FINAL REPORT

STATE: Oklahoma **GRANT NUMBER:** E-56-1

GRANT TYPE: Endangered Species Section 6

GRANT DATES: September 17, 2001 - September 16, 2008

PROJECT TITLE: Mid-story Thinning to Enhance Habitat for the Red-cockaded Woodpecker on the McCurtain County Wilderness Area.

PRINCIPLE INVESTIGATOR: John Skeen, Senior Biologist, Wildlife Division, ODWC

A. ABSTRACT:

The last remaining population of the endangered Red-cockaded Woodpeckers in Oklahoma resides within the state-owned McCurtain County Wilderness Area. As a result of regional fire suppression, the area has seen an increase in mid-story canopy closure and a reduction in the recruitment of young shortleaf pines and in the density of herbaceous ground cover that supports much of the woodpecker's insect prey base. Prescribed winter and early spring burns have been conducted on portions of the MCWA in an effort to restore the area to its historic structure as a more open pine-dominated woodland, however, this has not been sufficient in effectively altering the structure of the existing mid-story. This project was undertaken to remove selected mid-story vegetation and increase herbaceous ground cover in order to enhance the habitat for Red-cockaded Woodpeckers. Improving overall habitat conditions and should increase woodpecker productivity and aid in the recovery of this population and its expansion into the pine/bluestem restoration area on the adjacent Broken Bow Unit of the Ouachita National Forest. Since 2001, mid-story vegetation has been thinned on 3,678 acres surrounding most of the active Red-cockaded Woodpecker clusters and over one dozen recruitment stands on the MCWA.

B. PROJECT OBJECTIVE:

Improve the quality of Red-cockaded Woodpecker habitat on that portion of the McCurtain County Wilderness Area that contains active RCW clusters and recruitment stands.

C. INTRODUCTION:

The Red-cockaded Woodpecker occurs in a narrow range of habitat conditions and suitable habitat for this species is limited to mature pine woodlands and savannahs. In the Ouachita Mountains, which comprise the northwestern most extension of its range, the Red-cockaded Woodpecker is found in mature shortleaf pine woodlands and savannahs with a grassy understory dominated by bluestem species. Over the past century, the Red-cockaded Woodpecker population in the Ouachita Mountains has declined as a result of

habitat degradation. Widespread logging in the early part of the twentieth century eliminated many of the mature pine stands that supported RCW clusters. Through the rest of the century, the remaining pockets of mature pine habitat declined in quality as a result of fire suppression and the subsequent increase in mid-story vegetation.

In Oklahoma, the last known population of RCWs resides within the state-owned McCurtain County Wilderness Area (MCWA). Mid-story closure and reduced recruitment of young shortleaf pines in this historically pine-dominated forest are two of the primary threats facing these remaining clusters. Since 1992, prescribed winter and spring burns have been conducted on portions of the MCWA in an effort to control young hardwoods and mid-story encroachment. However, it has become apparent that while prescribed burning is an important tool for maintaining an open forest structure, burning alone cannot effectively alter the structure an already established mid-story. Since 1995, selected mid-story hardwood trees have been cut manually to create open, pine woodland corridors linking active Red-cockaded Woodpecker clusters and recruitment stands. The creation of corridors and the other Red-cockaded Woodpecker recovery efforts on the MCWA have successfully stabilized the local population, but the population has not increased as rapidly as hoped. Based upon observations of the habitat conditions at other locations across the southeastern U.S. where Red-cockaded Woodpecker populations are increasing, it appears that expanding the acreage of mid-story thinning surrounding the nesting areas is needed. This will improve overall habitat conditions and should promote increased woodpecker productivity.

Mid-story thinning and habitat restoration on portions of the McCurtain County Wilderness Area will complement on-going efforts by the Ouachita National Forest to restore approximately 50,000 acres in Management Area 22 to a shortleaf pine woodland/savannah habitat condition. This management will benefit locally rare species including the Red-cockaded Woodpecker, Bachman's Sparrow and Brown-headed Nuthatch which require open, mature pine woodland habitat. Improved habitat conditions at the landscape level (e.g. McCurtain County Wilderness Area and Ouachita National Forest) will support a much larger population size and improve the prospects for the long-term viability of Red-cockaded Woodpeckers in Oklahoma and the western Ouachita Mountains.

C. PROCEDURES:

Potential areas for mid-story thinning were delineated based upon their likelihood to support a shortleaf pine/bluestem woodland habitat and their proximity to active Red-cockaded Woodpecker clusters, foraging habitats, and recruitment stands. The areas chosen for thinning during the 2007-2008 grant period were on the area's east side, in sections 9, 10, and 14 of T03S, R25E. In previous reporting periods, areas were thinned on both the west and east sides of Broken Bow Reservoir in Sections 1, 2, 3, 4, 5, 8, 9, 10, 11, 12 of T03S, R25E, and in Sections 6 and 7 of T03S, R26E.

Prior to thinning each year, project personnel marked the boundaries for the thinning blocks and laid out access trails within the blocks. Most hardwood trees between 1 and 10 inches dbh were cut except for selected species, such as flowering dogwood, serviceberry and rusty blackhaw, which were specified to be left uncut. Any heavy slash was moved at least three feet from mature pines to reduce the fuel around these trees during prescribed

burns. Most, but not all, of the thinning activities took place during the fall and winter months. To eliminate unintentional disturbance, no thinning activities were conducted in close proximity to active clusters during the nesting season.

D. RESULTS AND CONCLUSIONS

Thinning work during the 2007-2008 segment began in October, 2007 on the area's east side and occurred in the compartments shown in Table 1 and Figure 1. It continued until the end of August, 2008 when project funds were exhausted. Four chain saw operators that were employed by the Oklahoma Department of Wildlife Conservation on a temporary basis accomplished thinning. During the 2007-2008 period of the grant, approximately 704 acres (Table 1) were thinned. The acreage of each block was adjusted to account for any areas within the block that had been previously treated.

Since initiation of this project in 2001, a total of 3,678 acres have been thinned. This acreage is summarized in Table 2 and mapped in Figure 2. The blocks selected for mid-story treatment in the next grant segment are shown in Figure 3 and total 765 acres.

E. SIGNIFICANT DEVIATIONS

None

F. COST $ 189,663.93
Federal Share $ 111,322.00

G. PREPARED BY: John Skeen, Senior Biologist

H. DATE: October 20, 2008

I. APPROVED BY: _____
Wildlife Division Administration
Oklahoma Department of Wildlife

_____
John Stafford, Federal Aid Coordinator
Oklahoma Department of Wildlife

Table 1. Acres of Midstory Hardwoods Thinned on the McCurtain County Wilderness Area from October 2007 through September 2008.

Block	Acreage
A07	154
B07	196
C07	112
D07	110
E07	95
F07	37
Total	704

Table 2. Acres of Midstory Vegetation Thinned on the McCurtain County Wilderness Area by year from 2003 through 2008.

Year	Acreage
2001-2002	0
2002-2003	700
2003-2004	0
2004-2005	978
2005-2006	563
2006-2007	733
2007-2008	704
Total	3,678

Figure 1. Areas Thinned from October 2007 through September 2008

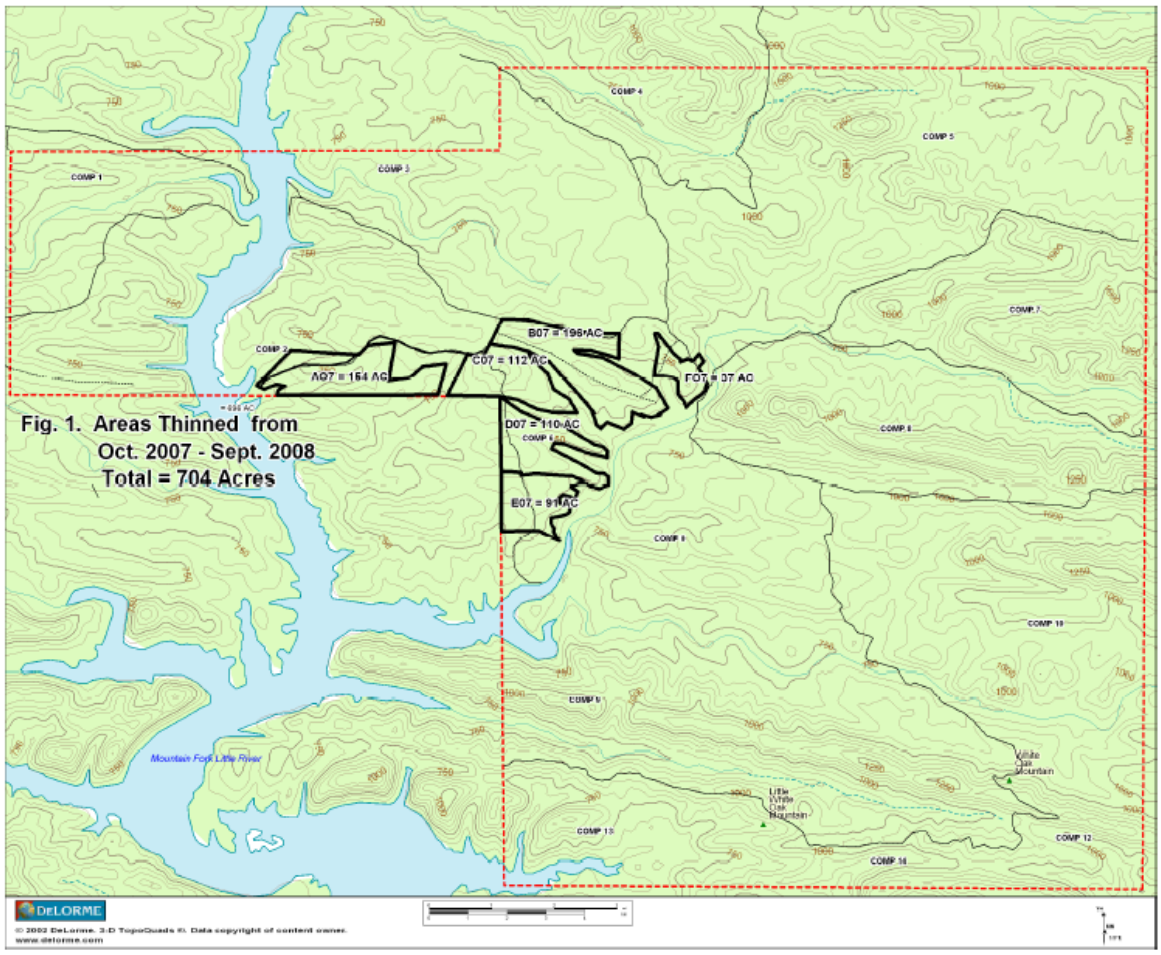

Fig. 1. Areas Thinned from Oct. 2007 - Sept. 2008 Total = 704 Acres

Figure 2. Areas Thinned on the McCurtain County Wilderness Area from 2001 to 2008. Note, that the areas thinned between the fall of 2001 and the spring of 2004 are labeled "2004" on the map to designate the earliest years of the project.

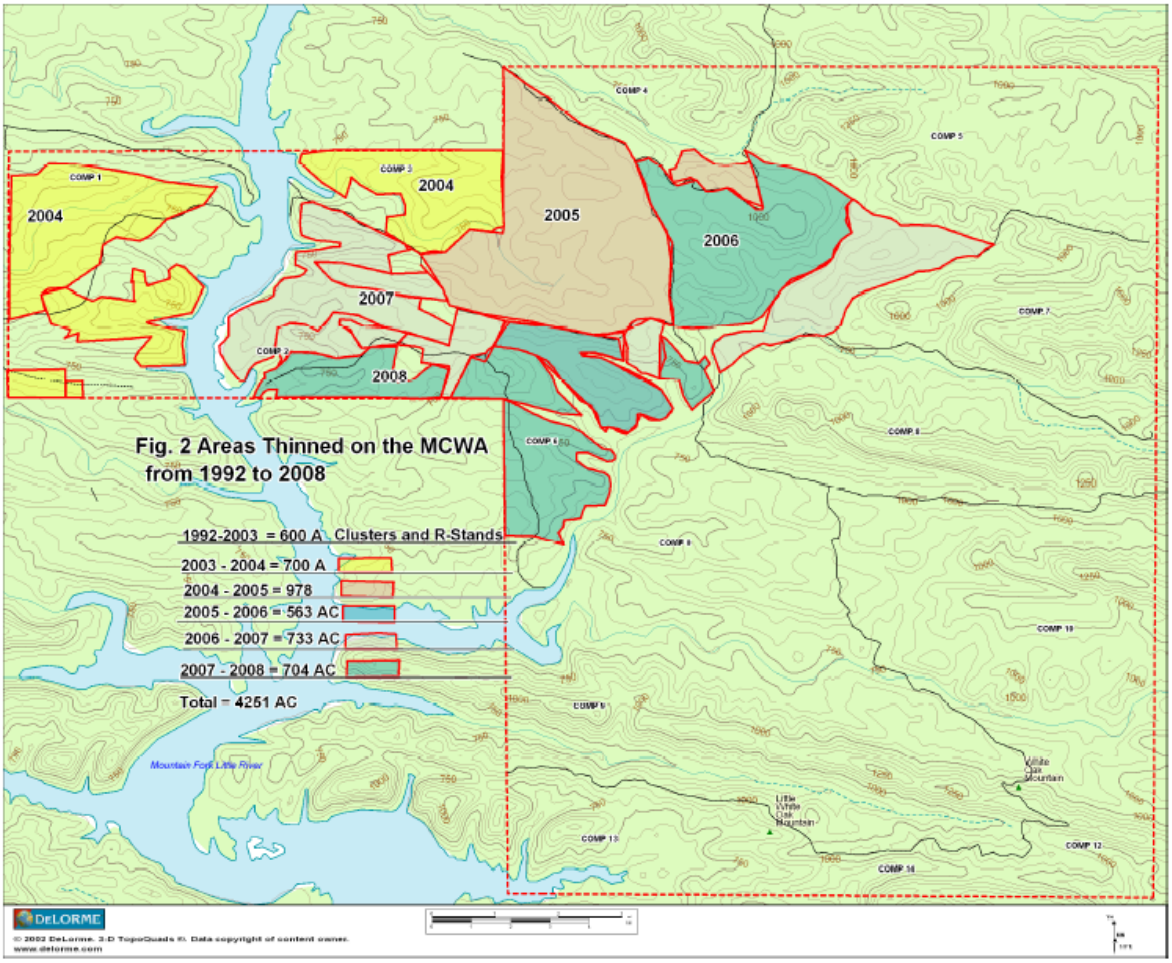

Figure 3. Area Planned for Thinning in 2008-2009