

FINAL PERFORMANCE REPORT



Federal Aid Grant No. F12AP01129 (E-21-18)

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

Oklahoma Department of Wildlife Conservation

September 1, 2012 – March 31, 2014

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State: Oklahoma

Grant Number: F12AP01129 (E-21-18)

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: September 1, 2012 – March 31, 2014

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 2012 and 2014, the number of active clusters occupied by Red-cockaded Woodpeckers decreased from 15 to 13 and the number of potential breeding groups decreased from 14 in the 2012 nesting season to 12 in the 2013 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 2013 nesting season, ten nesting attempts were documented of which six successfully fledged one or two chicks. Eleven chicks successfully fledged (six males and five females). From these fledglings, two were recaptured and color-banded in the fall after they fledged.

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:

Monitor all active clusters that support Red-cockaded Woodpeckers on the McCurtain County Wilderness Area (currently 13-15 active clusters) and maintain suitable recruitment stands to provide new roosting and nesting sites for dispersing woodpeckers. Active clusters will be monitored approximately bi-weekly during the nesting season and bi-monthly outside of the nesting season.

D. Procedures:

Monitoring

New cavity trees, when located, were tagged and mapped. The status of cavity trees and clusters was determined at least twice annually, including immediately prior to the nesting period. Adult RCW's and nestlings were 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 was reduced as needed within a 10-acre block surrounding each active cluster. Hardwood midstory trees within each cluster stand were controlled by an initial cutting followed by regular prescribed fire (prescribed burns were conducted under a separate grant funded through the Wildlife Restoration Act program).

Recruitment Stand Management

Recruitment clusters were developed and maintained in portions of the Wilderness Area within 1/4 mile and one mile of active clusters, and each recruitment stand was provisioned with at least three artificial cavity inserts. Recruitment stand locations were chosen that in areas where the habitat within and surrounding each recruitment stand is as similar as possible to the habitat found at the active clusters.

Corridors

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

Restrictors and Predator Guards

Restrictor plates were placed on Red-cockaded Woodpecker cavities to prevent enlargement by other woodpeckers and to rehabilitate previously enlarged cavities. Predator guards were installed and maintained on all active cavity trees. Flying squirrels and other nest competitors were removed from nest cavities as they were discovered during bi-monthly cavity checks.

Artificial Cavities

Cavity inserts were installed in active cluster stands to provide at least five usable cavities at each site. At least three inserts were 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 were 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. Translocations may prove more difficult in the future because two potential donor populations on National Forests in Arkansas and Texas are no longer banding nestlings and monitoring cluster composition, which are required to identify juveniles for translocating to recipient populations.

E. Results and Discussion:

Monitoring

Fifteen clusters, not including the recently activated recruitment cluster adjacent to the McCurtain County Wilderness Area on the Broken Bow Unit of the Ouachita National Forest, were active during the 2012-2014 reporting period (Table 1 and Table 2).

During the 2013 nesting season (Table 4), 10 nesting attempts at 10 clusters resulted in 33 eggs of which 20 hatched. No nesting activity was detected at clusters 20, 24, 31, 105, 107 or 202. This was the second year during which there was no nesting activity at four of these clusters – 20, 24, 31 and 105. Cavity monitoring in the months prior to the 2013 nesting season suggests that clusters 20, 31, 105 and 107 may have been occupied by single birds. Nest losses occurred at clusters 5, 37, 109 and 1201. There were no renesting attempts made at any of these clusters and we were unable to determine the cause for these nest failures. Six nesting attempts were successful and 11 young, six males and five females, were fledged (Table 4). Fall trapping resulted in the recapture of two juveniles - one juvenile at cluster 205 and one at cluster NF 5.

Cluster Stand Management

Two fewer clusters were active March 1, 2014 than at the same date in 2013 (Tables 1 and 2 and Figures 1 and 2). The loss of one cluster (cluster 105) is likely due to cavity tree damage from the December, 2013 ice storm. The mean number of active trees per cluster was 2.1 in 2013 and 2.4 in 2014. Cavities at active clusters were checked at intervals of approximately 8 weeks throughout the year and cleaned and repaired as needed. In 2013, 19 of the 31 natural cavities at active clusters were active, while only 15 of the 74 inserts were used (Table 1). This compares to 21 of the 33 natural cavities and 13 of the 66 inserts used in 2014 (Table 2).

During the period ending in 2013, three natural cavity trees died, one each at clusters 105, 111 and 112, from unknown causes and one tree died at cluster 5 and at cluster 37 from lightening. During the period ending in 2014, two natural cavity trees died from unknown causes, one each at clusters 109 and 112. Three others were destroyed by the December 2013 ice storm at clusters 109, 112, and 105.

Prescribed burns were conducted in 2013 and 2014 on the McCurtain County Wilderness Area. The costs associated with each burn were paid through other grants, but the burns are described in this report because they are relevant to the habitat management efforts for the Red-cockaded Woodpecker population. On the east side of Broken Bow Reservoir, Compartments 4 and 5, which comprise 2,550 acres on the MCWA and 1,299 acres on the Ouachita National Forest, were prescribed-burned on March 14, 2013. On the west side, Compartment 1, with 1,299 acres on the MCWA and 2,611 acres on the National Forest, was prescribed burned on March 26, 2013 (Fig. 1). No cavity trees were lost or damaged in these burns. Also on the east side, Compartments 2, 3, and 4 were prescribed-burned on March 13, 2014. This burn included 3,117 acres on the MCWA and 1,004 acres on the National Forest (Fig. 2). One cavity tree at cluster 105, which had a broken crown due to the December 2013 ice storm, was damaged in the burn. In 2013 and 2014, no 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.

Recruitment Stand Management

Thirty recruitment clusters were maintained in 2014 (Table 3).

Corridors

No additional corridors, to connect clusters and recruitment stands, were developed during this grant period. However, thinning in areas containing foraging habitat, clusters, and recruitment stands continued through the E-56 grant.

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 2-foot or 3-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 2013 period, three new cavities were restricted - one at cluster 107 and two at cluster 111. During the 2014 period, one new cavity was restricted at cluster 2.

Artificial Cavities

During the 2012 to 2013 period, three unserviceable inserts were replaced at active clusters, one each at clusters 20, 37 and 202. No inserts were added or replaced in the period ending in 2014.

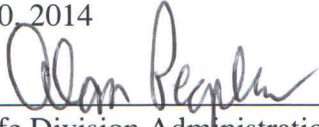
Augmentation


On October 18 2012, 5 pairs of juvenile Red-cockaded Woodpeckers were trapped at the Sam Houston NF and transported to four recruitment clusters on the MCWA and one recruitment stand on the Ouachita National Forest (Table 6). The male released on the NF site remained there, and a female was trapped on March 12, 2013 from the Ouachita NF population in Arkansas and released at this site. This pair nested successfully in 2013.

F. Significant Deviations: None

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Date: June 10, 2014

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Wildlife Division Administration
Oklahoma Department of Wildlife Conservation

Approved by: 
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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 AVAILABLE
	NC	NA	NI	NA	
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	8
109	3	2	5	0	8
111	7	2	4	0	11
112	2	4	4	1	6
202	4	2	5	0	9
205	1	1	5	3	6
1201	1	1	6	2	7
NF5	0	0	3	1	3
TOTAL	31	19	74	15	105

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

**TABLE 2. NUMBER AND STATUS OF CAVITIES AT ACTIVE CLUSTERS
ON MARCH 1, 2014**

CLUSTER	NATURAL CAVITIES		INSERTS		TOTAL CAVITIES AVAILABLE
	NC	NA	NI	NA	
2	3	3	5	0	8
5	2	1	4	0	6
16	3	2	5	1	8
20	1	1	5	1	6
37	2	2	4	1	6
107	4	2	6	0	10
109	1	1	5	0	6
111	8	3	4	0	12
112	2	2	4	1	6
202	4	2	5	0	9
205	2	1	5	3	7
210	0	0	3	1	3
1201	1	1	6	2	7
NF1	0	0	5	3	5
TOTAL	33	21	66	13	99

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

Table 3. Recruitment Clusters March 2014

Stand Type	Stand Number	Year Available
AC	24	2013
AC	25	2003
AC	31	2013
AC	32	2009
AC	105	2013
AC	137	92
R	3	93
R	4	93
R	6	93
R	11	93
R	15	93
R	16	96
R	18	96
R	19	96
R	22	98
R	23	98
R	26	2003
R	27	98
R	200	2005
R	201	2005
R	203	2005
R	204	2005
R	206	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 4. NESTING RESULTS FOR MCWA IN 2013

C L U S T E R	I N I T I A T I O N D A T E	N U M B E R E G G S L A I D	N U M B E R H A T C H E D	N U M B E R B A N D E D	N U M B E R I N N E S T	N E S T L I N G S F L E D G E D	T o t a l F l e d g e d	J U V E N I L E S B A N D E D
2	18-May	4	3	3	3	2M	2	0
5	14-May	1	1	0	1			
16	03-May	4	3	2	2	1M 1F	2	0
20	NNA							
24	NNA							
31	NNA							
37	17-May	3	0					
105	NNA							
107	NNA							
109	05-May	3	3	2	2			
111	07-May	3	2	2	2	1M 1F	2	0
112	13-May	4	3	1	2	1M 1F	2	0
202	NNA							
205	08-May	4	3	3	3	1F	1	1
1201	06-Jun	5						
NF 5	27-May	2	2	2	2	1M 1F	2	1
Totals		33	20	15	17	6M 5F	11	2

Footnotes:

Nesting Attempts = 10

Potential Breeding Groups = 14

Number of Successful Nests = 6

= Nest Loss at 4 Clusters

NNA = No Nesting Activity

TABLE 6. RCW'S TRANSLOCATED TO MCWA And Ouachita National Forest IN 2012 And 2013

B a n d #	L e f t	R i g h t	S e x	R e c Y e a r	R e l S i t e	R e l D a t e	* O r i g i n S i t e
2531-60180	LbA	DgLp	F	12	AC32	10/19/12	51-11
2531-60187	LbA	LbLg	M	12	AC32	10/19/12	45-2
2531-59957	LbA	LbLB	F	12	R212	10/19/12	31-4
2531-60153	LbA	DgO	M	12	R212	10/19/12	45-1
2531-59977	LgPu	Ya	F	12	R1203	10/19/12	30-2
2531-59939	WM	OA	M	12	R1203	10/19/12	7-4
2531-59938	DpLp	OA	F	12	NF4	10/19/12	7-4
2531-59976	YB	YA	M	12	NF4	10/19/12	30-2
2531-60132	LbA	WM	F	12	R23	10/19/12	3-5
2531-59907	ODp	YA	M	12	R23	10/19/12	15-1
2411-25672	BIY	LbA	F	12	NF4	03/13/13	ONF 12

Rec= Recruitment, Rel= Release, Obs= Observation

*= Site number on the Sam Houston or Ouachita NF

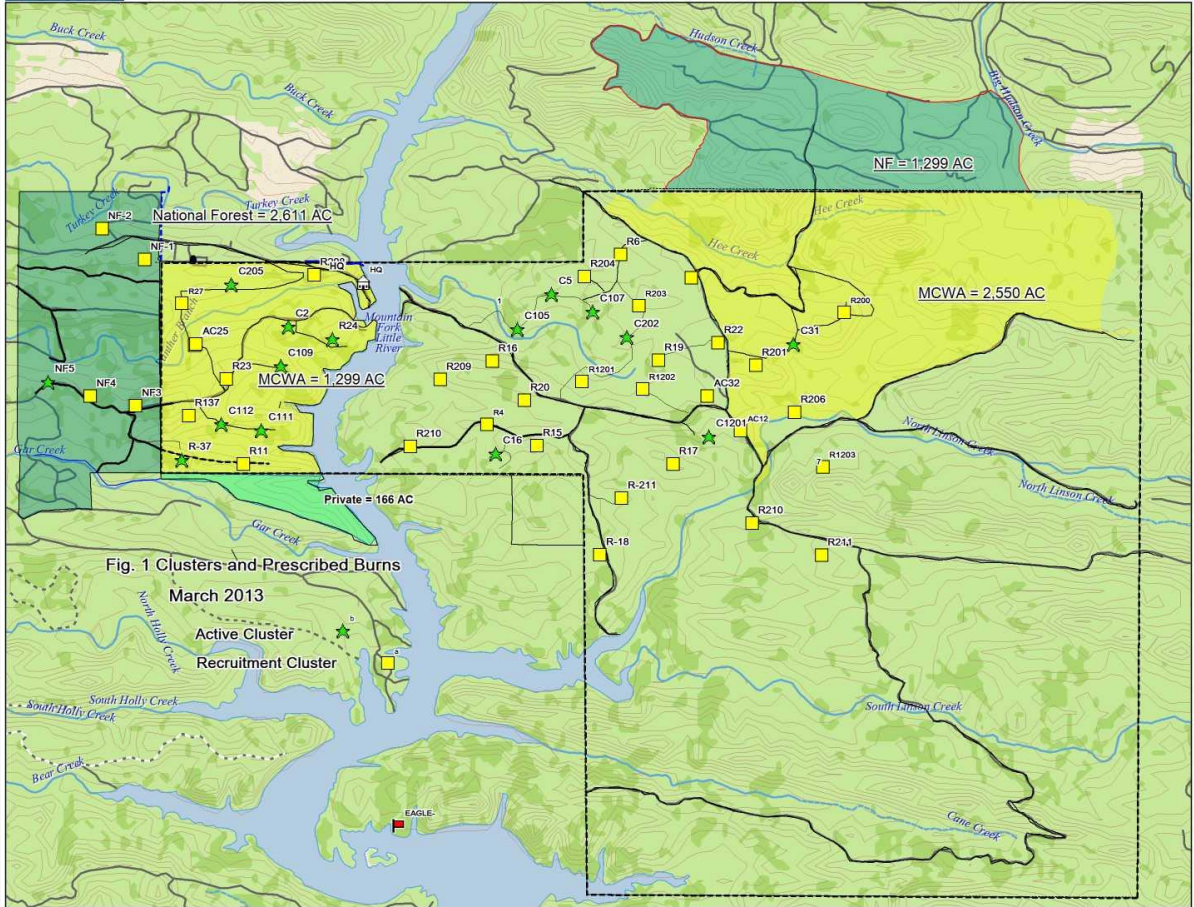
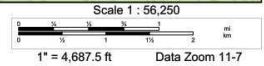


Fig. 1 Clusters and Prescribed Burns
March 2013

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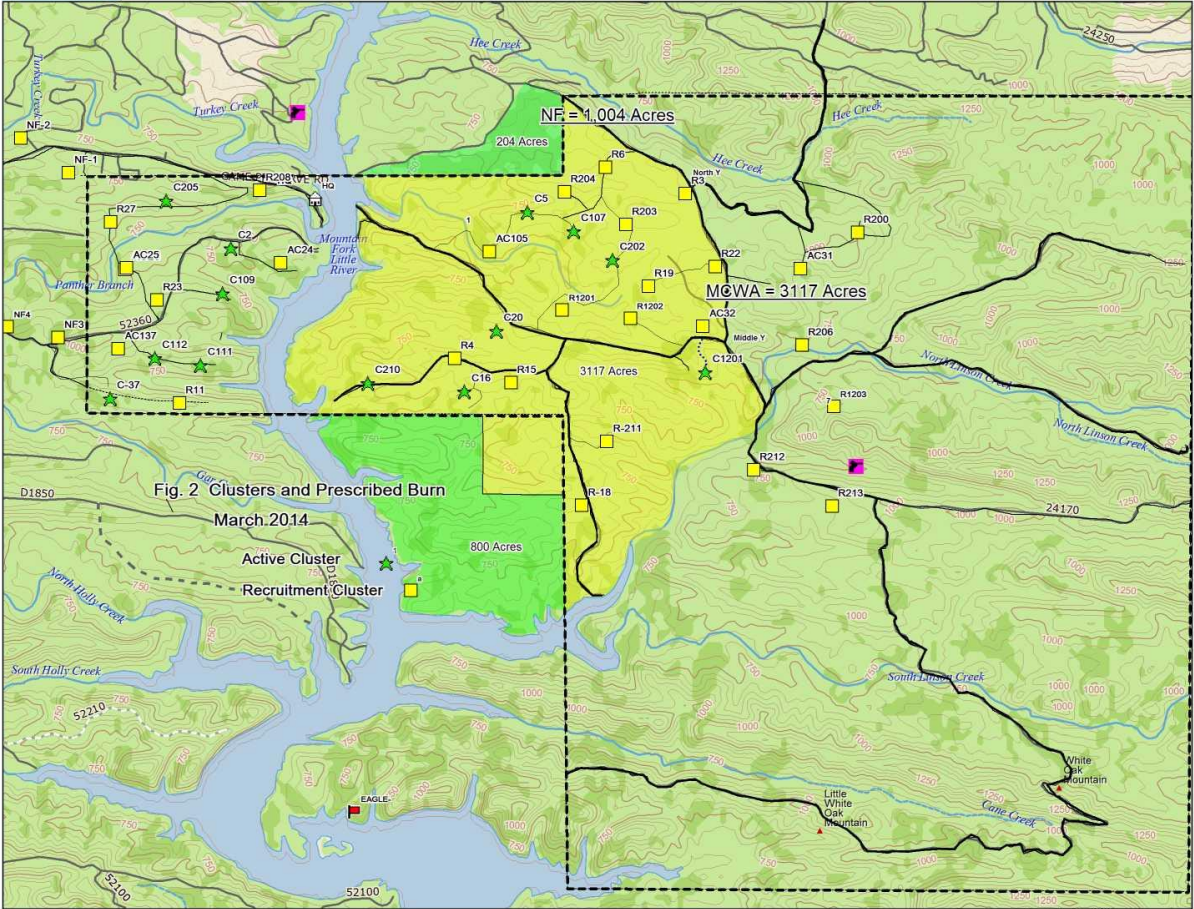


Fig. 2 Clusters and Prescribed Burn
March 2014

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TN
MN (2.2E)

Scale 1 : 50,000
0 1 2 3 4 5 6 7 8 9 10
mi
1" = 4,166.7 ft Data Zoom 12-0