

# **FINAL PERFORMANCE REPORT**



**Federal Aid Grant No. F13AP00780 (E-21-19)**

**Red-cockaded Woodpecker Recovery  
on the McCurtain County Wilderness Area**

**Oklahoma Department of Wildlife Conservation**

**April 1, 2014 – March 30, 2015**

## FINAL PERFORMANCE REPORT

**State:** Oklahoma

**Grant Number:** F13AP00780 (E-21-19)

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

**Grant Title:** Red-cockaded Woodpecker Recovery on the McCurtain County Wilderness Area

**Reporting Period:** April 1, 2014 – March 30, 2015

**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 2014 and 2015, the number of active clusters occupied by Red-cockaded Woodpeckers on the MCWA remained stable at 13, with the number of potential breeding groups remaining at 12 during the nesting season; the adjacent Ouachita National Forest land contains two additional active clusters.

Active clusters were monitored at an interval of approximately 8 weeks throughout the year and more frequently during the nesting season. During the 2014 nesting season, thirteen nesting attempts were documented of which two were re-nests. Nineteen chicks successfully fledged (eight males, six females, and five unknown). From these fledglings, six were recaptured and color-banded in the fall after they fledged; in addition, five adults were captured during fall that had been moved in previous years from Texas and Arkansas.

### **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:**

To implement the Red-cockaded Woodpecker management procedures in the 1991 McCurtain County Wilderness Area Implementation Plan to ultimately recover the Area's Red-cockaded

Woodpecker population to 45 active clusters.

#### **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 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 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 RCW's.

##### 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

Thirteen clusters, not including two recruitment clusters adjacent to the McCurtain County Wilderness Area on the Broken Bow Unit of the Ouachita National Forest, were active during the 2014-2015 reporting period (Table 1 and Table 2). One of the recruitment clusters on the National Forest Unit first became active during this reporting period, bringing the combined total number of active clusters to fifteen.

During the 2014 nesting season (Table 3), 13 nesting attempts at 11 clusters resulted in 46 eggs, of which 28 hatched. No nesting activity was detected at cluster 109. Nest losses occurred at clusters 20, 37, 111 and 1201. Clusters 37 and 111 both renested and successfully fledged four chicks (2 at each cluster). We were unable to determine the cause for these nest failures.

Thirteen nesting attempts were successful and 19 young (eight males, six females, and five unknowns) were fledged (Table 3). Fall trapping resulted in the recapture of six juveniles - one juvenile at cluster 5, one at cluster 16, one at cluster 112, two at cluster 205, and one at cluster NF 5; in addition, five adults were captured at clusters 2, 5, 11, NF4, and NF5 that had been moved in previous years from Texas and Arkansas (Table 4).

### Cluster Stand Management

One additional cluster was active on March 1, 2015 compared to the same date in 2014 (Tables 1 and 2 and Figures 1 and 2). The mean number of active trees per cluster was 2.4 in 2014 and 3.5 in 2015. Cavities at active clusters were checked at intervals of approximately 8 weeks throughout the year and cleaned and repaired as needed. In 2015, 22 of the 37 natural cavities at active clusters were active, while only 16 of the 70 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 2015, two natural cavity trees died, one each at clusters 2 and 111, from unknown causes.

Prescribed burns were conducted in 2015 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 8, 9, 10, and 11, which comprise 5,786 acres on the MCWA and 1,402 acres on the Ouachita National Forest, were prescribed-burned on February 13, 2015. No cavity trees were lost or damaged in these burns.

In 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 and abandoned clusters were maintained in 2015 (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 Mid-story Thinning 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 reporting period, thirteen new cavities were restricted - one at cluster 2, one at cluster 109, two at cluster 111, two at cluster 112, one at cluster 37, one at cluster 107, two at cluster 16, one at cluster 20, and two at cluster 210.

Artificial Cavities

During the 2014 to 2015 period, four unserviceable inserts were replaced at active clusters, one each at clusters 2, 20, 112, and 1201. Two inserts were added, one each at clusters 16 and 210.

Augmentation

No birds were moved from other populations during this period.

**F. Significant Deviations:**

None

**G. Prepared by:** John Skeen  
Senior Biologist  
Oklahoma Department of Wildlife Conservation

**Date:** April 2, 2015

**Approved by:** Andrea Crews  
Andrea Crews, Federal Aid Coordinator  
Oklahoma Department of Wildlife Conservation

**Approved by:** Adam Peoples  
Wildlife Division Administration  
Oklahoma Department of Wildlife Conservation

**TABLE 1. NUMBER AND STATUS OF CAVITIES AT ACTIVE CLUSTERS  
MARCH 1, 2015**

CLUSTER	NATURAL CAVITIES		INSERTS		TOTAL CAVITIES
	NC	NA	NI	NA	AVAILABLE
2	2	2	5	0	7
5	2	1	5	0	7
16	4	3	5	0	9
20	2	1	5	2	7
37	2	2	4	1	6
107	4	1	5	0	9
109	3	2	5	0	8
111	7	3	2	0	9
112	3	3	4	2	7
202	5	2	5	0	10
205	0	0	5	3	5
210	0	0	5	2	5
1201	3	2	5	0	8
NF4	0	0	5	3	5
NF5	0	0	5	3	5
<b>TOTAL</b>	<b>37</b>	<b>22</b>	<b>70</b>	<b>16</b>	<b>107</b>

NC = Number of Cavities

NI = Number of Inserts

NA = Number of Cavities Active

**Table 2. Recruitment Clusters March 2015**

<b>Stand Type</b>	<b>Stand Number</b>	<b>Year Available</b>
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 3. RCW NESTING RESULTS 2014**

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	28-Apr	4	3	3	3	2F 1U	3	0
5	15-May	4	2	2	2	1M	1	1
16	06-May	4	3	3	3	1M 1F	2	1
20	15-May	4	1	0	/	/	/	/
37	16-May	3	0	/	/	/	/	/
Renest	02-Jun	4	2	1	2	1M 1F	2	
109	NNA							
111	07-May	2	0	/	/	/	/	/
Renest	02-Jun	2	2	1	2	1M 1U	2	
112	02-May	3	3	0	3	1M 1U	2	1
202	NNA	2	2	0	2	2U	2	
205	15-May	4	2	2	2	1M 1F	2	2
1201	02-May	5	4	0	/	/	/	/
NF 5	06-May	5	4	3	3	2M 1F	3	1
Totals		46	28	15	22	8M 6F 5U	19	6

Footnotes:

Nesting Attempts = 13

Potential Breeding Groups = 12

Number of Successful Nests = 10

/ / / / / = Nest Loss at 4 Clusters

NNA = No Nesting Activity



**TABLE 4. ADULT AND JUVENILE RCW'S TRAPPED ON THE MCWA IN 2014**

C L U S T E R  T R A P P E D	B A N D  N U M B E R	B A N D  C O L O R S		S E X	A G E  W H E N  T R A P P E D	S I T E  F I R S T  B A N D E D	R e c r u i t m e n t  Y e a r	P r e v i o u s  O b s
		LEFT	RIGHT					
2	2301-02872	WA	DbP	M	A	2	13	2/13
2	2301-02881			u	n	2	14	
2	2301-02882			u	n	2	14	
2	2301-89401	DbDg	OA	M	A	TX	09	2/13
5	2301-02832	WA	YW	M	A	2	2011	5/13
5	2301-02845	BIA	PP	F	A	20	11	105/12
5	2301-02891			u	n	5	14	
5	2301-02892	WA	DgPu	M	J	5	14	
5	2301-89488	BIA	P	F	A	TX	10	107/13
16	2301-02843	BIA	PW	F	A	16	11	16/13
16	2301-02883			u	n	16	14	
16	2301-02884			u	n	16	14	
16	2301-02885	WA	DgDg	M	J	16	14	
20	2301-02862	WA	DgLb	M	A	16	12	16/12
20	2301-02864	OA	Pu	F	A	20	12x	20/13
37	2301-02836	OA	DgW	F	A	205	11	37/13
37	2301-02893			u	n	37	14	
37	2301-60966	FFLb	PuBl	F	A	12	AR	37/13
109	2301-02858	WA	DgM	F	A	111	12	111/12
111	2301-02840	WY	PuA	M	A	111	11	111/13
111	2301-02894			u	n	111	14	
111	2531-60132	LbA	WPu	F	A	TX	12	R23/12
111	8081-99894	LgP	PA	M	A	111	02	111/12
112	2301-02818	WA	Dg	F	A	105	09	112/12
112	2301-02840	W	PuA	M	A	C111	2011	111/13
112	2301-02849	LbA	WPu	M	A	112	12	112/12
112	2301-02895	WA	DgW	M	J	112	14	NBAC
205	2301-02880	DgW	PuA	M	A	25	13x	25/13
205	2301-02889	WA	DgR	M	J	205	14	
205	2301-02890	WA	DgDb	F	J	205	14	
210	2301-02848	OA	DbP	F	A	2	12	24/12
210	2301-02869	WA	DgO	M	A	16	13	16/13
1201	2301-02877	WA	DgDb	M	A	111	13	111/13
1201	2301-02821	WA	PuW	F	A	205	09	1201/12
NF4	2531-59976	YDb	YA	A	M	TX	12	NF5/13
NF5	2301-02878	DgPu	PuA	M	A	NF5	2013	NF5/13
NF5	2301-02886			u	n	NF5	14	
NF5	2301-02887			u	n	NF5	14	
NF5	2301-02888	WA	DgP	M	J	NF5	14	
NF5	2411-25672	BIY	LbA	F	A	AR	2013	NF5/13

\* CLUSTER/YEAR

\*\*COMMENT CODES: NBAC = NO BANDS AT CAPTURE

x= Unknown Year of Origin, u= Unknown sex, n= Nestling

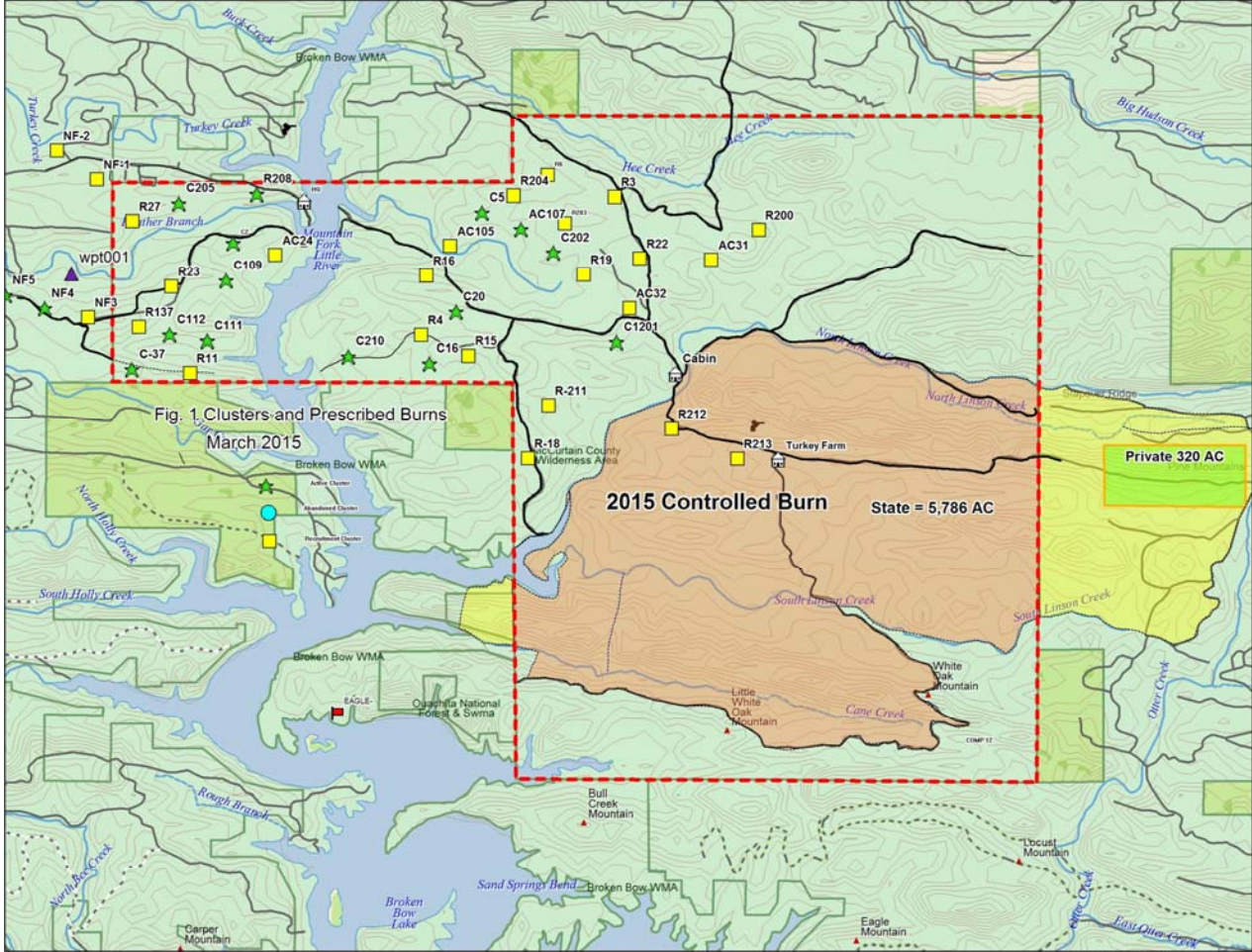


Fig. 1. Clusters and Prescribed Burns  
March 2015

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