FINAL PREFORMANCE REPORT

PROJECT NUMBER T-41-D-1

Project Title: Siloam Springs / Buckhorn Macrosite / Private Lands Habitat Expansion and Improvement Project

Proposed Objectives: Objectives for this project included: 1) Provide 10 new corridors to connect blocks of forest or grassland habitats through reforestation (tree planting) or prairie restorations of former agricultural fields located adjacent to existing forest/grassland blocks to increase the amount of contiguous habitat and decrease the amount of edge preferred by predators; 2) Enhance a minimum of 150 acres of existing forest/grassland habitat to improve suitability for use by species of greatest need of concern through the use of exotic species control, brush clearing, and prescribed burns; 3)Enroll a minimum of 3 private landowners in long-term protection agreement for a minimum of 10 years; and 4) Monitor success of project by increase in favorable habitat provided for species in greatest need of conservation and increase use, especially breeding productivity, by these species.

Project Background: The project area encompassed approximately 5,600 acres in Adams and Brown counties owned and managed by the Illinois Department of Natural Resources (IDNR) as well as several thousand acres in private ownership, permanently enrolled or eligible for enrollment in the Department of Agriculture's Conservation Reserve and Enhancement Program (CREP). The project was designed to coordinate work with the staff of Siloam Springs State Park and willing private landowners to enhance over 150 acres of existing habitat and create/restore several hundred additional acres of wildlife habitat on both State and privately owned and managed ground in strategic locations to provide habitat corridors connecting the large blocks of state-owned land with the permanent set-aside (CREP), or CREP eligible, privately owned land. Restored habitat connections will serve to expand and enhance the quality of forest and grassland communities within the largest publically owned forest and grassland block in west-central Illinois, identified in the State Wildlife Plan as a Conservation Opportunity Area (COA).

The Siloam Springs/Buckhorn Macrosite has been identified as a high priority site for the Illinois Wildlife Action Plan due to its large size and the amount of high quality wildlife habitat. The macrosite provides suitable habitat for approximately 25 "species of greatest need of concern" as identified in the Illinois Wildlife Action Plan. The expansion of forested and grassland habitat within the IDNR-owned Siloam Springs State Park and the Buckhorn Unit with the inclusion of privately owned land containing a mix of wooded ravines, pasture and farmland offers additional habitat for these species of concern. The improvement of existing habitat by control of exotic plants, selective removal of dense brush through manual cutting and prescribed fire, and reforestation to expand forest and prairie blocks will improve the availability of breeding habitat and help to increase the reproductive success of these sensitive species.

Accomplishments:

During the time frame of this project 13 new habitat corridor connections were created, primarily through the use of the Conservation Reserve Program (CRP) and the Conservation Reserve Enhancement Program (CREP) administered by the Department of Agriculture, within the high priority area linking forest and grassland habitats between Siloam Springs State Park and the Buckhorn Unit (Figure 1). Over 200 acres of new habitat was created through tree and grassland planting on privately owned lands. Wildlife habitat was enhanced and/or improved on over 1,000 acres of private and public lands through timber stand improvement (TSI), exotic control, invasive brush clearing and prescribed burning. Photos were taken to document the primary work sites of this project (Figure 2). A total of 3 land management agreements were signed by private landowners to facilitate wildlife habitat improvements. One of these agreements was part of the Landowner Incentive Program (LIP). Staff from the Department of Natural Resources and Illinois Nature Preserves Commission also met with additional private landowners to discuss options for critical habitat areas adjacent to Siloam Springs State Park. An agreement was drawn up to permit habitat enhancement work for one of these lands, 1040 acres owned by the Girl Scouts of Central Illinois, but was later refused signature by the owners due to plans to sell the land. The Girl Scout property, along with 2 additional tracts (356 acres and 179 acres), were offered to the DNR for purchased and some of which was recommended for acquisition by staff. Due to lack of funding the DNR has been unable to purchase additional lands in this area at this time.

An annual breeding bird road census was established in 2007 and repeated in 2008 and 2009. The census route covered 27 miles and ran along the northern edge and through the central portion of the project area through various tracts of forest, grassland and agricultural lands. An average of 72 bird species were reported for all 3 years with 18 Species of Greatest Need of Conservation (SGNC) seen/heard on these surveys (Figure 3). Preliminary results indicate that the area provides habitat for a wide variety of habitat-sensitive forest and grassland birds. Of the original 28 SGNC identified as potentially utilizing the area in the grant proposal, 13 have been seen or heard during these monitoring efforts plus an additional 5 species not previously known to occur in this area. Butterfly species were also recorded while walking through work sites funded through this grant (Figure 3).

A comparison between the years indicates grassland- and forest-sensitive breeding birds, including numerous SGNC, continue to breed successfully within the area. Henslow's Sparrows, formerly state-threatened, were reported in 2007 and 2008 and a Cerulean Warbler, state-threatened, was heard within Siloam Springs in 2008. An ornate box turtle and several byssus skippers were also observed within exotic/invasive control areas in Siloam Park.

This project also met several goals of the Illinois Wildlife Action Plan Forest Campaign including: 1) maintain and enhance the composition of Illinois' forested habitat through TSI and exotic species control; 2) increase statewide forested acreage with an emphasis on ecological connectivity and reduction of forest fragmentation; 3) development and expansion of programs to assist private

landowners in managing their forests; 4) promoting the increased use of prescribed fire and sustainable forestry practices; and 7) restoration and management of high quality examples of forest, savanna and barrens communities.

The project also met multiple goals established by the Illinois Wildlife Action Plan as part of the Farmland and Prairie Campaign including: 1) use of incentive-based programs and technical assistance to establish and restore grassland habitat; 2) use of incentive-based programs and technical assistance to moderate disturbance regimes and enhance condition of farmland habitats; 3) restore and manage native prairie communities and populations of imperiled prairie wildlife; 4) demonstrate on emphasis on multiple-resource benefits on conservation in agricultural landscapes; and 5) use of inter-agency cooperation and coordination to ensure agricultural programs do not conflict with wildlife habitat conservation objectives.

Additionally, the project addressed Priorities I, III, IV, and VII as well as Initiatives IV of the IDNR Strategic Plan for 2003-2008 including: (Priority I) help to maintain and meet outdoor educational and recreational demands by enhancing and enlarging the amount of quality wildlife habitat; (Priority III) improve the quality of life for Illinois citizens through proper management of the watershed by working with private landowners to plant floodplain fields and adjacent uplands to forest and prairie vegetation; (Priority IV) collect data and information on natural resources and effectively integrate with information technology operations through the establishment of baseline data on wildlife diversity and use of project area; (Priority VII) utilize public and private partnerships to achieve our priorities with limited fiscal resources; and (Initiative IV) accomplish initiatives to collect and analyze data on various natural resource issues, make multiple years of data available, and standardize criteria for special land use agreements .

ACCOMPLISHMENT CHART

Activity	Site	1st yr acres	2nd yr acres	3rd yr acres	4th yr acres	final acres	TOTAL
tree planting	Private - misc. sites	40	71		30	131	**141**
grass seeding	Private - misc. sites	26	23	35	20	74	**94**
TSI	Private - misc. sites	45	200	170	200	580	
	Russell Property	35				35	
	Barry Property			20		20	**670**
exotics/brush control	DNR - Evers Barrens		10			10	
	DNR - Hickory Hills Savanna		10		120	130	
	DNR - misc. areas		30	40	35	105	
	Russell Property		15			15	
	Barry Property			20		20	**280**
prescribed burning	DNR - Hickory Hills Savanna	120			120	240	
	DNR - misc. areas		100	25		125	
	Private - misc. sites		80			80	**445**
landowner agreement			2	1			**3**

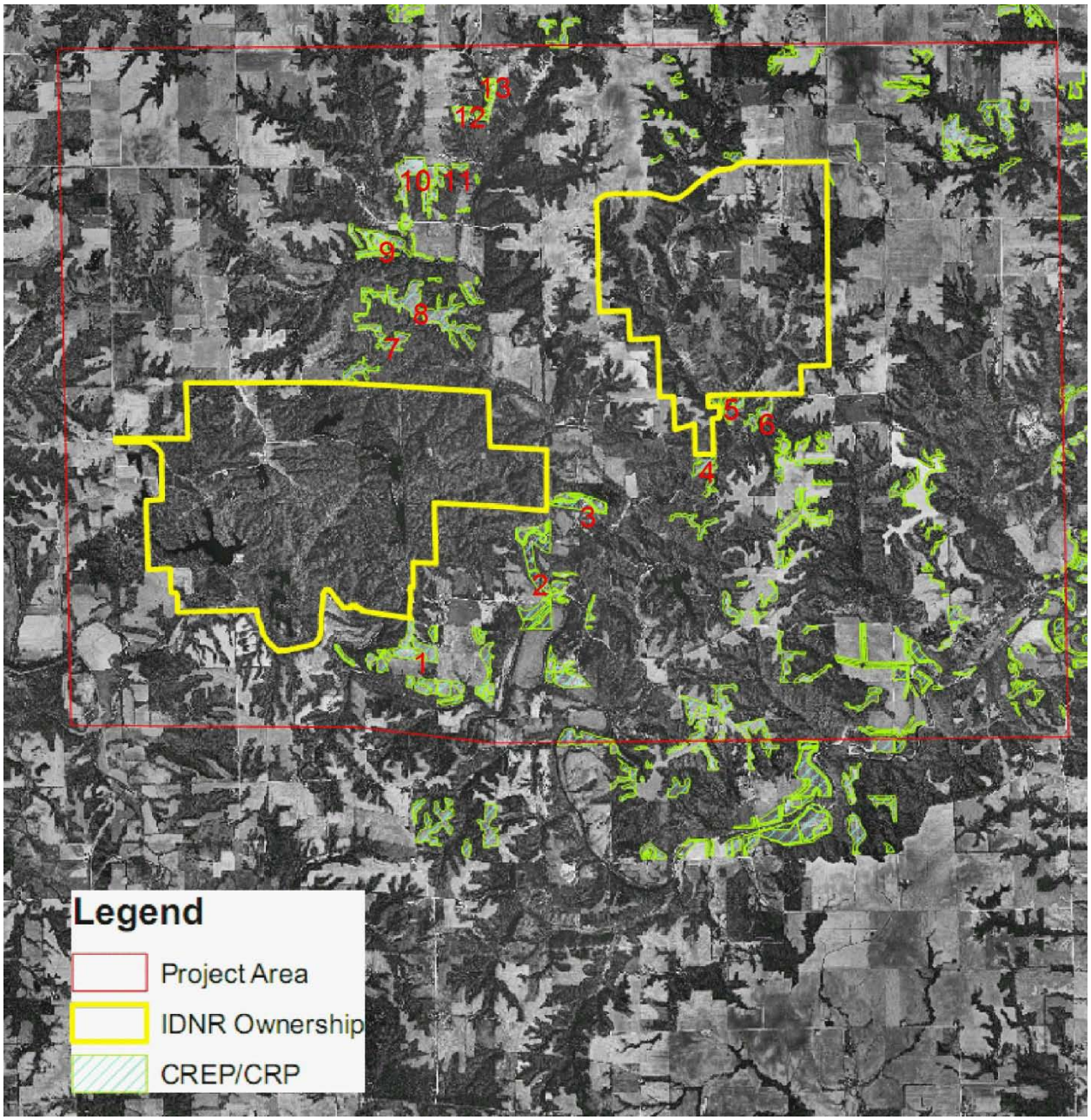

Figure 1. Habitat corridors (1-13) connecting forest and grassland tracts in core area of Siloam Springs/Buckhorn Project Area.

Figure 2. Photo documentation of SWG (T-41-D-1) work sites within Siloam Springs Project Area.

Evers Barrens pre-clearing 2000

Evers Barrens post clearing 2008

Hickory Hills Savanna pre-clearing 2009

Hickory Hills Savanna post clearing 2010

Little Missouri Creek Hill Prairie (Russell Property 2008)

Cedar clearing at Russell Property 2008

Barry Property pre-clearing 2008

Barry Property post clearing 2009

Figure 3. Siloam Springs/Buckhorn Project Area Wildlife Survey Results (2007-2009).

SILOAM SPRINGS AREA BIRD SURVEYS

Bird Species	**2007**	**2008**	**2009**
Green Heron		1	1
Wood Duck	3	1	
Hooded Merganser	***3***		
Wild Turkey	2	7	
Northern Bobwhite	***8***	***12***	***19***
Turkey Vulture	9	8	10
Red-tailed Hawk		2	
Cooper's Hawk			1
American Kestrel	4	1	
Barred Owl			1
Killdeer	5	3	10
Mourning Dove	32	37	18
Yellow-billed Cuckoo	***5***	***2***	***2***
Black-billed Cuckoo	1		1
Belted Kingfisher			2
Red-headed Woodpecker	***6***	***6***	***5***
Red-bellied Woodpecker	6	3	2
Downy Woodpecker	1	8	4
Yellow-shafted Flicker	3	3	4
Pileated Woodpecker	1		1
Eastern Wood Pewee	8	8	22
Eastern Phoebe	12	4	10
Great-crested Flycatcher	7	5	4
Acadian Flycatcher			3
Eastern Kingbird	7	10	10
Red-eyed Vireo	14	13	12
Yellow-throated Vireo	2	1	1
Warbling Vireo	21	10	17
Blue Jay	16	13	12
American Crow	8	2	3
Horned Lark	4	2	3
Tree Swallow	3	3	
No. Rough-winged Swallow	2	11	9
Cliff Swallow		11	1
Barn Swallow	44	37	61
Purple Martin	4		
Common Nighthawk		1	
Chimney Swift		1	3
Ruby-throated Hummingbird	1	2	3
Blue-gray Gnatcatcher	16	7	16
Black-capped Chickadee	4	5	10
Tufted Titmouse	9	7	9
White-breasted Nuthatch	1	2	9
Sedge Wren	6	3	5
Carolina Wren	2	6	5

BUTTERFLY SPECIES LIST

Evers Barrens

Pipevine Swallowtail
Zebra Swallowtail
Tiger Swallowtail
Black Swallowtail
Giant Swallowtail
Orange Sulfur
Clouded Sulfur
Little Yellow
Cabbage White
Summer Azure
Eastern Tailed Blue
Painted Lady
Red-spotted Purple
Viceroy (caterpillar)
Great Spangeled Fritillary
Little Wood Saytr
Monarch
Byssus Skipper (4)

Russell/Barry Properties

Pipevine Swallowtail
Spicebush Swallowtail
Orange Sulfur
Summer Azure
Great-spangeled Fritillary
Red-spotted Purple
Common Wood Nymph
Monarch
Southern Cloudywing
Tawny-edged Skipper

House Wren	11	5	15
Eastern Bluebird	6	3	5
Wood Thrush	11	3	6
American Robin	50	32	43
Gray Catbird	10	16	25
Brown Thrasher	7	6	15
Northern Mockingbird			1
European Starling	16	2	9
Cedar Waxwing	2		
Yellow Warbler	3	2	3
Cerulean Warbler		***1***	
Northern Parula	1	2	3
Ovenbird	***10***	***2***	***10***
Kentucky Warbler	***3***	***2***	***2***
Common Yellowthroat	45	44	89
Yellow-breasted Chat	***2***	***1***	***3***
Eastern Towhee	16	18	14
Chipping Sparrow	18	9	26
Field Sparrow	25	36	42
Vesper Sparrow	1	6	1
Savanna Sparrow	***1***	***2***	***2***
Grasshopper Sparrow	***4***	***5***	***6***
Henslow's Sparrow	***1***		
Song Sparrow	28	13	18
Lark Sparrow		1	
Northern Cardinal	13	19	20
Rose-breasted Grosbeak	6	7	22
Indigo Bunting	84	55	72
Dickcissel	***23***	***12***	***29***
Scarlet Tanager	2	1	5
Summer Tanager			1
Red-winged Blackbird	57	68	81
Eastern Meadowlark	20	4	13
Common Grackle	11	11	11
Brown-headed Cowbird	44	30	28
Orchard Oriole		1	1
Baltimore Oriole	5	5	11
American Goldfinch	49	14	30
House Sparrow	3	7	14
Total # Species	70	72	72
Total Individuals	860	703	985