

Region 3 Endangered Species Project

STATE: Iowa DNR

TITLE: Habitat management activities at sites containing federally listed vascular plant species.

Grant Dates: June , 2008 to December 31, 2009

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Recovery Plan Tasks

Mead's Milkweed – 2 (2.3) Control invasive species

Eastern Prairie Fringed Orchid - 2 Manage Habitat

Western Prairie Fringed Orchid – 3 Implement habitat management

Prairie Bush Clover – 2 Provide management at protected sites.

Northern Monkshood – 2 (25) Implement management

NEED

Four prairie and one forest plant species are known to occur in Iowa which are federally listed. Mead's Milkweed (*Asclepias meadii*), prairie bush clover (*Lespedeza leptostachya*), eastern prairie fringed orchid (*Platanthera leucophaea*), and western prairie fringed orchid (*Platanthera praeclara*) are associated with native prairies. The fifth, northern monkshood (*Aconitum noveboracense*) is restricted to algal talus slopes in forest areas. Sites containing one or more of these species are usually small, isolated natural areas which may face numerous threats. These threats include invasion by non-native plants and shrub and tree encroachment. Non-native species and tree and shrub encroachment will reduce or ultimately eliminate populations of Mead's milkweed, eastern and western prairie fringed orchids, prairie bush clover, and northern monkshood. It is important that management strategies be implemented or continued at a number of sites which may have had little or no assistance in addressing these threats in the past.

OBJECTIVES

Conduct management activities for selected non-native plant species at 1 private (Powell Prairie) and 10 public sites. Conduct shrub and brush control activities at 1 private and three public sites. Conduct non-native plant species control measures at 1 private and 9 public sites. Because non-native plant species and trees and shrubs are scattered throughout the 11 sites, comprising about 1,000 acres, it is only possible to very roughly estimate the acreage to be treated. It is estimated that management activities will occur on about 500 of the 1,000 acres.

EXPECTED RESULTS/BENEFITS

The proposed management activities are expected to maintain the current populations of the listed plant species.

APPROACH

The IDNR will contract with Mr. Bill Watson to conduct all the management activities. Management activities will be performed at sites across the state containing one or more of the listed species. Management focus will be on control and removal of non-native plant species but may also include cutting of trees and shrubs, assisting in prescribed burning if requested or additional measures to enhance habitat for the listed species. Herbicides will only be applied by spot spraying or hand treatment of stumps to prevent shrub and tree re-sprouting. Management with herbicides will be first concentrated around the known populations of the listed species and expanded out to provide a buffer. Mechanical and hand pulling of non-native plant species will also be conducted around known populations and be expanded to the entire site as resources allow.

Mr. Watson has almost 20 years experience with the listed species including use of herbicides to improve habitat for the prairie species. Management activities for northern monkshood will primarily be hand cutting and stump treatment of honeysuckle and buckthorn. The following is the list of sites and management activities:

- Baldwin Marsh (Eastern Prairie Fringed Orchid) – Herbicide treatment of reed canary grass (*Phalaris arundinacea*) by hand wicking with Rodeo or a generic equivalent.
- Cayler Prairie (Western Prairie Fringed Orchid and Prairie Bush Clover) – Control of musk thistle (*Carduus nutans*) and Canada thistle (*Cirsium arvense*) by cutting or hand pulling; reed canary grass by hand wicking with Rodeo or a generic equivalent.
- Crossman Prairie (Western Prairie Fringed Orchid) – Herbicide treatment of reed canary grass by hand wicking with Rodeo or a generic equivalent.
- Dinesen Prairie (Western Prairie Fringed Orchid) - Hand cutting and stump treatment of trees and shrubs.
- Hayden Prairie (Western Prairie Fringed Orchid and Prairie Bush Clover) - Herbicide treatment of reed canary grass by hand wicking with Rodeo or a generic equivalent. Control Canada thistle, white sweet clover (*Melilotus alba*) and yellow sweet clover (*Melilotus officinalis*) by cutting and hand pulling.
- Kalsow Prairie (Western Prairie Fringed Orchid) - Herbicide treatment of reed canary grass by hand wicking with Rodeo or a generic equivalent. Control Canada thistle, white sweet clover and yellow sweet clover by cutting and hand pulling.
- Muskat Slough (Eastern Prairie Fringed Orchid) - Herbicide treatment of reed canary grass by hand wicking with Rodeo or a generic equivalent. Control Canada thistle by cutting and pulling. Brush removal by hand cutting and stump treatment.
- Powell Prairie (Western Prairie Fringed Orchid and Mead's Milkweed) – Brush removal by hand cutting and stump treatment. Control wild parsnip (*Pastinaca sativa*) and bird's-foot trefoil (*Lotus corniculatus*) by hand pulling and spot spraying respectively.
- Roberts Creek (Northern Monkshood) – Control buckthorn and honeysuckle by hand cutting and stump treatment.
- Sheeder Prairie (Western Prairie Fringed Orchid) Control poison hemlock (*Conium maculatum*), white and yellow sweet clover by cutting and hand pulling. Control trees and shrubs by hand cutting and stump treatment.

- Steel Prairie (Western Prairie Fringed Orchid) - Herbicide treatment of reed canary grass by hand wicking with Rodeo or a generic equivalent. Control Canada thistle and musk thistle by cutting and hand pulling.

ROLES AND RESPONSIBILITIES

Daryl Howell will act as project supervisor for the IDNR and will be responsible for project reporting and budget management. Daryl.Howell@dnr.iowa.gov (515) 281-3891

Mr. Bill Watson will contract with the IDNR and will be responsible for all management activities and completion of a final report. Bill Watson (319) 266-3267 PO Box 281 Cedar Falls, IA 50613.

LOCATION

Proposed work sites include Baldwin Marsh (Jackson County), Cayler Prairie (Dickinson County), Crossman Prairie (Howard County), Dinesen Prairie (Shelby County), Hayden Prairie (Howard County), Kalsow Prairie (Pocahontas County), Muskrat Slough (Jones County), Powell Prairie (Taylor County), Roberts Creek (Clayton County), Sheeder Prairie (Guthrie County) and Steele Prairie (Cherokee County) in Iowa.

SCHEDULE

The contract period will be June , 2008 to December 31, 2009.

The contractor will conduct management activities on at least one site to control reed canary grass by June 30, 2008.

The contractor will submit a progress report by June 1, 2009 detailing the management activities completed through May 15, 2009.

The contractor will conduct management activities at the remaining 10 sites by October 31, 2009. The contractor plans to complete the work in 2008 but due to the potential for adverse weather conditions wants to have the option to complete the contract in 2009.

Submit a final report detailing the management activities completed at the 11 sites by December 31, 2009.

ESTIMATED COSTS

Salary and Wages (Biologist)	
Field work; 420 hrs @ \$23/hr	9,660.00
Report writing; 45 hrs @ \$23/hr	1,035.00
Mileage	
9,300 miles @ 54 cents/mile	5,022.00
Per-Diem	
Field Work Days – Lodging (38 days @ \$20/day)	760.00
Field Work Days – Meals (38 days @ \$14/day)	532.00
Miscellaneous	
Secretarial services, supplies, herbicide, etc.	539.00
TOTAL COSTS	\$17,548.00
Federal Share (FY 2008)	\$8,418.00
State Share	\$9,130.00

REFERENCES

- Watson, W. C. 2007. Habitat management activities at selected state preserves containing federally listed vascular plant species. Final report, submitted to the Iowa Department of Natural Resources, Des Moines, IA. 16 pp.
- Watson, W. C. 2005. Habitat management activities at Iowa sites containing federally listed vascular plant species. Final report, submitted to the Iowa Department of Natural Resources, Des Moines, IA and U.S. Fish and Wildlife Service, Rock Island, IL. 18 pp.
- Watson, W. C. 2003. Habitat evaluation and management at Iowa sites containing federally listed vascular plant species. Final report, submitted to Iowa Department of Natural Resources, Des Moines, IA and U. S. Fish and Wildlife Service, Rock Island, IL. 17 pp + maps.
- Watson, W. C. 2003. Census and management activities for *Asclepias meadii* torrey at two southern Iowa prairies. Final report, submitted to Iowa Department of Natural Resources, Des Moines, IA and U. S. Fish and Wildlife Service, Rock Island, IL. 9 pp.