

Office of Resource Conservation

State of Illinois

Grant Segment/Proposal

Project Number: tba

Project Title:

Statewide Public Lands Native Prairie/Savanna Wildlife Habitat Restoration Project

Background:

Native prairie covered 21 million acres of Illinois in the early 19th century. Today, less than 2,600 acres (<0.01%) of high-quality prairie remain. Most of the original prairie grassland of Illinois has been plowed, grazed, and/or mowed, and introduced grasses have been planted over much of the former prairie range.

Although native prairie has been extensively destroyed, 19.2% of the state's land cover is categorized as "grassland" habitat. Of this, over 780,000 grassland acres are in temporary agricultural programs as of 2005. However, few grasslands are large enough and unfragmented by woody vegetation and human structures to support area-sensitive species. Often dominated by introduced grasses (and to some extent forbs), these grasslands do not resemble native prairies. Therefore grasslands are arguably the terrestrial habitat most dominated by introduced /exotic species. Far less than the 19.2% of the state's land cover that is classified as grassland is actually functioning as a natural grassland ecosystem.

Savannas are habitats with tree canopy cover up to approximately 50% and a generally open understory composed of grasses, forbs, sedges, and shrubs which require high light levels. The original extent and condition of savannas are poorly known. These were some of the first habitats to undergo drastic and permanent alteration – either from early settlement within these more "park-like" settings or settlement related changes in fire regimes which led to rapid succession to more closed canopy wooded habitats. Estimates of savanna habitat loss exceed 99.98% within the Midwest. In Illinois, approximately 1,500 acres of high quality savanna remain, 1,300 acres of which are sand savanna. Current savanna and savanna-like habitats are converting to more closed wooded conditions due to lack of fire or other appropriate disturbance and are frequently degraded by exotic species and invasive native plant species. Characteristic species such as red-headed woodpecker and slender glass lizard are in decline throughout the state.

While savannas are classed within the Open Woodland, Savanna, and Barrens habitat type in the Illinois Wildlife Action Plan (IWAP), on-the-ground savannas are more closely associated with

prairies and grassland habitats (and to some extent wetlands). Further, most of existing savannas in Illinois are sand savannas which in many sites are parts of larger sand prairie-sand savanna complexes. Therefore, it is more efficient to collectively address savannas and savanna wildlife as part of a larger prairie and grassland project.

The General Assembly defines IDNR's powers and duties in Article 805 of the Civil Administrative Code 20 ILCS 805/805-1 et seq. which provides the framework for IDNR operations. Article 805 states that "the Department has the power to take all measures necessary for the conservation, preservation, distribution, introduction, propagation, and restoration of fish, mussels, frogs, turtles, game, wild animals, wild fowls and birds" (20 ILCS 805-805-100). Section 805-225 authorizes the conservation of natural and scenic areas, and Section 805-225 authorizes the development of recreational areas and facilities.

The Illinois Wildlife Action Plan (IWAP) was approved by the U. S. Fish and Wildlife Service in 2005 (<http://dnr.state.il.us/orc/wildliferesources/theplan/home.htm>). The Plan is organized around Campaigns - sets of conservation actions, programs and strategies that seek to address the most widespread and the most urgent issues affecting wildlife and habitats, in an efficient, effective, and comprehensive manner. Four of these Campaigns are habitat-based to achieve both broad and specific conservation goals for Forests, Prairies, Wetlands, and Streams. The Plan identifies habitat areas that demonstrate the greatest conservation need and potential and establishes specific conservation goals for the enhancement and protection of these habitats and associated wildlife. Further, the Plan outlines 654 Species in Greatest Need of Conservation, including, 433 invertebrates, 79 fish, 14 amphibians, 23 reptiles, 85 birds, and 20 mammals.

Need:

The Statewide Public Lands Native Prairie/Savanna Wildlife Habitat Restoration Project specifically addresses conservation needs of the IWAP Prairie Campaign. The purpose of this project is to enhance and increase native prairie and savanna habitat on IDNR-owned public lands in Illinois in order to maintain and secure associated and characteristic native wildlife populations in these habitats. Secondly, the project will seek to enhance and expand functionally equivalent prairie and savanna habitats that support characteristic native wildlife species with emphasis on Species in Greatest Need of Conservation (Illinois Wildlife Action Plan, 2005).

In addition to these species- and habitat-specific benefits, the project addresses the following sections of the Illinois Wildlife Action Plan (IWAP):

1. Habitats Goals (pp. 46 – 48)
 - a. Savanna Habitat Goals 1, 3, and 4
 - b. Grassland Habitat Goals 1, 2, and 6
 - c. Shrub Habitat Goal 2
2. Campaigns Actions (pp. 67 – 87)
 - a. Forest Campaign Actions 1a(1), 1d, 1e, 2b, 4, and 7
 - b. Farmland and Prairie Campaign Actions 1a, 1b, 1d, 2a, 2b, 2d, 3a, 3b, 3f

- c. Invasive Species Campaign Actions 3b
- d. Land & Water Stewardship Campaign Actions 2a, 2b, 2c

This project will further address habitat-specific actions on most Natural Divisions in Illinois (IWAP, 2005; p. 119), especially those listed below:

Grand Prairie (p. 130)

Illinois and Mississippi Sand Areas (p. 141)

Northeastern Morainal (p. 166)

Rock River Hill Country (p. 189)

Southern Till Plain (p. 203)

Finally, the project will enhance and increase habitat for Species in Greatest Need of Conservation listed in Appendix A.

Objectives:

By the end of this grant period, this project will maintain, enhance and develop 21,957 acres of prairie and savanna habitat and their functional equivalents (e.g. large acres of tame grasses that support grassland wildlife species, especially Species in Greatest Need of Conservation) using ecosystem-based natural community and habitat management practices on 19 IDNR-owned and -managed lands statewide (Figure 1, Table 1 below).

Funds approved through this grant will be used to expand the restoration and stewardship of high quality wildlife habitats on these publically-owned lands to meet the goals and objectives set forth in the Illinois Wildlife Action Plan (IWAP). The focus of this initiative is suitable IDNR-owned sites. This primarily includes sites that 1) are listed on the Illinois Natural Areas Inventory, 2) provide suitable habitat for threatened and endangered species, 3) provide suitable habitat for multiple species in greatest need of conservation, 3) are protected in perpetuity through an Illinois Nature Preserve program, or 4) are within a designated Conservation Opportunity Area.

Types of activities to be accomplished under this project include habitat protection, habitat management, surveys to locate extant populations, monitoring effects of management practices and improving natural resource databases. The management and restoration of rare habitat types that contain unique assemblages of wildlife will also be targeted among different Natural Divisions and Section – Illinois' equivalent of physiographic divisions (IWAP, 2005 p.119).

Expected Results or Benefits:

Focused natural resource management on publically-owned lands will insure that long-term IWAP and IDNR goals can be achieved, resulting in permanently-improved habitat conditions and enhanced wildlife populations for rare and declining species. Such lands will be critical components of any effort to recover rare species as well as to prevent declining species from

reaching perilously low numbers, necessitating more intensive and expensive conservation efforts.

Improving habitat conditions on project sites will maintain and enhance targeted wildlife species populations, achieving the primary goal of the IWAP. Large land holdings in the public trust are the most important component of any long-term conservation action.

Benefits of this project will include:

- Maintained and enhanced Prairie and Savanna habitat types and the associated Species in Greatest Need of Conservation to ensure their long-term survival in Illinois.
- Maintained and improved habitat structure and large habitat blocks that support area-sensitive wildlife species; benefits that, with rare exception, are best achieved on public lands.
- Enhanced habitat for various non-target species of wildlife that will benefit from implemented conservation actions. Many wildlife species that are not Species in Greatest Need of Conservation will also benefit from habitat conditions created and maintained under this project.
- Actions taken under this project will implement effective and efficient practices for improving habitat conditions on the ground and will serve as models for other public landowners, non-governmental organizations, and private landowners state-wide.

Approach:

Within this project, IDNR and its partners will use the following conservation practices to maintain existing and realize improved high-quality prairie and savanna habitats and associated wildlife benefits (Table 2).

- **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 and/or invasive species, control succession, maintain prairie and savanna habitats, and promote the regeneration of associated plant species. The prescribed burning activities include planning, preparation, implementation and monitoring/evaluation of the prescribed burn and its impacts. All DNR-led prescribed fires will be conducted under the Department's Prescribed Burn Policy (IDNR Policy and Procedure Manual Chapter 5D, Section 2) and all Burn Bosses will be State Certified under the Illinois Prescribed Burn Act (525 ILCS 37) and its Administrative Rules (Title 17 Chapter 1d part 1565).

- **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. Such control frequently, but not exclusively, includes follow-up application of appropriate herbicides to control resprouting, preparation and monitoring/evaluation of efforts. Control methods will include removal or thinning of target invasive and/or exotic woody plants depending on the management goals. The control methods applied shall be those that are most effective in meeting the desired goal, have a minimal adverse impact on non-target species and are most 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 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 on state owned land 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 control is the planned removal, elimination or reduction 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. All activities, supplies and equipment needed to plan, implement and monitor/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. All activities and materials needed to plan, implement and monitor/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 livestock, off road vehicles, and people at or near the site. These intrusions can cause direct harm to resources within a preserve or may result in degraded habitat conditions (e.g. increased erosion, spread of exotic or invasive species). Boundary protection includes the finding, delineating and marking of boundaries and the construction or repair of a fence or barrier if necessary. 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/Enhancement: Planting

Details – Planting of seed, started plants, rootstock, and seedlings/whips is used to establish new habitat and restore or enhance existing habitats. Existing high quality habitats

shall not be adversely impacted by such projects (e.g. over collection of seed). Restoration and enhancement for prairie habitats may include native grasses and forbs. Restoration and enhancement of savanna habitats may include appropriate native trees, shrubs, grasses and herbs. All activities included in planning, obtaining plant material, planting and monitoring/evaluating the success of habitat creation/restoration/planting will be included in this practice. 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 – The restoration of natural or manageable hydrologic conditions can correct degradation in wet and wet-mesic prairies and the loss of small wetland features (e.g. ephemeral pools) important to some Species in Greatest Need of Conservation, most notably amphibians, crayfish, and some invertebrates. All planning, implementation, and monitoring/evaluation activities will be included in this practice including groundwater monitoring.

Restoration of wetland features will be limited to the removal of previously placed fill or drain tiles in existing wetland basins, placement of water control structures, and/or development of ephemeral or vernal pools (*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 maximum surface area of disturbance for the restoration of a wetland feature in prairie and savanna habitats will be less than 5 acres with no more than 5 wetlands restored by the removal of fill at any project site.

Project Duration: March 1, 2011 – February 28, 2014

Location:

Table 1.
Public Lands Native Prairie/Savanna Wildlife Habitat Restoration Project Sites and Acres

SITE NAME	ACRES	SITE NAME	ACRES
Big River SF / Patterson LWR	540	Sand Ridge SF (Quiver, Burns NA)	454
		Sand Ridge Sand Ponds NA	48
Goose Lake Prairie SP	1802	Sand Ridge Savanna NA	82
		H A Gleason Sand Prairie NP	105
Iroquois Co SWA LWR	1602	Sand Prairie-Scrub Oak NP	1465
Hooper Branch NP	494	Matanzas Prairie NP	85
		Long Branch Sand Prairie LWR	94
Weldon Springs SRA		Sparks Pond LWR	195
Upper Sangamon River LWR	200	Sparks Pond LWR – Rollo Unit	145
		Barton-Sommer Woodland NP	55
		Prairie Ridge SNA	
		Jasper Co unit	2894
		Marion Co unit	1207
		Pyramid SP	
		Captain unit	6105
		Denmark unit	4385
		Total Acres	21,957



Figure 1.
Statewide Public Lands Native Prairie/Savanna Wildlife Habitat Restoration Project Sites

Table 2.

Planned Activities by Site - Statewide Public Lands Native Prairie/Savanna Wildlife Habitat Restoration Project Sites

SITE	Big River SF	Goose Lake SNA	Iroquois Co LWR	Weldon Springs - USRLWR	Sand Ridge SF	Prairie Ridge SNA	Pyramid SP
FY11							
Rx Fire	Y	Y	Y	Y	Y	Y	Y
Invasive Woody Control	Y	Y	Y	Y	Y	Y	Y
Invasive Exotic Control	Y	Y	Y	Y	Y	Y	Y
Erosion Control	N	N	N	N	N	N	N
Boundary Protection	Y	Y	Y	Y	Y	Y	Y
Planting	Y	Y	N	N	Y	Y	Y
Hydrologic Restoration	N	N	Y	N	Y	Y	N
FY12							
Rx Fire	Y	Y	Y	Y	Y	Y	Y
Invasive Woody Control	Y	Y	Y	Y	Y	Y	Y
Invasive Exotic Control	Y	Y	Y	Y	Y	Y	Y
Erosion Control	N	N	N	N	N	N	N
Boundary Protection	Y	Y	Y	Y	Y	Y	Y
Planting	Y	Y	N	N	Y	Y	Y
Hydrologic Restoration	N	N	Y	N	Y	Y	N
FY13							
Rx Fire	Y	Y	Y	Y	Y	Y	Y
Invasive Woody Control	Y	Y	Y	Y	Y	Y	Y
Invasive Exotic Control	Y	Y	Y	Y	Y	Y	Y
Erosion Control	N	N	N	N	N	N	N
Boundary Protection	Y	Y	Y	Y	Y	Y	Y
Planting	Y	Y	N	N	Y	Y	Y
Hydrologic Restoration	N	N	Y	N	Y	Y	N

APPENDICES:

- A. Benefitted 'Species in Greatest Need of Conservation' in Statewide Public Lands Native Prairie/Savanna Wildlife Habitat Restoration Project

Related Grants:

Pyramid State Park had projects that were funded through W-76-D, R-6-1 and T-5-M-1. However, the R-6-1 and T-5-M-1 projects have been completed and Pyramid is no longer part of W-76-D. Prairie Ridge however is still part of T-28-M-2.

Compliance

The IDNR will use its CERP (Comprehensive Environmental Review Process) as a tool to aid the Department in meeting NEPA compliance for the project outlined under this grant proposal. It is the Department's policy to require CERP applications for all land disturbing activities unless those activities are covered by CERP exemptions.

All planned activities will also be in compliance with the Endangered Species Act. All determinations and documentation will be in accordance with the current established U.S. Fish and Wildlife Service protocols for section 7.

All planned activities will be in compliance with the National Historic Preservation Act and the Council on Historic Preservation Act. All determinations and documentation will be in accordance with the terms of the Programmatic Agreement, as amended, effective September 23, 2002.

When applicable, those planned activities which involve a floodplain and/or jurisdiction wetlands will be done in accordance with Presidential Executive Orders 11988 and 11990.

When applicable, those planned activities which involve programs and/or site improvements will be done in accordance with Section 504 of the Rehabilitation Act and the Americans with Disabilities Act.

When applicable, those planned activities which involve the use of pesticides, herbicides or other comparable chemicals will be done in accordance with current state and federal regulations to assure the safe and legal application of those chemicals. All chemicals will be applied in accordance with the manufacturers label instructions. All persons applying chemicals will be licensed by the Illinois Department of Agriculture as a chemical operator along with a licensed applicator, in accordance with Illinois state law.

Grant Proposal Support Documentation:

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

1. Application for Federal Assistance (Standard Form 424)
2. Federal Aid Section 7 Evaluation Form
3. Illinois Clearinghouse Response per Federal Executive Order 12372
4. NEPA Compliance Checklist and Environmental Assessment
5. Location Map (See Figure 1).

Project Budget:

	Federal Share	State Share	Total
Contractual	\$477,855	\$43,000	\$520,855.00
Commodities	\$13,500	\$41,000	\$54,500.00
Personnel	\$0	\$180,576	\$180,576.00
Total	\$491,355	\$264,576	\$755,931.00

Contractual Services:

Contractual services are agreements entered into with qualified contractors to complete specific habitat management practices. These practices can include but are not limited to Prescribed Fire, Invasive Woody Plant Control, Invasive Exotic Species Control, Erosion/sedimentation control, Boundary Protection/Fence Repair, Habitat Creation/Restoration/Planting, and Hydrology Restoration.

Commodities:

Commodity funds are used to purchase materials for projects that are generally less than \$100 each unit (herbicide is an exception) that are used to carry out habitat management practices. Examples include but are not limited to herbicide, seed and other planting stock, small hand tools, signs and sign posts, and fencing material.

Personnel:

Personnel services will be in-kind match provided by IDNR personnel via prescribed burning, woody invasive vegetation control, exotic invasive species control, habitat creation/restoration: Planting, grant administration and project management. Personnel costs include salary, fringe benefits and indirect costs.

Project Personnel:

The following IDNR personnel will be the primary staff implementing the Statewide Public Lands Native Prairie/Savanna Wildlife Habitat Restoration Project. They will perform grant administration, project implementation and management, and direct contact with landowners and contractors. Other Office of Resource Conservation and Land Management staff may be involved in limited site specific project implementation.

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Appendix A.**Benefitted Species in Greatest Need of Conservation Statewide Public Lands Native
Prairie/Savanna Wildlife Habitat Restoration Project***(Status - FE/SE - Fed or State Endangered; FT/ST - Fed or State Threatened, CP – Conservation Priority / Species
in Greatest Need of Conservation)*

	Species Name	Scientific Name	Status
Amphibians			
	Illinois Chorus Frog	<i>Pseudacris streckeri illinoensis</i>	ST, CP
	Crayfish Frog	<i>Rana areolata</i>	CP
Birds			
	Willow Flycatcher	<i>Empidonax trailii</i>	CP
	Bell's Vireo	<i>Vireo bellii</i>	CP
	Blue-winged Warbler	<i>Vermivora pinus</i>	CP
	Yellow-breasted Chat	<i>Icteria virens</i>	CP
	Whip-poor-will	<i>Caprimulgus vociferous</i>	CP
	Northern Flicker	<i>Colaptes auratus</i>	CP
	Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	CP
	American Woodcock	<i>Scolopax minor</i>	CP
	Henslow's Sparrow	<i>Ammodramus henslowii</i>	SE, CP
	Grasshopper Sparrow	<i>Ammodramus savannarum</i>	CP
	Northern harrier	<i>Circus cyaneus</i>	SE, CP
	Eastern Meadowlark	<i>Sturnella magna</i>	CP
	King rail	<i>Rallus elegans</i>	SE, CP
	Pied billed grebe	<i>Podilymbus podiceps</i>	CP
	Common moorhen	<i>Gallinula chloropus</i>	ST, CP
	Least bittern	<i>Ixobrychus exilis</i>	SE, CP
	American bittern	<i>Botaurus lentiginosus</i>	SE, CP
	Sandhill crane	<i>Grus Canadensis</i>	ST, CP
	Marsh wren	<i>Cistothorus palustris</i>	CP
	Bobolink	<i>Dolichonyx oryzivorus</i>	CP
	Dickcissel	<i>Spiza Americana</i>	CP
	LeConte's Sparrow	<i>Ammodramus leconteii</i>	CP
	Great Egret	<i>Ardea alba</i>	CP
	Short-eared Owl	<i>Asio flammeus</i>	SE, CP
	Canvasback	<i>Aythya valisineria</i>	CP
	Upland Sandpiper	<i>Bartramia longicauda</i>	SE, CP
	Sedge Wren	<i>Cistothorus platensis</i>	CP
	Yellow Rail	<i>Coturnicops noveboracensis</i>	CP
	Prairie Warbler	<i>Dendroica discolor</i>	CP
	Little Blue Heron	<i>Egretta caerulea</i>	SE, CP
	Wilson's Snipe	<i>Gallinago delicatata</i>	CP
	Loggerhead Shrike	<i>Lanius ludovicianus</i>	ST, CP
	Savannah Sparrow	<i>Passerculus sandwichensis</i>	CP
	Field Sparrow	<i>Spizella pusilla</i>	CP
	Brown Thrasher	<i>Toxostoma rufum</i>	CP
	Greater Yellowlegs	<i>Tringa melanoleuca</i>	CP

Birds (cont'd)	Barn Owl	<i>Tyto alba</i>	SE, CP
	Nelson's sharp-tailed sparrow	<i>Ammodramus nelson</i>	CP
	Swainson's hawk	<i>Buteo swainson</i>	SE, CP
	Smith's longspur	<i>Calcarius pictus</i>	CP
	Stilt sandpiper	<i>Calidris himantopus</i>	CP
	Snowy egret	<i>Egretta thula</i>	SE, CP
	Black rail	<i>Laterallus jamaicensis</i>	SE, CP
	Short-billed dowitcher	<i>Limnodromus griseus</i>	CP
	Yellow-crowned night-heron	<i>Nyctanassa violacea</i>	SE, CP
	Black-crowned night-heron	<i>Nycticorax nycticorax</i>	SE, CP
	Wilson's phalarope	<i>Phalaropus tricolor</i>	CP
	American golden-plover	<i>Pluvialis dominica</i>	CP
	Least Tern	<i>Sternula antillarum</i>	FE SE,CP
	Greater prairie-chicken	<i>Tympanuchus cupido</i>	SE, CP
	Northern Bobwhite	<i>Colinus virginianus</i>	CP
	Willow flycatcher	<i>Empidonax trailii</i>	CP
	Field Sparrow	<i>Spiza pusilla</i>	CP
Invertebrates			
	Regal Fritillary	<i>Speyeria idalia</i>	ST, CP
	Ottoo Skipper	<i>Hesperia ottoe</i>	SE, CP
	Redveined Prairie Leafhopper	<i>Aflexia rubranura</i>	ST, CP
	Eryngium Stem Borer /Rattlesnakemaster borer moth	<i>Papaipema eryngii</i>	SE, CP
		<i>Hydraecia immanis</i>	CP
		<i>Lemmeris digitalis</i>	CP
	Blazing star stem borer	<i>Papaipema beeriana</i>	CP
		<i>Papaipema cerasata</i>	CP
		<i>Papaipema maritime</i>	CP
	Culvers root borer	<i>Papaipema sciata</i>	CP
		<i>Papaipema silphii</i>	CP
		<i>Tricholita notate</i>	CP
		<i>Boloria selene myrina</i>	CP
		<i>Euphyes bimacula</i>	CP
	Mottled duskywing	<i>Erynnis martialis</i>	CP
		<i>Lycaeides xanthoides dione</i>	CP
		<i>Lycaena helloides</i>	CP
		<i>Poanes viator</i>	CP
	Byssus skipper	<i>Problema byssus</i>	CP
		<i>Speyeria aphrodite</i>	CP
	Olympia marblewing	<i>Euchloe Olympia</i>	CP
		<i>Papaipema rutila</i>	CP
		<i>Papaipema limpida</i>	CP
		<i>Schinia gaura</i>	CP
		<i>Phytometra ernestina</i>	CP
		<i>Vaxi auratetla</i>	CP
		<i>Catocala abbreviatella</i>	CP
		<i>Catocala amestris</i>	CP
		<i>Chlorotettix limosus</i>	CP

Invertebrates		<i>Commellus colon</i>	CP
(cont'd)		<i>Erynnis icelus</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>Papaipema inquaesita</i>	CP
		<i>Papaipema nepheleptena</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
		<i>Polyamia similis</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>Stethophyma lineatum</i>	CP
		<i>Xerophloea peltata</i>	CP
Mammals			
	American Badger	<i>Taxidea taxus</i>	CP
	Least weasel	<i>Mustela nivalis</i>	CP
	Muskrat	<i>Odontra zibethicus</i>	CP
	Red squirrel	<i>Tamiasciurus hudsonicus</i>	CP
Reptiles			
	Blanding's turtle	<i>Emydoidea blandingii</i>	ST, CP
	Slender glass lizard	<i>Ophisaurus attenuates</i>	CP
	Smooth green snake	<i>Opheodrys vernalis</i>	CP
	Illinois Mud Turtle	<i>Kinosternon flavescens</i>	SE, CP
	Western Hognose Snake	<i>Heterodon nasicus</i>	ST, CP
	Ornate box turtle	<i>Terrapene ornata</i>	ST, CP
	Eastern Massasauga	<i>Sistrurus catenatus</i>	ST, FC, CP
Plants			
	Kittentails	<i>Besseyia bullii</i>	ST, CP
	Large-flowered Beardstongue	<i>Penstemon grandiflorus</i>	SE, CP
	Patterson's Bindweed	<i>Stylisma pickeringii</i>	SE, CP
	Blazing Star	<i>Liatris scariosa var Nieuwlandii</i>	ST, CP
	Prairie Rose Gentian	<i>Sebatia campestris</i>	SE, CP
	Royal Catchfly	<i>Silene regia</i>	CP
	False melic grass	<i>Schoenoplectus purshanus</i>	SE, CP
	Virginia Snakeroot	<i>Aristolochia serpentaria</i>	CP
	Old plainsman	<i>Hymenopappus scabiosaeus</i>	ST, CP
	Marsh speedwell	<i>Veronica scutellata</i>	ST, CP
	Narrow-leaved sundew	<i>Drosera intermedia</i>	ST, CP
	Primrose violet	<i>Viola primulifolia</i>	SE, CP
	Eastern blue-eyed grass	<i>Sisyrinchium atlanticum</i>	ST, CP
	Bristly blackberry	<i>Rubus setosus</i>	ST, CP
	Carey's heartsease	<i>Polygonum careyi</i>	SE, CP

