

# STATE WILDLIFE GRANT

State of Illinois

## Grant Agreement - Work Plan

PROJECT NUMBER: T-?-M-1

PROJECT TITLE: Public Land Native Wildlife Habitat Restoration Project

### OBJECTIVES:

By the end of the first segment of this grant period of December 31, 2008, the following activities will be accomplished:

- Restore and/or maintain an additional 100 acres of high quality prairie and wetlands at Green River State Wildlife Area, Lee County by the removal of invasive and exotic woody species.
- Protect 3145 acres of high quality natural areas at Harlem Hills Nature Preserve and Rock Cut State Park, Winnebago County by constructing approximately 2 miles of permanent fencing along all inadequately fenced boundaries. Conduct boundary surveys whenever the line is in question.
- Restore hydrology to 2500 acres of rare sand prairies and savannas at Iroquois State Wildlife Area Land and Water Reserve and Hooper Branch Savanna NP, Iroquois County.
- Restore and/or maintain prairie and savanna habitats at the 16,550 acre Jim Edgar Panther Creek State Fish and Wildlife, in Cass County by the removal of invasive and exotic woody species.
- Maintain and restore approximately 200 acres of forest and restore over 30 acres of agricultural fields and old field to prairie at Jubilee College State Park, Peoria County to restore habitat for area sensitive forest and grassland species as well as the state threatened Franklin's ground squirrel and short-eared owl.
- Provide, restore and maintain 3600 acres of grassland habitat at Prairie Ridge Sanctuary, Marion and Jasper Counties that provide habitat to 26 state endangered species, 5 watch list species and 5 area sensitive grassland species.
- Create two wetlands and restore prairie, and savanna habitat at Starved Rock State Park, LaSalle County to restore hydrologic function above a natural area canyon system in Starved Rock Nature Preserve.
- Create  $\geq 8$  ephemeral wetlands at Mount Vernon Game Propagation Center and Rend Lake State Fish and Wildlife Area, Jefferson County to provide direct benefits to the crawfish frog, listed as a Critical Species for the Southern Till Plain. The project will also benefit non-game

indicator species for the region, including southern leopard frog, cricket frog, chorus frog, spring peeper, and smallmouth salamander.

- Provide habitat for the northern harrier, Wilson's snipe, American bittern and American woodcock, listed as Species in Greatest Need of Conservation by Illinois' Comprehensive Wildlife Conservation Plan by creating a 4.5 acre ephemeral wetland and controlling exotic/invasive woody plants at Silver Springs State Fish and Wildlife Area (SSSFWA), Kendall County.
- Create/restore  $\geq 40$  acres of diverse wetland habitats (i.e., sedge meadows; ephemeral and permanent wetlands) at Union County Conservation Area, Union County to provide direct benefits to the Mississippi kite, Mississippi green water snake, mud snake, bald eagle and common moorhen, all listed as critical species for Lower Mississippi River Bottomlands.
- Create 15 acres of additional wetland habitat at Stephen A. Forbes State Park, Marion County.
- Create three 1-acre ponds at Cypress Pond State Natural Area, Johnson County to provide watershed protection and slow run-off to mimic pre-settlement hydroperiod.
- Create/restore shallow ponds and ephemeral wetlands for the state endangered Illinois mud turtle and state threatened Stroecker's chorus frog at Sparks Pond State Natural Area, Rollo Prairie State Natural Area, Illinois Sand Areas Land and Water Reserve and/or Sand Ridge State Forest, Mason County.
- Create a large shallow water wetland at Jim Edgar Panther Creek State Fish and Wildlife Area, Cass County, Illinois.

#### APPROACH:

The IDNR and non-governmental organizations will direct the habitat restoration efforts on these sites. Consulting and contractual services will also be needed on a number of the projects. All activities for these projects will be included, reviewed and approved through the IDNR's annual plan of work process. The following activities may be included in these habitat restoration projects:

- Prescribed Fire

**Details** - Prescribed fire involves the planned application of fire to meet specific management goals. Prescribed fire may be used to control the invasion or spread of exotic invasive species, control succession, maintain herbaceous habitats including prairies and some wetlands, and promote the regeneration of some woodland species. The prescribed burning activities include planning, preparation, implementation and evaluation of the prescribed burn and its impacts. Planning includes the development of a written prescription by the IDNR's District Heritage Biologist in a form and format consistent with IDNR prescribed burning policy. Plans are reviewed and approved by the Regional Forester and submitted to the Illinois Environmental Protection Agency for air quality related open burning permits. Planners will acquire any other open burning permits or authorizations required within the jurisdiction appropriate to the site. Preparation includes the maintenance of fire equipment, assembly, training and briefing of crews, construction of control lines and notification of neighbors. Implementation includes all activities related to the actual burning of the site. Prescribed burns will be

conducted by a district resource manager that meets the IDNR qualifications as a burn boss. Only persons who have received the minimum training standards under IDNR policy for participation prescribed burning will assist in conducting the burn. Evaluation includes the preparation of a burn report as per IDNR prescribed burning policy and procedures and any systematic review of impacts of the fire on a site. All prescribed fires will be approved through the annual site resource planning process and included on the site's annual plan of work.

- Invasive Woody Plant Control

**Details** - Invasive woody plant control is the planned mechanical removal, elimination or thinning of woody plant material that has invaded a project area. Invasive woody plants may also be controlled by the use of prescribed fire (see above). Invasive woody plant control is used in prairies, particularly hill prairies where surrounding native woody vegetation is encroaching. In savanna and wetland habitats, woody vegetation control can be used to control shrubs and trees that have increased in density and are shading out rare species found in these habitats. It may also be used to restore upland forest habitats where native mesophytic vegetation (such as maple) is replacing upland forest vegetation due to a long history of fire suppression. Control methods will include removal or thinning of target invasive woody plants depending on the management goals. The control methods applied in a site shall be those that will be effective in meeting the desired goal, have a minimal adverse impact on non-target species, and are cost efficient. Those methods will include mechanical cutting or removal of brush with tractor mounted mowers, bulldozer, hand operated brush cutters, and chainsaws, application of appropriate herbicides using cut stem, injection, basal bark and foliar methods, or a combination of methods. All methods of control of invasive woody plants will be done in ways consistent with methods described in the Illinois Nature Preserves Commission's Vegetation Management Guidelines. All activities, supplies and equipment needed to plan, implement and evaluate a woody plant control effort at a project site will be included. All invasive woody plant control will be approved through the annual site resource planning process and included on the site's annual plan of work.

- Invasive Exotic Species Control

**Details** - Invasive exotic species are species not native to a region which invade native habitats, disrupting the function of these habitats and causing the elimination of or stress to native species populations. Invasive exotic species control is the planned removal, elimination or reduction in these populations of invasive exotic species. Invasive exotic species include woody and herbaceous plants, and animals. The control methods applied in a project site shall be those that will be effective in meeting the desired goal, have a minimal adverse impact on non-target species, and are cost efficient. Invasive exotic woody plant species will be controlled using the methods outlined above for woody plant control. Herbaceous plant species will be controlled using mechanical methods such as pulling or mowing as appropriate, or by the application of herbicides in accordance with state and federal law by licensed applicators. Control of invasive exotic animal populations will include lethal methods such as: trapping; shooting; plus, trap & euthanasia. All methods of control of invasive exotic species will be done in ways consistent with methods described in the Illinois Nature Preserves Commission's Vegetation Management Guidelines. All activities, supplies and equipment needed to plan, implement and evaluate an invasive exotic species control effort at a project site will be included. All invasive exotic species control will be approved through the annual site resource planning process and included on the site's annual plan of work.

- Erosion/sedimentation control

**Details** - The control of erosion or sedimentation resulting from unnatural disturbances will be undertaken at some project sites. Erosion and sedimentation can lead to the direct elimination of habitat for at-risk species. The erosion control methods applied in a project site shall be those that will be effective in meeting the desired goal, have a minimal adverse impact on native species, and are cost efficient. Methods to be employed may include a combination of planting of native covers and installation of appropriate structures. Recommendations of the local NRCS personnel will be sought and considered for implementation. All appropriate local, state and federal laws will be followed. Erosion/sedimentation control projects will be evaluated at least one year after the installation. All activities and materials needed to plan, implement and evaluate erosion/sedimentation control projects may be included in this practice.

- Boundary Protection/Fence Repair

**Details** - Project sites may be impacted from external intrusions from people, off road vehicles and activities of adjacent land owners. These intrusions can cause direct harm to resources within a preserve or may result in increased erosion, or spread of exotic invasive species. Boundary protection includes the finding, delineating and marking of boundaries. Boundary protection may also include the construction or repair of a fence or barrier to prevent an illegal intrusion that damages natural resources. All activities and supplies needed to implement boundary protection may be included in this project. Land surveys will be conducted by licensed land surveyors.

- Habitat Creation/Restoration: Planting

**Details** - Native habitats required to support target species have been lost or degraded. By restoring and increasing the amount of habitat at a project site, we can improve the viability of populations in those locations. In addition to the use of prescribed burns, woody plant control and invasive exotic species control mentioned above, planting is an effective way to restore habitats. Where elements of a particular native habitat exist, seeds may be collected on site and replanted within the project site. If there are sites with insufficient reproduction of desirable native species or where important species components are missing, then habitat may be recreated using plant material from off site. All habitat creation/restoration projects will comply with the IDNR, INPC and Endangered Species Protection Board joint policy on translocation of plant materials. Species planted shall be native to the region where the project site is located. Habitats should be established only on areas where there are appropriate soils. Existing high quality habitats shall not be adversely impacted by habitat creation projects. Collection for restorations shall be from sites where landowners have given their permission and there will be no adverse impact on native populations. Restorations for prairie habitats may include native grasses and forbs. Restorations for forest, savanna, and barren habitats may include appropriate native trees, shrubs, grasses and herbs. Restorations for wetland, riparian and aquatic habitats may include appropriate native trees, shrubs, grasses, herbs and aquatic plants. All activities included in planning, obtaining plant material, planting and evaluating the success of habitat creation/restoration: planting will be included in this practice. All invasive woody plant control will be approved through the annual site resource planning process and included on the site's annual plan of work. All planting projects will be approved through the annual site resource planning process and included on the site's annual plan of work.

- Hydrology Restoration

**Details** - Changes in hydrology can impact the viability of target species. No streams or other bodies of water will be impacted. All work will be done in hydrologically isolated areas or in such a

way that they will not impact the movement of aquatic organisms. All hydrologic restorations will be done in accordance with local, state and federal laws and in consultation with the local NRCS office. All activities included in planning, implementing and evaluating the success of hydrology restoration projects will be included in this practice. All hydrologic restoration will be approved through the annual site resource planning process and included on the site's annual plan of work.

Wetland restoration will be limited to the removal of previously placed fill or drain tiles in existing wetland basins as well as the addition of water control structures. The maximum surface area of disturbance for the restoration of a wetland will be less than 5 acres. There will be no more than 5 wetlands restored by the removal of fill at any project site.

Wetland creation will be limited to the creation of low berms or depressions designed to capture precipitation or groundwater, as well as the addition of water control structures. Where porous soil exists, clay or synthetic liners will be allowed to be placed. These practices are described in greater detail by publications such as *A Guide to Creating Vernal Ponds* (Biebighauser 2002), *Habitat Management Guidelines for Amphibians and Reptiles of the Midwest* (Partners in Amphibian and Reptile Conservation 2002) and the *Illinois Landowner's Guide to Amphibian Conservation* (Szafoni et al. 2002). The wetlands constructed under this project will consist of an earthen berm with a maximum height of four (4) feet. The maximum surface area of disturbance for the construction of a wetland will be fifteen (15) acres. There will be no more than 16 wetlands constructed at any project site.

Pond restoration and creation will be limited to areas  $\leq 3$  acre in size. Ponds restored or created under this project will be constructed according to NRCS specifications.

#### LOCATION:

The Public Land Native Wildlife Habitat Restoration Project sites will be statewide on public lands. Projects will be conducted at Jim Edgar Panther Creek State Fish and Wildlife Management Area, Iroquois County State Wildlife Area Land and Water Reserve, Hooper Branch Savanna Nature Preserve, Prairie Ridge State Natural Area, Green River State Wildlife Area, Harlem Hills Nature Preserve, Rock Cut State Park, Jubilee College Forest Nature Preserve, Jubilee College State Park, Starved Rock State Park, Rend Lake State Fish and Wildlife Area, Mount Vernon Game Propagation Center, Silver Springs State Fish and Wildlife Area, Union County Conservation Area, Stephen A. Forbes State Park, Cypress Pond State Natural Area, Sparks Pond State Natural Area, Rollo Prairie State Natural Area, Illinois Sand Areas Land and Water Reserve, and Sand Ridge State Forest. Specific locations are provided in Appendices A-M for all work locations. Detailed topographic maps are also provided to better illustrate the terrain at and near the project area.

#### GRANT AGREEMENT SUPPORT DOCUMENTATION:

The following documents are attached in support of this grant agreement:

1. Grant Agreement (Standard Form 3-1552)
2. Grant Agreement - Budget Information
3. Federal Aid Section 7 Evaluation Form

4. Illinois Clearinghouse Response per Federal Executive Order 12372
5. NEPA Compliance Checklist
6. U.S. Department of Interior, Part E: Certification Regarding Lobbying

APPENDICES:

- A. Harlem Hills Nature Preserve / Rock Cut State Park, Winnebago County fencing project.
- B. Iroquois SWA Land & Water Reserve and Hooper Branch Savanna, Iroquois County hydrology restoration project.
- C. Jim Edgar Panther Creek State Fish and Wildlife Area, Cass County exotic vegetation control and habitat restoration project.
- D. Jubilee College Forest Nature Preserve/Jubilee College State Park, Peoria County grassland and forest restoration project.
- E. Prairie Ridge State Natural Area, Marion and Jasper Counties grassland habitat restoration project.
- F. Starved Rock State Park, LaSalle County wetland and grassland restoration project.
- G. Rend Lake State Fish and Wildlife Area and Mount Vernon Game Propagation Center, Jefferson County ephemeral wetland construction project.
- H. Silver Springs State Fish and Wildlife Area, Kendall County ephemeral wetland construction and invasive species control project.
- I. Union County Conservation Area, Union County wetland creation and restoration project.
- J. Stephen A. Forbes State Park, Marion County, wetland creation project.
- K. Cypress Pond State Natural Area, Johnson County pond creation project.
- L. Sparks Pond State Natural Area, Rollo Prairie State Natural Area, Illinois Sand Areas Land and Water Reserve and/or Sand Ridge State Forest, Mason County, habitat enhancement for the Illinois mud turtle project.
- M. Jim Edgar Panther Creek State Fish and Wildlife Area, Cass County shallow water wetland construction project.

**Appendix A**

**Job Title:** Job 1. Harlem Hills Nature Preserve / Rock Cut State Park Fencing

**Job Leader:** Todd Bittner  
 Restoration Ecologist  
 Starved Rock State Park  
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**Purpose/need:**

Harlem Hills Nature Preserve (HHNP) and Rock Cut State Park (RCSP) (Figure A) provide significant habitat for prairie, woodland, and wetland species of conservation concern, within an urban and suburban landscape (Table A). These sites are currently being impacted from external intrusions from off road vehicles and activities of adjacent land owners. These intrusions are causing direct harm to resources, and are resulting in increased erosion and the spread of exotic, invasive species.

**Objective:**

Protect high quality natural areas at Harlem Hills Nature Preserve and Rock Cut State Park by constructing approximately 2 miles of permanent fencing along all inadequately fenced boundaries. Conduct boundary surveys whenever the line is in question.

**Approach:**

Harlem Hills Nature Preserve (HHNP) and Rock Cut State Park (RCSP) are both in Loves Park, Winnebago County. IDNR personnel and contractors will implement a program to build a fence along all of HHNP and the southern portion of Rock Cut State Park. Descriptions of these practices are in the body of the grant proposal.

**Budget:**

Line Item	Federal Share	State Share	Project Total
Contractual	\$24,500.00	\$24,500.00	\$49,000.00
Commodities	\$0.00	\$0.00	\$0.00
Personnel	\$0.00	\$0.00	\$0.00
Total	\$24,500.00	\$24,500.00	\$49,000.00

Table A. Illinois Species in greatest conservation need at Harlem Hills Nature Preserve, Rock Cut State Park.

BIRDS

Henslow's sparrow (ST)  
Grasshopper sparrow  
Whip-poor-will  
Northern flicker  
Northern bobwhite  
Cerulean warbler (ST)  
Bobolink  
Red-headed woodpecker  
Savanna sparrow  
American woodcock  
Ovenbird  
American redstart  
Dickcissel  
Bell's vireo

MAMMALS

American badger

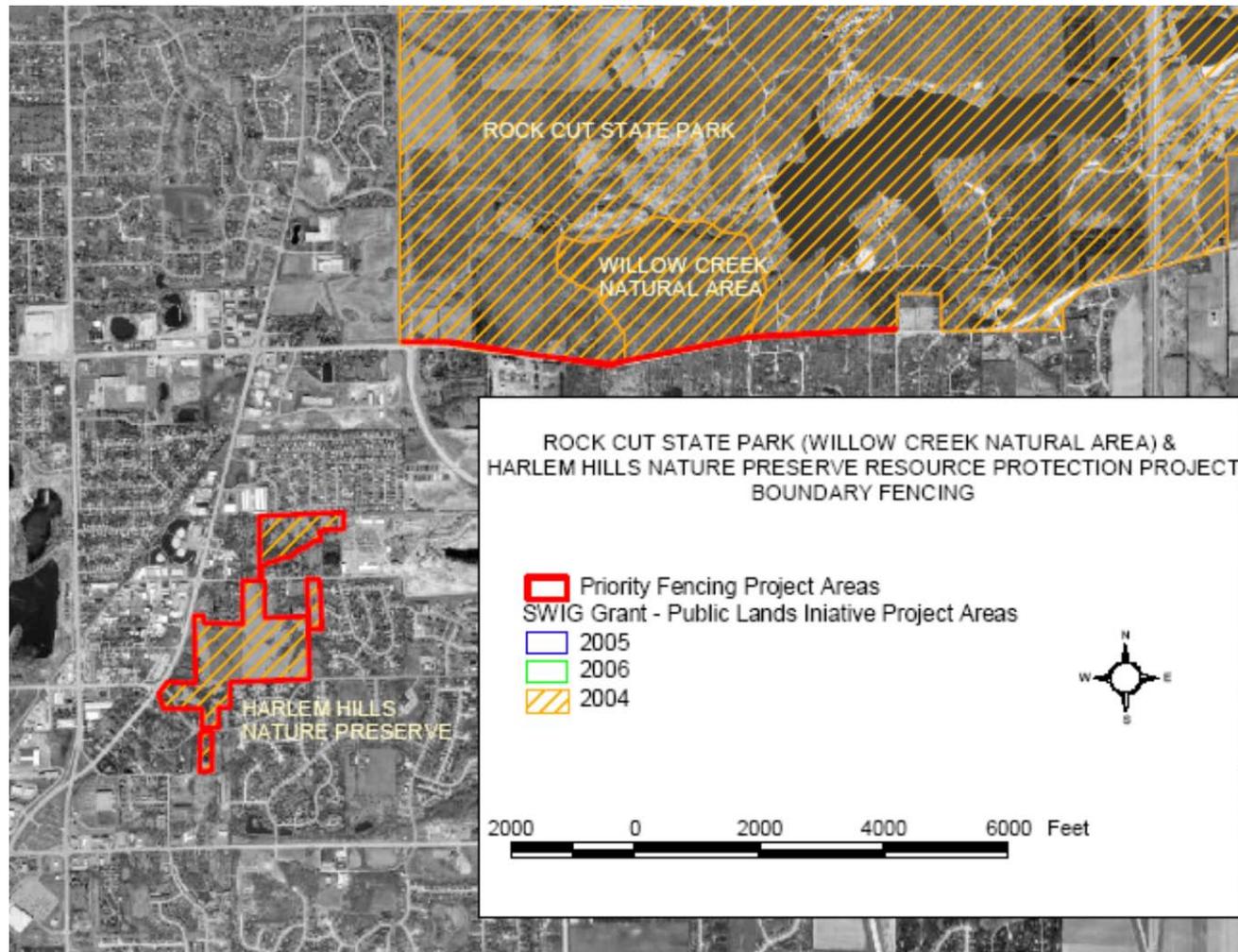
INSECTS

Priority species are likely, but no surveys have been conducted

(SE) State Endangered Species

(ST) State Threatened Species

FIGURE A



## Appendix B

**Job:** Job 2. Hydrology Restoration at Iroquois State Wildlife Area Land and Water Reserve and Hooper Branch Savanna NP, Iroquois County.

**Job Leader:** Eric L. Smith  
Restoration Ecologist  
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Gibson City, Illinois 60936  
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[esmith@dnrmail.state.il.us](mailto:esmith@dnrmail.state.il.us)

### Purpose/need:

The Iroquois County SWA Land and Water Reserve and Hooper Branch Savanna Nature Preserve (Figure B), located 3 miles northeast of Beaverville, Illinois in far northeastern Iroquois County, is a 2500-acre site containing a diverse mosaic of oak sand savanna, sand flatwoods, prairie, sedge meadow and marsh communities. The site contains one of the finest and most extensive sedge meadow/wet prairie/marsh complexes remaining in Illinois. The complex provides habitat for 14 state-listed species, several of which are only known from a handful of sites in the state (Table B). There are also several unusual mammals, such as the plains pocket gopher (*Geomys bursarius*), southern flying squirrel (*Glaucomys volans*), and the rare and restricted red squirrel (*Tamiasciurus hudsonicus*). This area is listed as a conservation priority area in the Grand Prairie Division of the Comprehensive Wildlife Conservation Plan. However, changes in hydrology from drainage ditches, broken water control structures, and a significant increase in pivot point irrigation throughout the Kankakee Sands Section ecosystem has significantly lowered the water table. This altered hydrology is threatening the site and its associated fauna and flora.

### Objective:

Restore hydrology within 2500 acres of Iroquois County State Wildlife Area LWR and Hooper Branch Savanna Nature Preserve by installing several water control structures to reverse the impacts of artificial water loss.

### Approach:

Several water control structures will be built in strategic locations, including the SW corner of Iroquois State Wildlife Area LWR and along 1.5 miles of drainage ditch in Hooper Branch Savanna NP. Potential locations are circled in brown in Figure B. Exact locations will depend on where it is determined that makes the most hydrological and economic sense. Descriptions of these practices are in the body of the grant proposal.

### Budget:

Line Item	Federal Share	State Share	Project Total
Contractual	\$23,600.00	\$15,600.00	\$39,200.00
Commodities	\$0.00	\$3,000.00	\$3,000.00

Personnel	\$0.00	\$5,000.00	\$5,000.00
Total	\$23,600.00	\$23,600.00	\$47,200.00

**Table B.** State Endangered (SE), Threatened (ST), and Conservation Priority Species (CP) at Iroquois County SWA Land and Water Reserve and Hooper Branch Savanna Nature Preserve.

COMMON NAME	SCIENTIFIC NAME	STATUS
<b>INSECTS</b>		
	<i>Boloria selene myrina</i>	CP
	<i>Catocala abbreviatella</i>	CP
	<i>Catocala amestris</i>	CP
	<i>Chlorotettix limosus</i>	CP
	<i>Commellus colon</i>	CP
	<i>Erynnis icelus</i>	CP
mottled duskywing	<i>Erynnis martialis</i>	CP
	<i>Euphyes bimacula</i>	CP
	<i>Flexamia areolata</i>	CP
	<i>Flexamia pryops</i>	CP
	<i>Graminella oquaka</i>	CP
	<i>Hesperia sassacus</i>	CP
	<i>Hydraecia stramentosa</i>	CP
	<i>Laevicephalus peronatus</i>	CP
	<i>Lycaena helloides</i>	CP
blazing star stem borer	<i>Papaipema beeriana</i>	CP
	<i>Papaipema cerrusata</i>	CP
	<i>Papaipema inquaesita</i>	CP
	<i>Papaipema limpida</i>	CP
	<i>Papaipema nepheleptena</i>	CP
culvers root borer	<i>Papaipema sciata</i>	CP

	<i>Papaipema speciosissima</i>	CP
	<i>Paraphlepsius maculosus</i>	CP
	<i>Polyamia compacta</i>	CP
	<i>Polyamia herbida</i>	CP
	<i>Polyamia oblecta</i>	CP
<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>	<b>STATUS</b>
	<i>Polyamia similaris</i>	CP
Byssus skipper	<i>Problema byssus</i>	CP
	<i>Scaphytopius abbreviatus</i>	CP
	<i>Scaphytopius cineris</i>	CP
	<i>Scaphytopius dorsalis</i>	CP
	<i>Scaphytopius vaccinum</i>	CP
	<i>Schinia nundina</i>	CP
	<i>Speyeria aphrodite</i>	CP
regal fritillary	<i>Speyeria idalia</i>	ST
	<i>Stethophyma lineatum</i>	CP
	<i>Xerophloea peltata</i>	CP
<b>FISH</b>		
starhead topminnow	<i>Fundulis dispar</i>	ST
ironcolor shiner	<i>Notropis chalybaeus</i>	SE
central mudminnow	<i>Umbra limi</i>	CP
<b>HERPS</b>		
ornate box turtle	<i>Terrapine ornata</i>	CP
slender glass lizard	<i>Ophisaurus attenuatus</i>	CP
<b>BIRDS</b>		
Henslow's sparrow	<i>Ammodramus henslowii</i>	ST

grasshopper sparrow	<i>Ammodramus savannarum</i>	CP
American bittern	<i>Botaurus lentiginosus</i>	SE
Whip-poor-will	<i>Caprimulgus vociferus</i>	CP
northern harrier	<i>Circus cyaneus</i>	SE
Sedge Wren	<i>Cistothorus platensis</i>	CP
yellow billed cuckoo	<i>Coccyzus americanus</i>	CP
northern flicker	<i>Colaptes auratus</i>	CP
northern bobwhite	<i>Colinus virginianus</i>	CP
<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>	<b>STATUS</b>
bobolink	<i>Dolichonyx oryzivorus</i>	CP
willow flycatcher	<i>Empidonax trailii</i>	CP
wood thrush	<i>Hylocichla mustelina</i>	CP
yellow breasted chat	<i>Icteria virens</i>	CP
Red-headed woodpecker	<i>Melanerpes erythrocephalus</i>	CP
king rail	<i>Rallus elegans</i>	CP
American Woodcock	<i>Scolopax minor</i>	CP
ovenbird	<i>Seiurus aurocapillus</i>	CP
dickcissel	<i>Spiza americana</i>	CP
field sparrow	<i>Spiza pusilla</i>	CP
brown thrasher	<i>Toxostoma rufum</i>	CP
<b>MAMMALS</b>		
plains pocket gopher	<i>Geomys bursarius)</i>	CP
southern flying squirrel	<i>Glaucomys volans)</i>	CP
red squirrel	<i>Tamiasciurus hudsonicus)</i>	CP
<b>PLANTS</b>		
old plains man	<i>Hymenopappus scabiosaeus</i>	ST
marsh speedwell	<i>Veronica scutellata</i>	ST

narrow-leaved sundew	<i>Drosera intermedia</i>	ST
primrose violet	<i>Viola primulifolia</i>	SE
Eastern blue-eyed grass	<i>Sisyrinchium atlanticum</i>	ST
bristly blackberry	<i>Rubus setosus</i>	ST
Carey's heartsease	<i>Polygonum careyi</i>	SE
tubercled orchid	<i>Platanthera flava var. herbiola</i>	ST
wood orchid	<i>Platanthera clavellata</i>	SE
shore St. John's wort	<i>Hypericum adpressum</i>	SE
ground pine	<i>Lycopodium dendroideum</i>	SE
sedge	<i>Carex cumulata</i>	SE
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dickcissel	<i>Spiza americana</i>	CP
field sparrow	<i>Spiza pusilla</i>	CP
brown thrasher	<i>Toxostoma rufum</i>	CP
<b>MAMMALS</b>		
plains pocket gopher	<i>Geomys bursarius</i> )	CP

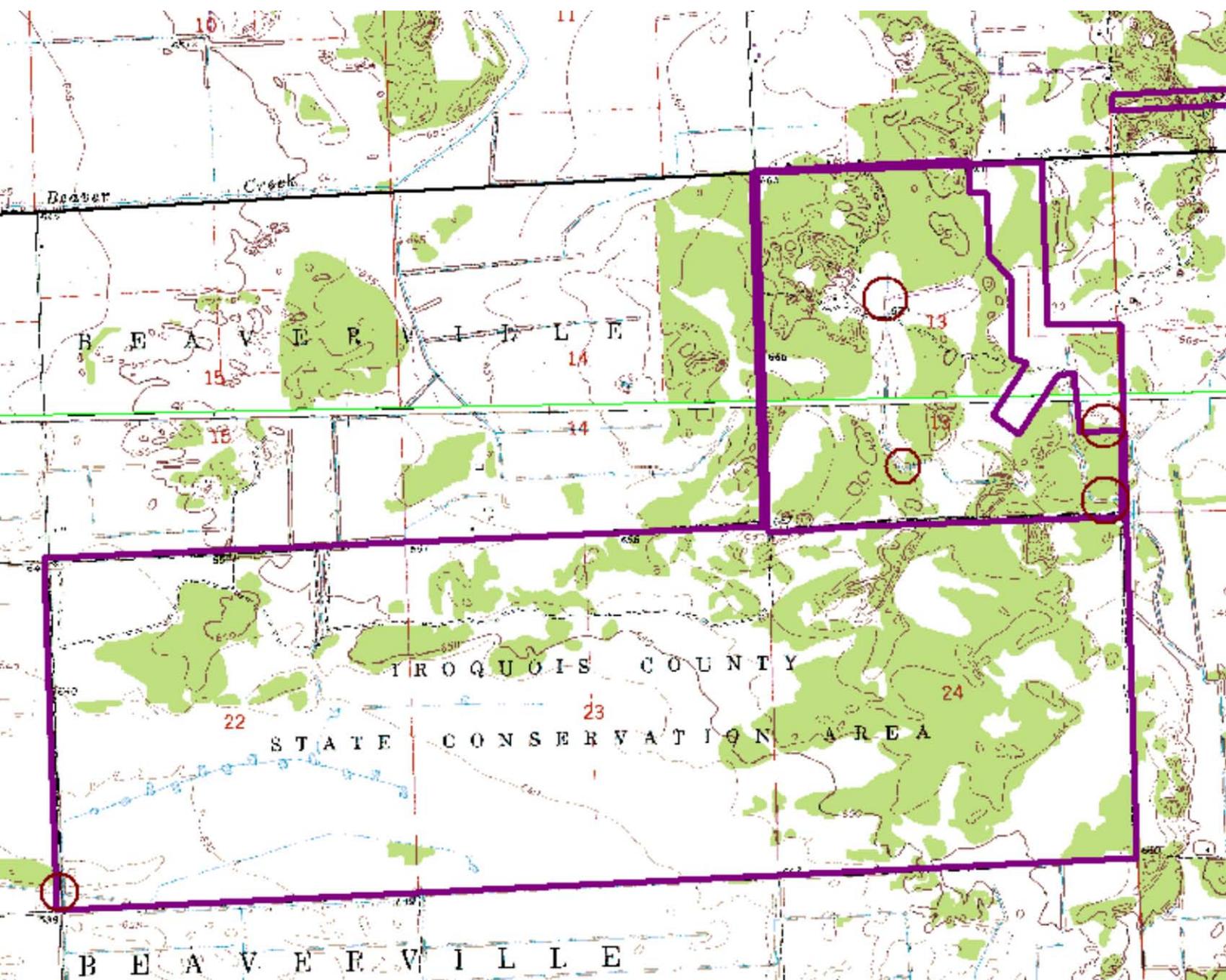
southern flying squirrel	<i>Glaucomys volans</i> )	CP
red squirrel	<i>Tamiasciurus hudsonicus</i> )	CP
<b>PLANTS</b>		
old plainsman	<i>Hymenopappus scabiosaeus</i>	ST
marsh speedwell	<i>Veronica scutellata</i>	ST
narrow-leaved sundew	<i>Drosera intermedia</i>	ST
primrose violet	<i>Viola primulifolia</i>	SE
Eastern blue-eyed grass	<i>Sisyrinchium atlanticum</i>	ST
bristly blackberry	<i>Rubus setosus</i>	ST
Carey's heartsease	<i>Polygonum careyi</i>	SE
tubercled orchid	<i>Platanthera flava var. herbiola</i>	ST
wood orchid	<i>Platanthera clavellata</i>	SE
shore St. John's wort	<i>Hypericum adpressum</i>	SE
ground pine	<i>Lycopodium dendroideum</i>	SE
sedge	<i>Carex cumulata</i>	SE
<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>	<b>STATUS</b>
<b>INSECTS</b>		
	<i>Boloria selene myrina</i>	CP
	<i>Catocala abbreviatella</i>	CP
	<i>Catocala amestris</i>	CP
	<i>Chlorotettix limosus</i>	CP
	<i>Commellus colon</i>	CP
	<i>Erynnis icelus</i>	CP
mottled duskywing	<i>Erynnis martialis</i>	CP
	<i>Euphyes bimacula</i>	CP
	<i>Flexamia areolata</i>	CP
	<i>Flexamia pryops</i>	CP
	<i>Graminella oquaka</i>	CP

	<i>Hesperia sassacus</i>	CP
	<i>Hydraecia stramentosa</i>	CP
	<i>Laevicephalus peronatus</i>	CP
	<i>Lycaena helloides</i>	CP
blazing star stem borer	<i>Papaipema beeriana</i>	CP
	<i>Papaipema cerrusata</i>	CP
	<i>Papaipema inquaesita</i>	CP
	<i>Papaipema limpida</i>	CP
	<i>Papaipema nepheleptena</i>	CP
culvers root borer	<i>Papaipema sciata</i>	CP
	<i>Papaipema speciosissima</i>	CP
	<i>Paraphlepsius maculosus</i>	CP
	<i>Polyamia compacta</i>	CP
	<i>Polyamia herbida</i>	CP
	<i>Polyamia obtecta</i>	CP
<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>	<b>STATUS</b>
	<i>Polyamia similaris</i>	CP
Byssus skipper	<i>Problema byssus</i>	CP
	<i>Scaphytopius abbreviatus</i>	CP
	<i>Scaphytopius cinerus</i>	CP
	<i>Scaphytopius dorsalis</i>	CP
	<i>Scaphytopius vaccinum</i>	CP
	<i>Schinia nundina</i>	CP
	<i>Speyeria aphrodite</i>	CP
regal fritillary	<i>Speyeria idalia</i>	ST
	<i>Stethophyma lineatum</i>	CP

	<i>Xerophloea peltata</i>	CP
<b>FISH</b>		
starhead topminnow	<i>Fundulis dispar</i>	ST
ironcolor shiner	<i>Notropis chalybaeus</i>	SE
central mudminnow	<i>Umbra limi</i>	CP
<b>HERPS</b>		
ornate box turtle	<i>Terrapine ornata</i>	CP
slender glass lizard	<i>Ophisaurus attenuatus</i>	CP
<b>BIRDS</b>		
Henslow's sparrow	<i>Ammodramus henslowii</i>	ST
grasshopper sparrow	<i>Ammodramus savannarum</i>	CP
American bittern	<i>Botaurus lentiginosus</i>	SE
Whip-poor-will	<i>Caprimulgus vociferus</i>	CP
northern harrier	<i>Circus cyaneus</i>	SE
Sedge Wren	<i>Cistothorus platensis</i>	CP
yellow billed cuckoo	<i>Coccyzus americanus</i>	CP
northern flicker	<i>Colaptes auratus</i>	CP
northern bobwhite	<i>Colinus virginianus</i>	CP
<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>	<b>STATUS</b>
bobolink	<i>Dolichonyx oryzivorus</i>	CP
willow flycatcher	<i>Empidonax trailii</i>	CP
wood thrush	<i>Hylocichla mustelina</i>	CP
yellow breasted chat	<i>Icteria virens</i>	CP
Red-headed woodpecker	<i>Melanerpes erythrocephalus</i>	CP
king rail	<i>Rallus elegans</i>	CP
American Woodcock	<i>Scolopax minor</i>	CP
ovenbird	<i>Seiurus aurocapillus</i>	CP

dickcissel	<i>Spiza americana</i>	CP
field sparrow	<i>Spiza pusilla</i>	CP
brown thrasher	<i>Toxostoma rufum</i>	CP
<b>MAMMALS</b>		
plains pocket gopher	<i>Geomys bursarius</i> )	CP
southern flying squirrel	<i>Glaucomys volans</i> )	CP
red squirrel	<i>Tamiasciurus hudsonicus</i> )	CP
<b>PLANTS</b>		
old plainsman	<i>Hymenopappus scabiosaeus</i>	ST
marsh speedwell	<i>Veronica scutellata</i>	ST
narrow-leaved sundew	<i>Drosera intermedia</i>	ST
primrose violet	<i>Viola primulifolia</i>	SE
Eastern blue-eyed grass	<i>Sisyrinchium atlanticum</i>	ST
bristly blackberry	<i>Rubus setosus</i>	ST
Carey's heartsease	<i>Polygonum careyi</i>	SE
tubercled orchid	<i>Platanthera flava var. herbiola</i>	ST
wood orchid	<i>Platanthera clavellata</i>	SE
shore St. John's wort	<i>Hypericum adpressum</i>	SE
ground pine	<i>Lycopodium dendroideum</i>	SE
sedge	<i>Carex cumulata</i>	SE

**FIGURE B** Hooper Branch Savanna Nature Preserve and Iroquois State Wildlife Area Land and Water Reserve. Potential locations for water control structures are circled in brown.



## Appendix C

**Job Title:** Job 3. Exotic Vegetation Control at Jim Edgar Panther Creek State Fish and Wildlife Area

**Job Leader:** Timothy M. Kelley, Restoration Ecologist  
Illinois Department of Natural Resources  
700 S. 10<sup>th</sup> St.  
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[tkelley@dnrmail.state.il.us](mailto:tkelley@dnrmail.state.il.us)

### **Purpose/need:**

Jim Edgar Panther Creek State Fish and Wildlife Area (Figure C) is located in east-central Cass Co., approximately 12 miles west of Petersburg and 6 miles northwest of Ashland, Illinois. The site contains significant acreage that once supported high quality grassland and savanna habitats, both of which are habitats designated as important by the Illinois Wildlife Action Plan. Further, several thousand acres within this site have been converted from fescue pasture to more wildlife-compatible native warm-season grass and forb communities over the last five years. The areas within the park supporting these grassland habitats provide habitat for various furbearing mammals, neotropical migrant songbirds, etc., that are delineated as important wildlife resources and/or “species in greatest need of conservation” in the CWCP (Table C). Furthermore, populations of the state-threatened blazing star (*Liatris scariosa* var. *neuwlandii*), pale false foxglove (*Agalinis skinnerianna*), and white lady’s slipper orchid (*Cypripedium candidum*) are present at various areas on the site, along with numerous other prairie-adapted plant species supported by these native and restored habitats, suggesting high quality for both plant species and the prairie-adapted wildlife that depend on them. One of the major threats to the continued viability and improvement of the prairie and savanna areas on site is invasion by a number of invasive, exotic species including, autumn olive, osage orange, bush honeysuckle, and multiflora rose

**Objective:** Restore and/or maintain prairie and savanna habitats at Jim Edgar Panther Creek State Fish and Wildlife Area, in Cass County, by the removal of invasive and exotic woody species, primarily located in the central and west-central portions of the site along the Panther Creek valley.

### **Approach:**

IDNR personnel and contractors will implement a program to reduce and control woody species. The primary practices to be applied will include prescribed fire, invasive woody plant control, invasive exotic species control and habitat restoration/creation: planting. Descriptions of these practices are in the body of the grant proposal.

### **Budget:**

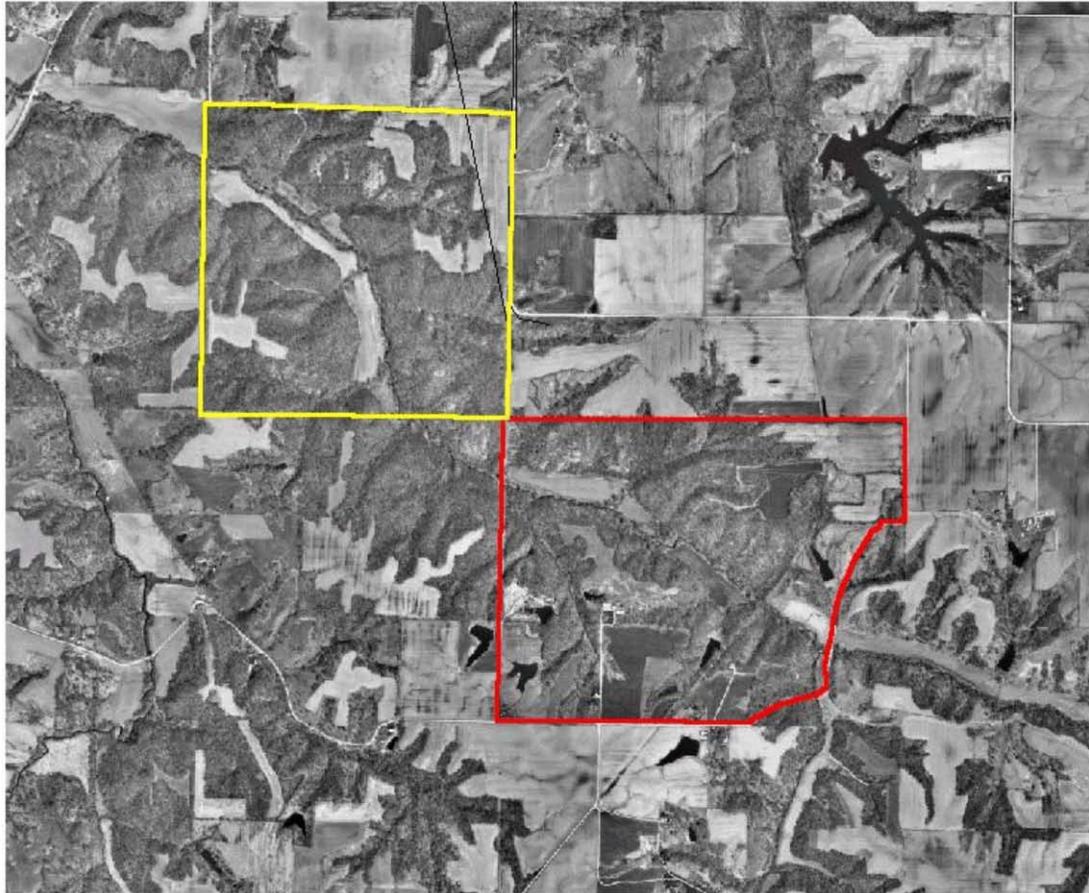
Line Item	Federal Share	State Share	Project Total
Contractual	\$25,000.00	\$0.00	\$25,000.00
Commodities	\$0.00	\$9,000.00	\$9,000.00
Personnel	\$0.00	\$16,000.00	\$16,000.00
Total	\$25,000.00	\$25,000.00	\$50,000.00

Table C. Endangered (E), Threatened (T), and Conservation Priority Species (CP) of Jim Edgar Panther Creek State Fish and Wildlife Area.

<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>	<b>STATUS (as listed in IL.)</b>
Loggerhead Shrike	<i>Lanius ludovicianus</i>	CP, T
Northern Harrier	<i>Circus cyaneus</i>	CP, E
Short-eared Owl	<i>Asio flammeus</i>	CP, E
Henslow's Sparrow	<i>Ammodramus henslowii</i>	CP, T
Brown creeper	<i>Certhia americana</i>	CP
Northern bobwhite	<i>Colinus virginianus</i>	CP
Red-headed woodpecker	<i>Melanerpes erythrocephalus</i>	CP
American Woodcock	<i>Scolopax minor</i>	CP
River Otter	<i>Lontra canadensis</i>	CP
Muskrat	<i>Ondatra zibethicus</i>	CP
Bobcat	<i>Lynx rufus</i>	CP
American badger	<i>Taxidea taxus</i>	CP
White Lady's Slipper Orchid	<i>Cypripedium candidum</i>	T
Savanna Blazing Star	<i>Liatris scariosa var. neuwlandii</i>	T
Pale False Foxglove	<i>Agalinis skinnerianna</i>	T

FIGURE C Locations of prairie and savanna habitat restoration at Jim Edgar Panther Creek State Fish and Wildlife, in Cass County, by removing invasive and exotic woody species.

### Jim Edgar Panther Creek Exotics Control SWG Project



- North-Western Unit; bordered on North and East by Palmerton Rd.
- South-eastern Unit; lies between Palmerton Rd. and Olive Branch Rd.

## Appendix D

**Job Leader:** Michelle Simone  
District Restoration Ecologist  
Illinois Department of Natural Resources  
215 N. 5<sup>th</sup> St., Pekin, IL 61554  
309-347-5119

### **Purpose/need:**

Jubilee College State Park is a 3200 acre site (Figure D) with a mix of forest, prairie, old field, row crops, and recreational areas. The several hundred acres of forest at Jubilee College provide habitat for woodland species of insects, reptiles, amphibians, mammals, and many area sensitive bird species (Table D). Sixty four acres of the site are dedicated as an Illinois Nature Preserve for the protection of high quality mesic and dry mesic upland forest. Invasive and exotic woody and herbaceous species and lack of oak regeneration are reducing the quality of the forest and its habitat value for wildlife at Jubilee College. Areas of restored and remnant tallgrass prairie cover more than 100 acres of Jubilee College State Park. Several area sensitive grassland birds have been documented in these prairies (Table D), including the state endangered short-eared owl. More than one hundred acres of agricultural fields and old fields are being converted to native prairie plants, providing additional habitat for grassland birds, insects, and mammals.

Jubilee College State Park is located in Peoria County, approximately ten miles northwest of the city of Peoria. To visit the site, from Interstate 74, take the Kickapoo-Edwards Exit #82, then turn right and travel 1.5 miles to Kickapoo. At Kickapoo, turn left onto US Rte 150 and travel 4 miles to the park entrance.

### **Objectives:**

Maintain and restore approximately 200 acres of forest and restore over 30 acres of agricultural fields and old field to prairie at Jubilee College State Park to restore habitat for area sensitive species and other wildlife.

### **Approach:**

IDNR personnel, volunteers, and contractors will implement a program to eliminate invasive and exotic plant species, restore prairie, and encourage oak regeneration through forest management throughout the park. Prairie restorations will occur in retired agricultural fields in southern sections of the park. Primary practices to be applied will include prescribed fire, invasive woody plant control, invasive exotic species control, and habitat creation/restoration:planting. Descriptions of these practices are in the body of the grant proposal.

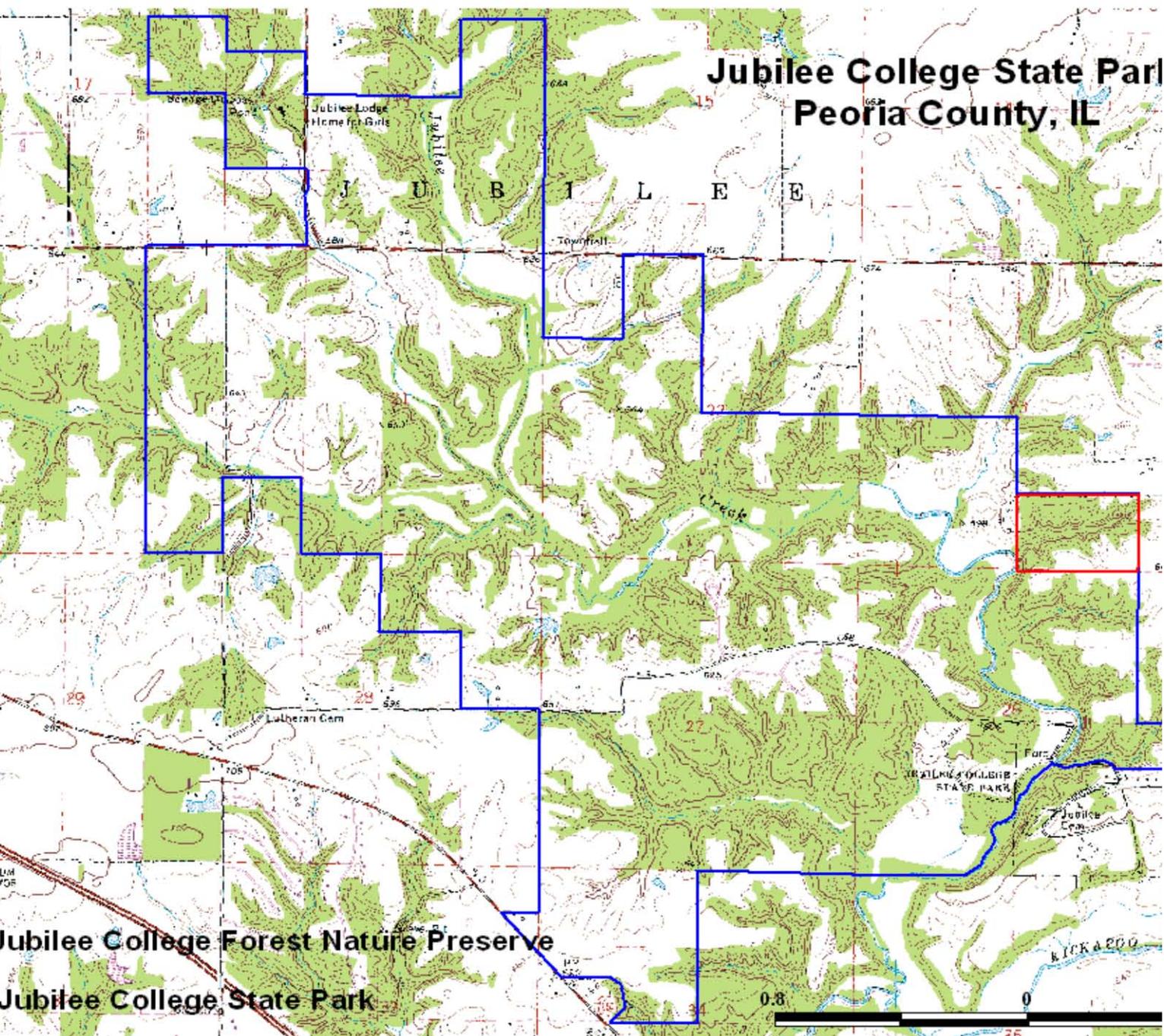
### **Budget:**

Line Item	Federal Share	State Share	Project Total
Contractual	\$20,000.00	\$0.00	\$20,000.00
Commodities	\$20,000.00	\$5,600.00	\$25,600.00
Personnel	\$0.00	\$26,790.00	\$26,790.00
Total	\$40,000.00	\$32,390.00	\$72,390.00

Table D. Species of concern known to use Jubilee College State Park, Peoria County

Common Name	Scientific Name	Status
Grassland Bird Species		
Bobolink	<i>Dolichonyx oryzivorus</i>	Area Sensitive Species
Eastern Meadowlark	<i>Sturnella magna</i>	Area Sensitive Species
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	Area Sensitive Species
Short-eared Owl	<i>Asio flammeus</i>	Illinois Endangered Species
Forest Bird Species		
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Area Sensitive Species
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	Area Sensitive Species
Acadian Flycatcher	<i>Empidonax vireescens</i>	Area Sensitive Species
White-breasted Nuthatch	<i>Sitta carolinensis</i>	Area Sensitive Species
Wood Thrush	<i>Hylocichla mustelina</i>	Area Sensitive Species
Veery	<i>Catharus fuscescens</i>	Area Sensitive Species
Blue-gray Gnatcatcher	<i>Polioptila caerulea</i>	Area Sensitive Species
Yellow-throated Vireo	<i>Vireo flavifrons</i>	Area Sensitive Species
Red-eyed Vireo	<i>Vireo olivaceus</i>	Area Sensitive Species
Ovenbird	<i>Seiurus aurocapillus</i>	Area Sensitive Species
Kentucky Warbler	<i>Oporornis formosus</i>	Area Sensitive Species
American Redstart	<i>Setophaga ruticilla</i>	Area Sensitive Species
Scarlet Tanager	<i>Piranga olivacea</i>	Area Sensitive Species
Summer Tanager	<i>Piranga rubra</i>	Area Sensitive Species
Pileated Woodpecker	<i>Dryocopus pileatus</i>	Area Sensitive Species
Mammals		
Franklin's Ground Squirrel	<i>Spermophilus franklinii</i>	Illinois Threatened Species
River Otter	<i>Lontra canadensis</i>	Recently Illinois Delisted

Figure D. Jubilee College State Park and Jubilee College Nature Preserve, Peoria County, Illinois



## Appendix E

**Job Title:** Job 5. Prairie Ridge State Natural Area grassland habitat restoration project.

**Job Leader:** Scott Simpson  
Prairie Ridge State Natural Area  
4295 N. 1000<sup>th</sup> St.  
Newton, IL 62448  
ssimpson@dnrmail.state.il.us  
618-783-2685

### **Purpose/need:**

Prairie Ridge State Natural Area (an INAI site), at nearly 3,800 acres, contains two of the five significant grasslands in Illinois, and a key site for grassland birds in the Midwest (Figure E). Grassland birds have shown more consistent, steeper, and more geographically widespread declines than any other group of North American birds, primarily due to loss of grassland habitat. The response of flora and fauna to habitat restoration and conservation at Prairie Ridge State Natural Area has been well documented. This site provides critical habitat for 78 of the Species in Greatest Need of Conservation identified in the Illinois Wildlife Action Plan, including 26 state listed species (17 endangered and 9 threatened) (Table E). Among these are breeding populations of 8 state endangered and 3 state threatened birds species, 2 state endangered and 1 state threatened plant species and two state threatened reptile species. Unique to any site in the state, all 10 area sensitive grassland birds species found in Illinois occur at Prairie Ridge, eight with breeding populations. The 2004 National Audubon State of the Birds Report lists 10 species nesting in Illinois among the 26 species undergoing population declines of greater than 66% from 1966-2003. Of those 10 species, eight are among the key nesting birds at Prairie Ridge State Natural Area, including Henslow's sparrow, loggerhead shrike and grasshopper sparrow. Prairie Ridge has been formally designated an Important Bird Area for nesting populations of ten special concern species, concentrations of migratory shorebirds, and concentrations of wintering grassland raptors. Prairie Ridge provides habitat for 23 Species of Concern identified by Partners in Flight, 15 species of Regional Conservation Concern listed by the US Fish & Wildlife Service, and 20 of National Audubon's Watch list Species. Of special importance is the fact that Prairie Ridge hosts Illinois' only breeding population of greater prairie chickens and the states largest breeding populations of northern harriers and short-eared owls.

Prairie Ridge State Natural Area is located in the SW portion of Jasper County, approximately 5 miles SW of Newton, IL and in the NE portion of Marion County both NE and south of Kinmundy, IL.

**DIRECTIONS TO OFFICE:** Driving East from Effingham or West from Newton on Route 33 turn south on Bogota Road (990N 900E) and go 4 miles to first curve in road. Go straight off of curve to crossroads (600N 900E), turn left (east) for 1 mile or first crossroads (600N 1000E) then turn right (south) and go 1 3/4 miles to white house with wire fence.

From Route 130 turn west at St. Marie Road (600N 1390E) and go 4 miles to (600N 1000E) then turn south (left) and go 1 3/4 miles to white house with wire fence.

### **Objective:**

Provide, restore and maintain 3600 acres of grassland habitat at Prairie Ridge Sanctuary, Marion and Jasper Counties that provide habitat to 78 of the Species in Greatest Need of Conservation identified in the Illinois Comprehensive Wildlife Conservation Plan, including 26 state endangered species, 5 watch list species and

5 area sensitive grassland species.

**Approach:**

IDNR personnel and contractors will implement of grassland and wetland habitat development that will include the following practices: prescribed fire, invasive woody plant control, invasive exotic species control, erosion/sedimentation control, boundary protection/fence repair, habitat creation/restoration: planting, and hydrology restoration. This type of will management will occur throughout the site.

Descriptions of these practices are in the body of the grant proposal.

**Budget:**

Line Item	Federal Share	State Share	Project Total
Contractual	\$80,000.00	\$47,900.00	\$127,900.00
Commodities	\$0.00	\$0.00	\$0.00
Personnel	\$0.00	\$32,100.00	\$32,100.00
Total	\$80,000.00	\$80,000.00	\$160,000.00

Table E. Species in Greatest Need of Conservation Prairie Ridge State Natural Area, Jasper and Marion Counties (IDNR, Wildlife Action Plan).

<u>Common Name</u>	<u>Scientific Name</u>
<b>Birds</b>	
Henslow's sparrow	<i>Ammodramus henslowii</i> (ST)
LeConte's Sparrow	<i>Ammodramus leconteii</i>
Nelson's sharp-tailed sparrow	<i>Ammodramus nelsoni</i>
Grasshopper sparrow	<i>Ammodramus savannarum</i>
American black duck	<i>Anas rubripes</i>
Great egret	<i>Ardea alba</i>
Short-eared owl	<i>Asio flammeus</i> (SE)
Lesser scaup	<i>Aythya affinis</i>
Canvasback	<i>Aythya valisineria</i>
Upland sandpiper	<i>Bartramia longicauda</i> (SE)
American bittern	<i>Botaurus lentiginosus</i> (SE)
Red-shouldered hawk	<i>Buteo lineatus</i>
Broad-winged hawk	<i>Buteo platypterus</i>
Smith's longspur	<i>Calcarius pictus</i>
Stilt sandpiper	<i>Calidris himantopus</i>
Chuck-will's -widow	<i>Caprimulgus carolinensis</i>
Whip-poor-will	<i>Caprimulgus vociferus</i>
Brown creeper	<i>Certhia americana</i>
Chimney swift	<i>Chaetura pelagica</i>
Black tern	<i>Chlidonias niger</i> (SE)
Common nighthawk	<i>Chordeiles minor</i>
Northern harrier	<i>Circus cyaneus</i> (SE)
Marsh wren	<i>Cistothorus palustris</i>
Sedge wren	<i>Cistothorus platensis</i>
Yellow-billed cuckoo	<i>Coccyzus americanus</i>
Black-billed cuckoo	<i>Coccyzus erythrophthalmus</i>
Northern flicker	<i>Colaptes auratus</i>
Northern bobwhite	<i>Colinus virginianus</i>
Yellow rail	<i>Coturnicops noveboracensis</i>
Trumpeter swan	<i>Cygnus buccinator</i>
Cerulean warbler	<i>Dendroica cerulea</i> (ST)
Prairie warbler	<i>Dendroica discolor</i>
Bobolink	<i>Dolichonyx oryzivorus</i>
Little blue heron	<i>Egretta caerulea</i> (SE)
Snowy egret	<i>Egretta thula</i> (SE)
Willow flycatcher	<i>Empidonax trailli</i>
Acadian flycatcher	<i>Empidonax virescens</i>
Rusty blackbird	<i>Euphagus carolinus</i>
Peregrine falcon	<i>Falco peregrinus</i> (ST)
Common moorhen	<i>Gallinula chloropus</i> (ST)
Wilson's snipe	<i>Gallinago delicatata</i>
Sandhill crane	<i>Grus canadensis</i> (ST)
Bald eagle	<i>Haliaeetus leucocephalus</i> (ST)
Wood thrush	<i>Hylocichla mustelina</i>

Table E (Con't). Species in Greatest Need of Conservation Prairie Ridge State Natural Area, Jasper and Marion Counties (IDNR, Wildlife Action Plan).

**Common Name**

Yellow-breasted chat  
 Least bittern  
 Loggerhead shrike  
 Short-billed dowitcher  
 Hooded merganser  
 Red-headed woodpecker  
 Yellow-crowned night-heron  
 Black-crowned night-heron  
 Kentucky warbler  
 Osprey  
 Savannah sparrow  
 Wilson's phalarope  
 American golden-plover  
 Pied-billed grebe  
 Prothonotary warbler  
 King rail  
 American woodcock  
 Ovenbird  
 Dickcissel  
 Field sparrow  
 Brown thrasher  
 Greater yellowlegs  
 Greater prairie-chicken  
 Barn-owl  
 Blue-winged warbler  
 Bell's vireo

**Mammals**

Least weasel  
 Muskrat  
 American badger

**Reptiles**

Crayfish frog  
 Wood frog  
 Kirtland's snake  
 Blanding's turtle  
 Ornate box turtle

**Scientific Name**

*Icteria virens*  
*Ixobrychus exilis* (SE)  
*Lanius ludovicianus* (ST)  
*Limnodromus griseus*  
*Lophodytes cucullatus*  
*Melanerpes erythrocephalus*  
*Nyctanassa violacea* (SE)  
*Nycticorax nycticorax* (SE)  
*Oporonis formosus*  
*Pandion haliaetus* (SE)  
*Passerculus sandwichensis*  
*Phalaropus tricolor*  
*Pluvialis dominica*  
*Podilymbus podiceps*  
*Protonotaria citrea*  
*Rallus elegans* (SE)  
*Scolopax minor*  
*Seiurus aurocapillus*  
*Spiza americana*  
*Spizella pusilla*  
*Toxostoma rufum*  
*Tringa melanoleuca*  
*Tympanuchus cupido* (SE)  
*Tyto alba* (SE)  
*Vermiforma pinus*  
*Vireo belli*

*Mustela nivalis*  
*Ondatra zibethicus*  
*Taxidea taxus*

*Rana areolata*  
*Rana sylvatica*  
*Clonophis kirtlandii* (ST)  
*Emydoidea blandingii* (ST)  
*Terrapene omata*

SE = State Endangered  
 ST = State Threatened

Figure E1. Sites at Prairie Ridge State Natural Area, Jasper County, Illinois.

# Prairie Ridge Sanctuary

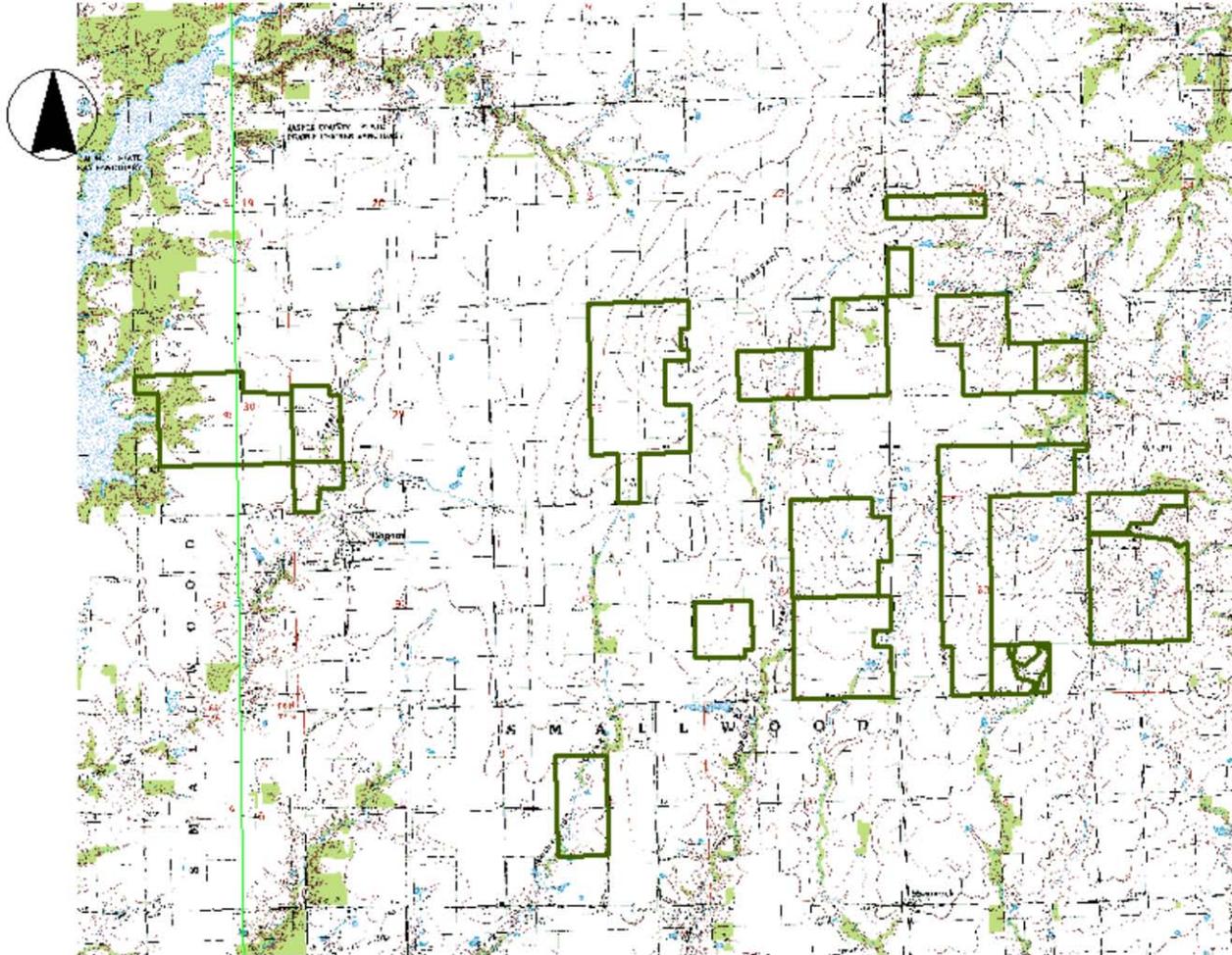
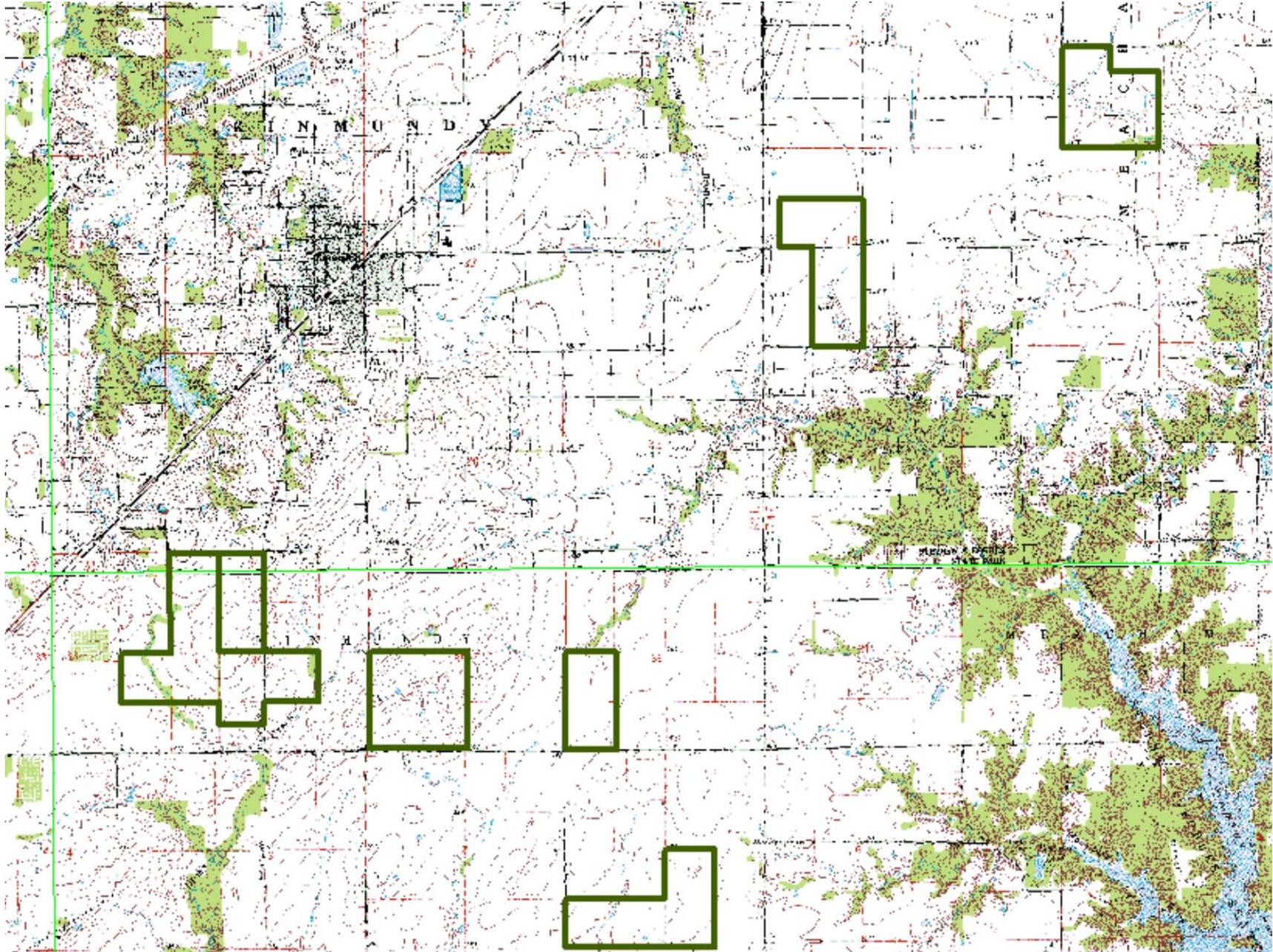


Figure E2. Sites at Prairie Ridge State Natural Area, Marion County, Illinois



## Appendix F

**Job Title:** Job 6. Starved Rock State Park Prairie Wetland Establishment

**Job Leader:** Todd Bittner  
Restoration Ecologist  
Starved Rock State Park  
P.O. Box 509  
Utica, IL 61373  
815/667-5364 office  
Tbittner@dnrmail.state.il.us

### **Purpose/need:**

Starved Rock Nature Preserve (Figure F) provides significant habitat for woodland and wetland species of conservation concern, all within Illinois' most well known and visited natural area (Table F). However, conversions within the watershed that lead into natural area canyons at Starved Rock Nature Preserve have been altered by historic habitat conversion, numerous drainage improvements, and resulting in stream bed head-cutting, erosion, and deposition.

### **Objective:**

The purpose of this project is to create two wetlands totaling 7 acres, restore 40 acres of prairie, and restore 10 acres of savanna habitat in order enhance wildlife habitats for species of concern and to restore hydrologic function above a natural area canyon system. The project will take place north of Rt. 71 and south of the Illinois River, west of Rt. 178 and east of the Vermilion River. It includes the Starved Rock Nature Preserve and adjacent DNR land to its south in Starved Rock Nature Preserve.

### **Approach:**

IDNR personnel and contractors will implement grassland and wetland habitat development that will include the following practices: erosion/sedimentation control, habitat creation/restoration: planting, hydrology restoration, prescribed fire, invasive woody plant control, and invasive exotic species control. Descriptions of these practices are in the body of the grant proposal.

### **Budget:**

Line Item	Federal Share	State Share	Project Total
Contractual	\$57,000.00	\$55,000.00	\$112,000.00
Commodities	\$0.00		\$
Personnel	\$0.00	\$2,000.00	\$2,000.00
Total	\$57,000.00	\$57,000.00	\$114,000.00

Figure F. Proposed location of wetland establishment at Starved Rock State Park.

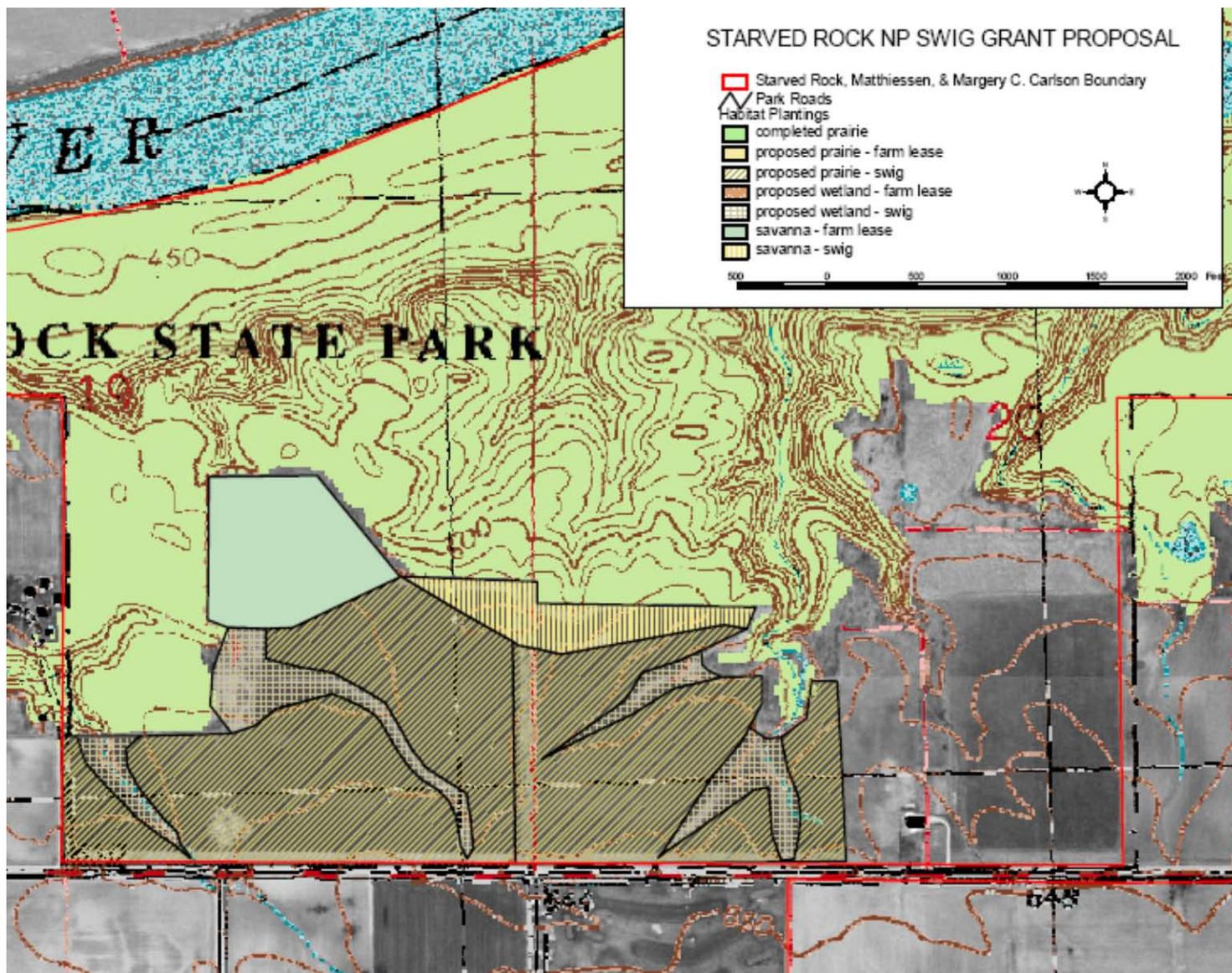


Table F. Species in Greatest Need of Conservation at Starved Rock State Park, County (IDNR, Wildlife Action Plan).

**STARVED ROCK STATE PARK**  
**ILLINOIS CONSERVATION PRIORITY SPECIES**

**BIRDS**

Henslow's sparrow (ST)	Least bittern (ST)
Grasshopper sparrow	Hooded merganser
American bittern	Red-headed woodpecker
Red-shouldered hawk	Savanna sparrow
Whip-poor-will	American woodcock
Brown creeper	Ovenbird
Chimney swift	Dickcissel
Common nighthawk	Field sparrow
Northern harrier (SE)	Brown thrasher
Marsh wren	Bell's vireo
Sedge wren	
Yellow-billed cuckoo	<b><u>MAMMALS</u></b>
Northern flicker	American badger
Northern bobwhite	River otter
Cerulean warbler	Bobcat
Bobolink	Indiana bat
Sandhill crane (SE)	
Bald eagle (FT)	
Wood thrush	

## Appendix G

**Job Title:** Job 7. Construct ephemeral wetlands at Rend Lake State Fish and Wildlife Area and Mount Vernon Game Propagation Center.

**Job Leader:** John Tippitt,  
District Wildlife Biologist  
Illinois Department of Natural Resources  
13995 East Game Farm Road  
Mt. Vernon, IL 62864  
618/242-1272

### **Purpose/need:**

Creating 10-15 ephemeral wetlands per year per IDNR administrative region is listed as a Priority Conservation Strategy by the Illinois Wildlife Action Plan. This project will provide direct benefits to the crawfish frog, listed as a critical species for the Southern Till Plain. The project will also benefit non-game indicator species for the region, including southern leopard frog, cricket frog, chorus frog, spring peeper, and smallmouth salamander.

### **Objective:**

Implement the construction of  $\geq 5$  ephemeral wetlands in depth in idled agricultural fields (grasslands) near wooded areas at Mount Vernon Game Propagation Center and Rend Lake State Fish and Wildlife Area, Jefferson County (Figure G1 and Figure G2). Mount Vernon Game Propagation Center is associated with Rend Lake State Fish and Wildlife Area, which is located in Jefferson and Franklin counties approximately 8 miles south of Mt. Vernon and just west of Bonnie, IL.

### **Approach:**

IDNR personnel and contractors will implement a program of ephemeral wetland construction. Practices that will be included in the management program are invasive woody plant control, invasive exotic species control, hydrology restoration, and habitat creation/restoration: planting. Descriptions of these practices are in the body of the grant proposal.

### **Budget:**

Line item	Federal Share	State Share	Project Total
Contractual	\$5,000.00	\$0.00	\$5,000.00
Commodities	\$0.00	\$0.00	\$0.00
Personnel	\$0.00	\$2,000.00	\$2,000.00
Total	\$5,000.00	\$2,000.00	\$7,000.00

Figure G1. Project locations for ephemeral wetland construction at Mount Vernon Game Propagation Center.

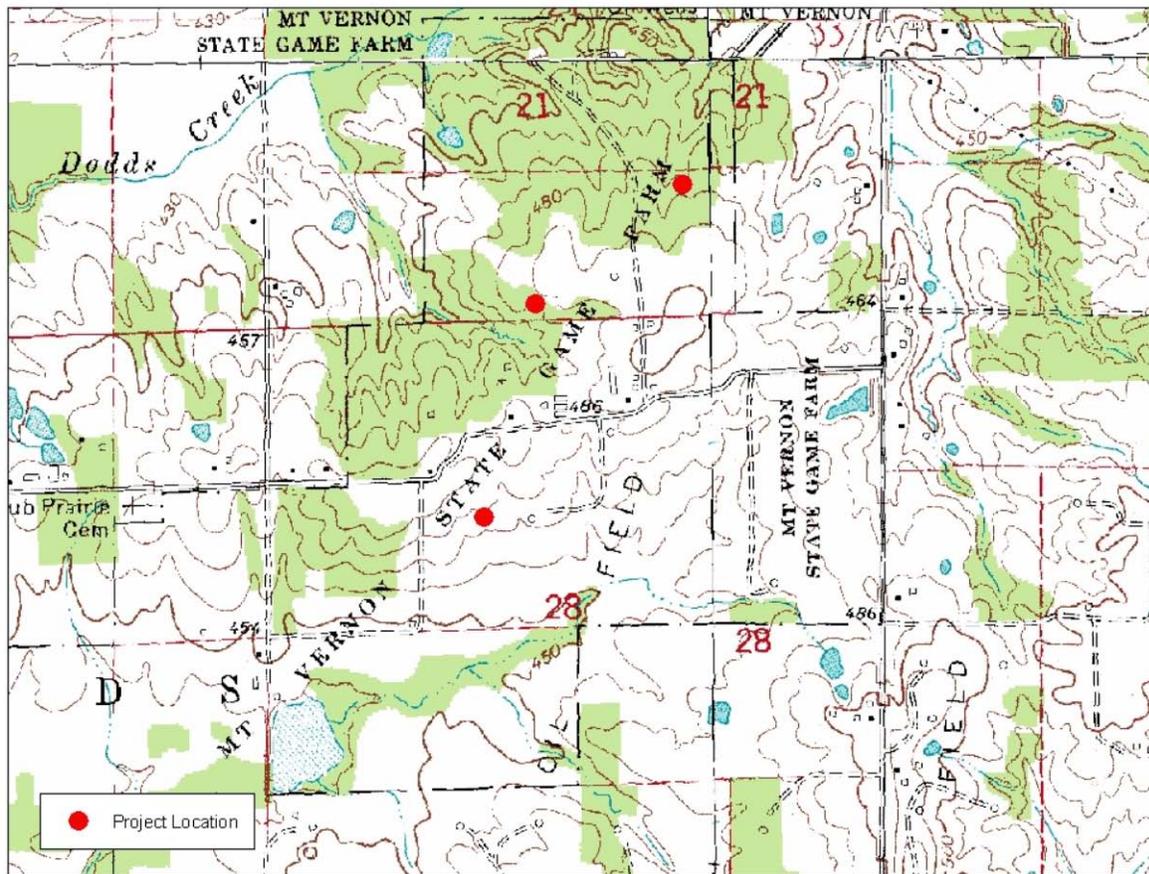
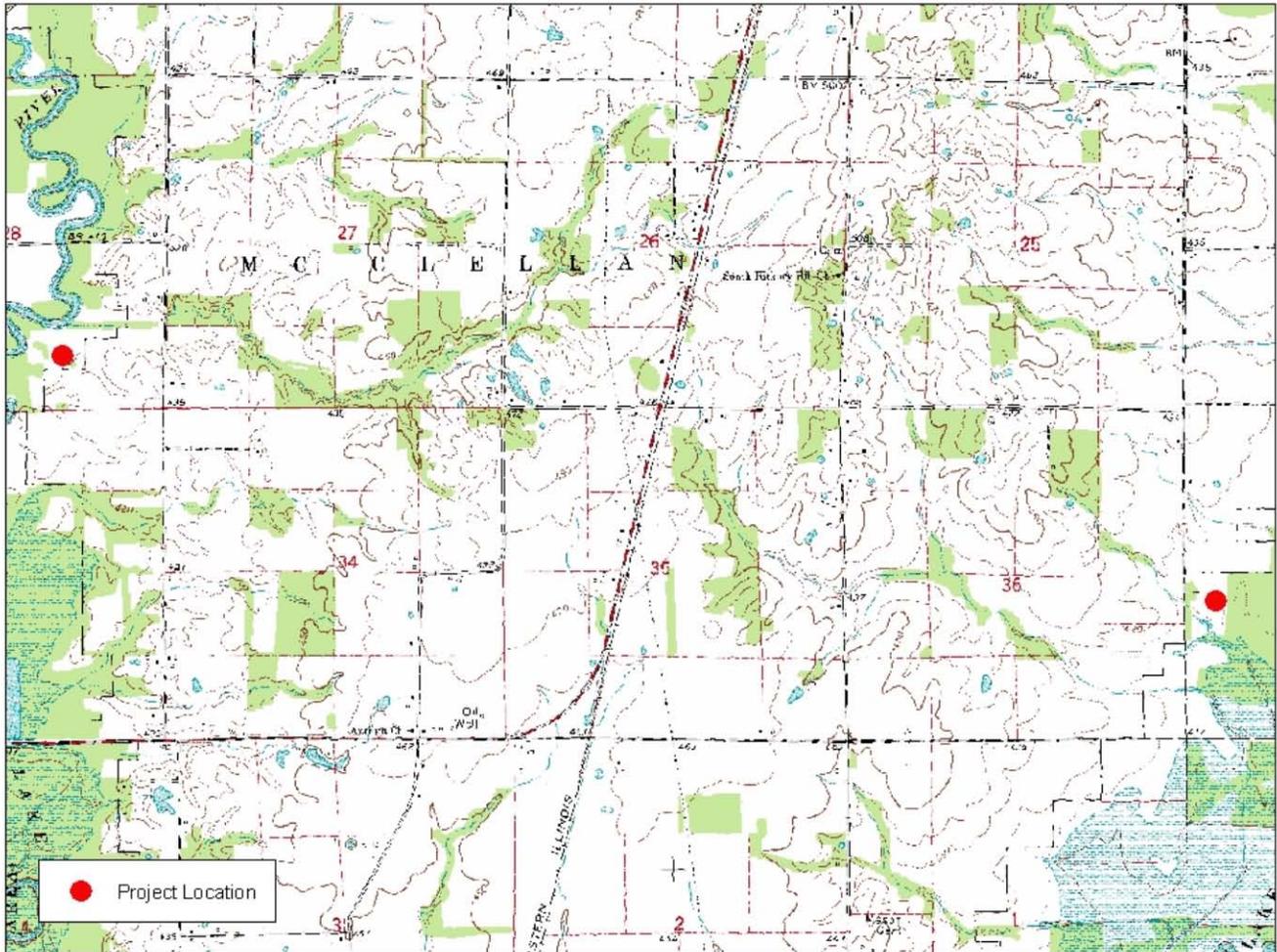


Figure G2. Project locations for ephemeral wetland construction at Rend Lake State Fish and Wildlife Area.



## Appendix H

**Job Title:** Job 8. Construct ephemeral wetland at Silver Springs State Fish and Wildlife Area.

**Job Leader:** Frank Ostling, Associate Wildlife Biologist  
Illinois Department of Natural Resources  
13608 Fox Road  
Yorkville, IL 60560  
630/553-5284

### **Purpose/need:**

Creating 10-15 ephemeral wetlands per year per IDNR administrative region is listed as a Priority Conservation Strategy by the Illinois Wildlife Action Plan. This project will provide direct benefits to the northern harrier, Wilson's snipe, American bittern and American woodcock, listed as Species in Greatest Need of Conservation by Illinois' Wildlife Action Plan. Blanding's turtle, marsh wren, smooth green snake, and Kirtland's water snake, listed as critical species for the Grand Prairie Natural Division, are known to occur in the region and could benefit from the project.

### **Objective:**

Create a large (approximately 4.5-acre) ephemeral wetland and control exotic/invasive woody plants in the project area at Silver Springs State Fish and Wildlife Area (SSSFWA) (Figure H), a 1,350-acre site located 5 miles west of Yorkville, IL in Kendall County.

### **Approach:**

IDNR personnel and contractors will implement a program of constructing ephemeral wetlands around a previous pond construction. Practices that will be included in the management program are invasive woody plant control, invasive exotic species control, hydrology restoration, and habitat creation/restoration: planting. Descriptions of these practices are in the body of the grant proposal.

### **Budget:**

Line item	Federal Share	State Share	Project Total
Contractual	\$7,500.00	\$0.00	\$7,500.00
Commodities	\$2,500.00	\$0.00	\$2,500.00
Personnel	\$0.00	\$2,000.00	\$2,000.00
Total	\$10,000.00	\$2,000.00	\$12,000.00

Figure H. Location of potential 4.5 acre ephemeral wetland at Silver Springs State Fish and Wildlife Area



## Appendix I

**Job Title:** Job 9. Create and restore wetland habitats at Union County Conservation Area.

**Job Leader:** Dan Woolard, District Wildlife Biologist  
Illinois Department of Natural Resources  
336 South Church Road  
Makanda, IL 62958  
618/529-6470

### **Purpose/need:**

Union County Conservation Area is located approximately 7 miles west of Jonesboro, IL off Route 146 in Union County. The site (Figure I) encompasses 6,202 acres in the Coastal Plain Natural Division. Lakes (625 acres) and wetlands (227 acres) comprise about 14% of the area. Of the 5,350-acre land area, approximately 2,400 acres are cultivated. The remaining acreage is timber, brush or permanent grass cover. The Illinois Wildlife Action Plan advocates increasing wetland habitat in the Lower Mississippi River Bottomlands by 4,000 acres. It also advocates use of wetland complexes and diverse water regimes to maximize benefits to wildlife.

### **Objective:**

Create/restore  $\geq 40$  acres of diverse wetland habitats (i.e., sedge meadows; ephemeral and permanent wetlands) at Union County Conservation Area to provide habitat for the Mississippi kite, Mississippi green water snake, mud snake, bald eagle and common moorhen, listed as critical species for the region. The project will also benefit efforts to restore the alligator snapping turtle as the recovery plan for this species identifies Union County Conservation Area as a potential site for repatriation. Other Species in Greatest Need of Conservation that will benefit from this project include the little blue heron, marsh rice rat and copperbelly water snake.

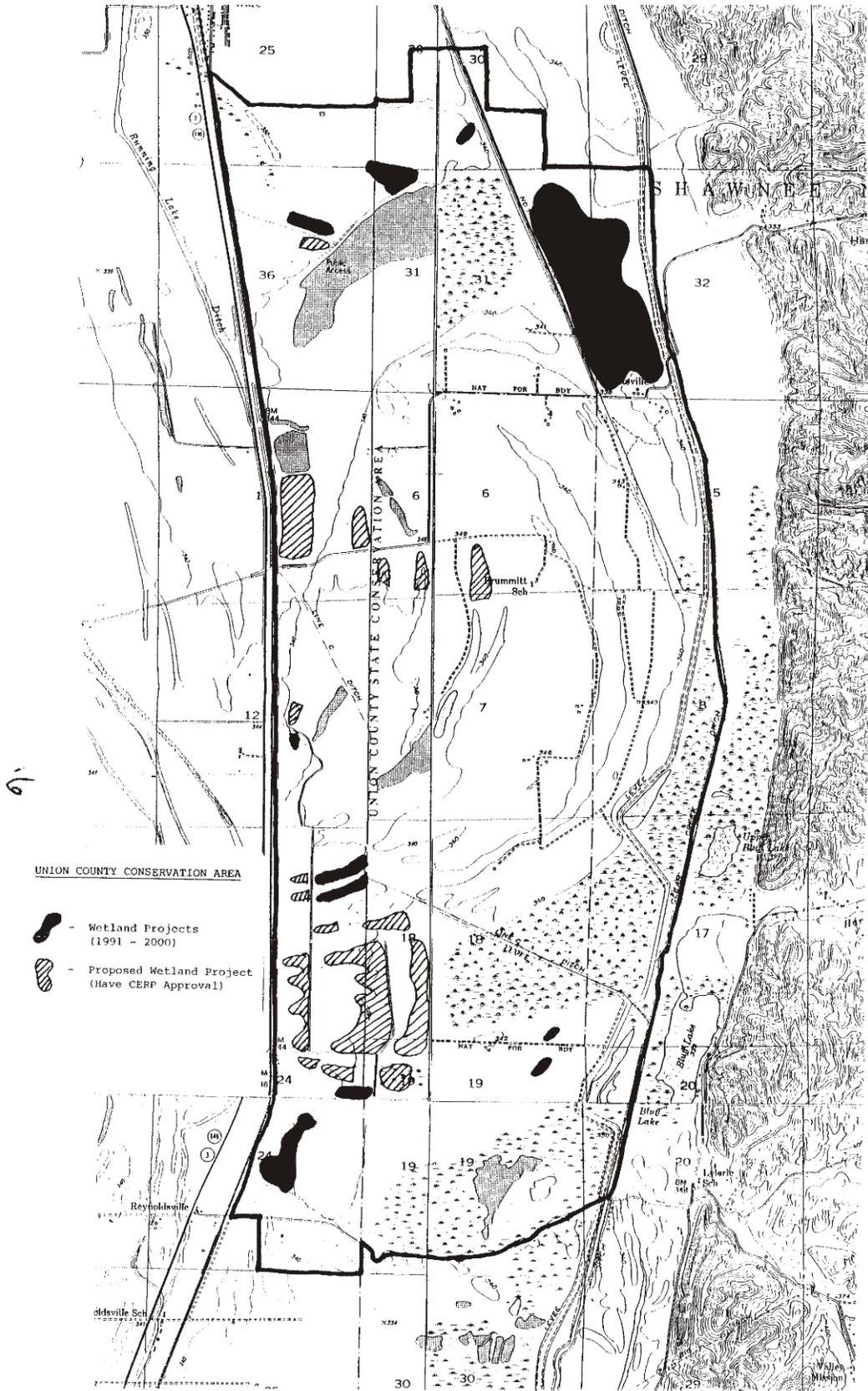
### **Approach:**

IDNR personnel and contractors will implement a program of constructing and restoring ephemeral wetlands. Practices that will be included in the management program are hydrology restoration, and habitat creation/restoration: planting. Descriptions of these practices are in the body of the grant proposal.

### **Budget:**

Line item	Federal Share	State Share	Project Total
Contractual	\$12,100.00	\$8,410.00	\$20,510.00
Commodities	\$0.00	\$0.00	\$0.00
Personnel	\$0.00	\$2,000.00	\$2,000.00
Total	\$12,100.00	\$10,410.00	\$22,510.00

Figure I. Project locations (40 acres of wetland construction) at Union County Conservation Area



**Appendix J.**

**Job Title:** Job 10. Create 15 acres of wetland habitat at Stephen A. Forbes State Park.

**Job Leader:** Steve Kern, District Wildlife Biologist  
Illinois Department of Natural Resources  
Stephen A. Forbes State Park  
6924 Omega Road  
Kinmundy, IL 62854  
618/547-3398

**Purpose/need:**

Illinois' Comprehensive Wildlife Conservation Plan advocates creating 3,800 acres of backwater and wetland habitats in the Southern Till Plain Natural Division. This project will help meet the objective and provide direct benefits to the little blue heron, osprey and river otter, listed as Critical Species for this region. The project will also benefit other Species in Greatest Need of Conservation, including the muskrat and bald eagle. Non-game indicator species for the region such as southern leopard frog, cricket frog, chorus frog and spring peeper will benefit.

**Objective:**

Create approximately 15 acres of additional wetland habitat at Stephen A. Forbes State Park (Figure J) that can be managed for moist soil production using spring/summer draw downs based on recommendations of the U.S. Fish and Wildlife Service's Waterfowl Management Handbook and local experience and conditions. The site is located 15 miles northeast of Salem, IL in Marion County.

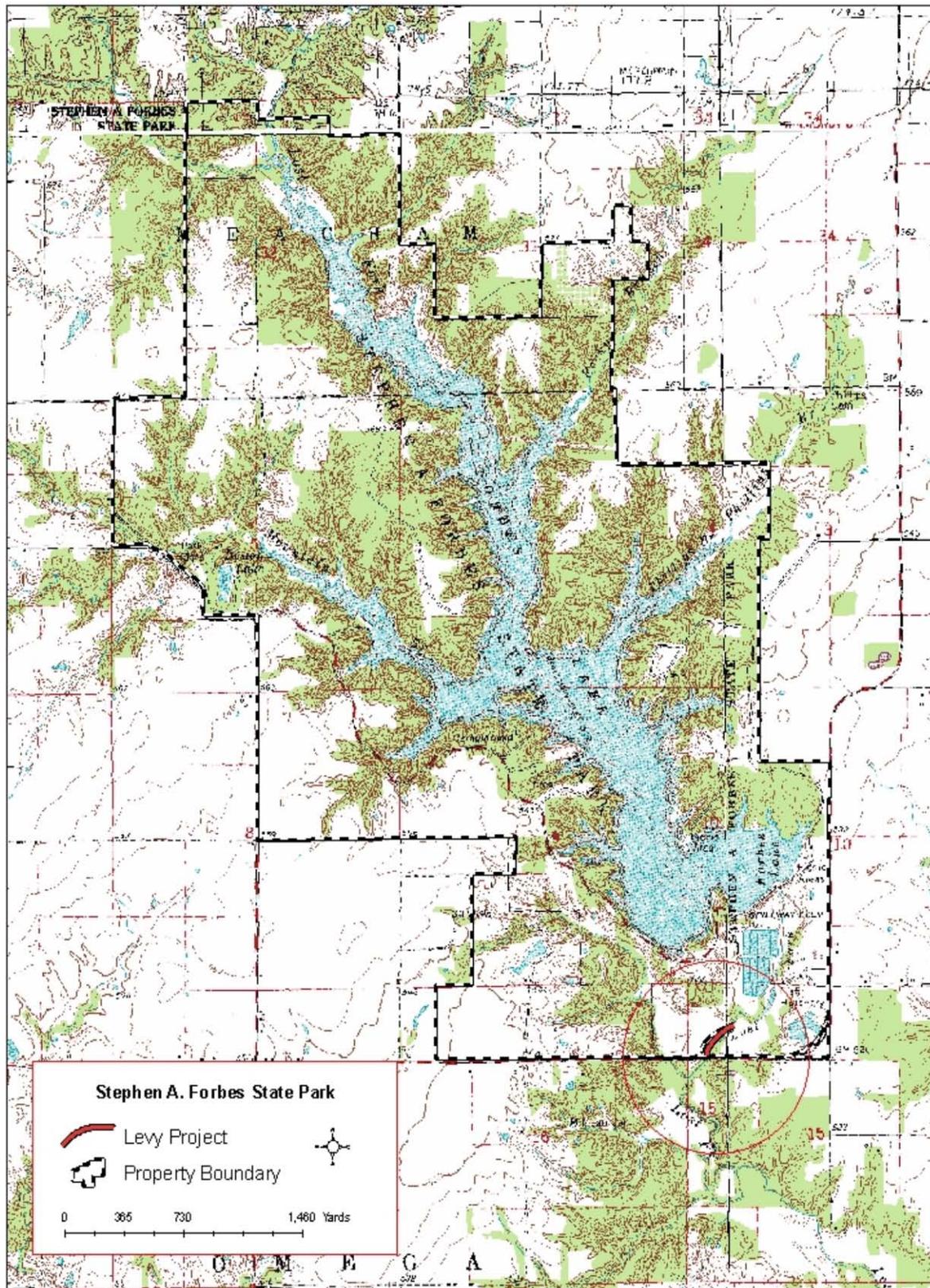
**Approach:**

IDNR personnel and contractors will implement a program of wetland construction. Practices that will be included in the management program are hydrology restoration, and habitat creation/restoration. Descriptions of these practices are in the body of the grant proposal.

**Budget:**

Line item	Federal Share	State Share	Project Total
Contractual	\$0.00	\$6,200.00	\$6,200.00
Commodities	\$0.00	\$5,900.00	\$5,900.00
Personnel	\$0.00	\$2,000.00	\$2,000.00
Total	\$0.00	\$14,100.00	\$14,100.00

Figure J. Location of additional moist soil unit at Stephen A. Forbes State Park.



**APPENDIX K**

**Job Title:** Job11. Construct 3 1-acre ponds at Cypress Pond State Natural Area.

**Job Leader:** Bill Reynolds, Site Superintendent  
Cypress Pond State Natural Area  
P.O. Box 10  
Goreville, IL 62939  
618/995-2411

**Purpose/need:**

Illinois' Comprehensive Wildlife Conservation Plan recognizes that intensive management and modification of lakes and ponds throughout the Coastal Plain Natural Division offers perhaps the most significant opportunity for watershed improvements. This project will provide watershed protection and directly benefit the river otter, listed as a Critical Species for the region. Other Species in Greatest Need of Conservation such as the muskrat, marsh rice rat, bald eagle and osprey will also benefit from this project.

**Objective:**

Create 3 1-acre ponds at Cypress Pond State Natural Area (Figure K). Cypress Pond State Natural Area, located ½ mile north of State Route 146 at the Union/ Johnson County line, is a satellite of Ferne Cliff State Park.

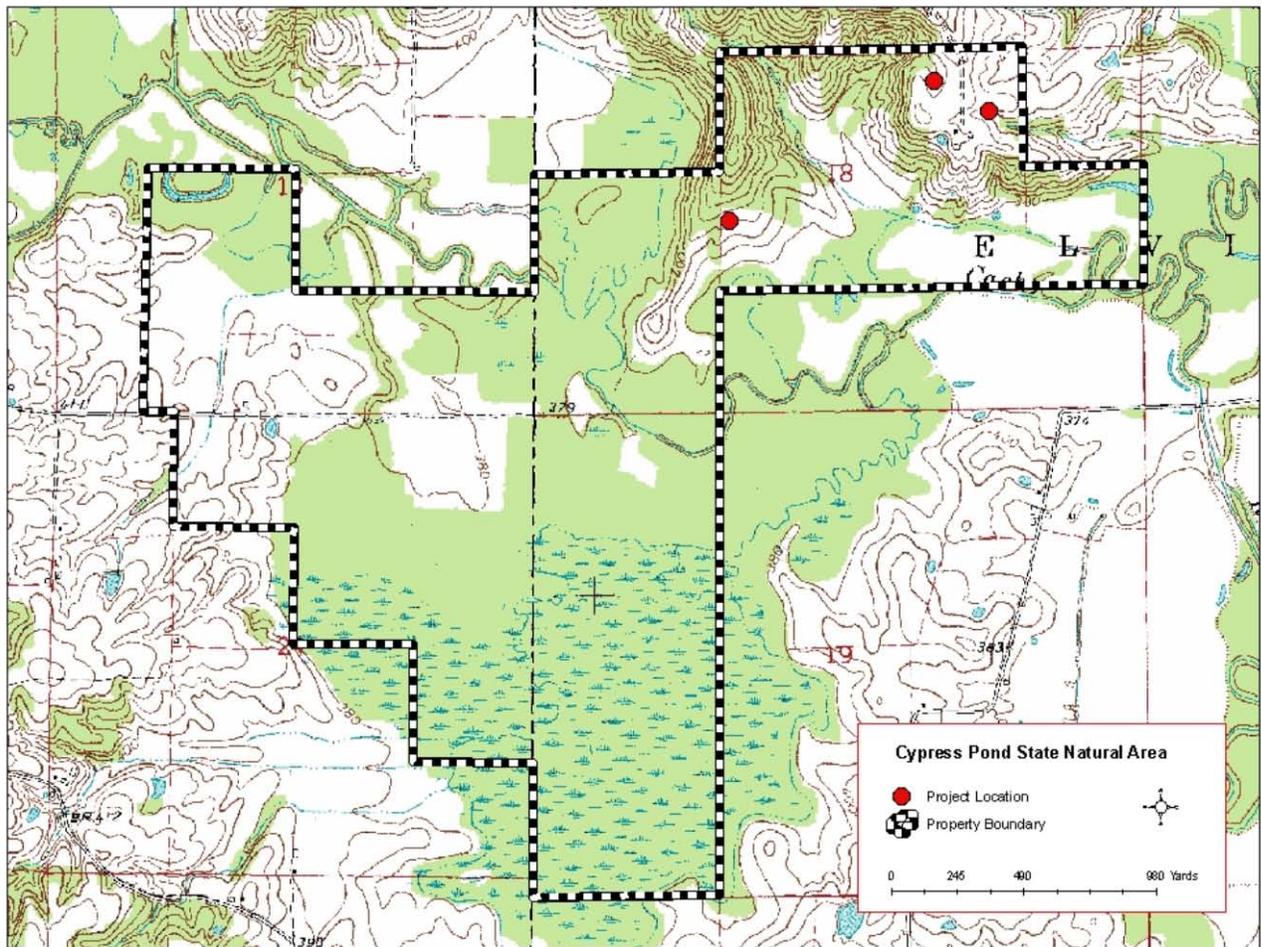
**Approach:**

IDNR personnel and contractors will implement a program of wetland construction. Practices that will be included in the management program are hydrology restoration, and habitat creation/restoration: planting. Descriptions of these practices are in the body of the grant proposal.

**Budget:**

Line item	Federal Share	State Share	Project Total
Contractual	\$0.00	\$15,000.00	\$15,000.00
Commodities	\$0.00	\$0.00	\$0.00
Personnel	\$0.00	\$2,000.00	\$2,000.00
Total	\$0.00	\$17,000.00	\$17,000.00

Figure K. Location of pond constructions at Cypress Pond State Natural Area.



## **Appendix L**

**Job Title:** Job 12. Habitat enhancement for the Illinois mud turtle in the Illinois River and Mississippi River Sand Areas Natural Division.

**Job Leader:** John Wilker, Restoration Ecologist  
Sangchris Lake State Park  
9898 Cascade Road  
Rochester, IL 62563  
217/498-8534

### **Purpose/need:**

The Illinois mud turtle, due to its specialized habitat requirements and habitat loss, is one of the rarest reptile species in Illinois and has been designated as a state endangered species. The species also occurred historically in eastern Iowa and northeastern Missouri. Of the 3 initial populations in Iowa, 2 are considered to be extinct and one is considered to be the largest of all populations of Illinois mud turtles with a population estimate of 300-600 individuals. The population in Missouri is considered to be extinct due to the floods of 1993.

In Illinois, historic occurrence records for this species are known from Lake, Morgan, Cass, Mason, Tazewell, Lee, Henderson, Whiteside, and Henry counties. Currently, 8 of the initial 12 populations (66%) from Illinois are considered locally extinct. Populations have not been relocated in Lake, Whiteside and Morgan Counties. However the Cass County population, which was considered extinct, was relocated in 1995. The Lee County population and two of the three initial populations in Henderson County are extant. Of the 4 initial populations in Mason County all 4 are considered to be locally extinct (Illinois Natural Heritage Database, 2002). However, new populations have been found in Henderson County, Mason County southwest of the town of Manito, and 3 populations were found in Tazewell County. One of those has not been relocated since 1979, and one has not been relocated since 1985 (Illinois Natural Heritage Database, 2002).

### **Objective:**

Sand Ridge State Forest is located approximately 20 miles southwest of Peoria, IL in Mason County. From the west, east or south: Follow IL Rt 136 to Mason County Road 2800E and turn north. Continue in a straight line for about 6 miles, through the village of Forest City. This road will turn to the west and become Mason County Road 2300N and will lead you directly into the forest.

This project will create or enhance habitat for Illinois mud turtles at state sites where they are extant or occurred historically (Sparks Pond State Natural Area, Rollo Prairie State Natural Area, Illinois Charles "Chinee" Colvin Sand Prairie Sand Land and Water Reserve and/or Sand Ridge State Forest, Mason County). It will also provide habitat for the Illinois (Stroecker's) chorus frog, a state threatened species that depends on sandy soils and occurs in the project area. In addition, Illinois' Wildlife Action Plan identifies both the Illinois mud turtle and Stroecker's chorus frog as critical species in the Illinois River and Mississippi River Sand Areas Natural Division. The plan lists Sparks Pond State Natural Area and Rollo Prairie State Natural Area as Conservation Opportunity Areas and calls for a net increase of 1,000 acres of wetlands in this Natural Division.

### **Approach:**

IDNR personnel and contractors will implement a program of constructing ephemeral wetlands, restoring a

pond, and creating a pond. Practices that will be included in the management program are invasive woody plant control, invasive exotic species control, hydrology restoration, and habitat creation/restoration: planting. Descriptions of these practices are in the body of the grant proposal.

**Budget:**

Line item	Federal Share	State Share	Project Total
Contractual	\$22,000.00	\$10,000.00	\$32,000.00
Commodities	\$20,800.00	\$10,000.00	\$30,800.00
Personnel	\$0.00	\$0,000.00	\$0,000.00
Total	\$42,800.00	\$20,000.00	\$62,800.00

Figure L1. Location of proposed pond restoration at Sparks Pond Land and Water Reserve to enhance habitat for the Illinois mud turtle and Illinois chorus frog.

Figure L2. Location of proposed pond restoration and creation at Rollo Prairie State Natural Area to enhance habitat for the Illinois mud turtle.

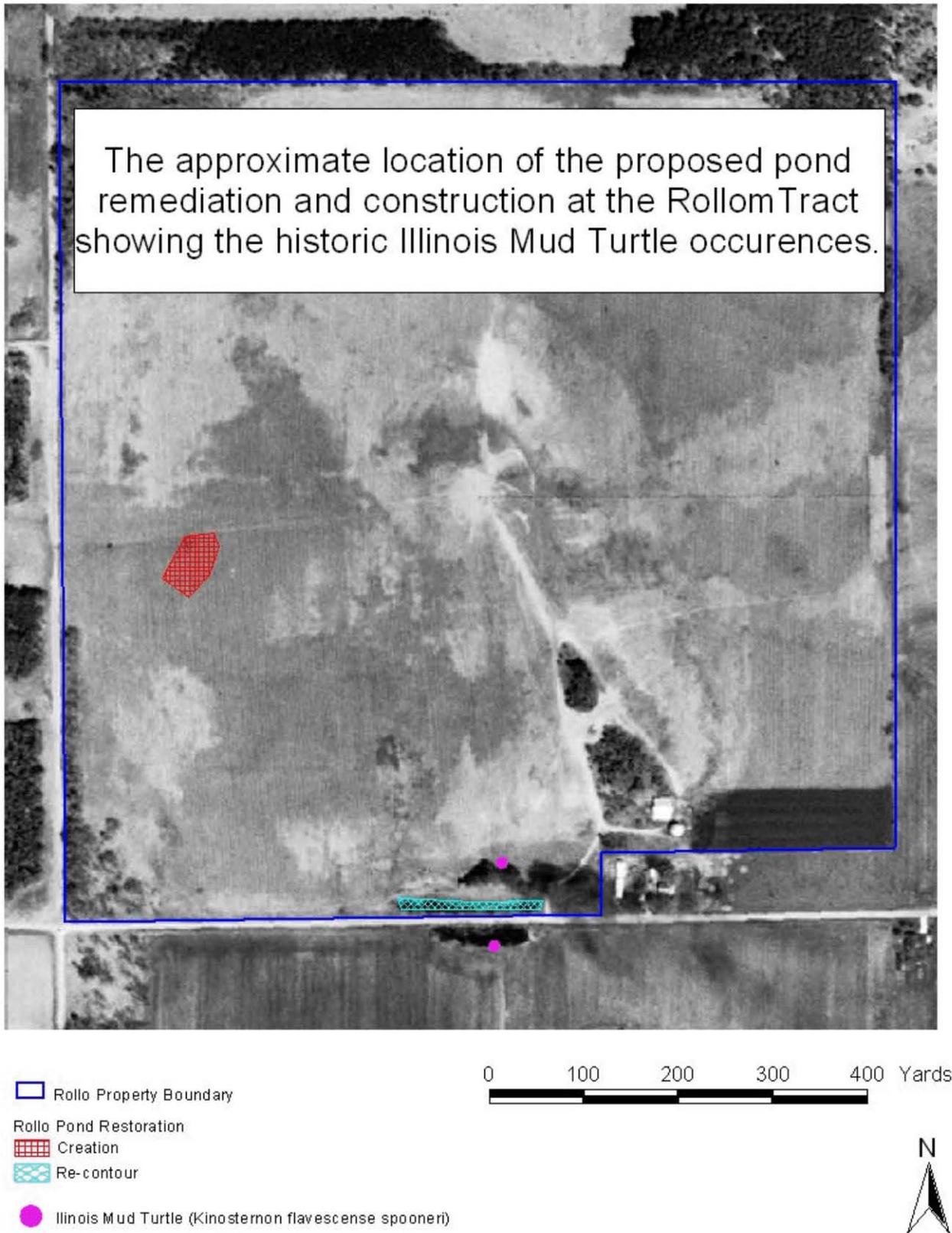
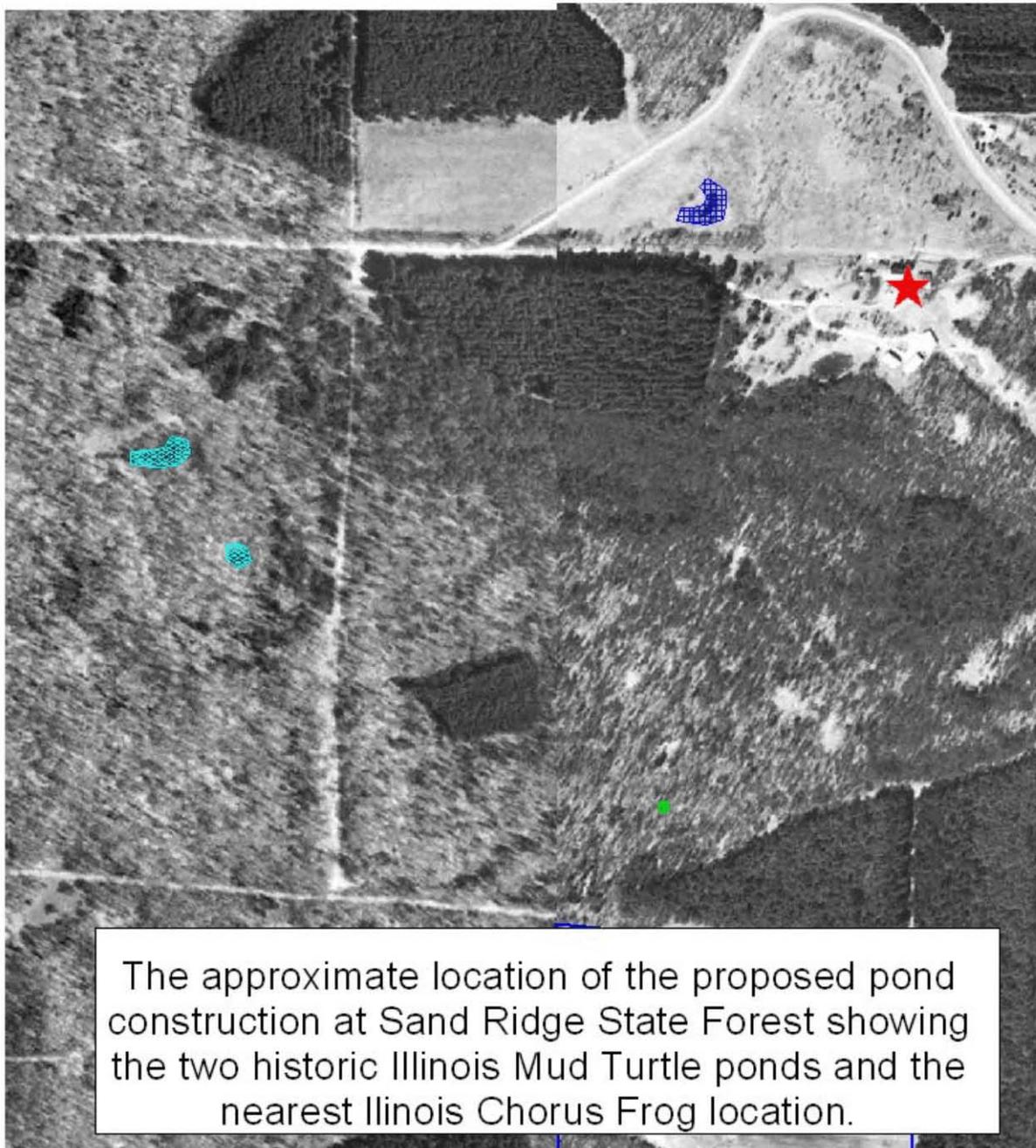


Figure L3. Location of proposed pond construction at Sand Ridge State Forest to enhance habitat for the Illinois mud turtle and Illinois chorus frog.



-  Sand Ridge State Forest Boundary
-  Headquarters
-  Historic mud turtle ponds
-  Illinois Chorus Frog (*Pseudacris streckeri illinoensis*)
-  Proposed pond

0 100 200 300 Yards



## Appendix M

**Job Title:** Job 13. Wetland construction at Jim Edgar Panther Creek State Fish and Wildlife Area.

**Job Leader:** Mike Chandler  
Illinois Department of Natural Resources  
700 South 10<sup>th</sup> Street  
Havana, IL 62644  
309/543-3288

### **Purpose/need:**

Illinois' Wildlife Action Plan advocates a net increase of 5,000 acres of wetland habitat in the Grand Prairie Natural Division. This project will help meet habitat objectives and benefit Wilson's snipe, American bittern, least bittern and American woodcock, listed as Critical Species for this region. It will also benefit Species in Greatest Need of Conservation such as the river otter and muskrat.

### **Objective:**

Create a large (approximately 5-acre) wetland at Jim Edgar Panther Creek State Fish and Wildlife Area (Figure M). Jim Edgar Panther Creek State Fish and Wildlife Area (Figure C) is located in east-central Cass Co., approximately 12 miles west of Petersburg and 6 miles northwest of Ashland, Illinois.

### **Approach:**

IDNR personnel and contractors will implement a program of constructing a shallow water wetlands. Practices that will be included in the management program are hydrology restoration, and habitat creation/restoration: planting. Descriptions of these practices are in the body of the grant proposal.

### **Budget:**

Line item	Federal Share	State Share	Project Total
Contractual	\$0.00	\$9,000.00	\$9,000.00
Commodities	\$0.00	\$1,000.00	\$1,000.00
Personnel	\$0.00	\$2,000.00	\$2,000.00
Total	\$0.00	\$12,000.00	\$12,000.00

Figure M. Location of five acre wetland construction at Jim Edgar Panther Creek State FWA.

