

Native Warm Season Grass Buffer Establishment in the Mississippi Alluvial Valley

Project Summary:

Agricultural field edges will be established in premium 30-120 ft wide native warm season grass buffers that will benefit Northern Bobwhite (*Colinus virginianus*) and other priority grassland birds in the Mississippi Alluvial Valley. This project will restore native grasses to 1,000 acres of private land in Cross, Jackson, Poinsett, and Woodruff counties by offering additional incentive to existing farm bill programs. This grant will enable the success and concentration of effort of an important conservation practice that will benefit many grassland birds.

Project Leaders:

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Project Partners:

Natural Resources Conservation Service, Farm Service Agency, Arkansas Forestry Commission, U of A Cooperative Extension Service, Conservation Districts, U.S. Fish and Wildlife Service and private landowners.

Budget Summary:

State Wildlife Grant Request - **\$100,000**
Matching Funds and In-kind Service - **\$100,000**
Total Project costs - **\$200,000**

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Funding and Conservation Priorities: This project addresses conservation priorities outlined in the Arkansas State Action Plan and funding priorities outlined in the 2008 State Wildlife Grants RFP. The proposed project will integrate wildlife action plan priorities with ongoing land-use or natural resources efforts at the local and state level. Restoration of native grasslands will help meet habitat objectives in plans including the Northern Bobwhite Conservation Initiative (NBCI). This project addresses needs of species of greatest conservation concern (SGCN) identified in the plan but will also benefit other fish and wildlife species that rely on grassland habitats. Lastly, this is an on-the-ground stewardship and restoration project that can also serve as a demonstration project for other state, federal, and private lands.

The proposed project addresses one funding priority outlined in the 2009 State Wildlife Grants RFP. This project will: 1) restore and maintain native grasslands for grassland birds and will require management of these established grasses to include prescribed fire or disking to maintain habitat quality.

Project Need: Grassland species have experienced severe declines over much of their range in the United States, including species identified as high priority species in the state action plan as well as by Partners in Flight (Rich et al. 2004). Threats to these species include habitat loss as a result of conversion to agriculture, habitat alteration, and fragmentation. Grassland species of concern include Northern Bobwhite, LeConte's Sparrow, Loggerhead Shrike, Grasshopper Sparrow, Northern Harrier, Painted Bunting, and Sedge Wren. Although specific species vary in their habitat requirements, varying site specific conditions and successional conditions can provide for many of these species at larger landscape scales. Conservation actions suggested for grassland-reliant species include habitat restoration and provision of larger blocks of grassland habitat. Additionally, establishment of native warm season grasses is an essential element of prairie restoration as are the management techniques outlined in this proposal for maintenance of habitats.

This project will restore and maintain approximately 1,000 acres of grassland habitat through 30-120 foot wide buffers around agricultural fields. These buffers would be maintained on rotational basis with prescribed fire or disking where fire is not feasible. Prescribed fire will be the preferred method for maintenance of these grass stands. The establishment of native grasslands and their maintenance are identified in the 2009 State Wildlife Grant RFP as a high funding priority and the actions will benefit numerous species of greatest conservation need (SGCN).

Project Site: This project will occur on many tracts of private land in Cross, Jackson, Poinsett, and Woodruff counties. These private tracts will include predominantly agricultural sites where a landowner/farmer is willing to sign up a native grass buffer around their row crop field. All four of these counties occur in the Mississippi Alluvial Valley. There are currently many federally funded projects in these counties that this project will fit into to begin creating a larger landscape effect on habitat and bird populations of these counties. These native grass buffers will have a bigger effect in this area for many SGCN due to the other projects in the area.

Project Goals: The proposed project will help to establish and manage approximately 1,000 acres of high quality grassland habitat with establishment of native grass buffers through appropriate planting techniques. These buffers will then be managed for ideal habitat through use of prescribed fire and strip disking. Northern Bobwhites require different stages of grass

establishment seasonally. Therefore a rotational fire or disking system will provide the management to maximize the quality of this habitat type. Additionally, rotational burning or disking will provide a variety of stages of grassland habitats to benefit a greater number of grassland bird species.

Over two years, this project will establish 1,000 acres of native grassland that currently have little or no wildlife value and are areas of low crop value. After NWSG has been established, fire and fallow disking will be used to maintain them as high quality grassland habitat. This reclamation of 1,000 acres of native grasslands could increase Northern Bobwhite populations by as much as 250 coveys based on the Northern Bobwhite Conservation Initiative (NBCI). The establishment of native warm season grasses and its management is identified in the State Action Plan as a high priority conservation action that will benefit several grassland bird species, such as LeConte's Sparrow, Grasshopper Sparrow, Loggerhead Shrike, and Sedge Wren. This grant would significantly increase the acreage being positively managed for SGCN on private lands in these counties.

Materials and Methods: In order to establish and manage 1,000 acres of native grasslands on private lands in Cross, Jackson, Poinsett, and Woodruff counties, AGFC will utilize our private lands staff to promote and write plans for establishment of native grass buffers from 30-120 foot wide around fields that a predominantly row crops. We will utilize money from this grant to use as an incentive to establish these buffers. The buffers would be on a contract for 10 years. This contract will require the landowner to establish the buffers in the first year of the contract and manage those buffers with fire or strip disking on a three year rotation. In order to maximize our money and interest of the landowners, we will use this grant money to match Signing Incentive Payments that are given to landowners that sign up with Farm Service Agency for the CP-33 (Native Grass Buffers for Upland Birds). This program has several thousand acres left available in Arkansas. With this added incentive, we expect to increase interest in this program that will greatly benefit many SGCN. We will promote this program through a new brochure we will develop, at least one workshop/field day per year in each county, articles in conservation and AGFC newsletters, use of local media outlets, and on the ground promotion by our PLBs.

Monitoring: We will monitor both habitat and bird response to this management regime. In order to monitor bird and habitat response we will utilize the current CP-33 monitoring effort to monitor these buffers. This protocol measures habitat and bird response on treatment and control areas. In order to monitor habitat change we will measure vegetation parameters that include percentage of native grasses, native forbs, woody plants, bare ground, and non-native plants. In order to monitor avian response to this management, this protocol will conduct point count in the late spring and early summer for birds that are SGCN in the Mississippi Alluvial Valley. The final monitoring methodology will be entered on the Natural Resources Monitoring Partnership website.

Study Results and Benefits: Through this project we propose to establish an additional 1,000 acres of native warm season grass buffers in Cross, Jackson, Poinsett, and Woodruff counties. This management should positively benefit grassland birds by increasing quality nesting and brooding habitat that will be maintained by prescribed fire and/or strip disking.

In addition to habitat benefits, we will be able to help update the CWCS with the results of this project. We will also present results at appropriate scientific meetings and utilize this project as a demonstration for the public to see the benefits of native warm season grass buffers. We will use this project's results to conduct field days and workshops for the public. These areas will

serve as a good demonstration for landowners in the Mississippi Alluvial Valley. Media days may also be utilized to educate the public about native warm season grass, prescribed fire, and other habitat management techniques.

Budget and Expenditures: The budget below outlines costs for the following habitat accomplishments: 1,000 acres of native warm season grass buffers that will be maintained on a rotational prescription of fire or strip disking.

Item	Total	Match	Grant
Salary Expenses			
AGFC value for 140 written plans @ \$440/plan	\$61,600	\$61,600	\$0
AGFC time in promotion through 12 workshops/field days	\$4,000	\$4,000	\$0
AGFC time in flyer development	\$500	\$500	\$0
AGFC time in brochure development	\$1,000	\$1,000	\$0
AGFC time for promotion through interviews	\$3,000	\$3,000	\$0
Contract Work			
Monitoring costs	\$4,000	\$4,000	\$0
Operating Expenses			
Incentive Payments	\$100,000	\$0	\$100,000
Capital Expenses			
Flyer printing	\$500	\$500	\$0
Brochure printing	\$1,000	\$1,000	\$0
Mail outs (12,400 @ \$1 value each)	\$12,400	\$12,400	\$0
ATV (needed for field work on this project)	\$6,000	\$6,000	\$0
Cost of workshops/field days – facility rental, food, etc..	\$6,000	\$6,000	\$0
Project Totals:	\$200,000	\$100,000	\$100,000

*All matching funds will be through AGFC budgeted items or in-kind service.

Literature Cited

Rich, T.D., C.J. Beardmore, H. Berlanga, P.J. Blancher, M.S.W. Bradstreet, G.S. Butcher, D.W. Demarest, E.H. Dunn, W.C. Hunter, E.E. Inigo-Elias, J.A. Kennedy, A.M. Martell, A.O. Panjabi, D.N. Pashley, K.V. Rosenberg, C.M. Rustay, J.S. Wendt, T.C. Will. 2004. Partners in Flight North American Landbird Conservation Plan. Cornell Lab of Ornithology. Ithaca, NY.

Qualification of Individuals and Organizations Involved

Organization:

The Arkansas Game and Fish Commission's mission is to wisely manage all the fish and wildlife resources of Arkansas while providing maximum enjoyment for the people. Arkansas Game and Fish Commission are engaged in bird initiatives including the Northern Bobwhite Conservation Initiative and Partners in Flight, which are initiatives with goals to restore high quality habitat for high priority bird species.

Research Personnel:

Steven Fowler has served as the Quail Program Coordinator at the AGFC for 2 years and previously was a private lands biologist for 3.5 years with the AGFC. He received his MS degree in Biology from Arkansas State University studying the Survival, Cause-Specific Mortality, and Habitat Use of Wild Northern Bobwhite Quail at Camp Robinson WDA. He is a member of the The Wildlife Society and the Arkansas Chapter of the Wildlife Society and currently chairs the Arkansas Quail Committee.

David Long has served as the Private Lands Coordinator and the Acres for Wildlife Coordinator at the AGFC for the past 4 years and prior to that he served as the Agricultural Liaison for the past 15 years. He received a BS in Wildlife Management from Arkansas State University. He served as a private lands biologist with the Acres for Wildlife Program for 8 years and served as the area manager of the Big Lake and Bayou DeView WMA. He is certified as a Wildlife Biologist with The Wildlife Society and is a member of the Arkansas Chapter of the Wildlife Society, Arkansas Wildlife Federation, and serves on the Arkansas Quail Committee.