

The Arkansas Field Office of The Nature Conservancy is pleased to submit this updated project action **Final Report** for the grant agreement titled:

***“Implementation of the Kingsland Prairie Conservation Plan: Fire and Woodland Habitat Restoration at Kingsland Prairie to Benefit Grassland Bird Species of Conservation Concern; and Monitoring of Habitat Effects”***.



**Post-burn and thinning herbaceous response in Expanded Slash-West Unit; July, 2007**

**LOCATION: Ecoregion: South Central Plains**

**Habitats: Saline Glade, Dry Pine-Hardwood Flatwoods, Small Stream/River Forest**

**Kingsland Prairie is owned by The Nature Conservancy**

## **PROJECT NARRATIVE**

Kingsland Prairie Conservation Area (KPCA) in Cleveland County, Arkansas, is a mosaic of prairie openings interspersed with unique savannas and woodlands. The Conservation Area covers some 2,140 acres of land on the Quaternary Age river terrace just west of the Saline River overflow bottoms. KPCA is in private ownership with the Conservancy owning 820 acres.

The unusual geology of KPCA makes for a landscape of very uncommon habitats and associated species and communities. Saline Glades associated with Lufe soils at KPCA support *Geocarpon minimum* (G2S2 LE); the 2,140-acre landscape of prairie openings, savannas, and woodlands supports at least three bird species of concern.

The Nature Conservancy implemented a conservation area plan at Kingsland Prairie Conservation Area (KPCA), which included fire management, woodland restoration/thinning, and monitoring the effects of management on species of conservation concern.

### **Fire Management at KPCA**

The most important stewardship goal at this site is the maintenance of a natural fire regime. The reintroduction of fire will decrease the woody component of the prairies, reduce the abundance of non-native species, favor native warm season grasses, increase the size and connectedness of the prairie openings, restore structure to the degraded woodlands, and reinvigorate the forest-woodland understory and prairie-woodland ecotone.

#### *Fire management objectives* (over two years)

Restore fire to all current conservation acres once within four years, with average 80% unit coverage.

Attain moderate overall burn intensity for 50% of the burns.

Reduce impact from wildfire suppression to 0 plow lines installed in next four years on the natural area.

#### **SWG Accomplishments:**

- **Completion of 9 prescribed burns for a total of 745 acres.**
- **Completion of 100 acres of pile and slash burning.**
- **Attained moderate overall burn intensity on over 50% of the burns**
- **Zero plow lines installed**

**Table 1: Prescribed Burns at Kingsland Prairie Preserve – March, 2006 to December, 2007**

<b>Burn Unit (FMU)</b>	<b>Acres</b>	<b>Date (Season)</b>	<b>Coverage</b>	<b>Intensity</b>	<b>Burn boss (App.)</b>
South Prairie (5-west, 3-S)	40	Mar. 04, 2006	89%	Moderate	Melnechuk
Exp. Slash East (1-SE)	60	Mar. 06, 2006	87%	Light	Melnechuk
Plantation (4-South)	85	Dec. 10, 2006	98%	Moderate	Melnechuk
SE Boundary (6-East)	60	Feb. 23, 2007	95%	Moderate	Melnechuk (Lapham)
North (1-North, 4-North)	60	Mar. 21, 2007	97%	Moderate	Melnechuk (Harris)
Exp. Slash West (1-SW)	100	Mar. 30, 2007	90%	Light	Melnechuk (Lapham)
Exp. Slash East (1-SE)	60	Oct. 13, 2007	98%	Moderate	Melnechuk (Gottfried)
FMU2 – West *includes 100 ac. piles	150	Nov. 03, 2007	70%	Light/Mod.	Melnechuk
FMU3 – Cottonmouth Creek	130	Nov. 04, 2007	75%	Light/Mod.	Melnechuk
<b>Total: 9 burns</b>	<b>745 acres</b>		<b>89% average</b>		

*Fire management tasks:*

Maintain all existing firelines at Kingsland Prairie Conservation Area.

Install firelines around and within south unit as it is developed.

Complete and implement burn plans for a south burn unit by fall of the second year.

Complete post fire effects monitoring and operational reports after each burn.

**SWG Accomplishments:**

- **Firelines were installed around the entire TNC Preserve boundary by commercial grinder**
- **Additional burn unit firelines were installed around 3 southern units by crew (Plantation, SE Boundary, South Prairie) and additional units (FMU2-west, FMU3)**
- **Burn plans complete and prescribed burns implemented on 3 south units (Plantation, SE Boundary, South Prairie)**
- **Fire Summary Reports and Post Burn Evaluations have been completed for all burns**

*Fire management monitoring:*

TNC's Arkansas Field Office utilizes a fire effects monitoring procedure to track attainment of fire objectives. This monitoring includes tracking burn acreage, seasonality, and intensity. Intensity is calculated from point transects through the burn unit. Monitoring information includes substrate consumption, understory vegetation consumption, scorch height, crown scorch percent, char height, and char degree.

*Fire management monitoring tasks:*

Track acres of units burned.

- **Completed (745 acres)**

Track burn unit coverage and seasonality.

- **Completed (see Table 1 above)**

Track burn unit intensity through post fire effects monitoring.

- **Completed (see Table 1 above)**

**Other Project Actions Completed:**

- **Completed restoration overstory thinning on 110 acres (November 2006)**
- **Completed wintering grassland bird survey and report (February 2007)**
- **Completed FY07 photopoint monitoring and report (May 2007)**
- **Completed FY07 breeding bird point counts and report (May/June 2007)**

Copies of the following project deliverables are attached:

- fire summary reports (9)
- post-burn evaluations (9)
- grassland bird monitoring report (1)
- breeding bird point count report (1)
- photopoint monitoring report (1)

**Budget Summary:**

<i>Project Funding</i>	
Approved	Actual
\$26,000 – SWG (50%)	\$26,000 – SWG (38%)
\$26,000 – Match (50%)	\$43,088 – Match (62%)
\$52,000 – Total	\$69,088 – Total

We appreciate the fact that the Arkansas Game and Fish Commission has been our partner in the restoration of Kingsland Prairie through this grant. The stewardship tasks there continue and are rewarding. We hope that this report meets your requirements and warrants your approval. Please call me at 501-614-5095 or email me at [mmelnechuk@tnc.org](mailto:mmelnechuk@tnc.org) with any questions or concerns.

Sincerely,

Mike Melnechuk  
Assistant Director-Stewardship/Fire Manager