

# OFFICE OF RESOURCE CONSERVATION

## State of Illinois

### SWG Proposal

**PROJECT NUMBER:** T- 57 D-1

**PROJECT TITLE:** Model Wildlife Action Plan Implementation through IBA Conservation Actions in Chicago Wilderness.

**PURPOSE:** The purpose of the project, *Model Wildlife Action Plan Implementation through IBA Conservation Actions in Chicago Wilderness*, is to use the Important Bird Areas program to focus the attention of the public, landowners, and planners on achieving population targets set by the Illinois Wildlife Action Plan for grassland and shrubland bird species in greatest need of conservation. With our partner, Kane County Forest Preserve District, Audubon will develop and begin to implement a model grassland and shrubland bird conservation plan for county holdings. Audubon will organize broad public outreach through trips and press coverage to IBAs in the Chicago Region.

**NEED:**

This project will address the steep declines in populations of the birds of the prairie (including grasslands with and without shrubs) that once dominated our state. Grassland birds are widely acknowledged to be the fastest declining suite of birds in the nation (Herkert, 1993), and Illinois is at the heart of their range. Audubon has found that implementing the recommendations of our local researchers to reduce fragmentation, connect small fragments and optimize the shape of local grasslands results in population gains of several hundred percent for rare grassland species. However, this type of landscape analysis is not yet common practice in the preserved lands of Chicago Wilderness (CW). The Chicago Wilderness coalition, a group of over 200 organizations, has begun to consider setting conservation targets. There is a need to broadly acquaint this region's land managers and citizens with the dramatic results that can be obtained when pursuing the conservation targets in the Illinois Wildlife Action Plan.

The project involves analyzing a Kane County Forest Preserve District's holdings and planning to increase numbers of target bird species; implementing a part of the plan by converting cropland to prairie; and publicizing the plan and its results.

The Muirhead Springs Preserve is a 780 acre preserve located in the north central portion of Plato Township between Bahr Road and Rohrson Road, at T41N R7E Secs 8, 9. It is a rolling site crossed by several ditches, at the edge of the Elburn morainal member of the Valparaiso morainal complex not far from the highest point in Kane County. A portion of the preserve was taken out of crop production under a former grant from the SWG program, and the rest is leased to local farmers for crop production. One hundred acres of pioneer native prairie species have been established and the prairie is now inhabited by meadowlarks, bobolinks and dickcissels.

This project will replace row crop with native prairie that will provide structure for grassland bird habitat. This will implement action goals 3a and b of the Illinois Wildlife Action Plan Farmland & Prairie Campaign and action goals 2a and b in the Land and Water Stewardship Campaign (Illinois Wildlife

Action Plan, 2005, Section III. Statewide Overview, E. Priority Conservation Actions – Farmland & Prairie Campaign p. 74-5 and 86). In addition the high quality native prairie will create habitat that will attract critical and indicator grassland bird species such as the grasshopper sparrow, Henslow’s sparrow, savannah sparrow, dickcissel, bobolink, and eastern meadowlark (Illinois Wildlife Action Plan, 2005, Section IV. Natural Division Assessment).

This project is necessary because, without it, the natural resources cannot be adequately protected and enhanced. This project is needed to restore the row crop land into prairie in order to prevent further erosion and runoff and provide habitat for grassland birds. It is important that these actions take place on this particular site because of its highly strategic location in the rapidly-expanding Elgin area.

Another need addressed by the project is public support for the Wildlife Conservation Plans. Protected grasslands in our state require management to compensate for the dramatic change in natural processes that act on them. Invasive species removal and prescribed burns require both the acceptance and financial support of surrounding communities. The wildlife in our preserved lands depends on an informed constituency for nature in order to have the conditions needed to survive. We intend for millions of people in the Chicago Region, and a plethora of political leaders, to see us implementing the Wildlife Action Plan. We hope this plan will also stimulate regional interest in shrubland bird habitat, a largely neglected habitat type in regional planning efforts.

This proposal represents a partnership between an NGO, Audubon Chicago Region, and the Forest Preserve District of Kane County, in collaboration with the state. Both organizations are part of Chicago Wilderness (CW), a coalition of over 200 organizations which promotes the rare biodiversity of our region. Grassland birds are the highest avian priority in the CW Biodiversity Recovery Plan. Results of this project will be shared with members of the CW land management team, and will be proposed as models for the work of other team members. In addition, the CW Region has a large, active citizen science bird monitoring program, the Bird Conservation Network (BCN) Census, with 12 monitors at sites in Kane County forest preserves. Finally, we will avail ourselves of the well-respected community of avian researchers in Illinois.

## **OBJECTIVES:**

- Job 1:** Within the first nine months, analyze county holdings and develop a plan to achieve population targets for grassland and shrubland birds in all KCFPD lands. 35% of budget
- 1.1 Through literature search and discussions with Illinois’ distinguished ornithological researchers, gather the best available research on management techniques for grassland and shrubland bird habitat
  - 1.2 Compile information about bird populations at all Kane County grassland and shrubland sites from the preserves’ active bird monitoring program, the BCN Census
  - 1.3 Analyze acreages of existing and potential grassland and shrubland habitat in all KCFPD holdings in order to identify sites where management techniques can increase functional grassland and shrubland bird habitat.
  - 1.4 Develop a grassland and shrubland bird conservation plan for all KCFPD lands which includes a prioritized list of habitat restoration activities (and an accompanying map) designed to at least double populations of American woodcock, northern bobwhite, bobolink, grasshopper sparrow, loggerhead

shrike, Henslow's sparrow, field sparrow, and increase by 50% populations of willow flycatcher, sedge wren, flicker, yellow- and black-billed cuckoo in Kane County preserves..

- 1.5 Use our grassland plan to predict increases that will result from the restoration of 260 acres at Muirhead Springs Preserve (60 acres through this project) (increases are expected at this site in 4- 6 of our target species)

**Job 2:** Plant 60 acres of former crop field in the Muirhead Springs Preserve with a diverse native tallgrass mesic prairie seed mix designed to produce structure suitable for grassland bird nesting (one that will not produce a monoculture of tall grasses.) Thirty acres each spring, 50% of budget.

- 2.1 Plant 30 acres of mesic prairie grasses (between 30 and 50 species) in spring 2009.
- 2.2 Spot spray Canada thistle and other noxious weeds over 30 acres that threaten the quality of the grassland in summer 2009
- 2.3 Plant 30 acres of mesic prairie grasses ( between 30 and 50 species) in spring 2010.
- 2.4 Spot spray Canada thistle and other noxious weeds over 60 acres that threaten the quality of the grassland in summer 2010.
- 2.5 Compare predictions of plan to results as a test of the plan, and prepare summary of results for use as demonstration site.

**Job 3:** In the final 9 months, share the results of the grassland plan publicly and with key stakeholders including landowners and local citizen conservationists in Chicago Wilderness and in Important Bird Areas. 15% of budget.

- 3.1 Mail information about the plan to all grassland and shrubland IBA landowners and associated local groups. Invite five partnerships to plan new conservation actions and/or publicize recent successes, and provide information and technical support to three.
- 3.2 Organize a campaign consisting of one press release, two public events and two tours – at sites including the Muirhead Springs demonstration site and other grassland Important Bird Areas in the Chicago region.
- 3.3 Share methods from the grassland plan, the Muirhead Springs demonstration site, and other successful results of similar projects widely in the Chicago Wilderness region through the CW coalition, the IBA program and through Audubon's Habitat Project which provides training opportunities for volunteer land stewards and bird monitors. At least one presentation will be given to staff members at a meeting of Chicago Wilderness, and at least three presentations for volunteers at a conference such as the Wild Things conference, and meetings of volunteers such as bird conservationists or IBA stewards. A description of the plan will be submitted to the Chicago Wilderness Journal for publication.

### **EXPECTED RESULTS OR BENEFITS:**

#### **Job 1:**

- A model plan to step down bird population targets in the IL wildlife conservation plan to a county Forest Preserve District level.
- One high profile model project of at least 260 acres (60 added through this funding) that will result in predicted increases in selected species at a demonstration site.
- A report showing the model for stepping down conservation targets and the results of implementation at the demonstration site that is promoted throughout the Chicago Wilderness region and made available to interested parties throughout the state.

**Job 2:**

- 60 acres of newly restored prairie
- a report that describes how well the bird population increases at the demonstration site matched our predictions.

**Job 3:**

- At least three training and information sessions about the best practices for Chicago region habitat volunteers
- New partnerships pursuing grassland bird population targets in at least three IBAs.
- One high profile public campaign that includes at least four events and that generates at least four articles.

All activity will take place in a designated conservation opportunity area, “Grand Prairie Grasslands” in the Muirhead Springs Preserve.

The species chosen are those grassland and shrubland birds designated by the status objectives in Appendix II of the Illinois Wildlife Action Plan as “Species in Greatest Need of Conservation” that breed in significant numbers in the CW region. Our plan will address status objectives found in Appendix II of doubling populations of American Woodcock, northern bobwhite, bobolink, grasshopper sparrow, Henslow’s sparrow, field sparrow, and increasing by 50% willow flycatcher, sedge wren, flicker, yellow-and black-billed cuckoo. Plans will be developed for the 16,000 acres of Kane County FPD lands and within at least three of the identified IBAs of Chicago Wilderness.

This chart shows how we will address goals of the Illinois Wildlife Action Plan:

Action 3a and b in the Farmland and Prairie Campaign:	
3. restore and manage native prairie communities and populations of imperiled and extirpated prairie wildlife.	
a. continue removal and control (chemical, mechanical and biological) of invasive exotic plants, especially within high quality natural areas	We will control invasive species in our 60 acre prairie planting
b. reintroduce native species into prairie habitat where decimating factors have been eliminated and natural recovery is unlikely	We will reintroduce a list of between 30 and 50 prairie species into former farmland, and rare grassland bird species will return to the site to nest.
Actions 2a and 2b in the Land and Water Stewardship Campaign,	
2. Improve the stewardship of public land and water resources.	
a. public sites should be managed with the best available science and tools, in a way that clearly demonstrates habitat restoration , maintenance of natural communities, forest management, grassland management, moist-soil management, and invasive species control.	We will use research findings to plan an increase of grassland and shrubland birds on all the county FPD’s holdings. Increases will conform with recommendations in the IWAP as well as national Partners in Flight plans. Ongoing grassland management will be conducted in such a way as to preserve or extend these increases. Results will be publicized.
b. public lands should be managed with a clear indication of the relative importance of providing wildlife habitat...	

## **APPROACH:**

This project will use a two-pronged approach to address the declines in prairie bird populations. Audubon will use the popular Illinois Important Bird Areas (IBA) program to inspire new conservation efforts and to highlight sites where dramatic increases have been achieved. We will enter a new partnership with the Forest Preserve District of Kane County to develop a model grassland bird conservation plan, begin to implement it, and promote it as a model throughout the region and the state.

**Job 1:** Within the first nine months, analyze county holdings and develop a plan to achieve population targets for grassland and shrubland birds in all KCFPD lands.

- 1.1 We propose to gather the best available research on grassland and shrubland bird habitat. Illinois has excellent researchers addressing these questions.
- 1.2 We will use existing citizen science data from the preserves' active bird monitoring program, the BCN Census, to map places where birds of Conservation Concern occur in the KCFPD holdings
- 1.3 We will analyze acreages of existing and potential grassland and shrubland habitat in the KCFPD holdings in light of best practice recommendations, and develop a prioritized list of habitat restoration activities to meet population targets for the birds listed above. We will identify sites where management techniques can increase functional grassland and shrubland bird habitat. Removal of fragmentation, removal of invasive woody vegetation or invasive herbaceous vegetation, prescribed burns, and seeding in of new prairie are techniques that would be considered for grassland birds, and instituting a phased rotational disturbance schedule, modifying an existing management schedule and/or planting native shrubs would be considered for shrubland birds.
- 1.4 Based on our analysis and feedback from knowledgeable advisors, we will develop a grassland bird conservation plan which includes a prioritized list of habitat restoration activities (and an accompanying map) designed to at least double populations of American woodcock, northern bobwhite, bobolink, grasshopper sparrow, loggerhead shrike, Henslow's sparrow, field sparrow, and increase by 50% populations of willow flycatcher, sedge wren, flicker, yellow- and black-billed cuckoo in Kane County preserves. We will send the plan to scientific advisors and key monitors for review before finalizing it.
- 1.5 Use our grassland plan to predict increases that will result from the restoration of 260 acres at Muirhead Springs Preserve demonstration site (60 acres through this project) (increases are expected at this site in 4- 6 of our target species)

**Job 2:** Plant 60 acres of former crop field with a diverse native tallgrass mesic prairie seed mix designed to produce structure suitable for grassland bird nesting (one that will not produce a monoculture of tall grasses.) We will strive for one quick, dramatic change in one targeted bird community (grassland birds, which includes 3 of our target species) with our model project at Muirhead Springs, newly acquired agricultural land in an agricultural matrix

2.1 Plant 30 acres of mesic prairie grasses (between 30 and 50 species) in spring 2009. Prairie mix suitable for grassland bird habitat will be planted in strategic locations adjacent to existing habitat on the preserve to create the biggest gains in bird populations. The goal of this planting will be to create the maximum amount of sustainable native prairie bird habitat rather than to achieve a species mix comparable to high quality prairie. We will avoid plants that form monocultures in the initial planting, and strive for a shorter-statured, diverse structure that has been proven in other local projects to work well for prairie birds (Joe Suchecki, pers. comm.).

Our working species list includes approximately 109 species of grasses and forbs that we anticipate planting over the long term. A high quality natural area would consist of 100-150 species. In this first seeding, we will plant between 30 and 50 species that establish well and for which we can find ecotypes that originate from within 30 miles of Kane County. This species list is lower cost, and allows us a good basic structure for grassland birds. Over time, our plans will create as close as possible the quality and quantity of biodiversity found in a significant natural area. A draft species list is included in Appendix B. We will bid out the seed order to nurseries within 200 miles. At this point in time the species list is still being finalized and will change slightly in species content, and species seeding rates. A no-till seed drill and hopper broadcast spreader will be used.

2.2 Spot spray Canada thistle and other noxious weeds over 30 acres that threaten the quality of the grassland in summer 2009, and mow weeds as needed at the time that is most effective for weed control (this varies according to the plant; generally when the lowest leaves have dried up and fallen off.) Contractors will be hired to spray and/or mow large infestations, and District staff will control smaller infestations. One of the firms that the District commonly works with on these projects will be contracted as a direct hire. Weed control mowing will be planned to minimize impact to bird populations. A controlled burn rotation will be planned to maintain the prairie, with each section being burned typically every other year in the establishment phase. All herbicide, mowing, and burning will be done in accordance with current state and federal regulations

2.3 Plant 30 acres of mesic prairie grasses (between 30 and 50 species) in spring 2010, as in 2.1.

2.4 Spot spray Canada thistle and other noxious weeds over 60 acres that threaten the quality of the grassland in summer 2010, as in 2.2.

2.5 Compare predictions of plan to results as a test of the plan; develop a description of the impacts of the seeding and herbiciding and other management activities carried out according to the plan on the bird populations at the demonstration site using before and after monitoring data.

**Job 3:** In the final 9 months, share the grassland plan and results of the activity at the demonstration site publicly and with key stakeholders including landowners and local citizen conservationists in Chicago Wilderness and in Important Bird Areas.

3.1 Mail information about the plan and demonstration site results to all grassland and shrubland IBA landowners and associated local groups. Invite partnerships to plan new conservation actions and/or publicize recent successes, with support from Audubon. These IBAs include such sites as Pratt's Wayne Woods and James "Pate" Philip State Park, Goose Lake Prairie, Bartel Grassland, and others. Illinois' Important Bird Area project is concluding its identification phase and moving into the

conservation action phase. There are now 66 IBAs in the state. Some sites have significant threats. Information will be shared with landowners and stakeholders at these IBAs about the grassland and shrubland bird targets in the IWAP and how to achieve them. Audubon will offer to partner by assisting with developing or reviewing plans to improve grassland habitat or engaging in activities to publicize successes such as IBA dedication ceremonies or developing and promoting news stories..

- 3.2 Organize a campaign consisting of one press release, two public events and two tours – at sites including the Muirhead Springs demonstration site and other grassland Important Bird Areas in the Chicago region. The goal will be to inform neighbors, citizens and local officials about the serious situation of these bird populations and the impressive gains that good management can bring about.
- 3.3 Share methods from the grassland plan, the demonstration site and other successful results of similar projects widely in the Chicago Wilderness region through the CW coalition, the IBA program and through Audubon’s Habitat Project which provides training opportunities for volunteer land stewards and bird monitors. Outreach would include the 12 IBAs in the Chicago Wilderness region that have nesting grassland and shrubland birds. At least four presentations will be made at venues such as meetings of Chicago Wilderness coalition members, a volunteer conference such as the Wild Things conference, and meetings of volunteers such as bird conservationists or IBA stewards. A description of the plan will be submitted to the Chicago Wilderness Journal for publication.

**LOCATION:** The restoration project (demonstration site) property is located in Kane County in Plato Township and has a legal description of Township 41 North, Range 7 East, Sections 8,9. Maps are attached that show the site in relation to Kane County, and the site and its surrounding area. The plan will cover all FPD holdings in Kane County, also shown in an attached map.

**PROJECT SCHEDULE:**

<b>Objectives</b>	<b>Fall 08</b>	<b>Winter 09</b>	<b>Spring 09</b>	<b>Summer 09</b>	<b>Fall 09</b>	<b>Winter 10</b>	<b>Spring 10</b>	<b>Summer 10</b>
1.1 gather the best available research on grassland and shrubland bird habitat	<b>x</b>							
1.2 compile existing data from the preserves’ active bird monitoring program	<b>x</b>							
1.3 analyze acreages of existing and potential grassland and shrubland habitat in the KCFPD holdings in order to identify sites where management techniques can increase functional grassland and shrubland bird habitat		<b>x</b>						
1.4 develop a prioritized list of habitat activities to double populations of American Woodcock, northern bobwhite, bobolink, grasshopper sparrow, loggerhead Shrike, Henslow’s sparrow, field sparrow, and increase by 50% populations of Willow flycatcher, sedge wren, flicker, yellow- and black-billed cuckoo.		<b>x</b>						

1.5 Use our grassland plan to predict increases that will result from the restoration of 260 acres at Muirhead Springs Preserve (60 acres through this project)		X						
2.1, 2.3 Plant 30 acres each year of mesic prairie grasses (approximately 30 species) in the spring 2009, 2010			X				X	
2.2, 2.4 Spot spray Canada thistle and other noxious weeds that threaten the quality of the grassland in summer 2009, 2010				X				X
2.5 Compare predictions of the plan to the result as a test of the plan.								X
3.1 Mail information about the plan to all grassland and shrubland IBA landowners and associated local groups. Invite partnerships						X	X	X
3.2 Organize a campaign consisting of one press release, two public events and two tours						X	X	X
3.2 Make at least 4 presentations to share successful methods from grassland plan widely in the Chicago Wilderness region through the CW coalition, the IBA program and through Audubon's Habitat Project						X	X	X

**PERSONNEL:**

Audubon's Director of Bird Conservation (Judy Pollock) is the principal staff for this project. Collaborators from the Forest Preserve District include Drew Ullberg. Volunteer leaders will also play significant roles in monitoring, although volunteers will not be used as a source of match.

Judy Pollock, who provides Audubon leadership to outreach and bird conservation projects, is the Illinois Important Bird Areas coordinator. Her Audubon accomplishments include coordination of the contract work at Bartel Grassland and Spring Creek Valley grassland bird habitat restoration projects. She was the principal organizer of the BCN Census, a regional volunteer bird monitoring effort.

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### **LITERATURE CITED:**

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SAMPLE MESIC PRAIRIE SEED MIX

GENUS/SPECIES	COMMON NAME	Oz/ACRE
<b>GRASSES/SEDGES/RUSHES</b>		
Andropogon gerardii	Big bluestem	32.00
Andropogon scoparius	Little bluestem	32.00
Elymus candensis	Prairie wild rye	16.00
Panicum virgatum	Prairie switch grass	1.50
Sorghastrum nutans (5)	Indian grass	<u>6.00</u>
	SUBTOTAL	87.50
<b>FORBS</b>		
Allium cemuum	Nodding wild onion	1.50
Aster ericoides	Heath aster	1.00
Aster laevis	Smooth-blue aster	2.00
Aster novae-angliae	New England aster	1.50
Baptisia leucantha	Wild white indigo	1.50
Cassisa fasciculata	Partridge pea	3.50
Coreopsis tripteris	Tall coreopsis	1.25
Desmodium canadense	Showy tick trefoil	1.50
Desmodium illinoense	Illinois tick trefoil	1.00
Echinacea pallida	Pale purple coneflower	3.00
Eryngium yuccifolium	Rattlesnake master	3.00
Gentiana andrewsii	Bottle gentian	1.00
Helenium autumnale	Sneezeweed	1.25
Heliopsis helianthoides	False sunflower	2.00
Lespedeza capitata	Round headed bush clover	3.00
Liatris spicata	Marsh blazing star	2.00
Liatris pycnostachya	Prairie blazing star	2.00
Monarda fistulosa	Prairie bergamot	2.00
Parthenium integrifolium	Wild quinine	2.50
Penstemon digitalis	Smoothe penstemon	2.00
Petalostemum purpureum	Purple prairie clover	1.00
Physostegia virginiana	False dragonhead	1.50
Pycnanthemum virginianum	Virginia mountain mint	0.75
Ratibida pinnata	Yellow coneflower	2.00
Rudbeckia hirta	Black eyed Susan	2.50
Rudbeckia laciniata	Cut leaf coneflower	0.75
Rudebeckia subtomentosa	Sweet black eyed Susan	1.25
Silphium intergrifolium	Rosin weed	2.00
Silphium laciniatum	Compass plant	2.00
Silphium perfoliatum	Cup plant	2.00
Silphium terebinthinaceum	Prairie dock	2.00
Solidago juncea	Early goldenrod	2.00
Solidago rigida	Stiff goldenrod	2.00

Tradescantia ohioensis	Common spiderwort	1.25
Verbena stricta	Hoary vervain	2.00
Veronia altissima	Ironweed	1.00
Veronicastrum virginicum	Culver's root	0.50
Zizia aurea (38)	Golden Alexander	<u>0.50</u>
	SUBTOTAL	65.50
<b>TEMPORARY COVER</b>		
Avena sativa	Seed oats	40.00
Lolium multiflorum (2)	Annual rye	<u>80.00</u>
	SUBTOTAL	<u>120.00</u>
	TOTAL	273.00

Map of sites included in planning process

Forest Preserve District - Kane County

