

2013 Arkansas State Wildlife Grant Proposal

INVASIVE SPECIES ERADICATION ON THE WINROCK GRASS FARM  
TO BENEFIT SPECIES OF GREATEST CONSERVATION NEED

**Project Summary**

Chinese privet, Japanese honeysuckle, Serecia lespedezia, and Tree of Heaven will be treated on the Winrock Grass Farm using herbicide treatment, prescribed fire, and physical removal as part of an overall restoration plan on the property. Invasive species removal will be part of the site preparation for forest enhancement, reforestation, establishment of shrubland, and streambank restoration on the 915-acre grass farm along approximately four river miles on the Maumelle River. Restoration activities will benefit 19 animal species of conservation concern known from the area, and address three conservation action funding priorities.

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**SWG Funding Requested:** \$14,625

**Amount and Sources of Matching Funds:** \$7875 will be provided from Central Arkansas Water.

**Total Project Costs:** \$22,500

**NEED:** Central Arkansas Water (CAW) purchased the 915-acre Winrock Grass Farm in 2010 as part of a requirement in the Lake Maumelle Watershed Management Plan to offset development in the Maumelle watershed. Lake Maumelle is the primary drinking water supply for Central Arkansas, and provides high quality drinking water to approximately 400,000 customers. CAW entered into partnership with the Arkansas Game & Fish Commission, US Fish and Wildlife Service, Arkansas Forestry Commission, US Forest Service, The Nature Conservancy, and the Watershed Conservation Resource Center to develop active management and restoration plans for the grass farm. Geosyntec Consultants, Inc. was hired to develop an overall site plan for the property to include streambank restoration, wetland restoration, reforestation, forest habitat improvement, and establishment of shrubland/grassland for Northern Bobwhite and other grassland birds.

Based on 1821 General Land Office notes, the site was primarily pine-oak-hickory forest. Several tributaries to the Maumelle River were also noted, along with associated emergent wetlands. By 1940, the timber had been removed and 47% of the forest had been converted to pasture, or other cleared land. Currently, the site is 49% forested consisting of upland oak, shortleaf pine, and bottomland hardwood forests. The Maumelle River has distinctive habitat characteristics such as cobble and bedrock substrate with cypress trees, scour prairies within the river channel, and two plant species of state conservation concern, Ouachita bluestar (*Amsonia hubrichtii*) and Sticky hedge-hyssop (*Gratiola brevifolia*). Ouachita bluestar (*Amsonia hubrichtii*) is endemic to the Ouachita Mountains; however, this is the first documented occurrence in Pulaski County and the eastern-most in its range. The species is also considered to be globally vulnerable giving it a conservation status rank of G3S3. Sticky hedge-hyssop (*Gratiola brevifolia*) is a common associate of the federally endangered species harperella (*Ptilimnium nodosum*). Various woodland habitats within the Ouachita Mountains Ecoregion are listed as habitats of concern, along with associated wildlife species. Several of these can be found on the project site. This project's immediate focus will be on the riparian area along the Maumelle River adjacent to a streambank restoration project that will occur in the summer of 2013. The long-term plan for the grass farm will be to conduct reforestation in the sod fields; forest stand improvement along the riparian areas, to include thinning, controlled burning and invasive species eradication; wetland restoration, especially in areas with channel alteration; and creation of shrubland/grassland habitat for avian species. Currently, the site has 19 known bird species of greatest conservation need, as well as several other bird species of greatest conservation need in the areas adjacent to the grass farm and/or that could potentially utilize the habitat (Table 1). This proposal will address several priority actions in the Arkansas Wildlife Action Plan: habitat restoration/improvement, fire management, and invasive species removal all geared towards Species of Greatest Conservation Need. The project will begin the process of removing invasive vegetation, and will serve as a model for removing invasives and restoring habitat throughout the site. Ultimately, four of the Conservation Action Priorities listed under the Habitat category, and two listed under the Bird category will be addressed: forest management, wetland management/restoration, measure regional bank erosion rates, implement road BMP projects, and manage for native grasslands.

AWAP SGCN known from the WGF that will benefit from the project	Species Priority Score
Migrant Loggerhead Shrike	33
American Woodcock	24
Sedge Wren	23
Swallow-tailed Kite	23
Eastern Towhee	19
Bell's Vireo	19
Bald Eagle	17
Osprey	17
Yellow-billed Cuckoo	14
Snowy Egret	14
Wood Thrush	14
Red-headed Woodpecker	14
American White Pelican	14
Chimney Swift	14
Pied-billed Grebe	14
Prothonotary Warbler	14
Brown-headed Nuthatch	14
Mississippi Kite	11
Painted Bunting	11

*Table 1 Species of Greatest Conservation Need and their Priority Score*

**LOCATION:** The Winrock Grass Farm is located in the Fourche Mountains of the Ouachita Mountains Ecoregion. The eastern boundary of the Ouachita National Forest is approximately 1.5 miles west of the property. The Maumelle River, which is the largest tributary to Lake Maumelle, runs through the property. The site contains the second highest ranking terrestrial habitat, Ozark-Ouachita Riparian, and the fourth highest ranking habitat, Ozark-Ouachita Mesic Hardwood forest.



*Figure 1 Aerial photo of the Winrock Grass Farm*

**OBJECTIVES:** The primary purpose of the project is to remove invasive species from the restoration area. Invasive species eradication will take two years with one prescribed burn conducted during that period.

1. Conduct habitat management to increase habitat quality through the use of invasive species removal and prescribed fire. Pertinent page numbers from species accounts: 185, 188, 192, 213, 224, 240, 252, 268, 282, 293, 301, 305, 333.
2. Address the emerging issue of invasive species and their impacts on SGCN.
3. Manage landscapes for native grasslands and habitat enhancement riparian forest.

**APPROACH:** All objectives will be addressed during the two year grant period. A hand crew will be used to treat invasives using the following procedures: Chinese privet and Japanese Honeysuckle will be chemically injected with a 25% triclopyr (trade name Garlon) solution and/or sprayed. Tree of Heaven will be burned early summer, chemically injected with a mix of triclopyr and imazapyr (trade name Arsenal) late summer, followed by an early fall burn; if trees are cut, stumps will be treated with herbicide as well. Serecia lepedezia will follow the same burn/treatment regime as Tree of Heaven using a spray mixture of triclopyr and fluroxypyr (trade name PastureGard) and a surfactant to maximize results.

**EXPECTED RESULTS AND BENEFITS:** Approximately ten acres of riparian area will be treated to remove invasive species in order to improve habitat for SGCN. Eradication of these invasives will lay the ground work for long-term efforts to remove invasive species, improve riparian and other woodland habitats, and facilitate successful establishment of warm season native grasses and shrubland in conjunction with reforestation. A continuous burn regime will be established in order to return the tract to its historic condition. Northern Bobwhite, grassland and marshbird SGCN, and other riparian woodland and grassland-dependent species will benefit from long-term restoration strategies that will result in high quality, protected habitat.

**BUDGET:** The estimated total cost of the project is \$22,500. The 50% federal cost share would be \$11,250, and the 65% federal cost share would be \$14,625. CAW will provide non-federal match of either \$11,250 (50%) or \$7875 (35%).

Category	Total	Match (50%)	Grant (50%)
Salaries/Benefits	\$ 7,500	\$ 7,500	
Contract Services	7,500		7,500
Supplies	5,500	2,750	2,750
Travel	2,000	1,000	1,000
<b>GRAND TOTAL</b>	<b>\$22,500</b>	<b>\$11,250</b>	<b>\$11,250</b>

Category	Total	Match (35%)	Grant (65%)
Salaries/Benefits	\$ 7,500	\$ 2,625	\$ 4,875
Contract Services	7,500	1,500	6,000
Supplies	5,500	2,750	2,750
Travel	2,000	1,000	1,000
<b>GRAND TOTAL</b>	<b>\$22,500</b>	<b>\$7,875</b>	<b>\$14,625</b>

**QUALIFICATIONS:** Central Arkansas Water has partnered with several federal, state, and non-profit organizations to develop a broad-based management plan for CAW-owned property. With the technical expertise and services of these partners, CAW has begun the process of enhancing and restoring habitat in the Maumelle watershed to benefit wildlife and enhance water quality. The following is a summary of the staff who will participate in this project:

- Stephanie Hymel, Project Lead, is the Stewardship Coordinator for Central Arkansas Water. Ms. Hymel has a B.A. in English from the University of Arkansas at Little Rock, and an M.S. in Environmental Science, with an emphasis in water quality, from the University of North Texas. She previously worked for Audubon Arkansas as a Conservation Program Manager. Ms. Hymel has experience in water quality sampling and analysis, wetland restoration, reforestation, and watershed management.
- Sandi Formica is the Executive Director of the Watershed Resource Conservation Center. Ms. Formica has a B. S. and M.S. in Chemical Engineering, with an emphasis in transport of chemicals in the environment, from the University of Arkansas at Fayetteville. She has extensive experience in watershed management, watershed assessment, stream stability analysis, natural channel restoration design, and the utilization of GIS for inventory and evaluation of natural resource condition. Ms. Formica will serve in a technical advisor role.
- Steve Burgess is a Habitat Biologist with the Arkansas Game and Fish Commission. Mr. Burgess has a B. S. in Forestry from the University of Arkansas at Monticello. He has over 16 years of forestry experience with the Arkansas Forestry Commission and the Arkansas Game and Fish Commission. Mr. Burgess has extensive experience in all aspects of forestry including invasive species removal. He will provide technical support and oversight on the project.



*Winock Grass Farm*



*Bald Eagle at Lake Maumelle*