

2014 Upper Mississippi River and Great Lakes Region Joint Venture Bird Habitat Conservation Accomplishments

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Introduction

Partners of the Upper Mississippi River and Great Lakes Region Joint Venture (JV) submit bird habitat accomplishments to the JV Science Office each year. Tracking partner conservation actions provides information on the land area influenced by the partnership, as well as a measure of funding expended to accomplish JV Implementation Plan objectives. An estimate of JV partner influence on bird populations is also a JV monitoring goal.

Our understanding of bird-habitat relationships will improve with consistent tracking of landscape change, including partner accomplishment. The 2007–2008 report form mirrored the level of cover type description in the 2007 JV Implementation Plan. Although this level of detail is ideal, several partner agencies struggled with reporting which resulted in inconsistent responses. To overcome this issue, partners were surveyed by JV staff to identify reporting impediments, and in 2009 a simplified reporting form was developed. Since then, reports have been completed more consistently but with less cover type (bird habitat) detail. We continue to use the simplified format.

2014 Accomplishments

JV partners reported 197,334 acres of bird habitat conservation, expending approximately \$63.6 million. Similar to previous years, bird habitat enhancement was the primary conservation action (73% of the reported area), followed by protection (14%), and restoration (13%).

Enhancement¹ highlights

- 43,910 acres of wetlands enhanced across the region
- 83% of emergent marsh enhancement (12,380 total acres) occurred in BCR 23
- 85% of mudflat and shallow water enhancement (31,200 total acres) occurred in BCR 22
- 100,150 acres of uplands enhanced across the region
- 65,990 acres of grassland enhanced, with 47,120 acres reported for BCR 22
- 34,160 acres of woodland enhanced, with 13,660 acres reported for BCR 23

Protection² highlights

- 2,310 acres of wetlands protected across the region; 82% were emergent marsh
- 1,520 acres of emergent marsh were protected in BCR 23
- 23,780 acres of uplands protected; 78% were woodland
- 56% of woodland acres were in BCR 23.

Restoration³ highlights

- 2,820 acres of wetlands restored across the region

¹ "Enhancement" is defined as increasing ecological functions and improving quality of degraded bird habitat with practices lasting for extended periods (>10 years). Work might include setting-back succession, controlling invasive plants, improving water quality resulting in increased forage, or other techniques that increase focal species recruitment and or survival.

² "Protection" is defined as any conservation action to protect an area of relatively high value to target bird species (i.e., JV focal species or guilds) through fee acquisition by a conservation organization or through private-land perpetual conservation easement.

³ "Restoration" is defined as reverting an altered site with low-value cover (i.e., annual row crop, agricultural/drainage wetland) to a perennial native-plant community with restored ecological functions and high value for focal bird species or guilds.

- 79% of acres were emergent marsh, with 1,309 acres reported for BCR 23.
- 22,850 acres of upland cover restored across the region
- 78% of upland restoration was grasslands, with 13,740 acres reported for BCR 23.
- 56% of restored woodland acres were reported for BCR 12

JV cumulative accomplishments since Implementation Plan completion (2007 – 2014)

Cumulative accomplishments are compiled for two categories: protection and restoration / enhancement. Protection accomplishments represent existing bird habitats now under management by a conservation organization through acquisition or long-term agreements (easements). Restoration / enhancement accomplishments represent additional new area available for target bird species through improved habitat quality via cover type manipulation. Since 2007, JV partners have restored or enhanced up to 1,548,200 acres across the region. Also during this time, 195,400 acres of bird habitat were protected. Comparing cumulative total accomplishments against 2007 JV Implementation Plan objectives, we can calculate the percent of JV Plan objectives achieved. These percentages were determined for restoration / enhancement objectives and are presented in Tables 1 (wetlands) and 2 (uplands). These percentages are not calculated for protection objectives because a complete assessment of protected area of various cover types before 2007 has not been completed. In addition, bird habitat losses during the assessment period were not determined but must be considered in a complete bird habitat accounting process.

JV science staff recently completed bird habitat assessments at the State x Bird Conservation Region scale. These [State x BCR Assessments](#), and accompanying Summaries, were developed to serve as a “stepped-down” version of the 2007 Joint Venture (JV) Implementation Plan. Bird habitat (cover type) conservation objectives at the State x BCR scale are included in assessments as well as the amount and location of land currently under protection. Also included are primary modes of land cover conversion from 2001—2006 and general bird management implications based on how existing land cover relates to JV-established bird habitat objectives.

Acknowledgements

Joint Venture partners in the Upper Mississippi River and Great Lakes region are transitioning from largely opportunistic conservation to science-based and targeted actions following the 2007 JV Implementation Plan. Bird habitat objectives and decision-support maps were developed by the JV Science Team to increase JV efficiency and effectiveness. However, the engine for bird conservation in the JV region remains in habitat delivery, and partner accomplishments since 2007 have been impressive. We thank the following partners who in coordination with countless private and public partner agencies, land conservancies, and foundations, contributed information from which this report was created:

[Indiana Department of Natural Resources](#)
[Illinois Department of Natural Resources](#)
[Kansas Department of Wildlife, Parks and Tourism](#)
[Michigan Department of Natural Resources](#)
[Missouri Department of Conservation](#)
[Nebraska Game and Parks Commission](#)
[Ohio Department of Natural Resources](#)
[Wisconsin Department of Natural Resources](#)
[U.S. Fish and Wildlife Service - Partners for Fish and Wildlife Program](#)
[U.S. Fish and Wildlife Service - Division of Realty](#)

Table 1. Percent of wetland objectives accomplished (%) and cumulative acres restored and enhanced (2007–2014) by the Upper Mississippi River and Great Lakes Region Joint Venture compared to habitat objectives identified in the 2007 Joint Venture Implementation Plan. Cumulative totals for BCRs represent data from 2009–2014 partner accomplishment reports; data from 2007–2008 were reported by state and are included in the "unknown" category. Percent (%) = the cumulative total / objective * 100.

State	BCR	Marsh ^a			Mudflat / Shallows ^b			Open water / Beach ^c		
		Objective	Cumulative total	%	Objective	Cumulative total	%	Objective	Cumulative total	%
Iowa	22	23,356	23,900	102.3	55,117	6,297	11.4	2,974	0	0.0
	23	2,471	1,180	47.8	3,184	399	12.5	796	0	0.0
	Unknown		5,334			410			0	
	Total	25,827	30,414	117.8	58,301	7,106	12.2	3,770	0	0.0
Illinois	22	22,542	21,966	97.4	63,163	2,173	3.4	3,584	655	18.3
	23	1,649	0	0.0	1,487	0	0.0	376	18	4.8
	24	1,995	2,011	100.8	2,484	0	0.0	230	0	0.0
	Unknown		174			212			22	
Total	26,186	24,147	92.2	67,134	2,385	3.6	4,190	695	16.6	
Indiana	22	14,781	2,038	13.8	22,852	1,823	8.0	1,242	126	10.1
	23	9,086	678	7.5	5,795	0	0.0	1,445	0	0.0
	24	4,337	914	21.1	4,612	353	7.7	388	1	0.2
	Unknown		1,381			387			40	
Total	28,204	5,014	17.8	33,259	2,563	7.7	3,075	167	5.4	
Kansas	22/Total	4,344	2,726	62.8	33,705	270	0.8	2,018	84	4.2
Michigan	12	66,795	4,624	6.9	4,945	5,049	102.1	8,882	765	8.6
	22	1,440	1,054	73.2	2,124	328	15.4	175	0	0.0
	23	56,881	27,984	49.2	25,869	3,830	14.8	7,289	39	0.5
	Unknown		4,817			12			0	
Total	125,116	38,479	30.8	32,938	9,219	28.0	16,346	804	4.9	
Minnesota	12	75,321	7,806	10.4	4,668	na	na	7,128	na	na
	22	5,412	na ^d	na	3,959	na	na	207	na	na
	23	86,643	2,976	3.4	11,473	na	na	2,835	na	na
	Unknown		1,155			0			0	
Total	167,376	11,937	7.1	20,100	0	0.0	10,170	0	0.0	
Missouri	22/Total	5,167	32,773	634.3	42,304	110,216	260.5	2,440	0	0.0
Nebraska	22/Total	5,985	229	3.8	11,323	750	6.6	649	18	2.8
Ohio	13	8,784	2,238	25.5	7,057	521	7.4	7,457	266	3.6
	22 ^e	12,517	3,477	27.8	26,758	5	0.0	4,515	23	0.5
	24	170	0	0.0	4,895	0	0.0	524	0	0.0
	Unknown		943			274			0	
Total	21,471	4,457	20.8	38,710	550	1.4	12,496	144	1.2	
Wisconsin	12	31,652	14,469	45.7	2,617	15	0.6	12,503	97	0.8
	22	1,428	50	3.5	760	0	0.0	311	0	0.0
	23	159,326	11,049	6.9	42,882	659	1.5	28,543	146	0.5
	Unknown		5,466			20			99	
Total	192,406	31,034	16.1	46,259	694	1.5	41,357	342	0.8	
All states	12	173,768	26,898	15.5	12,230	5,064	41.4	28,513	862	3.0
	13	8,784	2,238	25.5	7,057	521	7.4	7,457	266	3.6
	22	96,972	86,713	89.4	262,065	121,862	46.5	18,115	906	5.0
	23 ^f	316,056	45,363	14.4	90,690	4,888	5.4	41,284	203	0.5
	24	6,502	2,928	45.0	11,991	353	2.9	1,142	1	0.1
	Unknown		19,271			1,315			161	
Total	602,082	183,411	30.5	384,033	134,004	34.9	96,511	2,399	2.5	

^aMarsh category includes wet meadow with open water, shallow semi-permanent marsh, hemi-marsh, deep-water marsh, and marsh with associated shrub / forest. The larger value for shallow semi-permanent marsh, hemi-marsh between breeding and non-breeding season objectives at the state/BCR level was used. Deep water marsh values for the breeding season were used because objectives were greater than the non-breeding season.

^bMudflat/shallows category includes dry mudflat/agriculture, wet meadow/moist soil plants, shallow-depth water, and moderate-depth water. Dry mudflat/agriculture values for the breeding season were used because objectives were greater than the non-breeding season.

^cOpen water/beach category includes extensive open water and beach. The larger value for beach between breeding and non-breeding season objectives at the state/BCR level was used.

^dNot available.

^eIncludes accomplishments reported in BCR23, formerly designated BCR 22, for which no habitat objectives were developed.

^fBCR 23 totals correspond to the 2007 JV boundary.

Table 2. Percent of upland objectives accomplished (%) and cumulative acres restored and enhanced (2007–2014) by the Upper Mississippi River and Great Lakes Region Joint Venture compared to habitat objectives identified in the 2007 Joint Venture Implementation Plan. Cumulative totals for BCRs represent data from 2009–2014 partner accomplishment reports; data from 2007–2008 were reported by state and are included in the “unknown” category. Percent (%) = the cumulative total / objective * 100.

State	BCR	Grassland ^a			Woodland ^b			Total Upland ^c		
		Objective	Cumulative total ^d	%	Objective	Cumulative total	%	Objective	Cumulative total	%
Iowa	22	4,250,376	409,547	9.6	2,717	17,461	642.7	4,253,093	427,008	10.0
	23	216,619	33,273	15.4	0	4,224	0.0	216,619	37,497	17.3
	Unknown		0			0			0	
	Total	4,466,995	442,830	9.9	2,717	21,685	798.1	4,469,712	464,515	10.4
Illinois	22	3,777,124	44,088	1.2	26,676	8,992	33.7	3,803,800	53,080	1.4
	23	86,944	128	0.1	4,940	3,104	62.8	91,884	3,232	3.5
	24	829,426	110	0.0	59,527	14,017	23.5	888,953	14,127	1.6
	Unknown		0			0			0	
Total	4,693,494	44,356	0.9	91,143	26,113	28.7	4,784,637	70,469	1.5	
Indiana	22	952,185	15,686	1.6	270,218	1,358	0.5	1,222,403	17,043	1.4
	23	223,535	5,844	2.6	75,829	504	0.7	299,364	6,348	2.1
	24	1,080,625	12,477	1.2	656,032	9,964	1.5	1,736,657	22,441	1.3
	Unknown		0			0			0	
Total	2,256,345	34,007	1.5	1,002,079	11,825	1.2	3,258,424	45,832	1.4	
Kansas	22/Total	2,782,949	33,898	1.2	6,422	1,486	23.1	2,789,371	35,384	1.3
Michigan	12	206,986	30,724	14.8	395,200	66,168	16.7	602,186	96,892	16.1
	22	69,901	586	0.8	34,580	22	0.1	104,481	608	0.6
	23	334,685	45,078	13.5	700,986	11,840	1.7	1,035,671	56,918	5.5
	Unknown		1,309			25			1,334	
Total	611,572	77,696	12.7	1,130,766	78,055	6.9	1,742,338	155,752	8.9	
Minnesota	12	242,060	10,216	4.2	800,280	54,656	6.8	1,042,340	64,872	6.2
	22	222,300	0	0.0	0	0	0.0	222,300	0	0.0
	23	736,060	1,404	0.2	191,919	149	0.1	927,979	1,553	0.2
	Unknown		0			0			0	
Total	1,200,420	11,620	1.0	992,199	54,805	5.5	2,192,619	66,425	3.0	
Missouri	22/Total	5,536,999	150,114	2.7	79,040	19,277	24.4	5,616,039	169,391	3.0
Nebraska	22/Total	1,247,597	3,510	0.3	0	195	0.0	1,247,597	3,705	0.3
Ohio	13	277,875	1,032	0.4	244,283	108	0.0	522,158	1,140	0.2
	22 ^e	762,736	65	0.0	406,068	240	0.1	1,168,804	305	0.0
	24	6,422	0	0.0	8,892	0	0.0	15,314	0	0.0
	Unknown		20			0			20	
Total	1,047,033	700	0.1	659,243	348	0.1	1,706,276	1,047	0.1	
Wisconsin	12	69,901	621	0.9	518,700	37,827	7.3	588,601	38,449	6.5
	22	14,079	242	1.7	988	17	1.7	15,067	259	1.7
	23	1,831,999	11,739	0.6	716,300	13,460	1.9	2,548,299	25,199	1.0
	Unknown		0			0			0	
Total	1,915,979	12,602	0.7	1,235,988	51,325	4.2	3,151,967	63,927	2.0	
All states	12	518,947	41,562	8.0	1,714,180	158,672	9.3	2,233,127	200,233	9.0
	13	277,875	1,032	0.4	244,283	108	0.0	522,158	1,140	0.2
	22	19,616,246	657,727	3.4	826,709	49,047	5.9	20,442,955	706,774	3.5
	23 ^f	3,429,842	97,472	2.8	1,689,974	33,281	2.0	5,119,816	130,753	2.6
	24	1,916,473	12,587	0.7	724,451	23,981	3.3	2,640,924	36,568	1.4
	Unknown		1,329			25			1,354	
Total	25,759,383	811,708	3.2	5,199,597	271,655	5.2	30,958,980	1,228,362	4.0	

^aGrassland category includes grassland and mixed wooded openland.

^bWoodland category includes deciduous forest, evergreen forest, forested wetland, and other forest.

^cTotal upland includes both grassland and woodland totals; reports from 2007–2008 grouped woodland and grassland objectives. These data were identified by states and are included in the “unknown” category.

^dCumulative totals for BCRs are separated out by woodland and grassland categories only represent data since 2009 partner accomplishment reports.

^eIncludes accomplishments reported in BCR23, formerly designated BCR 22, for which no habitat objectives were developed.

^fBCR 23 totals correspond to the 2007 JV boundary.