

FINAL PERFORMANCE REPORT



FEDERAL AID GRANT NO. F10AP00552 (E-21-17)

**RED-COCKADED WOODPECKER (*PICOIDES BOREALIS*)
RECOVERY ON THE MCCURTAIN COUNTY WILDERNESS AREA**

OKLAHOMA DEPARTMENT OF WILDLIFE CONSERVATION

August 2, 2010 through March 31, 2013

FINAL PERFORMANCE REPORT

State: Oklahoma

Grant Number: F10AP00552 (E-21-17)

Grant Program: Endangered Species Act Section 6

Grant Title: Red-cockaded woodpecker (RCW) (*Picoides borealis*) recovery on the McCurtain County Wilderness Area (MCWA)

Reporting Period: August 2, 2010 – March 31, 2013

Principle Investigator: John Skeen, Oklahoma Department of Wildlife Conservation

A. Abstract:

Recovery efforts were conducted for the Red-cockaded Woodpecker (RCW) population on the McCurtain County Wilderness Area (MCWA) in accordance with the 1991 MCWA Management Plan and the Red-cockaded Woodpecker Recovery Plan. Between 2010 and 2012, the number of active clusters occupied by Red-cockaded Woodpeckers increased from 14 to 15 and the number of potential breeding groups increased from 12 in the 2010 nesting season to 14 in the 2012 nesting season. Active clusters were monitored at an interval of approximately 8 weeks throughout the year and more frequently during the nesting season. During the three nesting seasons from 2010 through 2012, 29 nesting attempts were documented. These included four re-nesting attempts after initial nests had failed. Twenty-two nests successfully fledged at least one chick and a minimum of 35 chicks were fledged (13 males, 19 females and three of undetermined sex). From these fledglings, 11 (5 males and 6 females) were recaptured and color-banded in the fall after they fledged. A male fledgling that was hatched in 2010, was recaptured for the first time and color-banded one year later in 2011.

Prescribed burns were conducted during the late winter to maintain suitable habitat for Red-cockaded Woodpeckers. At all active clusters, predator guards were installed and maintained on cavity trees and restrictor plates were installed and maintained on all natural cavities. Thirty to 31 recruitment stands were available each year for dispersing RCWs. Each of these stands was located within one mile of at least one active cluster. To augment the population, ten pairs of juvenile Red-cockaded Woodpeckers were translocated from the Sam Houston National Forest and one pair of juvenile RCWs was translocated from the Ouachita National Forest in Arkansas. These translocations occurred in October of 2010 and October of 2012.

B. Background:

In Oklahoma, the last known population of Red-cockaded Woodpeckers (RCWs) resides within the state-owned McCurtain County Wilderness Area (MCWA). The narrow range of 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 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 midstory vegetation. The population on the MCWA declined from approximately 28 clusters in 1977 to 9 in 1990. Since 1992, we have been implementing a management plan to recover the Red-cockaded Woodpecker population on the area and the surrounding portions of the Broken Bow Unit of the Ouachita National Forest.

C. Objective:

Recover the Red-cockaded Woodpecker population on the McCurtain County Wilderness Area to 45 active clusters by implementing the procedures outlined in the 1991 McCurtain County Wilderness Area Implementation Plan.

D. Procedures:

Monitoring

New cavity trees, when located, will be tagged and mapped. The status of cavity trees and clusters will be determined, especially during the nesting period. Adult RCW's and nestlings will be banded to obtain data on production changes, dispersal, and mortality and to aid in identification of single bird clusters that would benefit from augmentation.

Cluster Stand Management

The density of hardwood midstory and understory trees will be reduced within a 10-acre block surrounding each active cluster. Hardwood midstory trees within each cluster stand will be controlled by an initial cutting followed by regular prescribed fire (controlled burns will be done under a separate grant funded through the Wildlife Restoration Act program).

Recruitment Stand Management

Recruitment clusters will be developed and maintained in portions of the Wilderness Area within 1/4 mile and one mile of active clusters. Each recruitment stand will be provisioned with at least three artificial cavity inserts and the habitat within and surrounding the stand will be as similar as possible to the habitat found at the active clusters.

Corridors

Where needed and feasible, corridors will be developed and maintained between clusters and recruitment stands.

Restrictors and Predator Guards

Restrictors will be placed on Red-cockaded Woodpecker cavities to prevent enlargement by other woodpeckers and to rehabilitate previously enlarged cavities. Predator guards will be installed on all active cavity trees. Flying squirrels and other nest competitors will be removed from nest cavities when they are discovered.

Artificial Cavities

Cavity inserts will be installed in active cluster stands to provide at least five usable cavities at each site. At least three inserts will be installed at each recruitment site and two or three additional inserts will be added when a site is activated by RCWs.

Augmentation

Single bird clusters will be identified and Red-cockaded Woodpeckers may be translocated from donor populations to complete pairs at those clusters if birds are available and the transfer is approved. Juvenile pairs also may be translocated to the MCWA when population conditions (such as population declines) warrant and when the RCW's are available to move from donor populations.

E. Results and Discussion:

Monitoring

Fifteen clusters, not including the newly activated recruitment cluster on the adjacent Ouachita National Forest, were active during the 2012-2013 reporting period (Table 1 and Fig. 1). This is an increase of one cluster over the number that was active in the previous year. Cluster 37, which had been managed as a recruitment cluster, was activated during the reporting period (Table 2). The mean number of active trees per cluster was 2.2. Cavities at active clusters were checked at intervals of approximately 8 weeks throughout the year and cleaned and repaired as needed. Nineteen of the 31 natural cavities at active clusters were active, while only 14 of the 71 inserts were used (Table 1). During the year, three natural cavity trees died of unknown causes, one each at clusters 105, 111 and 112, and two cavity trees died from lightning strikes, one each at clusters 5 and 37.

During the 2010-2011 and 2011-2012 grant segments, fourteen clusters were active. During the annual late-winter census of active cavities, at least 38 cavities were active in 2011 and 39 were active in 2013. Woodpeckers occupied both natural cavities and artificial cavity inserts. In 2011, 23 out of 32 natural cavities were occupied as were 15 out of 72 available artificial cavities. In 2012, 23 out of 32 natural cavities were occupied and 16 out of 72 artificial cavities were occupied.

During the 2012 nesting season, 10 nesting attempts at 8 clusters resulted in 32 eggs of which 16 hatched (Table 3). These ten nesting attempts included two renestings - one each at clusters 16 and 109. No nesting activity was detected at clusters 20, 24, 31 or 105. Seven of 10 nesting attempts were successful and 12 young were fledged (Table 3). Fall trapping resulted in the recapture of two juvenile females (Table 4).

During the 2010 nesting season, seven nesting attempts were documented at seven clusters. Six of these nests were successful and fledged at least 10, but possibly 12, birds – 3 males, 4 females and 3-5 birds of undetermined sex. Of these birds, four males were recaptured and color-banded as juveniles in the fall. During the 2011 nesting season, 11 nesting attempts were made, including two renestings at clusters where the initial nesting attempt was unsuccessful. Nine nesting attempts were

successful and these produced at least 13 fledglings – 6 males and 7 females. Of these 13 birds, one male and four females were recaptured and color-banded as juveniles in the fall.

Cluster Stand Management

On the area's east side, a dormant-season prescribed fire was used to burn compartments 4 and 5 (2,550 acres on the MCWA and 1,299 acres on the Ouachita National Forest). On the west side, compartment 1 (1,249 acres on the MCWA and 2,611 acres on the ONF) was burned by a dormant-season prescribed fire (Figure 1). No cavity trees were lost or damaged in these burns. In 2012 no southern pine beetle spots were observed on the area and no beetle activity was seen throughout the region. Cooperative monitoring of the southern pine beetles with the Oklahoma Division of Forestry will continue.

Dormant-season prescribed fires were used to burn compartments totaling 4,126 acres in 2011 and 4,198 acres in 2012. No cavity trees were lost during these prescribed burns and no cavity trees were lost at any of the active clusters during either year. No southern pine beetle activity was observed on the MCWA in 2011 and 2012 and only a small amount of regional activity was detected in 2011.

Recruitment Stand Management

Thirty recruitment clusters and abandoned stands, each provisioned with three or more cavity inserts, are available on the area (Figure 2). Three new recruitment clusters within thinned areas were established and provisioned with four inserts. Thirty-one recruitment stands were available to dispersing birds in both the 2010-2011 and the 2011-2012 project years.

Corridors

No additional corridors were developed to connect clusters and recruitment stands during the entire grant period. However, mid-story vegetation removal and thinning was conducted annually in areas containing foraging habitat, clusters, and recruitment stands through another ESA Section 6 grant (E-56/F10AP00564).

Restrictors and Predator Guards

All usable natural cavities at active and inactive clusters have been restricted, and all active cavity trees have been fitted with a 3-foot or 5-foot section of aluminum flashing as a predator guard. When a cavity tree at a recruitment stand or inactive cluster showed Red-cockaded Woodpecker activity, a predator guard was installed. During the reporting period, restrictor plates were installed on three new cavities, one at cluster 39 and two at cluster 111. In the two previous grant segments, restrictor plates were placed around a total of four new cavities.

Artificial Cavities

During the period, three unserviceable inserts were replaced - one each at clusters 202, 20 and 37. Two cavity inserts were added - one at cluster 37 and one at cluster 20. At six of the existing recruitment clusters, inserts were added or replaced to provide at least four cavities, two of which were new. This was done because there is evidence that new inserts are more likely to be activated than older ones (personal communication August 2012 at the Western Zone RCW Augmentation Meeting).

During the two previous grant segments, nine cavity inserts were removed and replaced at active clusters and two new inserts were installed (one at cluster 24 and one at cluster 107). Two cavity inserts were installed at one recruitment stand in 2011 to replace two inserts that were lost when their tree was felled by high winds.

Augmentation

In October 2012, five pairs of juvenile Red-cockaded Woodpeckers were trapped by U.S. Forest Service personnel at the Sam Houston National Forest and transported to four recruitment stands on the McCurtain County Wilderness Area and one recruitment stand on the adjacent Broken Bow Unit of the Ouachita National Forest. All birds left their cavities at dawn following their release and appeared to forage normally in the area surrounding their release sites. The locations of these released birds have not been determined yet except for the male bird that was released at the ONF site.

In October 2010, U.S. Forest Service personnel trapped five pairs of juvenile Red-cockaded Woodpeckers on the Sam Houston National Forest in Texas and one pair of juvenile birds on the Ouachita National Forest in Arkansas. These birds were transported to and released at six recruitment stands on the MCWA. Two of these birds, a male from Arkansas and a female from Texas were confirmed at active clusters in 2011. The male bird also was confirmed at a cluster in 2012. No translocations of Red-cockaded Woodpeckers were performed in 2011.

F. Significant Deviations:

None

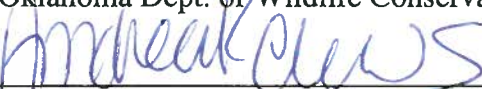
Date: May 10, 2013

Approved by:



Wildlife Division Administrator
Oklahoma Dept. of Wildlife Conservation

Approved by:



Andrea Crews, Federal Aid Coordinator
Oklahoma Department of Wildlife Conservation

Table 1. NUMBER AND STATUS OF CAVITIES AT ACTIVE CLUSTERS ON MARCH 1, 2013

CLUSTER	NATURAL CAVITIES		INSERTS		TOTAL CAVITIES
	NC	NA	NI	NA	AVAILABLE
2	1	1	5	2	6
5	2	1	4	0	6
16	2	1	5	1	7
20	0	0	5	1	5
24	0	0	5	2	5
31	2	1	5	0	7
37	1	1	4	2	5
105	3	1	3	0	6
107	2	1	6	0	6
109	3	2	5	0	8
111	7	2	4	0	11
112	2	2	4	1	9
202	4	2	5	0	9
205	1	1	5	3	6
1201	1	1	6	2	7
TOTAL	31	19	71	14	102

NC = Number of Cavities
 NI = Number of Inserts
 NA = Number of Active Cavities

TABLE 2. AVAILABLE DATE AND STATUS OF RECRUITMENT CLUSTERS

Stand Type	Stand Number	Year Available
R	3	1993
R	4	1993
R	6	1993
R	10	1993
R	11	1993
R	15	1993
R	16	1996
R	18	1996
R	19	1996
AC	21	1996
R	22	1998
R	23	1998
R	25	2003
R	26	2003
R	27	1998
AC	32	2009
AC	137	1992
R	200	2005
R	201	2005
R	203	2005
R	204	2005
R	206	2006
R	207	2006
R	210	2007
R	211	2007
R	212	2009
R	213	2009
R	1201	2012
R	1202	2012
R	1203	2012

Number Stands Available = 30

Stand Types: R=Recruitment AC=Abandoned Cluster

TABLE 3. NESTING RESULTS FOR MCWA IN 2012

CLUSTER	INITIATION DATE	NUMBER EGGS LAID	NUMBER HATCHED	NUMBER BANDED	NUMBER IN NEST	NESTLINGS FLEDGED	Total Fledged	JUVENILES BANDED
2	16-Apr	3		3	3	3F	3	0
5		0	0	0	0	0	0	0
16	24-Apr	3	3	0	0	0		0
16 Renest	29-May	3	2	1	1	1M	1	0
20		0	0	0	0	0	0	0
24		0	0	0	0	0	0	2*
31		0	0	0	0	0	0	0
105		0	0	0	0	0	0	0
107	6-May	4		2	2	1M	1	0
109	30-April	3	0	0	0	0	0	0
109 Renest	25-May	3	0	0	0	0	0	0
111	10-May	3		2	2	2F	2	0
112	23-April	4		3	3	1M, 1F	2	0
202		0	0	0	0	0	0	0
205	23-April	3				2F	2	0
1201	24-April	3		2	2	1M	1	
TOTAL		32	5+	15	15	4M, 8F	12	2

Footnotes

Nesting Attempts = 10 (2 renests)

Potential Breeding Groups = 14

Number of Successful Nests = 7

█ = Nest Loss

* 2 F banded as nestlings at cluster 2 were banded as juveniles at cluster 24

TABLE 4. ADULT AND JUVENILE RCW'S TRAPPED ON THE MCWA IN 2012

CLUSTER TRAPPED	BAND NUMBER	BAND COLORS		SEX	AGE WHEN TRAPPED	SITE FIRST BANDED	RECRUITMENT YEAR	*PREVIOUS OBSERVATIONS
		LEFT	RIGHT					
2	2301-02813	PA	LgDb	F	A	C205	2009x	2/10, 2/12
2	2301-89401	DbDg	OA	M	A	TX	2009	2/10, 2/11
16	2301-02829	WPu	YA	M	A	16	2010x	
16	2301-02843	BIA	PW	F	A	16	2011	16/11
16	2301-02854			N			2012	
16	2301-02855			N			2012	
16	2301-02862			N			2012	
20	2301-02864	OA	DgPu	F	A	20	2012x	NBAC**
24	2301-02823	W	YAl	M	A	2	2010	24/11
24	2301-02846	OA	DgDg	F	J	2	2012	
24	2301-02848	OA	DgP	F	J	2	2012	
37	2301-02836	OA	DgW	F	A	205	2011	205/11
105	2301-02845	BIA	PP	F	A	20	2011	20/11
105	2301-02825	WW	PA	M	A	111	2010	105/11
107	2301-02860			N			2012	
107	2301-02861			N			2012	
107	2301-02865	WPu	PuA	M	A	107	2012x	NBAC
109	2301-02863	OA	DgY	F	A	109	2012x	NBAC
111	2301-02840	WY	PuA	M	A	111	2011	111/11
111	2301-02858			N			2012	
111	2301-02859			N			2012	
111	8081-99894	LgP	PA	M	A	C111	2002	111/10,111/11
112	2301-02818	PA	LgY	F	A	105	2009	112/10,112/11
112	2301-02824	WY	PA	M	A	111	2010	112/10,112/11
112	2301-02834	WW	PuA	M	A	112	2011	112/11
112	2301-02849			N			2012	
112	2301-02850			N			2012	
112	2301-02851			N			2012	
205	2301-02852			N			2012	
205	2301-02853			N			2012	
205	2301-89437	LgA	DbY	F	A	TX	2009	205/11
1201	2301-02821	PA	PuW	F	A	C205	2009	1201/10 & 11
1201	2301-02856			N			2012	
1201	2301-02857			N			2012	
1201	2301-18297	LgA	DgPu	M	A	AR	2010	20/11

* Cluster/ Year

** NBAC = No Bands At Capture

x= Unknown Recruitment Year

TABLE 5. RED-COCKADED WOODPECKERS TRANSLOCATED TO MCWA AND OUACHITA NATIONAL FOREST IN 2012

BAND #	LEFT	RIGHT	SEX	REC YEAR	REL YEAR	REL DATE	SITE OF ORIGIN*
2531-60180	LbA	DgLp	F	2012	AC 32	10/19/2012	51-11
2531-60187	LbA	LbLg	M	2012	AC 32	10/19/2012	45-2
2531-59957	LbA	LbLb	F	2012	R212	10/19/2012	31-4
2531-60153	LbA	DgO	M	2012	R212	10/19/2012	45-1
2531-59977	LgPu	YA	F	2012	R1203	10/19/2012	30-2
2531-59939	WM	OA	M	2012	R1203	10/19/2012	7-4
2531-59938	DpLp	OA	F	2012	NF4	10/19/2012	7-4
2531-59976	YB	YA	M	2012	NF4	10/19/2012	30-2
2531-60132	LbA	WM	F	2012	R23	10/19/2012	3-5
2531-59907	ODp	YA	M	2012	R23	10/19/2012	15-1

REC = Recruitment

REL = Release

* = Site Number on the Sam Houston or Ouachita National Forest

