper Mississippi River and Great Lakes Region Joint Venture (UMRGLRJV). These include conservation plans for shorebirds (Potter et al. 2007a), landbirds (Potter et al. 2007b), waterbirds (Soulliere et al. 2007a), waterfowl (Soulliere et al. 2007b), and the UMRGLRJV Implementation Plan (UMRGLRJV 2007).

The Ohio All-Bird Conservation Plan is a collaborative effort among members representing numerous organizations that serve on the Ohio Bird Conservation Initiative's Conservation Planning and Research Committee. This plan has two main functions: to summarize existing national and regional plans, and to provide guidance for future bird conservation efforts in Ohio.

GOALS OF THE PLAN

1. **Summarize UMRGLRJV Habitat Conservation Strategy plans for shorebirds, waterbirds, waterfowl, and landbirds, and step-down population and habitat goals to Ohio**
2. **Prioritize a species list that identifies Ohio species that are at risk in the state, region, and across the continent**
3. **Identify research and monitoring projects needed to sustain bird populations and habitats in Ohio**
4. **Identify funding sources to encourage development of collaborative conservation projects among OBCI partners**

PLAN CHAPTERS

The Plan contains five chapters; Chapters 1-4 summarize UMRGLRJV Conservation Strategy plans for shorebirds, waterbirds, waterfowl, and landbirds, respectively. Chapter 5 is the OBCI Implementation plan which describes Ohio, OBCI, regional and continental bird conservation plans, and a summary of habitat objectives from the four bird groups covered in chapters 1-4.

Chapter 1: Shorebird Plan

Shorebirds (Order Charadriiformes) include diverse groups such as plovers, avocets, stilts, and sandpipers. Ohio is primarily used by shorebirds during spring and fall migration with approximate peaks of shorebird abundance occurring from late April-June and July-October. Most shorebirds using Ohio are long-distance migrants that require suitable wetlands where they can periodically stop to replenish their energetic reserves. These staging areas must have water less than 20 cm (<8 inches) in depth or mud flats, sparse vegetation (<25% cover), undisturbed resting areas, and abundant invertebrate food resources to meet the habitat needs and high energy demands of migratory shorebirds.

Conservation planning for shorebirds is difficult given the unpredictable nature of their migration routes and stopover duration, but the UMRGLRJV has established a scientific process for habitat objective-setting that includes identification of assumptions. To link population and habitat objectives for a diverse group like shorebirds, breeding and non-breeding focal species were selected for habitat planning.

Focal Species

Non-Breeding	**Breeding**
American Golden-Plover	Killdeer
Dunlin	Wilson's Snipe
Short-billed Dowitcher	
Upland Sandpiper	

Killdeer, Photo: ODNR Div. of Wildlife

Habitat Objectives

Habitat types important to breeding and migrating shorebirds in Ohio include natural and managed wetlands, flooded agricultural fields, floodplains, sand, and gravel bars of rivers, and shorelines and mudflats of lakes and reservoirs. In addition, open shrubland / shrub/sapling-stage forest are important habitats for breeding and foraging American Woodcock, whereas extensive grassland habitats are required by breeding Upland Sandpipers.

The goals set by the UMRGLRJV Shorebird Conservation Strategy are based on focal species. Habitat objectives for Ohio are to protect 8,468 ha for breeding shorebirds and 7,153 ha for migrating shorebirds. Restoration objectives are to restore 11,950 ha for breeding shorebirds and 5,500 ha for migrating shorebirds.

Research and Monitoring Objectives

Monitoring objectives include the development of a monitoring program to validate and improve estimates of breeding and migrating shorebird populations and trends, with an emphasis on focal species. This effort will include estimates of population size, migration timing, duration of stay, and use- days for migrating species and status and trends of breeding species. Research needs for shorebirds include building and refining biological models for breeding populations, development of bioenergetics models, and tracking migratory habitat use.

Chapter 2: Waterbird Plan

The term "waterbird" refers to colonial nesting birds (herons, egrets, terns, gulls and cormorants), secretive marshbirds (rails, bitterns and cranes), and loons and grebes that are most often associated with wetland and open-water habitats. The most productive area for waterbirds in Ohio is within the marshes of the Western Lake Erie basin, an area that was once the Great Black Swamp. Also, many species spend the non-breeding season along the shores of Lake Erie, while some species are here only during migration.

Common tern, Photo:ODNR Div. of Wildlife

Focal Species

The UMRGLRJV chose five focal species as the basis for their biological models and habitat objectives. These focal species are representatives of the major habitat types found in Ohio which include: seasonal herbaceous wetland and meadows, shallow semi-permanent marshes, deep-water marshes and open water, herbaceous seasonal and hemi marsh with forest, island/shorelines with little or no vegetation.

Focal species by general community preference for breeding habitat

Seasonal herbaceous wetlands and wet meadows	**Shallow semi-permanent marshes**	**Deep-water marshes and open water, islands with herbaceous or brush**	**Herbaceous seasonal and hemi-marsh wetlands with associated forest or forested/brushy islands**	**Islands or shoreline with little or no vegetation surrounded by extensive open water**
King rail Yellow rail	King rail Black tern	Black tern	Black-crowned night-heron	Common tern

Habitat Objectives

Habitat goals and objectives are based on desired population numbers for the JV focal species. Objectives for Ohio are protection of 1600 ha of shallow semi-permanent marsh and herbaceous wetlands and 300 ha of deep water marsh. Restoration objectives for Ohio are to restore 300 ha each of shallow semi-permanent marsh, deep water marsh, and herbaceous wetlands. Targeting areas along Lake Erie and within Western Lake Erie basin for protection, restoration, and enhancement will enhance habitat for
migratory, wintering and breeding waterbirds.

Research and Monitoring Objectives

Monitoring goals include adopting standard methodologies for surveying waterbirds and identifying gaps in current population survey efforts. Research needs for waterbirds include understanding habitat requirements of waterbird groups, identification of critical migration staging areas, understanding the effects of invasive plant species, and updating land-cover inventories to enhance conservation planning.

Chapter 3: Waterfowl Plan

Wood duck, Photo: ODNR Div. of Wildlife

There are a variety of waterfowl species that use Ohio for wintering, migrating and breeding. Ohio's most important role in providing habitat is for migratory and wintering waterfowl.

To link population and habitat objectives for this diverse bird group, several focal species were selected for waterfowl breeding habitat planning and monitoring. Each focal species represents a primary cover type and waterfowl guild, an assemblage of species that share similar life requisites. Also, these species have well known life histories and are dependent on the area. Likewise, foraging guilds that correspond to different cover types were selected for habitat planning during the non-breeding period.

Focal Species

Breeding habitat	Non-breeding habitat	
Mallard	Mallard	
Blue-winged Teal	Blue-winged Teal	Lesser Scaup
Wood Duck	Wood Duck	Canvasback
American Black Duck	American Black Duck	Tundra Swan

Habitat Objectives

Habitat objectives are linked to population goals for waterfowl focal species. The main goal for this strategy is to not only maintain waterfowl breeding populations, but also to increase the health of migrating and wintering waterfowl, which will productively affect survivorship and recruitment. The UMRGLRJV suggests maintaining/protecting total of 88,246 hectares for breeding and non-breeding waterfowl in Ohio. Shallow semi-permanent marsh/hemi-marsh has the highest need for protection, with the statewide goal set at 50,121 ha for non-breeding waterfowl (36,111 for breeding waterfowl). Ohio objectives include protecting and maintaining approximately 3,800 ha of deep water marsh, 7,100 ha of marsh associated with forest, and about 26,100 ha of open water.

Blue-winged teal, Photo: ODNR Div. of Wildlife

Research and Monitoring Objectives

Monitoring objectives for waterfowl include expanding and integrating surveys of species abundance and environmental factors. Research needs include identifying landscape-scale population limiting factors, quantify carrying capacity, improve understanding of migratory corridors, and determine optimum spatial arrangement of wetland types within a landscape.

Chapter 4: Landbird Plan

The term "landbird" refers to a diverse group of species that are typically associated with non-aquatic habitats (e.g., forests, grasslands, bottomlands, prairies, riparian forests, and shrublands). Birds in this group include: songbirds, woodpeckers, raptors, owls, nighthawks, vultures, nuthatches, swallows, swifts, and hummingbirds. Ohio has over 170 species of landbirds that regularly breed within the state, with many more that are regular migrants.

To link population and habitat objectives for this diverse bird group, focal species were selected for breeding and non-breeding habitat planning and monitoring. Each focal species represents a primary cover type and landbird guild.

Focal Species

Whip-poor-whill	Chimney swift
Red-headed woodpecker	Cerulean warbler
Yellow-breasted chat	Henslow's sparrow
Golden-winged warbler	Dickcissel
Eastern meadowlark	

Eastern Meadowlark, Photo: ODNR Div. of Wildlife

Habitat Objectives

Habitat goals and objectives are based on desired population numbers for focal species. Maintenance and protection goals for Ohio include maintaining and protecting 1,092 km^2 of deciduous forest, 4 km^2 of forested wetland, 5,100 km^2 of shrublands, 1,939 km^2 of grassland and 2,933 km^2 of mixed-wooded openland. The restoration and enhancement goals for Ohio include maintaining and protecting an additional 890 km^2 of deciduous forest, 2 km^2 of forested wetland, 2,826 km^2 of shrublands, 1,939 km^2 of grassland and 193 km^2 of mixed-wooded openland.

Conservation Strategies

Several strategies were identified by the UMRGLRJV to provide land managers with guidelines for maintaining and increasing landbird populations of conservation concern. These strategies have been adapted for Ohio and include: 1) Promoting "best practices" guidelines for land managers and planning across ownerships to ensure viable breeding populations of all landbirds in the region, (2) Focusing on land supporting viable populations of focal species in relatively unfragmented landscapes, and (3) Seeking partnerships to create vegetation patches on small parcels, privately owned or municipal lands along the Lake Erie shoreline.

Research Objectives

Research objectives include identifying landscape and habitat characteristics associated with high productivity, identifying migratory stopover sites, and improving the understanding of landscape- and fine-scale habitat attributes important to focal species.

Chapter 5: Implementation Plan

The goal of the implementation plan is to summarize the combined habitat needs for the four bird groups for the Upper Mississippi River and Great Lakes Region Joint Venture (UMRGLRJV) region and Ohio using habitat objectives stepped-down by the UMRGLRJV (2007). This plan improves our potential for strategic conservation design and delivery, as opposed to opportunity based conservation.

To set state-level habitat objectives for multiple species with different seasonal needs, a limited number of bird habitats were identified by the UMRGLRJV (2007), as were the seasons of greatest importance by bird group.

	Bird group				Period	
Cover type	Waterfowl	Waterbird	Shorebird	Landbird	Breeding	Non-breeding
Wet meadow with open water	X	X	X		X	
Shallow semi-permanent marsh, hemi-marsh	X	X			X	X
Wet mudflat / moist soil plants	X		X			X
Deep water marsh	X	X			X	X
Marsh with associated shrub / forest	X	X			X	
Beach			X		X	X
Dry mudflat / agriculture			X		X	X
Shallow water (<5 cm)			X		X	X
Moderate water (5–20 cm)			X		X	X
Extensive open water	X					X
Islands with limited vegetation		X			X	
Waste-grain field	X					X
Deciduous forest				X	X	
Shrubland				X	X	
Grassland				X	X	
Mixed wooded openlands				X	X	
Residential / commercial				X	X	

Habitat Cover Types

Decision-support maps were created to identify areas most valuable to birds at the regional scale. To identify priority conservation areas, focal species from the four primary bird groups were placed into three general breeding habitat categories (marsh wetlands, woodlands, and openland) and two non-breeding habitat categories (marsh/deep water and mudflat/shallows) (UMRGLRJV 2007). Conservation objectives for bird habitats were developed by the UMRGLRJV using two categories: “maintenance and protection” and “restoration and enhancement.” Maintenance and protection objectives equate to the area of habitat required to maintain populations in the region (UMRGLRJV 2007).

Breeding Habitat Cover Types

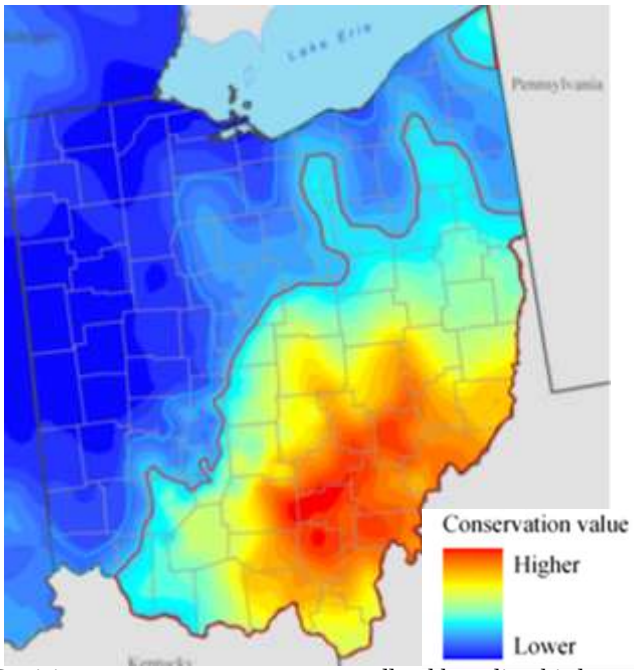
Marsh Wetlands

The marsh wetland category includes four cover types used for bird planning and habitat recommendations: 1) wet meadow with open water, 2) shallow semi-permanent marsh, hemi-marsh, 3) deep-water marsh, and 4) marsh with associated shrub/forest.

Decision-support map to target marsh-wetland breeding bird conservation effort.

Woodlands

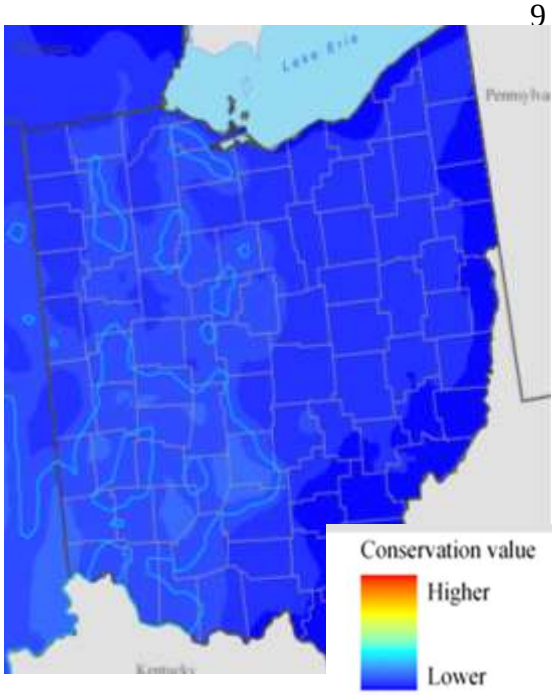
The woodland habitat category includes: 1) deciduous forest, 2) forested wetlands, 3) shrubland, and 4) "other forest". Other forest is a non-specific category for generalist species that can use deciduous forest, mixed deciduous forest, and or woody wetlands.



Decision-support map to target woodland breeding bird conservation effort. Locations encompassed by red line reflect existing important areas for greater habitat maintenance/protection emphasis, while areas within the blue line suggest a restoration / enhancement focus.

Openlands

The openland bird habitat category includes four cover types: 1) grassland, 2) mixed wooded openland, 3) dry mudflat / agriculture, and 4) beach.

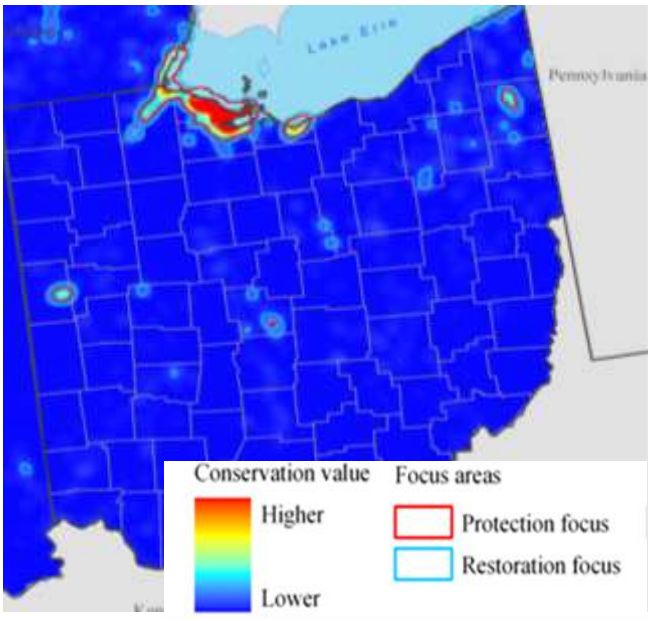


Decision-support map to target openland breeding bird conservation effort. Areas within the blue line suggest a restoration/enhancement focus.

Non-breeding Habitat Cover Types

Marsh/Deep Water

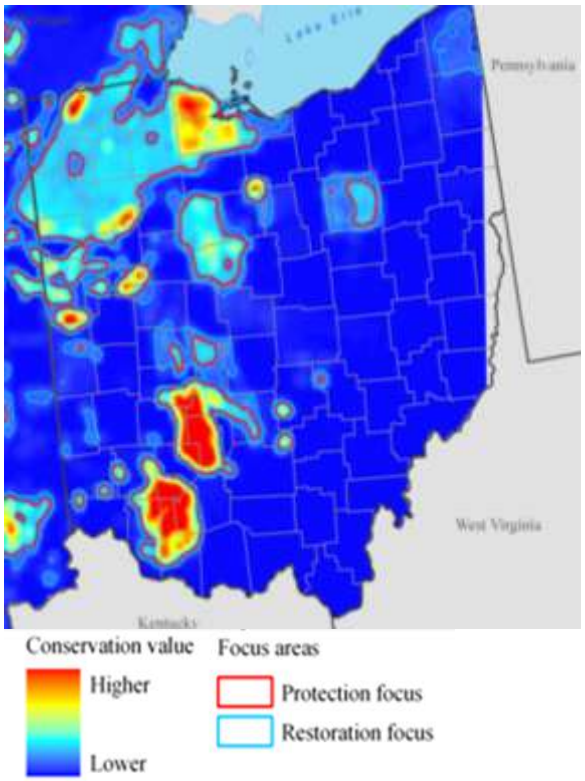
The marsh and deep water non-breeding habitat category includes three cover types: 1) shallow semi-permanent marsh / hemi-marsh, 2) deep water marsh, and 3) extensive open water.



Decision-support map to target marsh and deepwater conservation effort for birds during the non-breeding period.

Mudflat/Shallows

This category includes: 1) wet mudflat / moist soil plants, 2) dry mudflat / agriculture, 3) shallow water (<2 inches; 5 cm), 4) moderate water (2–4 inches; 5–20 cm), and 5) beach.



Decision-support map to target mudflat/shallows conservation effort for birds during the non-breeding period.

Funding Sources

Locating funding to work towards the conservation goals laid out in this plan is a very challenging task. However, OBCI partners have access to many funding sources for doing their conservation work. Over 45 programs based in federal, state and private organizations are provided for partners in Appendix F.

Literature Cited

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