

# **FINAL PERFORMANCE REPORT**



**Federal Aid Grant No. F15AP00185 (E-56-6)**

**Mid-Story Thinning to Enhance Habitat for the Red-cockaded Woodpecker on the McCurtain County Wilderness Area**

**Oklahoma Department of Wildlife Conservation**

**April 1, 2015 through March 31, 2016**

# FINAL PERFORMANCE REPORT

**State:** Oklahoma  
6)

**Grant Number:** F15AP00185 (E-56-

**Grant Program:** Endangered Species Act Section 6

**Grant Title:** Mid-story Thinning to Enhance Habitat for the Red-cockaded Woodpecker on the McCurtain County Wilderness Area

**Grant Period:** April 1, 2015 – March 31, 2016

**Principal Investigator:** John Skeen, Oklahoma Department of Wildlife Conservation

## A. Abstract:

During the period of this grant, April 1, 2015 to March 31, 2016, 323 acres were thinned to restore woodland stand structure and enhance habitat quality for the resident population of federally-endangered Red-cockaded Woodpeckers (*Picoides borealis*) on the McCurtain County Wilderness Area (MCWA). This increases the total area of woodland restoration on the MCWA to 7,701 acres. This work was accomplished with five temporary chain saw operators that were employed by the Oklahoma Department of Wildlife Conservation (ODWC) annually. The remaining areas to which mid-story thinning or re-thinning is required totals approximately 150 acres; future thinning activities will be conducted under a separate, though related ODWC Section 6 grant focused on Red-cockaded Woodpecker recovery.

## B. Objective:

Enhance habitat quality for Red-cockaded Woodpeckers by thinning mid-story vegetation on 525-625 acres of existing pine-oak forest in close proximity to occupied cavity trees and the designated recruitment stands that contain suitable but unoccupied cavity trees.

## C. Background:

The Red-cockaded Woodpecker (RCW) 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 RCW is found in mature shortleaf pine woodlands and savannahs with a grassy understory dominated by bluestem species. Over the past century, the RCW 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 which 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 hardwood vegetation.

In Oklahoma, the last known population of RCWs resides within the state-owned McCurtain County Wilderness Area (MCWA) and adjacent McCurtain Unit of the Ouachita National Forest.

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. After the reintroduction of fire on the area, it became apparent that prescribed burning alone could not effectively alter the structure of the mid-story hardwood vegetation that had established itself; as such, mechanical thinning was enacted to supplement fire as a management tool for ecosystem restoration. Since 1992, selected mid-story hardwood trees have been cut manually to create open, pine woodland corridors linking active RCW clusters and recruitment stands. The creation of corridors, enhancement of foraging habitat, and the other Red-cockaded Woodpecker recovery efforts on the MCWA have been important in stabilizing the population over a number of years. Although most of the initial thinning has been completed, it is anticipated that additional re-thins will periodically be needed to control stump-sprouts and other undesirable vegetation that is not altered by prescribed burns; this will continue to both improve and maintain foraging and nesting habitat conditions for the RCW.

Mid-story thinning and habitat restoration on 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. Aside from the RCW, this management will benefit other rare bird species; examples include Bachman's Sparrow and Brown-headed Nuthatch, both of 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 RCWs in Oklahoma and the western Ouachita Mountains.

#### **D. Procedures:**

- 1) Potential areas for mid-story thinning are delineated based upon their likelihood to support a shortleaf pine/bluestem woodland habitat and their proximity to active RCW clusters, foraging habitats, and recruitment stands.
- 2) Project personnel mark the boundaries for the thinning blocks and subsequently lay out access trails within the blocks.
- 3) Most hardwood trees between 1 and 10 inches dbh are targeted for removal; common species include Oaks (*Quercus* sp.), Hickories (*Carya* sp.), and Sweetgum (*Liquidambar* sp.). Flowering Dogwood (*Cornus florida*), Serviceberry (*Amelanchier arborea*), and Rusty Black Haw (*Viburnum rufidulum*) are not removed due to their benefit as food sources for other wildlife species.
- 4) Heavy slash that may be present is moved a minimum of 3 feet from mature pines to reduce fuel and lower the risk of tree mortality from prescribed burns.
- 5) Previously thinned areas are systematically inspected; portions that may require additional thinning or where significant regrowth has occurred are flagged and re-cut to achieve desired stand characteristics (e.g. tree spacing and open understory).

#### **E. Results and Discussion:**

Thinning work in this segment began in March 31, 2015 and continued until October 31, 2015. The areas chosen for thinning during this segment were approximately 323 acres located on the area's east side within Sections 17, 19, and 20 in T3S R26E (Figures 1 and 2). A total of 2,202 acres have been thinned (Fig 2) on the MCWA since this project began as a section 6 grant in September 2010. Combined with previous thinning efforts initiated in 1992, this has brought the total numbers of acres restored on the MCWA to 7,701. Regrowth and hardwood stump-sprouting had occurred in some portions previously-thinned portions; these areas were located around RCW recruitment clusters and totaled approximately 30 acres. This project was accomplished with 5 temporary chain saw operators employed by the Department. The acreages of the cut areas were adjusted by subtracting what, if any, had been previously treated. This project has contributed to the ongoing efforts to recover the Red-cockaded Woodpecker in Oklahoma; since most of the initial mid-story thinning has been completed, this report concludes the final segment of the mid-story thinning management component as a stand-alone grant. Future thinning activities will now be included within the separate, though related Section 6 grant titled "Red-cockaded Woodpecker Recovery on the McCurtain County Wilderness Area" that has been in place since 1992.

**F. Significant Deviations:**

Actual acres of mid-story thinned were fewer than anticipated for this year of the project, due to a combination of factors including rough topography and density of vegetation.

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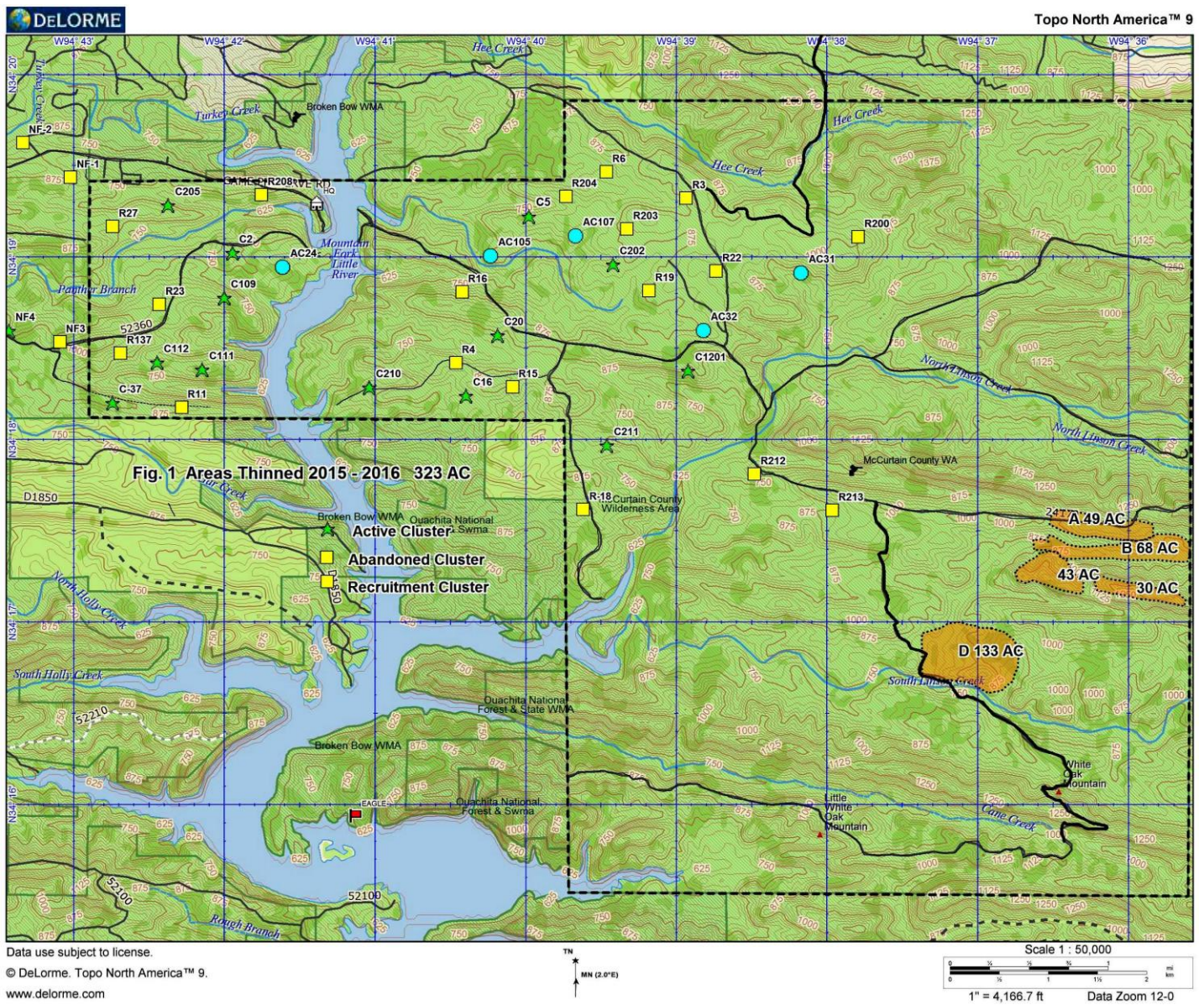
**DATE:** April 26, 2016

**APPROVED BY:** \_\_\_\_\_  
Andrea Crews, Federal Aid Coordinator  
Oklahoma Department of Wildlife Conservation

**APPROVED BY:** \_\_\_\_\_  
Wildlife Division Administration  
Oklahoma Department of Wildlife Conservation



**Figure 1. Portions of the McCurtain County Wilderness Area thinned in 2015 – 2016.**





**Figure 2. Portions of the McCurtain County Wilderness Area thinned since habitat restoration efforts began for the Red-cockaded Woodpecker in 1992.**

