

STATE: Indiana
GRANT TITLE: Restoration and Management of Rare Habitats
PROGRAM FUNDING: Section 6
DATES: 7/1/2006-6/30/2008

Grant Proposal:

NEED:

Rare habitats are the homes of rare plants and animals. Nature Preserves contain some of the last remaining, intact, high quality, minimally disrupted savanna, wetland, forest and prairie communities in Indiana. Habitat management, mainly to restore native forest or grasslands or control plant succession and invasion of woody vegetation or exotic plants, is needed to maintain the character, quality, and ability of these unique communities to sustain their associated native wildlife species of conservation concern.

The properties addressed by this grant contain the best remaining examples of these natural habitats (Table 1) in Indiana. They were discovered as part of a systematic, statewide inventory. They became conservation priorities for acquisition because of the high quality of the habitats and the concentrations of rare species associated with the habitats. Once acquired, they were dedicated as state nature preserves. Under Indiana Code 14-31, an area that retains or reestablishes natural character and has unusual flora or fauna or biotic, geological, scenic or paleontological features of scientific or educational value can be dedicated as a state nature preserve.

The total acreage of nature preserves addressed by this grant is 5,506 (Table 1). According to the natural heritage database, a total of 28 listed vertebrate animals, 64 listed invertebrates and 102 listed plants are found on nature preserves. A total of 274 occurrences of these species, including one 1 federal listed, 3 federal threatened, 9 federal candidate, 72 state endangered, 56 state threatened, 113 state rare and 20 state special concern have been recorded in the natural heritage database to date.

The Department of Natural Resources owns all the preserves in the attached list. These management activities will, collectively, preserve these areas for the intended purpose, conservation in perpetuity. Activities conducted under this grant more resemble maintenance than construction or development, and are critical to the conservation of native wildlife species of conservation concern.

This grant addresses the need for a mechanism to quickly respond to habitat management opportunities, such as invasive species control, planting or plant control, depending on habitat need, the nature of the habitat threat being addressed and weather/climate conditions. Work covered by this grant could occur at any of the locations specified in Table 1.

OBJECTIVE:

Perform habitat restoration and management over a two year period, on a total of 300 acres of specialized natural habitats that support listed plants and animals, located on Division of Nature Preserves owned lands. The precise location of these activities is dependant on weather, invasive species problems and the needs of the natural areas. The number of acres impacted by these specific practices is shown below.

Acres impacted by management activities by project year		
Management Activity	2006-2007	2007-2008
Plant Control	110	100
Invasive Removal	20	20
Reforestation	40	0
Barrens Planting	10	0
Totals	180	120

EXPECTED BENEFITS:

Grant supported restoration and management of these rare habitats will allow the character and quality of the habitats to be restored or maintained. Therefore, these sites will continue be able to support the species of concern associated with these rare high quality communities.

APPROACH:

Habitat management activities will include plant control, invasives removal, reforestation, and barrens planting. Plant control includes managing succession by mowing, bushhogging, and hand cutting and herbicide application. Invasives removal includes hand pulling and herbiciding. Reforestation will be planting appropriate tree species and barrens planting will be planting grasses and herbs for barrens restoration. The sites selected for work funded by this grant will be selected by regional ecologists, based on the most pressing management needs. For example, a site may have a patch of the invasive, garlic mustard, which is encroaching on a rare plant population. Controlling the garlic would become an immediate priority. Regional ecologists will make these decisions based on their professional knowledge of the preserves they manage the rare species populations present and the threats to the species and habitats. The "Acres impacted by management activities by project year" table in the Objective section defines the quantity of work to be accomplished through this grant.

Any application of herbicide associated with this project will involve the use of target species and application rates specified by the product label. All herbicide will be applied by properly licensed and certified applicators.

COMPLIANCE:

The activities conducted under this grant, mowing, bush hogging, hand pulling invasive species and the use of herbicide as outlined in the approach section are consistent with

National Environmental Protection Act categorical exclusion 1.4B 2 and 3, and these exclusions will apply. The Indiana Natural Heritage database will be used to screen for the presence of at risk species.

KEY PERSONNEL:

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Project Budget:

Cost Description	Year 1	Year 2	Totals
Personnel	\$ 15,000	\$ 31,014.67	\$ 46,014.67 ✓
State Operations	\$ 15,000 ✓	\$ 15,000 ✓	\$ 30,000 ✓ ✓
Project Total	\$ 30,000	\$ 46,014.67	\$ 76,014.67 ✓
State Share (25%)	\$ 7,500	\$ 11,503.67	\$ 19,003.67
Federal Share (75) ✓	\$ 22,500	\$ 34,511	\$ 57,011

Funding Breakout: ✓
Endangered Species Grants 5941

Grant Year	State Share	Federal Share	Total
Year 1 7/1/2006-6/30/2007	\$7,500	\$22,500	\$30,000
Year 2 7/1/2007-6/30/2008	\$11,503.67	\$34,511	\$46,014.67
Grant Totals	\$19,003.67	\$57,011	\$76,014.67

Table 1. Nature Preserves, county, acreage, listed species, and management activity.

Preserve	County	Acreage	Species	Status	Management
Baseline Barrens	Washington Lake	71	Rough green snake	SC	barrens planting
Bleescker Prairie	Kosciusko	34	Mead's Milkweed	FT, G2	plant control
Big Chapman Lake	Putnam	185	Blanding's turtle	SE	invasives removal
Big Walnut	Spencer	681	Cerulean warbler	SC	reforestation
Bloomfield Barrens	Floyd	793	Buffalo Clover	SE	plant control
Brock-Sampson	Dubois	453	Southeastern crowned snake	SE	plant control
Buffalo Pond	St. Joseph	337	Western cottonmouth	SE	invasives removal
Chamberlain Lake	Newton	82	Bayonet rush	SE	invasives removal
Conrad Savanna	Elkhart	463	Ornate box turtle	SE	plant control
Elkhart Bog	Harrison	159	Eastern massasauga	C, SE, G3G4	invasives removal
Flint Barrens	Starke	56	Mottled duskywing	ST, G3G4	plant control
Koontz Lake	Steuben	148	Four-toed salamander	SE	plant control
Lime Lake	Steuben	87	Silphium borer moth	ST, G3G4	invasives removal
Loon Lake	White	99	Virginia rail	SE	invasives removal
Lowe's Prairie	Harrison	80	Prairie white fringed orchid	FT, G3	plant control
Mosquito Creek	LaGrange	121	Earwig scorpionfly	SE, G3G5	plant control
Olin Lake	Elkhart	268	Blanding's turtle	SE	invasives removal
Pipewort Pond	Fountain	135	Spotted turtle	SE	invasives removal
Portland Arch	Starke	436	Velvetleaf blueberry	SE	plant control
Round Lake	Harrison	140	Beer's blazing star borer moth	ST, G2G3	plant control
Short's Goldenrod	Vermillion	2	Short's goldenrod	FE, G1	invasives removal
Smith Cemetery	Jasper	1	Silene regia	ST, G3	plant control
Stoutsburg Savanna	Crawford	235	Ornate box turtle	SE	plant control
Yellow Birch Ravine	SE=state endangered	440	French's shooting star	SR, G3	invasives removal
FE=federal endangered	ST=state threatened		G1=critically imperiled		
FT=federal threatened	SR=state rare		G2=imperiled		
C=federal candidate	SC=state special concern		G3=vulnerable		