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Environmental Consultants

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26 August 2013

Steve Lewis, Wildlife Biologist
Dr. Steve Reagan, Refuge Manager
Ms. Kimberly Sykes, Deputy Refuge Manager
Sam D. Hamilton Noxubee National Wildlife Refuge
2970 Blufflake Road
Brooksville, MS 39739

Dear Mr. Lewis, Dr. Reagan and Ms. Sykes:

All red-cockaded woodpecker (RCW) breeding season field work for 2013 has been completed at the Sam D. Hamilton Noxubee (NOX) National Wildlife Refuge in Noxubee, Oktibbeha, and Winston Counties, Mississippi (MS). Data are presented in the attached Tables 1-3 and shapefiles are included with this letter report.

Task 1: Cavity suitability inspections, cavity cleaning, artificial cavity and restrictor installation in 58 clusters (NOX Clusters 1, 3, 4, 6, 7, 8, 13, 14, 15, 17, 19, 23, 27, 28, 37, 48, 54, 60, 79, 80, 82, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 112, 113, 114, 116, 117, 118, 119, 120, 122, 123, 126, 127, 128, and 129) was completed by 30 June (Table 1).

Task 2: The breeding season activity status for cavity trees in 58 clusters was updated by 30 April 2013 (Table 1 and 3).

Task 3: The determination of RCW nesting, reproductive success and group size at all active clusters was completed by 30 June 2013, with the exception of the fledgling check for Cluster 113 (Table 2).

During the 2013 breeding season there were 30 active RCW clusters, 16 inactive clusters and 12 clusters assessed as abandoned on the Refuge (Table 2). Twenty-seven clusters contained potential breeding groups (PBGs) (NOX 6, 7, 8, 13, 14, 15, 17, 19, 27, 37, 82, 94, 95, 100, 103, 104, 106, 107, 110, 112, 113, 114, 116, 117, 122, 123 and 126), 2 clusters were captured by adjacent groups (NOX 23 by 94 and NOX 28 by 82) and 1 cluster contained a solitary male (NOX 129) (Table 2). Twenty-six groups nested or attempted to nest and 62 nestlings were banded (Table 2). Fifty-one (excludes Cluster 113) fledglings were seen, 22 males and 29

females (Table 2). Sixty-six adult RCWs were seen during the 2013 breeding season (Table 2), 32 of which were unbanded. The average group size for the population was 2.4 adults (excluding active captured clusters) (Table 2).

Of note this breeding season was that Cluster 106 went from 5 unbanded adults with 4 fledglings in 2012 to 2 different banded adults that did not nest in 2013.

Cavity kleptoparasitism by southern flying squirrels (*Glaucomys volans*) remained a problem throughout the breeding season. Between 1 April and 28 June 294 squirrels were removed; 16 escaped during the removal process and the rest were euthanized (Table 4). Cavity competition appeared to have a direct negative effect on a PBG's ability to produce nestlings. Cluster 8 was predated 3 times, with egg shell remains found at the base of the nest tree. All nest trees were outfitted with snake excluder devices and snakes swallow eggs whole, therefore possible predators in this case include flying squirrel or other woodpecker species. Interactions were observed between red-headed woodpeckers (*Melanerpes erythrocephalus*) and RCWs after the first nest failure on 22 April, so it is possible that it was an example of cavity competition between woodpeckers. A camera installed on a nearby tree did not provide any conclusive evidence of predator type. Cluster 15 contained a nest at the beginning of the breeding season that flying squirrels subsequently destroyed. The PBGs were unable to recover and no re-nests were detected.

Flying squirrels affected some clusters more than others, as indicated by the number of squirrels removed over the breeding season. It is interesting to note that while a few clusters had only a few squirrel issues (NOX 13, 100 and 126), many clusters had issues throughout the breeding season (NOX 7, 8, 15, 27, 82, 94, 103, 106, 110 and 114).

Task 4: Cavity tree monumentation and numbering was completed by 30 June 2013.

Task 5: Training refuge personnel was ongoing throughout the season and completed by 30 June 2013.

Task 6: Report is enclosed.

Habitat was greatly improved in 2013 due to a large number of prescribed burns implemented in April, especially in Clusters 6, 8, 19, 37, 100, 103, 113, and 114. A 1-2 year rotation of prescribed fire in the early to mid-growing season (April) in order to control the midstory in both active and inactive clusters promotes better herbaceous groundcover conditions and more ideal RCW habitat. Mechanical or chemical treatments of the midstory would also

benefit the RCW population on the Refuge. Inactive clusters would become more attractive to potential PBGs if excessive mid-story was controlled, especially in NOX Clusters 88, 89 and 93. Appendix 1 contains a list of habitat recommendations.

Approximately one-half of the adults in the breeding population are unbanded (32), which is an improvement from 2012 (58). Although banding nestlings each breeding season will result in an increasingly banded population, banding all adults outside of the breeding season would expedite this process. Tracking movements of RCWs between clusters is possible with a banded population. The majority of banded adults observed in 2013 were banded in 2012 as nestlings and became helpers at their natal clusters. In 5 cases, a bird banded as a nestling in 2012 moved to another cluster and became a breeding adult in 2013.

Please feel free to call if you have any questions.

Sincerely,

Caroline Causey
Wildlife Biologist

cc: JCA file

Table 1. Red-cockaded woodpecker (*Picoides borealis*) cavity tree inventory and cavity maintenance/installation performed in 2013 on Noxubee National Wildlife Refuge, Mississippi.

Cluster	# of Living Cavity Trees	# of Active Cavities	# of Possibly Active Cavities	# of Inactive Cavities	# of Relic Cavities	Suitable Cavity Information and Work Performed							# of Active Advanced Starts (entrance >3 inches in depth)	# of Possibly Active Advanced Starts (entrance >3 inches in depth)	# of Inactive Advanced Starts (entrance >3 inches in depth)	# of Relic Advanced Starts (entrance >3 inches in depth)	# of Active Starts (entrance ≤ 3 inches in depth)	# of Possibly Active Starts (entrance ≤ 3 inches in depth)	# of Inactive Starts (entrance ≤ 3 inches in depth)	# of Relic Starts (entrance ≤ 3 inches in depth)	# of Possibly Active Substarts (entrance < 1 inch in depth)	# of Restrictors Needed
						# of Suitable Natural Cavities	# of Suitable Artificial Cavities	Total # of Suitable Cavities in Cluster	# of Suitable Cavities Cleaned	# of Suitable Cavities Needed to Reach 4 per Cluster	# of New Inserts Installed	# of Replacement Inserts Installed										
1	14	0	0	0	13	screens installed on insert cavities that were not grown-over							0	0	0	1	0	0	0	0	0	0
3	9	0	0	0	6	screens installed on insert cavities that were not grown-over							0	0	0	3	0	0	0	0	0	0
4	4	0	0	0	4	all trees are dead or dying							0	0	0	0	0	0	0	0	0	0
6	19	5	0	3	7	4	2	6	3	0	0	0	1	0	0	0	2	1	0	0	0	0
7	13	4	0	1	6	2	2	4	4	0	0	0	0	0	0	0	0	0	1	1	0	0
8	19	6	0	2	7	3	3	6	3	0	0	0	2	0	0	0	1	0	1	0	0	0
13	17	4	0	4	5	3	0	3	0	1	1	0	2	0	0	0	0	0	1	2	0	0
14	23	4	0	2	13	3	1	4	2	0	0	0	2	0	0	0	0	0	1	1	0	0
15	13	7	0	2	2	2	1	3	3	1	0	1	2	0	0	0	0	0	0	0	0	0
17	19	4	1	2	6	4	2	6	3	0	0	0	1	0	0	0	2	0	0	3	0	0
19	22	4	1	2	14	4	1	5	3	0	0	0	0	0	0	0	1	0	0	0	0	0
23	16	3	1	2	7	2	1	3	3	1	1	0	0	0	0	0	2	0	0	1	0	0
27	16	4	0	2	2	3	0	3	3	1	1	0	2	0	1	0	0	0	4	2	0	1
28	18	1	3	2	10	0	4	4	4	0	0	0	0	0	0	1	0	0	1	0	0	0
37	18	5	0	1	7	3	3	6	2	0	1	0	0	0	1	0	0	1	0	3	0	0
48	12	0	0	0	12	screens installed on insert cavities that were not grown-over							0	0	0	0	0	0	0	0	0	0
54	15	0	0	5	9	0	4	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0
60	17	0	0	6	11	0	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0
79	11	0	0	0	8	screens installed on insert cavities that were not grown-over							0	0	0	1	0	0	0	2	0	0
80	14	0	0	4	8	0	4	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0
82	14	5	0	5	3	4	1	5	2	0	0	0	0	0	0	1	0	0	0	2	0	0
88	10	0	0	4	6	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
89	4	0	0	4	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0
90	8	0	0	4	2	0	4	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0
91	5	0	0	4	1	screens installed on insert cavities							0	0	0	0	0	0	0	0	0	0
92	5	0	0	5	0	screens installed on insert cavities							0	0	0	0	0	0	0	0	0	0
93	5	0	0	5	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
94	5	4	0	1	0	0	4	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0
95	7	5	0	2	2	3	2	5	0	0	0	1	2	0	0	0	0	0	1	0	0	0
96	4	0	0	0	4	screens installed on insert cavities that were not grown-over							0	0	0	0	0	0	0	0	0	0
97	4	0	0	0	4	screens installed on insert cavities that were not grown-over							0	0	0	0	0	0	0	0	0	0
98	4	0	0	0	4	screens installed on insert cavities that were not grown-over							0	0	0	0	0	0	0	0	0	0

Table 1. Red-cockaded woodpecker (*Picoides borealis*) cavity tree inventory and cavity maintenance/installation performed in 2013 on Noxubee National Wildlife Refuge, Mississippi.

Cluster	# of Living Cavity Trees	# of Active Cavities	# of Possibly Active Cavities	# of Inactive Cavities	# of Relic Cavities	Suitable Cavity Information and Work Performed							# of Active Advanced Starts (entrance >3 inches in depth)	# of Possibly Active Advanced Starts (entrance >3 inches in depth)	# of Inactive Advanced Starts (entrance >3 inches in depth)	# of Relic Advanced Starts (entrance >3 inches in depth)	# of Active Starts (entrance ≤ 3 inches in depth)	# of Possibly Active Starts (entrance ≤ 3 inches in depth)	# of Inactive Starts (entrance ≤ 3 inches in depth)	# of Relic Starts (entrance ≤ 3 inches in depth)	# of Possibly Active Substarts (entrance < 1 inch in depth)	# of Restrictors Needed
						# of Suitable Natural Cavities	# of Suitable Artificial Cavities	Total # of Suitable Cavities in Cluster	# of Suitable Cavities Cleaned	# of Suitable Cavities Needed to Reach 4 per Cluster	# of New Inserts Installed	# of Replacement Inserts Installed										
99	4	0	0	0	4	screens installed on insert cavities that were not grown-over							0	0	0	0	0	0	0	0	0	0
100	16	4	0	1	4	1	3	4	2	0	0	0	3	0	1	0	4	0	0	0	0	0
101	11	0	0	4	5	screens installed on insert cavities that were not grown-over							0	0	0	1	0	0	1	0	0	0
102	6	0	0	4	2	screens installed on insert cavities that were not grown-over							0	0	0	0	0	0	0	0	0	0
103	15	3	1	2	7	2	2	4	3	0	0	0	2	0	0	0	0	0	0	0	0	0
104	13	4	0	1	5	2	2	4	2	0	0	0	2	0	0	0	1	0	0	0	0	0
105	7	0	0	4	3	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
106	10	3	2	1	3	3	3	6	4	0	0	0	0	0	0	0	0	0	0	0	0	2
107	10	3	2	0	3	0	4	4	2	1	0	1	0	0	1	0	0	0	1	0	0	0
108	4	0	0	0	4	screens installed on insert cavities that were not grown-over							0	0	0	0	0	0	0	0	0	0
109	7	0	0	0	7	screens installed on insert cavities that were not grown-over							0	0	0	0	0	0	0	0	0	0
110	9	4	0	1	3	1	3	4	2	0	0	0	1	0	0	0	1	0	0	0	0	0
112	16	4	0	1	8	2	2	4	0	0	0	0	0	0	0	0	1	0	0	1	0	0
113	13	5	1	1	3	3	2	5	2	0	0	0	1	0	1	0	1	0	0	0	0	0
114	10	4	1	3	2	5	2	7	5	0	0	0	0	0	0	0	0	0	0	0	0	0
116	11	5	0	1	4	1	3	4	3	0	0	1	1	0	0	0	0	0	0	0	0	0
117	6	3	0	1	3	1	3	4	2	0	0	0	1	2	0	0	0	0	0	0	0	0
118	13	0	0	7	4	0	3	3	0	1	0	1	0	0	0	0	0	0	1	2	0	0
119	9	0	0	4	4	screens installed on insert cavities not blown out by pileated woodpecker							0	0	0	0	0	0	1	1	0	0
120	12	0	0	5	6	screens installed on insert cavities that were not grown-over							0	0	0	0	0	0	0	1	0	0
122	14	3	1	3	3	0	4	4	1	0	0	1	3	0	0	0	1	0	0	0	0	0
123	13	5	0	1	2	3	2	5	2	0	0	0	2	0	0	0	2	0	1	0	0	0
126	8	4	0	2	4	1	3	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0
127	3	0	0	3	0	screens installed on insert cavities that were not grown-over							0	0	0	0	0	0	0	0	0	0
128	3	0	0	0	3	screens installed on insert cavities that were not grown-over							0	0	0	0	0	0	0	0	0	0
129	9	3	1	1	1	2	1	3	3	0	1	0	0	0	3	0	0	0	0	0	0	1
Totals	636	122	15	125	280	67	97	164	74	10	9	6	30	2	8	8	19	2	17	24	0	4

Work performed by Dr. J. H. Carter III & Associates, Inc.

Work performed by S. Lewis, Wildlife Biologist of SBHNNWR

Cluster where inserts were screened

Table 2. Red-cockaded Woodpecker Nesting and Banding summary for the 2013 Breeding Season, Sam D. Hamilton Noxubee National Wildlife Refuge, Brooksville, MS.

Cluster	Activity Status	Breeding Status	Nest Tree Tag #	# of Active Cavities	# of Eggs Found	# of Eggs in Renest	# of Eggs 2nd Renest	# Nestlings Found	Nestling USFWS Number	Nestling Band Combination (sex id'd during fledge check) LL:RL	Adult Ids	Trees GPS'd (Y/N)	Notes
1	Abandoned	screened										Y	
3	Abandoned	screened										Y	
4	Abandoned	grown over										Y	
6	Active	PBG	169	5	4			4(d1/2)	2331-08992 2331-08993 2331-08994 2331-08995	DBYEDB:REAL (F) DBYEDB:ORAL (F) DBYEDB:YEAL (F) DBYEDB:PUAL (F)	DBYEDB:DBAL(F) UB:UB AL:UB	Y	Banded 4 d5 chicks 5/3; check on 5/27 confirmed all 4 fledglings; try to capture AL:UB adult
7	Active	PBG	300	4	3 (4/29)			4 (5,7,8)	2421-28834 2421-28835 2421-28836	YEREYE:DGAL(F) YEREYE:YEAL(F) YEREYE:LBAL(F)	DBLBDB:DBAL (F) ALWH:REREOR (M)	Y	Chicks different ages, check on 6/10 confirmed all 3 fledglings; adults fighting with other unidentified birds
8	Active	PBG	113	6	2(4/22)	3	2(6/4)				UB:UB UB:UB	Y	Initial failure? Broken eggs below nest tree; Failed; failed on 5/3; 3e on 5/13; failed again on 5/30; 2e on 6/4; camera installed 6/10; failed again 6/17
13	Active	PBG	393	4	5 (4/24)			3 (d8)	2421-8810 2421-8811 2421-8812	LGDBLG:WHAL (F) LGDBLG:DGAL (M) LGDBLG:DBAL (F)	UB:UB UB:UB	N	Banded 3 (D8) chicks on 5/9; check on 5/31 confirmed all 3 fledglings; restricted cavity is blown out; insert installed 6/12
14	Active	PBG	449	4	? (4/17)			3 (d15/16)	2421-28805 2421-28806	DBREDB:YEAL (M) DBREDB:DGAL (F) UB:UB (F)	UB:UB (F) DBREDB:PUAL (M) DBREDB:LGAL (M)	Y	Nestlings very old, could not pull 1 female; 2 banded on 5/6; check on 5/20 confirmed all 3 fledglings
15	Active	PBG	195	7	1 (4/15)						UB:UB UB:UB	Y	Remove gloves as needed
17	Active	PBG	255	4	4 (4/24)			3 (d2/3)	2421-28822 2421-28823 2421-28824	DBDGDB:LBAL (F) DBDGDB:ORAL DBDGDB:WHAL(M)	UB:UB UB:UB	Y	Banded on 5/13 (d10); check on 5/31 (d28) confirmed 2 of 3 fledglings
19	Active	PBG	901	4	1 (4/22)			3 (d0)	2421-28830 2421-28831 2421-28832	PUREPU:DBAL(F) PUREPU:YEAL(F) PUREPU:ORAL(M)	UB:UB UB:UB PUREPU:WHAL	Y	Banded on 5/15 (d8), check on 6/4 (d28) confirmed all 3 fledglings
23	Active	Captured by 94		3								Y	possibly vacuum cavity in tree 85

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27	Active	PBG	311	4	4			3 (d4)	2421-28813 2421-28814 2421-28815	DBORDB:LBAL DBORDB:REAL DBORDB:YEAL	UB:UB UB:UB	Y	new insert installed 4/19 in 313; banded on 5/10 (d6); check on 6/3 and subsequent checks revealed no fledglings
28	Active	Captured by 82		1								Y	
37	Active	PBG	901	6	1			3 (d2), 1 dead, 1 e	2421-28802 2421-28803 2421-28804	DGYEDG:DBAL (F) DGYEDG:YEAL (M) DGYEDG:WHAL (M)	DGYEDG:REAL (M) DGYEDG:PUAL (F) DGYEDG:ORAL (M) UB:UB (M)	Y	New cavity tree/nest found; banded on 5/6; check on 5/24 confirmed all 3 fledglings
48	Abandoned	grown over										Y	
54	Inactive											Y	
60	Inactive	RC										Y	
79	Abandoned	screened										Y	
80	Inactive	RC										Y	
82	Active	PBG	4	5	4 (4/17)			1 (d5)	2331-08991	DGPUDG:REAL	UB:UB UB:UB	Y	only 1 nestling found, banded 5/2; check on 5/27 (d30); checks revealed no fledglings; failed nest
88	Inactive	RC										Y	
89	Inactive	RC										Y	
90	Inactive	screened										Y	
91	Inactive	screened										Y	
92	Inactive	screened										Y	
93	Inactive	RC										Y	
94	Active	PBG	56	4	4			1 (d0) 1e	2421-28842 2421-28843	YELGYE:WHAL(M) YELGYE:DBAL(F)	YEREYE:DBAL(M) YELGYE:YEAL(F)	Y	Banded 6/5 (d8); check on 6/25 confirmed 2 fledglings
95	Active	PBG	462	5	5 (4/17)			3 (d8)	2331-08996 2331-08997 2331-08998	PUDBPU:OR (F) PUDBPU:DG (M) PUDBPU:YE (M)	PUDBPU:REAL(M) LGAL:PUDBPU(M) UB:UB(F)	Y	Banded on 5/4; check on 5/23 confirmed all 3 fledglings
96	Abandoned	grown over										Y	
97	Abandoned	grown over										Y	
98	Abandoned	grown over										Y	
99	Abandoned	grown over										Y	

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Cluster	Activity Status	Breeding Status	Nest Tree Tag #	# of Active Cavities	# of Eggs Found	# of Eggs in Renest	# of Eggs 2nd Renest	# Nestlings Found	Nestling USFWS Number	Nestling Band Combination (sex id'd during fledge check) LL:RL	Adult Ids	Trees GPS'd (Y/N)	Notes
100	Active	PBG	291	4	1(4/30)			3 (d0) 1e	2421-28839 2421-28840 2421-28841	LGRELG:WHAL LGRELG:PUAL LGRELG:DBAL	UB:UB(F) YEREYE:ORAL(M)	Y	Banded 5/21 (d8); check on 6/13 and subsequent checks revealed no fledglings
101	Inactive	screened										Y	
102	Inactive	screened										Y	
103	Active	PBG	503	3	?			2 (d8)	2421-28837 2421-28838	LGORLG:REAL(F) LGORLG:LBAL(M)	UB:UB LGDBLG:PUAL(F)	Y	New nest tree found 5/9 too tall to peep; banded 2 d8 on 5/17; check on 6/6 confirmed 2 fledglings
104	Active	PBG	379	4	1(4/23)			3 (d0/1)	2421-28833	PUDGPU:YEAL(M)	PUDGPU:LGAL(F) ALWH:YEWYWH(M)	Y	Banded on 5/16 (d8); check on 6/5 (d28) confirmed 1 fledgling
105	Inactive	RC										Y	
106	Active	PBG		3							LGPULG:YEAL(F) ALDG:REWEWH(M)	Y	2 adults in courtship behavior 4/30; bird checking inside cavity on 5/15; no nest found
107	Active	PBG	226	3	? (4/23)			3 (d8)	2421-28807 2421-28808 2421-28809	YEPUYE:LBAL(F) YEPUYE:DGAL(M) YEPUYE:YEAL(M)	UB:UB YEPUYE:PUAL(M)	Y	Banded on 5/7; check on 5/27 (d28) confirmed all 3 fledglings; copulation observed 6/4, no second nest found
108	Abandoned	screened										Y	
109	Abandoned	grown over										Y	
110	Active	PBG	244	4	4 (4/18)			3 d0, 1e	2331-08999 2331-09000 2421-28801	PULGPU:DBAL (M) PULGPU:REAL PULGPU:YEAL (F)	UB:UB UB:UB	Y	Banded on 5/6; check on 5/27 (d29), only 2 of 3 fledglings confirmed
111	Abandoned	grown over										N	
112	Active	PBG	38	4	4 (4/8)			2 (d3)	2331-08985 2331-08986	LGDGLG:ORAL (F) LGDGLG:WHAL (M)	LGDGLG:REAL(F) UB:AL LGDGLG:LBAL (M)	Y	Banded 4/22; check on 5/10 confirmed only 2 fledglings; try to capture AL:UB adult
113	Active	PBG	132	5	2 (4/22)	1(5/29) 3(6/4)		1(d0)2e	2421-28845 2421-28846	PUYEPU:LBAL PUYEPU:ORAL	UB:UB UB:UB UNK:UNK	Y	Failed, 1 egg on 5/3; removed dud egg; only 3 suitable cavs, drilled out wet cavities 6/18; banded on 6/18; fledge check on 7/8
114	Active	PBG	216	4	1 (4/22)			3 (d1)	2421-28828 2421-28829	DBWHDB:REAL(F) DBWHDB:YEAL(M)	UB:UB YEREYE:REAL(F)	Y	Banded on 5/14 (d8); check on 6/3 (d28) confirmed both fledglings

Table 2. Red-cockaded Woodpecker Nesting and Banding summary for the 2013 Breeding Season, Sam D. Hamilton Noxubee National Wildlife Refuge, Brooksville, MS.

Cluster	Activity Status	Breeding Status	Nest Tree Tag #	# of Active Cavities	# of Eggs Found	# of Eggs in Renest	# of Eggs 2nd Renest	# Nestlings Found	Nestling USFWS Number	Nestling Band Combination (sex id'd during fledge check) LL:RL	Adult Ids	Trees GPS'd (Y/N)	Notes
116	Active	PBG	276	5	4(4/23)			3 (d3)	2421-28819 2421-28820 2421-28821	LGWHLG:YEAL(F) LGWHLG:REAL(F) LGWHLG:PUAL(M)	UB:UB UB:UB	N	replace insert in 273, banded on 5/13 (d9/10); check on 6/3 (d30) confirmed all 3 fledglings
117	Active	PBG	34	3	2 (4/9)			3 (d0/1)	2331-08987 2331-08988	DGDBDG:DGAL (M) DGDBDG:PUAL (M)	DGDBDG:ORAL(M) DGDBDG:LBAL(F)	Y	Banded on 4/29; check on 5/20 confirmed 2 fledglings
118	Inactive	RC										Y	
119	Inactive	screened										Y	
120	Inactive	screened										Y	
121	Abandoned	grown over										N	
122	Active	PBG	59	3	1 (4/23)			3 (d8)	2421-28816 2421-28817 2421-28818	DBLGDB:YEAL(M) DBLGDB:LBAL(M) DBLGDB:PUAL(F)	UB:UB(F) DB/RE:ORWH(M) DBLGDB:REAL(M)	Y	Banded on 5/13 (d8); check on 6/3 (d29) confirmed 3 of 3 fledglings
123	Active	PBG	409	5	3 (4/12)			2 (d0), 1e	2331-08989 2331-08990	LGPULG:REAL (F) LGPULG:DBAL (F)	LGPULG:WHAL (M) ALYE:YEYEO (F) UB:UB(M)	Y	Banded on 4/29; check on 5/20 (d28) confirmed 2 of 2 fledglings
124	Abandoned	grown over										N	
126	Active	PBG	239	4	3 (4/22)			3(d1) 2e	2421-28825 2421-28826 2421-28827	DBLBDB:YEAL(M) DBLBDB:LBAL(F) DBLBDB:REAL(F)	DBLBDB:ORAL(M) WHAL:YEYEE UB:UB	Y	Banded on 5/14 (d9/11); check on 6/3 (d29/31) confirmed all 3 fledglings
127	Inactive	screened										Y	
128	Abandoned	grown over										Y	
129	Active	Solitary		3							UB:UB	Y	
62									66				
Total Number of Clusters = 58 (does not include 111,121,124) Total Number of Active Clusters = 30 Total Number of Inactive Clusters = 16 Total Number of Abandoned Clusters = 12 Total Number of PBGs = 27 Total Solitary RCW Clusters = 1 (129) Total Captured RCW Clusters = 2 (23, 28) Total Number of Nests to Date (includes failed nests) = 29 Total Nestlings Banded to Date = 62 fledglings seen as of 6/28/13 = 51													

PBG = Potential Breeding Group

AL= Aluminum

LP= Light Pink

* RCW nest failure

* Inactive

* Abandoned

OR= Orange

WH= White

YE= Yellow

LB= Light Blue

DB= Dark Blue

d = day

DG= Dark Green

LG= Light Green

RE= Red

PU= Purple

RC=Recruitment cluster

XX= Banded but not identified

UB - Unbanded

Table 3. Red-cockaded woodpecker cavity tree status for 2013 on the Sam D. Hamilton Noxubee National Wildlife Refuge, Brooksville, Mississippi.

Cluster	New Tree #	Old Tree #	Status	Activity	GPS Coordinates (UTM 16 N)		Notes
					Northing	Easting	
1	0	1 (deleted?)	insert cavity	relic	3683653.82	333251.80	all cavity trees are loblolly pine
	0	2	cavity	relic	3683622.78	333221.42	
	0	6	advanced start	relic	3683618.81	333288.32	
	0	7	cavity	relic	3683611.76	333323.86	
	0	8	cavity	relic	3683628.99	333231.26	
	0	9	cavity	relic	3683632.92	333225.33	
	0	10	cavity	relic	3683675.03	333279.51	
	0	41	cavity	relic	3683609.22	333298.77	
	0	45	cavity	relic	3683740.20	333261.19	
	0	46	cavity	relic	3683716.30	333302.29	
	0	47	cavity	relic	3683746.37	333269.25	
	0	664	cavity	relic	3683637.30	333285.58	
	0	665	cavity	relic	3683641.74	333324.63	
	0	666	cavity	relic	3683729.61	333239.46	
3	0	1	insert cavity	relic	3683140.35	332675.87	all cavity trees are loblolly pine
	0	2	insert cavity	relic	3683126.00	332639.14	
	0	4	cavity	relic	3683137.43	332591.97	
	0	88	cavity	relic	3683307.25	332830.93	
	0	91	start	relic	3683292.58	332765.86	
	0	414	cavity	relic	3683096.08	332648.57	
	0	674	start	relic	3683330.98	332824.54	
	0	675	start	relic	3683286.28	332815.25	
	0	731	insert cavity	relic	3683119.28	332657.34	
4	0	2	insert cavity	relic	3683945.70	331637.06	all cavity trees are loblolly pine
	0	11	cavity	relic	3683983.84	331642.10	
	0	678	cavity	relic	3683903.95	331640.55	
	0	679	cavity	relic	3683863.89	331610.93	
6	164	1	insert cavity	inactive	3680302.92	327504.09	all cavity trees are loblolly pine 2013 nest tree
	165	715	insert cavity	inactive	3680297.46	327520.65	
	166	17	insert cavity	active	3680318.96	327505.96	
	167	12	cavity	relic	3680323.59	327521.45	
	168	13	cavity	relic	3680334.77	327528.37	
	169	nt 3	recently complete cavity	active	3680339.96	327527.87	
	170	18	cavity	active	3680349.91	327540.72	
	171	nt4	start	active	3680357.62	327536.11	
	172	25	cavity	active	3680339.61	327562.31	
	173	2	insert cavity	inactive	3680316.03	327471.98	
	174	nt2	insert cavity	active	3680306.63	327477.39	

Table 3. Red-cockaded woodpecker cavity tree status for 2013 on the Sam D. Hamilton Noxubee National Wildlife Refuge, Brooksville, Mississippi.

Cluster	New Tree #	Old Tree #	Status	Activity	GPS Coordinates (UTM 16 N)		Notes
					Northing	Easting	
6 Cont.	175	5	cavity	relic	3680321.83	327441.42	
	176	4	cavity	relic	3680351.95	327449.17	
	177	16	no visible cavity	relic	3680377.84	327356.53	
	178	716	cavity	relic	3680342.15	327331.50	
	179	7	cavity	relic	3680307.33	327324.37	
	180	nt1	advanced start	possibly active	3680313.64	327335.76	
	181	8	start	inactive	3680302.18	327314.51	
	182	n/a	start	active	3680314.12	327239.91	
7	295	627	cavity	relic	3679043.48	328503.20	all cavity trees are loblolly pine 2013 nest tree
	296	nt1	cavity	relic	3679032.72	328481.68	
	297	4	insert cavity	relic	3679042.51	328494.33	
	298	727	insert cavity	relic	3679059.14	328474.97	
	299	3	cavity	active	3679061.52	328459.01	
	300	nt2	cavity	active	3679079.37	328462.49	
	301	6	start	inactive	3679122.24	328442.15	
	302	7	insert cavity	active	3679124.15	328401.12	
	303	nt4/620	cavity	relic	3679074.92	328402.49	
	304	1	insert cavity	active	3679062.05	328411.48	
	305	2	cavity	inactive	3679030.94	328411.41	
	306	8	insert cavity	relic	3679029.51	328390.30	
	307	nt3/621	start	relic	3679073.84	328338.80	
8	112	new tree	start	possibly active	3678519.87	327708.17	all cavity trees are loblolly pine 2013 nest tree
	113	nt7	advanced start	active	3678403.89	327740.77	
	114	617	insert cavity	relic	3678388.04	327618.79	
	115	nt5	recently complete cavity	active	3678376.50	327606.66	
	116	5	insert cavity	relic	3678391.41	327576.85	
	117	684	cavity	relic	3678412.17	327603.08	
	118	nt6	cavity	active	3678422.88	327614.66	
	119	81	insert cavity	missing from tree	3678415.87	327577.09	
	120	4	insert cavity	relic	3678429.77	327545.64	
	121	nt4	start	inactive	3678445.90	327526.33	
	122	3	insert cavity	inactive	3678446.21	327522.78	
	123	6	start	active	3678493.76	327474.60	
	124	nt3	cavity	active	3678501.77	327453.67	
	125	nt2	insert cavity	inactive	3678482.32	327441.38	
	126	nt1	insert cavity	active	3678483.35	327431.47	
	127	9	insert cavity	inactive	3678493.70	327429.16	
	128	8	cavity	relic	3678514.33	327422.86	

Table 3. Red-cockaded woodpecker cavity tree status for 2013 on the Sam D. Hamilton Noxubee National Wildlife Refuge, Brooksville, Mississippi.

Cluster	New Tree #	Old Tree #	Status	Activity	GPS Coordinates (UTM 16 N)		Notes
					Northing	Easting	
8 Cont.	129	7	cavity	relic	3678521.18	327419.95	dying
	NT1	new tree	advanced start	active	3678515.93	327695.61	needs to be tagged
13	393	31	cavity	active	3682611.82	332640.52	2013 nest tree cavity enlarged by other species; insert installed all cavity trees are loblolly pine
	394	30	cavity, insert cavity	active	3682594.91	332633.61	
	395	nt1	cavity	relic	3682614.91	332735.28	
	396	14	start	inactive	3682583.39	332735.44	
	397	25	insert cavity	inactive	3682690.65	332695.06	
	398	24	insert cavity	inactive	3682701.26	332687.79	
	399	22	cavity	inactive	3682694.78	332742.57	
	400	21	insert cavity	inactive	3682702.84	332742.01	
	401	23	insert cavity	inactive	3682739.46	332772.11	
	402	16	cavity	relic	3682736.90	332806.21	
	403	693	cavity	relic	3682708.86	332773.09	
	404	12	cavity - snapped at cavity	relic	3682900.86	332700.31	
	405	212	cavity	relic	3682955.06	332842.70	
	406	15	no visible cavity	relic	3682972.90	332867.71	
	407	66	start	relic	3682938.79	332871.34	
	540	new tree	advanced start	active	3682621.68	332665.78	
	541	new tree	advanced start	active	3682646.04	332645.78	
14	434	7	insert cavity	inactive	3683221.93	333051.48	all cavity trees are loblolly pine
	435	8	insert cavity	possibly active	3683208.44	333067.13	
	436	9	cavity	active	3683205.15	333084.16	
	437	28	cavity	relic	3683199.48	333086.26	
	438	684	cavity	relic	3683184.66	333089.45	
	439	9	cavity	relic	3683181.64	333111.72	
	440	95	cavity	relic	3683179.59	333117.37	
	441	4	no visible cavity	relic	3683174.15	333122.46	
	442	96	no visible cavity	relic	3683142.17	333116.60	
	443	8	cavity	relic	3683118.32	333133.21	
	444	3	advanced start	active	3683155.35	333096.37	
	445	2	cavity	relic	3683160.55	333067.59	
	446	98	cavity	relic	3683059.63	333073.53	
	447	5	start	inactive	3683233.95	333090.43	
	448	29	cavity	relic	3683243.94	333108.92	
	449	new tree	cavity	active	3683235.69	333145.44	
	450	30	start	relic	3683304.85	333110.11	
	451	6	cavity	relic	3683306.30	333100.43	
	452	10	cavity	inactive	3683311.81	333105.21	

Table 3. Red-cockaded woodpecker cavity tree status for 2013 on the Sam D. Hamilton Noxubee National Wildlife Refuge, Brooksville, Mississippi.

Cluster	New Tree #	Old Tree #	Status	Activity	GPS Coordinates (UTM 16 N)		Notes
					Northing	Easting	
14 Cont.	453	20	cavity	active	3683328.08	333101.65	needs to be tagged
	454	31	no visible cavity	relic	3683334.79	333138.09	
	455	21	cavity	relic	3683389.75	333077.78	
	NT1	new tree	advanced start	active	3683299.11	332997.98	
15	183	5	cavity	active	3681994.34	328083.22	active cavity but unsuitable - filled with water all cavity trees are loblolly pine
	184	6	insert cavity	active	3681981.03	328136.64	
	185	nt5	recently complete cavity	active	3681996.07	328144.10	
	186	2	cavity	relic	3682011.11	328160.37	
	187	7	insert cavity	inactive	3681964.88	328157.48	
	188	new tree	advanced start	active	3681914.61	328236.07	
	189	nt4	cavity	active	3681904.86	328192.04	
	190	nt3	insert cavity	inactive	3681923.50	328142.99	
	191	nt2	insert cavity	active	3681941.53	328132.96	
	192	nt1	advanced start	active	3681954.39	328119.80	
	193	3	insert cavity	active	3681950.53	328114.82	
	194	717	insert cavity	relic	3681967.14	328096.60	
	195	8	cavity	active	3681944.64	328064.27	
17	252	703	cavity	relic	3679518.34	330380.63	all cavity trees are loblolly pine 2013 nest tree
	253	639	cavity	relic	3679521.15	330424.85	
	254	758	insert cavity	relic	3679466.22	330424.41	
	255	9	cavity	active	3679452.80	330421.75	
	256	17	cavity	relic	3679442.60	330397.64	
	257	new tree	cavity	active	3679415.77	330410.38	
	258	11	cavity	relic	3679442.47	330597.89	
	259	nt2	start	active	3679475.61	330625.52	
	260	19	insert cavity	possibly active	3679471.02	330565.95	
	261	20	start	active	3679454.10	330536.22	
	262	5	insert cavity	inactive	3679458.59	330531.28	
	263	22	insert cavity	active	3679461.96	330517.54	
	264	6	cavity	inactive	3679451.47	330505.81	
	265	7	cavity	active	3679496.92	330491.05	
	266	14	advanced start	active	3679498.90	330498.58	
	267	nt3	start	relic	3679359.88	330430.62	
	268	2	start	relic	3679335.26	330374.53	
	270	18/12	start	relic	3679311.17	330492.02	
	NT1	nt1	cavity	relic	3679790.01	330427.45	
19	143	65	cavity	relic	3681124.37	327725.75	tree missed during tagging/painting most cavity trees are loblolly pine
	144	799	cavity	relic	3681155.96	327624.59	

Table 3. Red-cockaded woodpecker cavity tree status for 2013 on the Sam D. Hamilton Noxubee National Wildlife Refuge, Brooksville, Mississippi.

Cluster	New Tree #	Old Tree #	Status	Activity	GPS Coordinates (UTM 16 N)		Notes
					Northing	Easting	
19 Cont.	145	13	cavity	relic	3681225.51	327602.45	
	146	61	cavity	relic	3681221.83	327636.30	
	147	63	cavity	relic	3681281.68	327632.17	
	148	64	cavity	relic	3681303.54	327654.63	
	149	nt2	cavity	active	3681459.38	327610.62	
	150	nt3	cavity	active	3681495.08	327608.48	
	151	nt4	start	active	3681517.93	327626.64	
	152	11	cavity	relic	3681435.12	327646.39	
	153	new tree	cavity	relic	3681437.33	327691.79	
	154	681	cavity	relic	3681356.43	327678.62	
	155	nt1	cavity	active	3681339.03	327756.54	
	156	7	cavity	relic	3681246.87	327752.52	
	157	10	cavity	relic	3681250.57	327742.06	
	158	2	insert cavity	inactive	3681237.61	327736.91	
	159	9	insert cavity	possibly active	3681228.39	327742.83	
	160	nt5	cavity	relic	3681200.91	327747.98	
	161	690	cavity	relic	3681190.13	327711.34	
	162	5	no visble cavity	relic	3681169.86	327740.16	
	163	4	insert cavity	inactive	3681198.93	327769.21	
	901		recently complete cavity	active	3681191.87	327625.62	
23	76	7	cavity	relic	3676946.23	330819.25	all cavity trees are loblolly pine
	77	8	cavity	relic	3676707.57	330751.15	
	78	nt2	insert cavity	inactive	3676744.65	330720.44	
	79	RC82E.7/63-1	cavity	inactive	3676744.44	330698.15	
	80	3	insert cavity	active	3676693.47	330754.22	
	81	724	insert cavity	relic	3676670.82	330730.63	
	82	4	cavity	active	3676675.21	330728.28	
	83	5	cavity	relic	3676663.34	330721.93	
	84	723	start	active	3676663.71	330716.90	
	85	10	cavity	active	3676656.06	330717.14	
	86	nt1	start	active	3676643.97	330734.84	
	87	11	cavity	relic	3676616.74	330725.55	
	88	6	cavity	relic	3676621.93	330705.72	
	89	12	insert cavity	possibly active	3676682.37	330689.57	
	90	1	insert cavity	relic	3676686.48	330671.89	
	91	9	start	relic	3676695.47	330684.07	
27	308	14	start	relic	3679378.67	329320.48	all cavity trees are loblolly pine
	309	10	cavity	relic	3679392.27	329336.65	

Table 3. Red-cockaded woodpecker cavity tree status for 2013 on the Sam D. Hamilton Noxubee National Wildlife Refuge, Brooksville, Mississippi.

Cluster	New Tree #	Old Tree #	Status	Activity	GPS Coordinates (UTM 16 N)		Notes
					Northing	Easting	
27 Cont.	310	16	start	relic	3679410.64	329312.90	2013 nest tree insert installed 4/19/13
	311	new tree	cavity	active	3679345.70	329170.39	
	312	nt2	start	inactive	3679436.25	329110.92	
	313	11	cavity, insert cavity	relic	3679270.26	329110.94	
	314	12	start	inactive	3679273.70	329130.20	
	315	13	advanced start	inactive	3679267.62	329132.36	
	316	18	insert cavity	inactive	3679269.07	329117.50	
	317	5	cavity	relic	3679246.65	329096.72	
	318	19	insert cavity	inactive	3679225.48	329132.22	
	319	4	cavity	active	3679241.93	329140.86	
	320	17	start	inactive	3679289.54	329180.59	
	321	nt1	start	inactive	3679285.54	329242.26	
	510		advanced start	active	3679274.18	329103.50	
	511		advanced start	active	3679275.54	329103.09	
28	14	54	advanced start	relic	3691418.89	322983.58	all cavity trees are loblolly pine installed fall of 2011 installed fall of 2011 installed fall of 2011
	16	52	cavity	relic	3691396.88	322926.35	
	17	10	cavity	relic	3691380.41	322977.79	
	18	5	cavity	relic	3691344.35	322984.06	
	19	6	no visible cavity	relic	3691341.25	323015.21	
	20	4	insert cavity	possibly active	3691348.83	323028.05	
	21	nt1	insert cavity	inactive	3691353.69	323036.22	
	22	new insert	insert cavity	possibly active	3691382.64	323023.44	
	23	3	insert cavity	inactive	3691374.25	323037.20	
	24	new insert	insert cavity	active	3691390.35	323026.14	
	25	new insert	insert cavity	possibly active	3691390.64	323040.50	
	26	7	start	inactive	3691411.58	323094.56	
	27	8	cavity	relic	3691373.43	323132.99	
	28	688	cavity	relic	3691411.64	323181.76	
	29	50	cavity	relic	3691460.32	322952.74	
	30	9	cavity	relic	3691505.12	323011.84	
	31	49	cavity	relic	3691539.69	322993.96	
	32	57	cavity	relic	3691516.69	322936.43	
37	417	3	start	relic	3679892.38	330072.52	all cavity trees are loblolly pine
	418	604	cavity	relic	3679848.05	330027.54	
	419	670	cavity	relic	3679808.01	330084.26	
	420	nt1	start	relic	3679875.39	330134.79	
	421	6	insert cavity	active	3679901.30	330153.75	
	422	10	cavity	relic	3679880.60	330168.64	

Table 3. Red-cockaded woodpecker cavity tree status for 2013 on the Sam D. Hamilton Noxubee National Wildlife Refuge, Brooksville, Mississippi.

Cluster	New Tree #	Old Tree #	Status	Activity	GPS Coordinates (UTM 16 N)		Notes
					Northing	Easting	
37 Cont.	423	5	advanced start	inactive	3679893.74	330182.01	blown out by pileated woodpecker
	424	nt2	cavity	active	3679913.43	330201.15	
	425	607	insert cavity	active	3679950.61	330212.07	
	426	2	insert cavity	active	3679947.23	330163.50	
	427	14	cavity	relic	3679925.19	330292.27	
	428	new tree	cavity	relic	3679948.58	330330.78	
	429	19	cavity	inactive	3679848.24	330370.59	
	430	nt3	start	inactive	3679847.84	330359.63	
	431	11	cavity	relic	3679876.95	330256.58	
	432	17	cavity	relic	3679875.85	330221.43	
	433	12	start	relic	3679906.16	330250.76	
	501		recently complete cavity	active	3679993.81	330312.93	2013 nest tree
48	0	1	insert cavity	relic	3681675.41	332036.11	all cavity trees are loblolly pine
	0	2	cavity	relic	3681651.89	332001.95	
	0	4	insert cavity	relic	3681647.99	331990.31	
	0	5	insert cavity	relic	3681642.26	331972.75	
	0	6	cavity	relic	3681651.01	331981.84	
	0	9	cavity	relic	3681571.69	331942.29	
	0	10	cavity	relic	3681734.13	331990.20	
	0	11	cavity	relic	3681661.25	332010.10	
	0	12	cavity	relic	3681637.33	332015.77	
	0	13	insert cavity	relic	3681716.30	331988.48	
	0	14	cavity	relic	3681678.14	331906.29	
54	353	new insert	insert cavity	inactive	3694992.78	324806.30	installed fall of 2011
	354	11	cavity	relic	3694998.75	324806.18	installed fall of 2011 installed fall of 2011 installed fall of 2011
	355	new insert	insert cavity	inactive	3694995.25	324811.66	
	356	new insert	insert cavity	inactive	3695007.54	324813.74	
	357	new insert	insert cavity	inactive	3695012.76	324829.47	
	358	3	insert cavity	relic	3695092.70	324746.67	
	359	10	cavity	inactive	3695111.03	324726.60	
	360	8	cavity	relic	3695112.61	324748.41	
	361	4	insert cavity	relic	3695114.89	324756.82	
	362	new tree	start	inactive	3695104.52	324758.14	
	363	nt1	cavity	relic	3695146.19	324744.04	
	364	9	cavity	relic	3695124.94	324744.58	
	365	7	insert cavity	relic	3695159.32	324785.19	
	366	5	insert cavity	relic	3695124.86	324774.69	
	367	6	insert cavity	relic	3695118.82	324792.21	

Table 3. Red-cockaded woodpecker cavity tree status for 2013 on the Sam D. Hamilton Noxubee National Wildlife Refuge, Brooksville, Mississippi.

Cluster	New Tree #	Old Tree #	Status	Activity	GPS Coordinates (UTM 16 N)		Notes
					Northing	Easting	
60	0	0	insert cavity	relic	3692377.25	322039.49	all cavity trees are loblolly pine
	514	788	cavity	relic	3692302.05	322130.35	
	515	0	insert cavity	inactive	3692328.47	322086.10	
	516	0	insert cavity	inactive	3692313.62	322086.00	
	517	0	insert cavity	inactive	3692303.43	322056.34	
	518	780	cavity	inactive	3692298.92	322059.15	
	519	7	insert cavity	relic	3692284.36	322046.34	
	520	1	cavity	relic	3692241.13	322053.66	
	521	0	insert cavity	relic	3692324.48	322036.50	
	522	25	cavity	inactive	3692353.44	322053.42	
	523	26	insert cavity	inactive	3692366.41	322065.04	
	524	787	cavity	relic	3692413.13	322035.51	
	525	0	cavity	relic	3692457.33	322047.33	
	526	10	cavity	relic	3692444.11	322153.38	
	527	785	cavity	relic	3692450.06	322194.74	
	528	786	cavity	relic	3692449.97	322198.37	
	529	0	cavity	relic	3692322.88	322206.10	healed over
79	0	1	insert cavity	relic	3683297.52	332232.53	all cavity trees are loblolly pine
	0	3	cavity	relic	3683299.06	332162.11	
	0	4	insert cavity	relic	3683294.91	332219.67	
	0	5	insert cavity	relic	3683263.61	332287.07	
	0	6	advanced start	relic	3683294.06	332223.54	
	0	14	start	relic	3683276.63	332207.69	
	0	15	start	relic	3683274.93	332215.96	
	0	16	cavity	relic	3683311.26	332200.68	
	0	732	insert cavity	relic	3683304.48	332203.59	
	0	733	cavity	relic	3683289.72	332191.39	
	0	nt1	insert cavity	relic	3683269.99	332268.85	
80	0	nt1	cavity	relic	3680051.81	330828.93	all cavity trees are loblolly pine installed in 2011 installed in 2011 installed in 2011
	482	new insert	insert cavity	inactive	3680124.56	331019.63	
	483	new insert	insert cavity	inactive	3680109.39	330999.55	
	484	new insert	insert cavity	inactive	3680176.51	330963.28	
	530	13	cavity	relic	3680116.34	331011.22	
	531	9	insert cavity	inactive	3680144.84	330944.05	
	532	11	insert cavity	inactive	3680149.69	330965.69	
	533	6	insert cavity	relic	3680203.22	330956.78	
	534	5	cavity	relic	3680214.11	330920.86	
	535	4	insert cavity	relic	3680209.01	330912.17	

Table 3. Red-cockaded woodpecker cavity tree status for 2013 on the Sam D. Hamilton Noxubee National Wildlife Refuge, Brooksville, Mississippi.

Cluster	New Tree #	Old Tree #	Status	Activity	GPS Coordinates (UTM 16 N)		Notes
					Northing	Easting	
80 Cont.	536	757	cavity	relic	3680226.90	330908.66	
	537	3	start	relic	3680205.36	330888.98	
	538	8	cavity	relic	3680182.68	330891.13	
	539	7	cavity	relic	3680167.94	330922.67	
82	1	6	cavity	inactive	3691056.14	323584.73	all cavity trees are loblolly pine installed in 2011 2013 nest tree
	2	new insert	insert cavity	active	3691052.60	323588.70	
	3	nt1	cavity	active	3691052.23	323584.75	
	4	new tree	cavity	active	3691145.24	323513.65	
	5	new tree	cavity	active	3691139.26	323452.07	
	6	9	insert cavity	inactive	3691077.52	323603.07	
	7	nt3	start	relic	3691094.67	323629.13	
	8	7	cavity	relic	3691119.31	323612.03	
	9	8	insert cavity	inactive	3691132.42	323594.27	
	10	nt4	start	relic	3691147.98	323562.35	
	11	5	insert cavity	inactive	3691167.19	323539.21	
	12	RC82A.5	cavity	relic	3691198.37	323583.06	
	13	651/RC82A.1	cavity	relic	3691191.29	323603.75	
	15	761	advanced start	relic	3691219.59	323621.98	
88	68	998-999	cavity	relic	3676556.12	326504.60	all cavity trees are loblolly pine installed April 2012 installed April 2012 installed April 2012 installed April 2012
	69	new insert	insert cavity	inactive	3676559.35	326494.63	
	70	new insert	insert cavity	inactive	3676551.26	326483.59	
	71	998-999	cavity	relic	3676541.20	326493.30	
	72	new insert	insert cavity	inactive	3676526.08	326485.74	
	73	new insert	insert cavity	inactive	3676527.00	326474.39	
	74	998-999	cavity	relic	3676513.22	326477.08	
	75	998-999	cavity	relic	3676516.36	326473.32	
	468	998-999	cavity	relic	3676627.02	326641.86	
89	469	998-999	cavity	relic	3676597.72	326636.83	
	0	1	insert cavity	inactive	3687632.76	328889.99	all cavity trees are loblolly pine all inserts replaced at 30 feet new tags installed, not recorded
	0	3	insert cavity	inactive	3687697.73	328828.00	
	0	4	insert cavity	inactive	3687743.04	328821.53	
	0	new insert	insert cavity	inactive	3687602.78	328859.86	
90	329	1	insert cavity	relic	3694431.38	323387.96	all cavity trees are loblolly pine installed April 2012 installed April 2012
	330	new insert	insert cavity	inactive	3694466.85	323369.65	
	331	new insert	insert cavity	inactive	3694470.18	323378.55	
	332	3	insert cavity	inactive	3694481.18	323328.56	
	333	nt1	cavity	relic	3694501.72	323323.91	
	334	4	insert cavity	inactive	3694513.49	323316.99	

Table 3. Red-cockaded woodpecker cavity tree status for 2013 on the Sam D. Hamilton Noxubee National Wildlife Refuge, Brooksville, Mississippi.

Cluster	New Tree #	Old Tree #	Status	Activity	GPS Coordinates (UTM 16 N)		Notes
					Northing	Easting	
90 Cont.	335	new tree	start	inactive	3694524.69	323306.45	
	336	nt2	cavity	inactive	3694536.21	323348.92	
91	348	new insert	insert cavity	inactive	3694817.26	324224.94	all cavity trees are loblolly pine, screened installed in 2012, screened installed in 2012, screened installed in 2012, screened
	349	new insert	insert cavity	inactive	3694824.24	324219.52	
	350	new insert	insert cavity	inactive	3694813.89	324221.32	
	351	new insert	insert cavity	inactive	3694807.64	324236.82	
	352	1	insert cavity	relic	3694865.13	324232.85	
92	463	new insert	insert cavity	inactive	3692770.52	323122.94	installed in 2012, screened in 2013 installed in 2012, screened in 2013 installed in 2012, screened in 2013 all cavity trees are loblolly pine
	464	new insert	insert cavity	inactive	3692781.34	323126.07	
	465	new insert	insert cavity	inactive	3692782.20	323129.19	
	466	4	insert cavity	inactive	3692794.53	323212.77	
	467	1	insert cavity	inactive	3692760.73	323099.90	
93	92	new insert	insert cavity	inactive	3677655.98	332610.61	installed in 2012 all cavity trees are loblolly pine
	93	4	insert cavity	inactive	3677672.78	332613.31	
	94	3	insert cavity	inactive	3677700.47	332589.48	
	95	2	insert cavity	inactive	3677684.13	332637.36	
	96	nt1	insert cavity	inactive	3677688.80	332634.59	
	97	1	insert cavity	inactive	3677720.66	332650.95	
94	53	1	insert cavity	active	3676467.30	329990.10	all cavity trees are loblolly pine 2013 nest tree
	54	nt1	insert cavity	active	3676465.21	330003.61	
	55	2	insert cavity	active	3676471.50	330029.73	
	56	6	insert cavity	active	3676458.67	330066.86	
	57	3	insert cavity	inactive	3676483.46	330074.75	
95	456	2	insert cavity	relic	3690724.00	324478.88	all cavity trees are loblolly pine installed fall of 2011 2013 nest tree
	457	new insert	insert cavity	inactive	3690729.41	324462.72	
	458	1	insert cavity	relic	3690724.78	324504.66	
	459	4	insert cavity	active	3690691.16	324466.18	
	460	3	insert cavity	active	3690667.91	324474.66	
	461	5	cavity	possibly active	3690662.97	324466.13	
	462	6	recently complete cavity	active	3690617.56	324468.18	
96	0	1	insert cavity	relic	3687890.83	327496.01	all cavity trees are loblolly pine inserts not grown over were screened
	0	3	insert cavity	relic	3687938.61	327459.67	
	0	5	cavity	relic	3687770.45	327487.88	
	0	nt1	cavity	relic	3687757.15	327464.52	
97	0	1	insert cavity	relic	3687694.03	326803.90	all cavity trees are loblolly pine inserts not grown over were screened
	0	2	insert cavity	relic	3687726.99	326805.90	
	0	3	insert cavity	relic	3687750.15	326800.72	
	0	4	insert cavity	relic	3687725.73	326788.66	

Table 3. Red-cockaded woodpecker cavity tree status for 2013 on the Sam D. Hamilton Noxubee National Wildlife Refuge, Brooksville, Mississippi.

					GPS Coordinates (UTM 16 N)		Notes
Cluster	New Tree #	Old Tree #	Status	Activity	Northing	Easting	
98	0	1	insert cavity	relic	3688382.82	324728.80	all cavity trees are loblolly pine inserts not grown over were screened
	0	2	insert cavity	relic	3688407.85	324744.92	
	0	3	insert cavity	relic	3688434.44	324710.81	
	0	4	insert cavity	relic	3688475.62	324735.20	
99	0	1	insert cavity	relic	3687928.02	328148.10	all cavity trees are loblolly pine inserts not grown over were screened
	0	2	insert cavity	relic	3687931.63	328130.47	
	0	3	insert cavity	relic	3687889.25	328110.58	
	0	4	insert cavity	relic	3687882.06	328132.94	
100	281	nt2	start	active	3678005.18	328151.19	all cavity trees are loblolly pine 2013 nest tree
	282	7	cavity	relic	3677966.16	328218.01	
	283	4	insert cavity	relic	3677909.51	328309.56	
	284	1	insert cavity	relic	3677951.17	328300.31	
	285	8	insert cavity	relic	3677824.66	328278.02	
	286	10	insert cavity	inactive	3678029.28	328135.02	
	287	9	advanced start	active	3678026.31	328133.15	
	288	3	insert cavity	active	3678029.37	328103.19	
	289	2	advanced start	inactive	3678030.56	328102.02	
	290	new tree	start	active	3678040.07	328108.96	
	291	5	insert cavity	active	3678041.56	328098.94	
	292	new tree	start	active	3678060.10	328084.73	
	293	new tree	start	active	3678063.10	328078.18	
	294	8	insert cavity	active	3677993.73	328140.54	
	512	new tree	advanced start	active	3678038.67	328142.88	
	513	new tree	advanced start	active	3677982.00	328072.50	
101	337	4	insert cavity	relic	3694076.44	322866.63	all cavity trees are loblolly pine screened in 2013 installed fall of 2011; screened in 2013 screened in 2013 installed fall of 2011; screened in 2013
	338	3	advanced start	relic	3694087.94	322795.30	
	339	2	insert cavity	relic	3694068.14	322772.65	
	340	nt3	start	inactive	3694169.75	322895.55	
	341	nt2	insert cavity	inactive	3694143.82	322912.15	
	342	new insert	insert cavity	inactive	3694141.10	322915.03	
	343	nt1	insert cavity	inactive	3694134.15	322923.92	
	344	new insert	insert cavity	inactive	3694136.12	322934.61	
	345	nt4	cavity	relic	3694213.70	322923.60	
	346	6	insert cavity	relic	3694119.60	322918.76	
	347	5	insert cavity	relic	3694108.78	322896.69	
102	474	new insert	insert cavity	inactive	3682649.47	335445.38	installed fall of 2011
	475	4	insert cavity	relic	3682655.49	335440.01	installed fall of 2011
	476	new insert	insert cavity	inactive	3682666.86	335440.63	

Table 3. Red-cockaded woodpecker cavity tree status for 2013 on the Sam D. Hamilton Noxubee National Wildlife Refuge, Brooksville, Mississippi.

					GPS Coordinates (UTM 16 N)			
Cluster	New Tree #	Old Tree #	Status	Activity	Northing	Easting	Notes	
102 Cont.	477	1	insert cavity	inactive	3682672.35	335438.98	all cavity trees are loblolly pine	
	478	2	insert cavity	relic	3682699.17	335457.76		
	479	3	insert cavity	inactive	3682704.66	335474.28		pileated woodpecker damage
103	196	nt1	cavity	active	3682171.74	326658.15	all cavity trees are loblolly pine installed in 2011	
	197	new insert	insert cavity	active	3682169.89	326679.94		
	198	19	cavity	inactive	3682172.66	326734.69		
	199	26	insert cavity	active	3682147.99	326751.26		
	201	15	insert cavity	relic	3682118.43	326773.09		
	202	25	insert cavity	possibly active	3682177.49	326820.09		
	203	6	cavity	relic	3682181.53	326813.13		
	204	9	cavity	relic	3682185.24	326894.05		
	205	7	cavity	relic	3682227.76	326920.25		
	206	28	cavity	relic	3682273.49	326905.12		
	207	5	cavity	relic	3682243.06	326822.18		
	208	725	cavity	relic	3682232.57	326657.85		
	503		recently complete cavity	active	3682168.21	326791.05		2013 nest tree
	505		advanced start	active	3682181.65	326854.20		
	552		advanced start	active	3682189.66	326806.81		
104	371	3	insert cavity	active	3682979.06	331558.06	all cavity trees are loblolly pine	
	372	nt1	insert cavity	active	3683017.07	331595.02		
	373	11	cavity	inactive	3683046.37	331580.49		
	374	new tree	start	active	3683036.30	331616.92		
	375	new tree	advanced start	active	3683040.24	331622.03		
	376	708	insert cavity	relic	3683049.24	331631.33		
	377	1	cavity	relic	3683037.85	331632.42		
	378	nt2	cavity	active	3683011.77	331628.53		
	379	12	cavity	active	3683019.85	331653.11		2013 nest tree healed over healed over healed over
	380	10	cavity	relic	3682966.73	331625.86		
	381	5	cavity	relic	3682956.72	331612.62		
	382	709	cavity	relic	3682955.39	331607.76		
	504	new tree	advanced start	active	3683029.82	331639.27		
105	209	1	insert cavity	inactive	3680753.30	325630.59	all cavity trees are loblolly pine installed April 2012 installed April 2012 installed April 2012	
	210	new insert	insert cavity	inactive	3680703.00	325651.13		
	211	new insert	insert cavity	inactive	3680691.76	325652.96		
	212	new insert	insert cavity	inactive	3680684.47	325639.69		
	213	4	insert cavity	relic	3680649.43	325627.73		
	214	3	insert cavity	relic	3680690.15	325613.20		
	215	2	insert cavity	relic	3680726.95	325654.28		

Table 3. Red-cockaded woodpecker cavity tree status for 2013 on the Sam D. Hamilton Noxubee National Wildlife Refuge, Brooksville, Mississippi.

Cluster	New Tree #	Old Tree #	Status	Activity	GPS Coordinates (UTM 16 N)		Notes
					Northing	Easting	
106	383	7	insert cavity	relic	3680746.68	331644.07	all cavity trees are loblolly pine
	384	nt1	cavity	active	3680763.58	331644.76	
	385	8	insert cavity	relic	3680761.62	331671.86	
	386	2	cavity	relic	3680780.64	331612.07	
	387	4	insert cavity	active	3680769.36	331607.63	
	388	754	insert cavity	relic	3680748.48	331598.75	
	389	5	insert cavity	active	3680738.88	331603.38	
	390	3	insert cavity	inactive	3680726.43	331595.99	
	391	nt3	cavity	possibly active	3680679.10	331830.61	
	392	nt2	recently complete cavity	possibly active	3680673.17	331801.87	
107	226	new insert	insert cavity	active	3681354.79	328866.60	installed fall of 2011; 2013 nest tree all cavity trees are loblolly pine installed in 2011 insert replaced in 2011
	227	nt1	start	possibly active	3681353.98	328874.45	
	228	2	insert cavity	active	3681362.14	328871.11	
	229	new insert	insert cavity	active	3681348.95	328869.13	
	230	1	insert cavity	active	3681342.31	328866.59	
	231	9	insert cavity	active	3681337.90	328856.38	
	232	5	insert cavity	relic	3681330.63	328860.40	
	233	8	advanced start	inactive	3681292.07	328849.21	
	234	3	insert cavity	missing from tree	3681382.82	328881.90	
	235	4	insert cavity	inactive	3681430.31	328887.55	
108	0	1	insert cavity	relic	3680101.73	323890.52	all cavity trees are loblolly pine inserts not grown over were screened
	0	2	insert cavity	relic	3680094.31	323901.59	
	0	3	insert cavity	relic	3680068.67	323852.96	
	0	4	insert cavity	relic	3680112.99	323938.42	
109	0	1	insert cavity	relic	3682516.18	334543.03	all cavity trees are loblolly pine inserts not grown over were screened
	0	3	insert cavity	inactive	3682482.44	334573.60	
	0	4	cavity	inactive	3682443.11	334651.57	
	0	5	start	relic	3682555.66	334576.90	
	0	7	start	relic	3682496.51	334549.41	
	0	9	insert cavity	relic	3682484.03	334555.43	
	0	719	insert cavity	relic	3682509.11	334570.81	
110	244	7	cavity	active	3679394.24	330213.94	2013 nest tree all cavity trees are loblolly pine
	245	9	insert cavity	active	3679401.92	330206.09	
	246	new substart	substart	active	3679439.87	330210.65	
	247	2	insert cavity	relic	3679456.22	330185.25	
	248	3	insert cavity	inactive	3679462.11	330175.93	
	249	10	insert cavity	active	3679486.14	330145.66	
	250	8	insert cavity	active	3679476.22	330191.83	

Table 3. Red-cockaded woodpecker cavity tree status for 2013 on the Sam D. Hamilton Noxubee National Wildlife Refuge, Brooksville, Mississippi.

Cluster	New Tree #	Old Tree #	Status	Activity	GPS Coordinates (UTM 16 N)		Notes
					Northing	Easting	
110 Cont.	251	1	cavity	relic	3679595.90	330318.64	
	269	1a	cavity	relic	3679350.36	330361.34	
112	38	16	cavity	active	3676565.20	331567.03	2013 nest tree all cavity trees are loblolly pine healed over
	39	4	insert cavity	relic	3676549.38	331564.63	
	40	14	insert cavity	inactive	3676546.86	331584.24	
	41	3	insert cavity	relic	3676510.34	331547.41	
	42	2	insert cavity	relic	3676477.09	331533.26	
	43	5	cavity	relic	3676447.31	331533.76	
	44	6	cavity	relic	3676422.19	331539.39	
	45	12	cavity	relic	3676448.29	331508.66	
	46	15	insert cavity	active	3676517.71	331496.99	
	47	14	cavity	active	3676539.47	331504.39	
	48	1	insert cavity	relic	3676566.62	331510.47	
	49	10	cavity	relic	3676573.54	331523.88	
	50	13	start	relic	3676579.06	331526.57	
	51	8	cavity	relic	3676609.49	331540.74	
	52	9	insert cavity	active	3676584.60	331502.90	
	496	new tree	start	active	3676549.56	331626.65	
113	130	3	insert cavity	active	3678605.67	326905.31	all cavity trees are loblolly pine 2013 nest tree drilled a drain hole drilled a drain hole
	131	6	insert cavity	possibly active	3678591.86	326915.81	
	132	nt2	cavity	active	3678579.67	326925.34	
	133	5	insert cavity	relic	3678575.07	326923.34	
	134	nt6	cavity	active	3678578.54	326895.46	
	135	nt5	advanced start	active	3678573.02	326885.41	
	136	8	start	active	3678563.69	326883.15	
	137	1	insert cavity	relic	3678570.74	326878.21	
	138	7	insert cavity	active	3678607.86	326873.43	
	139	nt3	cavity	active	3678590.27	326833.86	
	140	nt4	cavity	inactive	3678575.06	326845.75	
	141	2	insert cavity	relic	3678506.77	326891.76	
	142	nt1	advanced start	inactive	3678621.37	326941.40	
114	216	nt2	recently complete cavity	active	3678661.88	329001.75	2013 nest tree all cavity trees are loblolly pine
	217	9	cavity	inactive	3678703.72	329009.82	
	218	11	cavity	active	3678698.34	328983.83	
	219	20	insert cavity	inactive	3678685.08	328974.86	
	220	nt1	insert cavity	possibly active	3678683.61	328952.26	
	221	2	insert cavity	inactive	3678742.80	328960.81	
	222	6	insert cavity	active	3678747.21	328972.51	

Table 3. Red-cockaded woodpecker cavity tree status for 2013 on the Sam D. Hamilton Noxubee National Wildlife Refuge, Brooksville, Mississippi.

Cluster	New Tree #	Old Tree #	Status	Activity	GPS Coordinates (UTM 16 N)		Notes
					Northing	Easting	
114 Cont.	223	12	cavity	active	3678764.90	328950.94	
	224	7	cavity	relic	3678783.16	328991.06	
	225	8	insert cavity	relic	3678753.75	328991.67	
116	271	9	insert cavity	inactive	3679867.63	331418.53	all cavity trees are loblolly pine installed in 2011; needs replacement 2013 nest tree
	272	12	insert cavity	inactive	3679849.39	331411.19	
	273	new insert	insert cavity	active	3679837.47	331413.67	
	274	nt1	insert cavity	active	3679838.33	331432.63	
	275	6	cavity	active	3679844.61	331452.42	
	276	5	insert cavity	active	3679838.36	331458.49	
	277	2	insert cavity	relic	3679857.85	331459.14	
	278	4	insert cavity	relic	3679878.47	331430.25	
	279	11	cavity	relic	3680033.03	331464.59	
	280	10	cavity	relic	3680048.28	331448.74	
	502	new tree	advanced start	active	3679916.91	331450.98	
117	33	1	insert cavity	relic	3677804.50	331788.66	all cavity trees are loblolly pine 2013 nest tree
	34	9	insert cavity	active	3677821.19	331784.97	
	35	4	insert cavity	relic	3677807.07	331762.63	
	36	8	insert cavity	active	3677828.15	331799.72	
	37	5	insert cavity	relic	3677862.35	331815.14	
	497	new tree	advanced start	active	3677830.97	331732.78	
118	98	nt1	start	inactive	3677876.84	331075.26	shortleaf pine all other cavity trees are loblolly pine installed in 2012 installed in 2012 installed in 2012 insert installed 2013 healed over
	99	2	insert cavity	inactive	3677916.58	331053.48	
	100	new insert	insert cavity	inactive	3677918.37	331043.36	
	101	new insert	insert cavity	inactive	3677925.47	331038.28	
	102	new insert	insert cavity	inactive	3677916.57	331033.62	
	103	7	cavity	relic	3677919.44	331027.28	
	104	1	insert cavity	inactive	3677917.94	331069.69	
	105	5	cavity	relic	3677921.51	331077.15	
	106	14	start	relic	3677923.64	331084.71	
	107	16	insert cavity	inactive	3677937.84	331091.90	
	108	15	cavity	relic	3677940.07	331103.69	
	110	9	insert cavity	inactive	3678000.62	331098.08	
	111	17	start	relic	3678013.84	331075.90	
119	481	new insert	insert cavity	inactive	3682745.01	328567.12	all cavity trees are loblolly pine all cavities not blown out by PIWO were screened
	544	1	insert cavity	relic	3682780.83	328677.69	
	545	6	insert cavity	relic	3682779.51	328630.84	
	546	5	insert cavity	relic	3682752.36	328628.76	
	547	7	start	relic	3682765.02	328591.95	

Table 3. Red-cockaded woodpecker cavity tree status for 2013 on the Sam D. Hamilton Noxubee National Wildlife Refuge, Brooksville, Mississippi.

Cluster	New Tree #	Old Tree #	Status	Activity	GPS Coordinates (UTM 16 N)		Notes
					Northing	Easting	
119 Cont.	548	9	insert cavity	inactive	3682739.85	328577.63	
	549	10	insert cavity	inactive	3682731.86	328560.10	
	550	20	start	inactive	3682768.27	328570.21	
	551	8	cavity	inactive	3682718.29	328583.51	
120	0	1	insert cavity	relic	3691762.73	322511.88	all cavity trees are loblolly pine
	0	2	start	relic	3691786.09	322539.66	
	0	4	insert cavity	relic	3691758.40	322550.04	
	0	5	cavity	relic	3691790.34	322542.48	
	0	6	insert cavity	relic	3691752.65	322536.70	
	0	7	insert cavity	inactive	3691737.64	322527.51	
	0	9	cavity	relic	3691856.65	322528.16	
	554	new insert	insert cavity	inactive	3691748.47	322551.16	
	555	new insert	insert cavity	inactive	3691766.41	322527.53	
	556	new insert	insert cavity	inactive	3691739.35	322541.08	installed in 2011; screened installed in 2011; screened installed in 2011; screened installed in 2011; screened
	557	new insert	insert cavity	inactive	3691735.53	322545.69	
	0	nt1	insert cavity	relic	3691767.07	322541.05	
122	58	2	insert cavity	relic	3676628.80	327118.18	all cavity trees are loblolly pine 2013 nest tree - PIWO damage installed in 2011 installed in 2011 installed in 2011
	59	nt1	insert cavity	active	3676641.68	327139.04	
	60	new insert	insert cavity	active	3676648.68	327137.53	
	61	new insert	insert cavity	active	3676651.78	327133.85	
	62	new insert	insert cavity	possibly active	3676654.06	327137.60	
	63	nt3	cavity	inactive	3676609.29	327166.10	replacement insert installed in 2013
	64	nt4	cavity	relic	3676608.73	327199.73	
	65	4	insert cavity	inactive	3676595.20	327160.18	
	66	3	insert cavity	relic	3676590.53	327142.70	
	67	nt2	insert cavity	inactive	3676566.42	327162.28	
	489	new tree	start	active	3676704.81	327169.80	
	801	new tree	advanced start	active	3676595.69	327129.13	
	802	new tree	advanced start	active	3676602.96	327120.70	
	803	new tree	advanced start	active	3676572.23	327057.17	
123	408	9	cavity	relic	3680927.14	328312.44	all cavity trees are loblolly pine 2013 nest tree
	409	12	cavity	active	3680986.62	328204.50	
	410	nt1	cavity	active	3681026.28	328127.34	
	411	new tree	cavity	active	3681008.83	328092.21	
	412	10	insert cavity	active	3680941.13	328199.28	
	413	2	insert cavity	inactive	3680943.12	328187.44	
	414	new start	start	inactive	3680914.60	328221.31	
	415	13	insert cavity	active	3680913.60	328230.95	

Table 3. Red-cockaded woodpecker cavity tree status for 2013 on the Sam D. Hamilton Noxubee National Wildlife Refuge, Brooksville, Mississippi.

Cluster	New Tree #	Old Tree #	Status	Activity	GPS Coordinates (UTM 16 N)		Notes
					Northing	Easting	
123 Cont.	416	4	insert cavity	relic	3680929.21	328241.98	
	506	new tree	start	active	3680962.26	328209.07	
	507	new tree	advanced start	active	3680904.79	328307.21	
	508	new tree	advanced start	active	3680912.78	328315.76	
	509	new tree	start	active	3680928.88	328218.96	
126	236	7	insert cavity	relic	3682898.13	329676.63	all cavity trees are loblolly pine 2013 nest tree
	237	6	insert cavity	inactive	3682908.77	329662.05	
	238	10	cavity	relic	3682921.66	329648.56	
	239	8	cavity	active	3682928.33	329643.04	
	240	12	insert cavity	active	3682912.72	329636.39	
	241	11	insert cavity	inactive	3682942.11	329621.09	
	242	5	insert cavity	relic	3682973.85	329630.68	
	243	4	start	relic	3683018.96	329673.21	
127	493	2	insert cavity	inactive	3676503.84	332002.65	all cavity trees are loblolly pine
	542	3	insert cavity	inactive	3676526.94	332004.58	
	543	nt1	insert cavity	inactive	3676479.67	331993.63	
128	368	2	insert cavity	relic	3693140.15	324718.64	all cavity trees are loblolly pine beehive in base of tree
	369	3	insert cavity	relic	3693180.90	324724.78	
	370	1	insert cavity	relic	3693125.88	324734.08	
129	322	8	advanced start	inactive	3693678.60	324987.33	all cavity trees are loblolly pine intalled in 2013
	323	5	insert cavity	inactive	3693689.12	324920.58	
	324	6	insert cavity	active	3693702.56	324879.47	
	325	nt2/7	advanced start	inactive	3693690.51	324872.62	
	326	9	cavity	active	3693692.70	324810.80	
	327	nt3	cavity	active	3693611.53	324844.95	
	328	nt1	cavity	relic	3693470.56	325055.37	
	480	new tree	insert cavity	active	3693640.23	324825.44	

* nt = new tree

Color denotes tree not tagged/painted

Table 4. Southern flying squirrel issues in 2013 by RCW cluster, Sam D. Hamilton Noxubee National Wildlife Refuge, Brooksville, MS.

Cluster #	Cluster Activity Status	RCW Successfully Nested/Fledged Y/N	# Glvos Removed - January (with tree #)	# Glvos Removed - Breeding Season (with tree #)	Notes/ total Glvos euthanized
1	Abandoned				
3	Abandoned				
4	Abandoned				
6	Active	Y		164 - 7 euthanized 174 - 1 euthanized	8
7	Active	Y	302 - 3 euthanized 304 - 1 euthanized	299 - 5 euthanized 304 - 5 euthanized 302 - 5 euthanized, 1 escaped	19
8	Active	N (nest failed)		126 - 6 euthanized 118 - 5 euthanized 115 - 4 euthanized	15
13	Active	Y			
14	Active	Y		452 - 2 euthanized	2
15	Active	N (nest failed)	184 - 3 euthanized	195 - 6 euthanized 189 - 5 euthanized	14
17	Active	Y	265 - 1 euthanized	257 - 1 euthanized, 1 escaped 261 - nest material 265 - 2 euthanized 267 - 3 euthanized, 1 escaped	7
19	Active	Y		155 - 5 euthanized, 1 escaped	5
23	Active	N/A		82 - 3 euthanized 85 - 3 euthanized, 4 escaped	6
27	Active	N (did not fledge)	315 - 3 euthanized 319 - 1 euthanized	319 - 11 euthanized	15
28	Active	N/A	22 - 2 euthanized, 2 escaped	20 - nest material 22 - nest material	2
37	Active	Y		421 - 2 euthanized 425 - 1 euthanized	3
48	Abandoned				
54	Inactive				
60	Inactive - RC			26 - nest material others = wasps	
79	Abandoned				
80	Inactive - RC			482 - nest material 483 - nest material 9 - nest material/nuts 13 - nest material/nuts 484 - rat snake, nest material	

Table 4. Southern flying squirrel issues in 2013 by RCW cluster, Sam D. Hamilton Noxubee National Wildlife Refuge, Brooksville, MS.

Cluster #	Cluster Activity Status	RCW Successfully Nested/Fledged Y/N	# Glvos Removed - January (with tree #)	# Glvos Removed - Breeding Season (with tree #)	Notes/ total Glvos euthanized
82	Active	N (did not fledge)	3 - 4 euthanized	3 - 4 euthanized 1 - 12 euthanized, 1 escaped	20
88	Inactive - RC				
89	Inactive - RC				
90	Inactive	Screened			
91	Inactive	Screened			
92	Inactive	Screened			
93	Inactive - RC				
94	Active	Y		53 - 3 euthanized 54 - 1 euthanized 55 - 10 euthanized 57 - nuts	14
95	Active	Y		457 - 4 euthanized	4
96	Abandoned				
97	Abandoned				
98	Abandoned				
99	Abandoned				
100	Active	N (did not fledge)		294 - 1 euthanized	1
101	Inactive	Screened			
102	Inactive	Screened			
103	Active	Y	199 - 3 euthanized	196 - 3 euthanized 197 - 5 euthanized, 1 escaped 199 - 4 euthanized, 3 escaped	15
104	Active	Y		372 - 4 euthanized	4
105	Inactive-RC				
106	Active	N (no nest found)		392 - 4 euthanized, nest material 391 - 3 euthanized, 1 escaped 384 - 4 euthanized, nest material 387 - 8 euthanized, 2 escaped	19
107	Active	Y	226 - 3 euthanized 231 - 1 euthanized	231 - nest material 229 - other species' nest	4
108	Abandoned	Screened			
109	Abandoned	Screened			
110	Active	Y	244 - 2 euthanized 250 - 1 euthanized	244 - 10 euthanized 249 - 4 euthanized	17
111	Abandoned				
112	Active	Y		38 - 7 euthanized	7

Table 4. Southern flying squirrel issues in 2013 by RCW cluster, Sam D. Hamilton Noxubee National Wildlife Refuge, Brooksville, MS.

Cluster #	Cluster Activity Status	RCW Successfully Nested/Fledged Y/N	# Glvos Removed - January (with tree #)	# Glvos Removed - Breeding Season (with tree #)	Notes/ total Glvos euthanized
113	Active	Y		131 - 2 euthanized 130 - 8 euthanized 139 - 3 euthanized	13
114	Active	Y		220 - 2 euthanized 217 - 12 euthanized 218 - 10 euthanized 223 - 3 euthanized 200 - 1 euthanized	28
116	Active	Y		272 - 11 euthanized 273 - 3 euthanized 274 - 8 euthanized	22
117	Active	Y	34 - 4 euthanized	34 - 6 euthanized	10
118	Inactive - RC			102 - 2 euthanized	2
119	Inactive	Screened			
120	Inactive	Screened			
121	Abandoned				
122	Active	Y		65 - 6 euthanized	6
123	Active	Y		410 - 5 euthanized	5
124	Abandoned				
126	Active	Y		237 - 3 euthanized	3
127	Inactive	Screened			
128	Abandoned				
129	Active	N (solitary male)	326 - 4 euthanized		4
Total			36	258 = euthanized 16 = escaped	294

* Glvo = *Glaucomys volans*, Southern Flying Squirrel
RC = Recruitment Cluster

Appendix 1. Habitat management and/or maintenance recommendations

Active Noxubee (NOX) RCW clusters that could benefit from habitat maintenance:

NOX 15 – Prescribed burn to keep re-growth of mid-story out of cleared areas.

NOX 19 – Prescribed burn to keep re-growth of mid-story out of cleared areas.

NOX 23 – Remove large hardwoods within the main cluster area.

NOX 27 – Prescribed burn to keep re-growth of mid-story out of cleared areas.

NOX 37 - Treat pine regeneration and hardwoods mechanically or chemically if response to Prescribed burning is inadequate.

NOX 94 – Removal of large hardwoods is recommended, especially those in close proximity to RCW cavity trees.

NOX 95 - Treat hardwoods mechanically or chemically and prescribed burn.

NOX 103 – Needs continued prescribed burning to keep re-growth of mid-story out of cleared areas.

NOX 104 - Treat hardwoods mechanically or chemically that are growing between the 2 groups of cavity trees.

NOX 106 – Prescribed burn to keep re-growth of mid-story out of cleared areas.

NOX 116 – Continue prescribed burning to keep re-growth of mid-story out of cleared areas.

NOX 117 - Treat pine regeneration and hardwoods mechanically or chemically.

NOX 126 - Mechanically or chemically treat hardwoods – desperately needed here.

Inactive NOX RCW clusters in need of habitat maintenance:

NOX 88 - Treat pine regeneration and hardwoods mechanically or chemically.

NOX 89 - Treat pine regeneration and hardwoods mechanically or chemically.

NOX 93 - Treat pine regeneration and hardwoods mechanically or chemically.

For all clusters, we suggest treating pine regeneration and hardwoods mechanically or chemically within a 50-foot radius of all cavity trees. Where possible, clear the understory between cavity trees. Post-understory treatment, prescribe burn when there's enough fuel on the ground.