

FINAL PERFORMANCE REPORT



Federal Aid Grant No. F10AP00564 (E-56-4)

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

Oklahoma Department of Wildlife Conservation

September 17, 2010 through March 31, 2014

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State: Oklahoma
(F10AP00564)

Grant Number: E-56-4

Grant Program: Endangered Species Act Traditional Section 6

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

Grant Period: September 17, 2010 - March 31, 2014

Principal Investigator: John Skeen, Wildlife Biologist, Oklahoma Dept. of Wildlife Conservation

ABSTRACT:

During the period of this grant, September 17, 2010 to March 31, 2014, one thousand six hundred and fifty-three (1,653) acres were thinned to restore woodland stand structure and enhance habitat quality for the resident population of Red-cockaded Woodpeckers on the McCurtain County Wilderness Area. This increases the total area of woodland restoration on the McCurtain County Wilderness Area to 7,102 acres. This work was accomplished with three to four temporary chain saw operators that were employed by the Oklahoma Department of Wildlife Conservation annually. Some acres were re-cut during 2012 and 2013 to remove woody understory re-growth (primarily stump sprouts) that the prescribed winter burns did not top kill. The remaining areas to which mid-story thinning is desired is reported and totals 451 acres.

OBJECTIVE:

Enhance habitat quality for Red-cockaded Woodpeckers by thinning mid-story vegetation on 600-900 acres of existing pine-oak woodlands in close proximity to occupied cavity trees and potential recruitment stands that contain suitable but unoccupied cavity trees.

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 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 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 vegetation.

In Oklahoma, the last known population of RCW's resides within the state-owned McCurtain County Wilderness Area (MCWA) and adjacent national forest. Midstory 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 midstory 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 midstory. Since 1992, selected midstory 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 were important in stabilizing the population over a number of years.

Augmentation has also been an important part of the recovery effort with the translocation of five pairs of RCW from the Sam Houston NF in 2009, six pairs in 2010 (1 pair from AR), and five pairs in 2012. One of the RCW's moved in 2012 activated a recruitment stand on the national forest and, along with a RCW moved from Arkansas, successfully nested in 2013. Along with the continuing translocations, additional midstory thinning is needed to improve foraging and nesting habitat conditions and to promote increased woodpecker productivity.

Mid-story thinning and habitat restoration on the McCurtain County Wilderness Area complements the on-going efforts by the Ouachita National Forest to restore approximately 50,000 acres on its adjacent Management Area 22 to a shortleaf pine woodland/savannah habitat condition. This management will benefit locally rare species including the RCW, 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 RCW's in Oklahoma and the western Ouachita Mountains.

PROCEDURES:

Potential areas for midstory thinning were 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. The areas chosen for thinning during the segment from September 2014 to March 2014 were on the area's east side in Sections 15 and 19 T03S, R25E (Fig. 1).

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, that were specified to be left uncut. Any heavy slash was moved at least 3 feet from mature pines to reduce the fuel around these trees during prescribed burns.

Previously thinned areas were systematically inspected and portions that required additional thinning or where significant regrowth was present were flagged and re-cut to achieve the needed stand characteristics e.g. tree spacing and open understory. Regrowth had occurred in some portions because fire intensity in one or more of the previous burning rotations was not sufficient to achieve a total top kill of hardwood sapling.

RESULTS AND DISCUSSION:

Thinning work in the last segment of this grant began in early October of 2013 and continued until March of 2014. During this period, approximately 121 acres (Fig. 1 and 2) were thinned on two locations. During all years of the project, from September of 2010 through March of 2014, 1,653 acres were thinned (Fig 2). This brings the total area treated on the McCurtain County Wilderness Area to 7,102 acres (Fig 2). All of the mid-story thinning/woodland restoration work was accomplished by three to four hourly employees of the Oklahoma Department of Wildlife Conservation that were hired on an annual, temporary basis. The acreages of the cut areas reported here were adjusted by subtracting what, if any, had been previously treated. In addition to the newly-cut area, designated areas, often near active clusters and recruitment stands, received additional thinning to remove mid-story re-growth that prescribed burns had not top killed (Fig. 3). Four areas remain that are suitable for shortleaf pine woodland restoration and we would like to apply selective mid-story thinning to these stands in the subsequent year of this grant. These areas total 451 acres and are adjacent to the areas that were thinned in 2012 and 2013.

SIGNIFICANT DEVIATIONS:

None.

PREPARED BY: John Skeen, Senior Wildlife Biologist

DATE: June 4, 2014

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Wildlife Division Administration
Oklahoma Department of Wildlife Conservation

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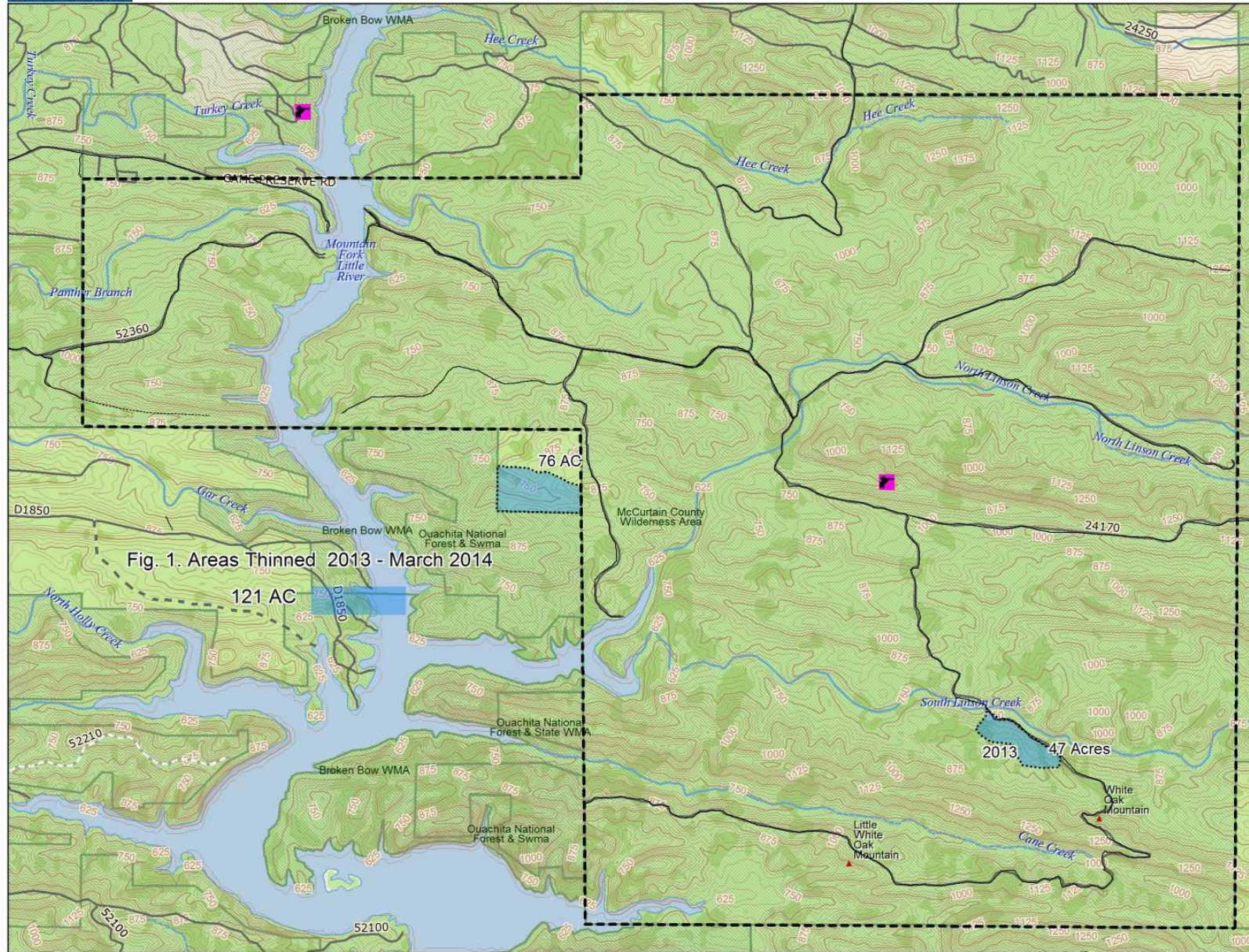
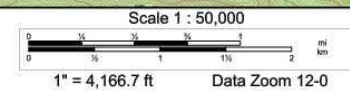


Fig. 1. Areas Thinned 2013 - March 2014

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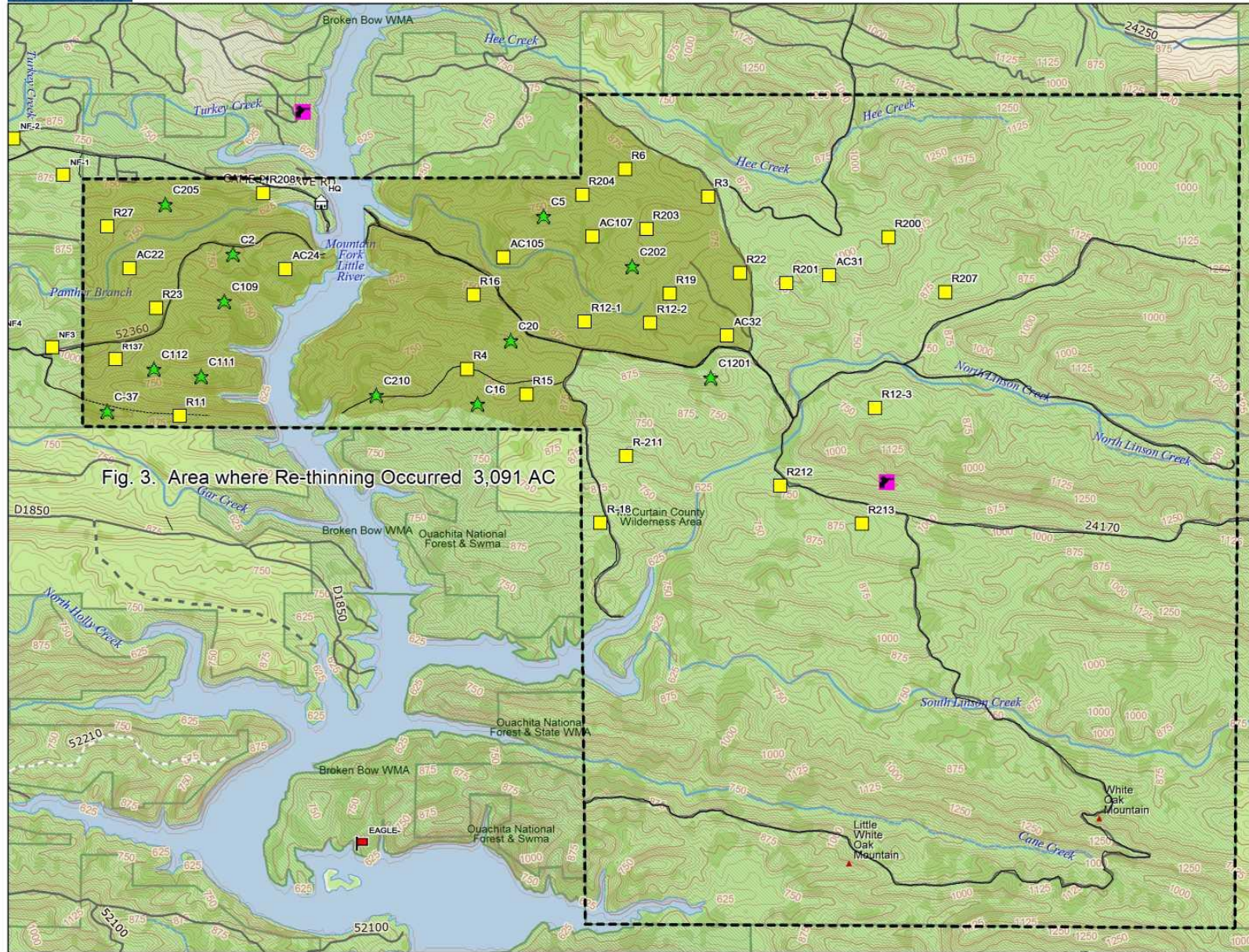


Fig. 3. Area where Re-thinning Occurred 3,091 AC

