

ALABAMA WATERFOWL SURVEY

ANNUAL REPORT, 2012-2013

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Federal Aid Project

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ALABAMA DIVISION OF WILDLIFE AND FRESHWATER  
FISHERIES

WILDLIFE RESTORATION PROGRAM

Grant Number W-35, Study 1

## 2012-2013 ANNUAL WATERFOWL REPORT

STATE: Alabama

Grant Number: W-35

Time Period: July 1, 2012-June 30, 2013

GRANT TYPE: Surveys and Inventories

GRANT TITLE: Statewide Wildlife Research and Surveys

STUDY I: WATERFOWL RESEARCH AND SURVEYS

Study Objective: To determine waterfowl population characteristics and harvest information needed to plan management of ducks and geese in Alabama.

Job I-A. Title: Cooperative Waterfowl Banding

Job Objective: To band waterfowl in accordance with assigned quotas.

Activity: Attempts to trap and band wood ducks were carried out during the summer of 2012 at the following locations in Alabama:

- Near Tanner in Limestone County
- Near Decatur in Morgan County
- Near Stevenson in Jackson County
- Near Leighton in Colbert County
- Near Florence in Lauderdale County
- Near Guin in Marion County
- Near Demopolis in Greene County
- Near Marion in Perry County
- Near Goodwater in Coosa County
- Near Midway in Barbour County
- Near Opp in Covington County
- Near Bay Minnette in Baldwin County

A total of 517 wood ducks were banded this year with most birds being collected at the Limestone County site. The banding quota recommended for our agency in the Banding Needs document is 500. The classification of birds banded during the 2012 banding season is outlined in Table 1.

Table 1. Number of Wood Ducks Banded by Sex and Age During the 2012 Banding Season.

<u>Age</u>	<u>Sex</u>	<u>Number</u>
AHY	M	89
AHY	F	73
HY	M	203
HY	F	142
HY	U	8
U	F	2

Remarks: Efforts to trap and band wood ducks were repeated in more locations than in past years. Banders in many areas had difficulties on trap sites due to high levels of non-target species such as feral hogs, squirrels, raccoons, and coyotes keeping the wood ducks from the bait site. Trapping efforts will continue to be expanded to other sites in Alabama for the 2013 trapping season.

Recommendations: This project will incorporate additional banding sites in order to continue to meet the quota set for our agency. Additionally, different trapping methods such as floating traps, rocket nets, above-water platform traps and traps partially submerged in water will be investigated.

Job I-B. Title: Survey of Waterfowl Hunting Activity

Job I-B. Objective: To monitor waterfowl harvest trends and hunter activity on the major waterfowl wintering areas within Alabama.

Activity: Waterfowl hunter bag checks were made at the checking stations on the Tennessee River public hunting areas and at private duck hunting properties and in the Mobile Delta at selected times during the waterfowl season. Information regarding the hunter bag checks conducted during the past 10 years is summarized in Table 2.

Table 2: Duck Hunting Activity Comparison for the Tennessee River and Mobile Bay/Delta Areas for the Past 10 Years.

Hunting Season	Tennessee River		Mobile Bay & Delta	
	Average Hours/Trip	Average Ducks/Trip	Average Hours/Trip	Average Ducks/Trip
12-13	3.7	0.87	3.0	2.1
11-12	3.2	1.8	3.3	2.1
10-11	3.3	1.6	3.6	1.5
09-10	3.6	1.8	3.3	1.3
08-09	3.8	1.3	3.1	1.6
07-08	4.1	1.0	2.9	1.2
06-07	3.7	0.6	3.2	0.9
05-06	4.5	1.6	3.8	1.9
04-05	3.1	1.6	3.4	1.0
03-04	3.1	2.3	2.7	1.4

The composition of the Alabama duck harvest by species for 2012-2013 is contained in Table 3. Historical duck hunting activity in the Tennessee River and Mobile Bay and Delta is summarized in Table 4. The composition of the Alabama duck hunting harvest by percent for 1980s, 1990s, 2000s, 2010s is contained in Tables 5, 6, 7, and 8 for Tennessee Valley and 9, 10, 11 and 12 for Mobile Delta.

Table 3. Percentage of Ducks by Species in the Alabama Hunter Bag Checks Conducted During the 2012-2013 Season on the Tennessee River and Mobile Bay and Delta.

	Tennessee River	Mobile Bay and Delta
	%	%
Mallard	11.5	0.5
Black Duck	0.4	0.0
Gadwall	32.4	22.9
Wigeon	1.5	0.9
GW Teal	3.3	2.4
Pintail	0.7	0.2
Canvasback	0.6	0.0
Scaup	3.5	53.5
Ringneck	19.0	0.0
Wood Duck	18.1	2.3
Goldeneye	0.3	0.2
Bufflehead	0.5	2.1
Merganser	1.5	0.0
BW Teal	1.1	1.6
Shoveler	3.7	5.8
Ruddy Duck	0.5	0.5
Redhead	1.4	6.7
Mottled Duck	0.0	0.4



Table 4 Continued. Historical Duck Hunting Activity Comparison for the Tennessee River and Mobile Bay and Delta Areas

Decade of the 1980's	Tennessee River		Mobile Bay and Delta	
	Average Trip Hours	Average Harvest/Trip	Average Trip Hours	Average Harvest/Trip
89-90	4.8	1.1	3.5	1.8
88-89	4.9	.6	2.8	1.5
87-88	4.8	.8	3.6	2.0
86-87	4.7	.6	4.4	1.1
85-86	4.7	.7	3.8	2.4
84-85	4.5	.7	4.8	3.5
83-84	5.0	1.0	3.6	1.4
82-83	4.9	.6	4.0	2.7
81-82	4.5	.6	4.0	3.0
80-81	4.8	.6		1.6
Low Value for Decade	4.5	.6	2.8	1.1
High Value for Decade	5.0	1.1	4.8	3.5
Average	4.8	.7	3.8	2.1

Table 5. Percentage of Ducks by Species in the Alabama Hunter Bag Checks Conducted During the Decade of the 2010's on the Tennessee River.

Season	19-20	18-19	17-18	16-17	15-16	14-15	13-14	12-13	11-12	10-11	3 Yr. Avg
# hunters checked								<u>3482</u>	747	1054	1761
# ducks checked								<u>3025</u>	1346	1707	2026
Mallard								11.5	6.4	17.7	11.9
Black Duck								0.4	0.2	0.9	0.5
Gadwall								32.4	42.6	46.8	40.6
Wigeon								1.5	0.7	1.5	1.2
GW Teal								3.3	2.5	2.5	2.7
Pintail								0.7	0.4	0.6	0.6
Canvasback								0.6	0.5	2.1	1.1
Scaup								3.5	1.8	1.1	2.1
Ringneck								19.0	26.5	10.6	18.7
Wood Duck								18.1	14.0	8.6	13.7
Goldeneye								0.3	0.1	0.3	0.2
Bufflehead								0.5	1.1	1.5	1.0
Merganser								1.5	0.4	2.0	1.3
BW Teal								1.1	0.3	0.3	0.6
Shoveler								3.7	2.4	3.2	3.1
Ruddy Duck								0.5	0.0	0.2	0.2
Redhead								1.4	0.0	0.1	0.5
Mottled Duck								0.0	0.0	0.0	0.0
Oldsquaw								<u>0.0</u>	0.0	0.0	0.0

Table 6. Percentage of Ducks by Species in the Alabama Hunter Bag Checks Conducted During the Decade of the 2000's on the Tennessee River.

Season	09-10	08-09	07-08	06-07	05-06	04-05	03-04	02-03	01-02	00-01	10 Yr. Avg
# hunters checked	1870	1677	1732	1526	2256	1786	830	1232	1817	1314	1537
# ducks checked	3366	1844	1915	936	2734	2887	1868	1195	1611	1763	1856
Mallard	21.5	25.3	9.2	19.0	22.4	13.8	8.6	30.0	32.4	48.2	23.0
Black Duck	1.9	2.0	0.6	1.8	1.1	0.9	1.0	2.4	2.5	2.6	1.6
Gadwall	29.9	23.5	40.8	29.5	25.5	34.1	32.2	14.1	19.1	25.4	27.6
Wigeon	1.5	2.4	1.9	1.5	1.9	5.1	1.6	1.0	2.3	1.9	2.2
GW Teal	5.2	7.0	2.9	5.2	8.0	6.0	1.2	15.5	7.0	8.6	6.8
Pintail	1.1	4.4	0.3	1.5	1.5	2.1	0.6	0.4	1.1	1.7	1.2
Canvasback	1.1	0.0	2.9	0.8	0.1	0.0	0.3	0.0	0.0	0.4	0.6
Scaup	2.5	0.3	0.8	0.5	2.9	3.3	12.6	0.8	1.1	1.4	2.9
Ringneck	25.3	9.2	26.1	29.9	14.0	8.5	28.9	17.1	8.3	3.7	17.1
Wood Duck	4.8	16.2	4.6	4.6	14.0	14.0	2.8	16.2	19.9	2.4	9.8
Goldeneye	0.9	0.9	0.1	1.1	0.6	0.2	0.3	0.0	0.3	0.0	0.3
Bufflehead	1.5	2.0	0.0	1.2	1.2	1.4	1.0	0.4	1.2	0.8	0.9
Merganser	2.0	1.4	1.2	2.4	0.5	2.6	2.9	0.2	1.2	1.0	1.5
BW Teal	0.0	1.0	2.5	0.0	0.7	0.1	2.0	0.4	0.2	0.2	0.8
Shoveler	0.0	2.9	3.9	0.0	3.5	7.1	3.5	1.4	2.5	1.5	2.9
Ruddy Duck	0.0	0.1	0.1	0.0	0.6	0.1	0.0	0.0	0.2	0.1	0.1
Redhead	0.8	1.4	0.6	0.2	1.5	0.7	0.4	0.1	0.7	0.1	0.5
Mottled Duck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oldsquaw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 7. Percentage of Ducks by Species in the Alabama Hunter Bag Checks Conducted During the Decade of the 1990's on the Tennessee River.

Season	99-00	98-99	97-98	96-97	95-96	94-95	93-94	92-93	91-92	90-91	10 Yr. Avg
# hunters checked	1144	1833	1648								
# ducks checked	1015	2392	1725								
Mallard	24.3	38.4	21.0	35.3	30.8	35.7	51.9	31.7	43.0	28.4	34.1
Black Duck	1.7	2.8	1.0	1.3	2.2	2.4	4.8	3.8	7.6	2.1	3.0
Gadwall	23.4	12.5	16.7	16.4	23.2	20.4	13.8	16.8	12.7	17.7	17.4
Wigeon	2.3	2.1	3.1	2.0	2.5	3.1	0.9	6.6	3.7	4.5	3.1
GW Teal	15.8	15.8	9.0	5.1	8.4	7.4	6.6	3.9	5.2	8.9	8.6
Pintail	1.2	2.7	5.3	1.9	1.5	3.5	1.7	3.2	0.8	1.3	2.3
Canvasback	0.2	0.5	0.3	0.1	0.8	0.1	0.0	0.0	0.0	0.1	0.2
Scaup	3.6	2.8	3.8	1.2	1.4	0.7	1.1	4.2	0.5	1.5	2.1
Ringneck	6.9	10.4	15.1	13.4	6.9	9.5	5.3	15.6	3.0	9.2	9.5
Wood Duck	7.7	4.6	13.5	15.8	11.6	9.1	5.9	6.5	15.5	11.3	10.2
Goldeneye	1.2	1.1	1.5	1.4	1.9	1.0	1.1	0.9	2.1	3.0	1.5
Bufflehead	3.2	1.4	1.5	1.0	3.6	0.9	1.2	2.0	2.3	3.9	2.1
Merganser	1.5	2.3	2.0	1.8	1.6	2.2	1.8	3.1	2.6	3.5	2.2
BW Teal	0.4	0.1	1.3	0.4	0.6	0.3	0.0	0.0	0.0	0.0	0.3
Shoveler	5.5	3.8	4.3	2.2	2.2	3.4	3.9	1.7	0.8	4.1	3.2
Ruddy Duck	0.6	0.2	0.7	0.9	0.2	0.1	0.0	0.0	0.0	0.5	0.3
Redhead	0.5	0.4	0.6	0.5	0.2	0.2	0.0	0.0	0.1	0.0	0.3
Mottled Duck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oldsquaw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 8. Percentage of Ducks by Species in the Alabama Hunter Bag Checks Conducted During the Decade of the 1980's on the Tennessee River.

Season	89-90	88-89	87-88	86-87	85-86	84-85	83-84	82-83	81-82	80-81	10 Yr. Avg
Mallard	32.7	40.8	23.4	41.1	28.7	41.7	64.5	44.4	32.0	34.3	38.4
Black Duck	4.6	4.1	2.0	2.7	4.4	3.8	5.6	4.7	2.0	4.6	3.9
Gadwall	10.1	3.9	7.2	2.8	4.6	4.0	4.4	5.9	4.1	7.9	5.5
Wigeon	5.0	3.0	5.9	3.4	7.4	9.0	7.5	4.5	6.5	9.3	6.2
GW Teal	5.3	15.8	22.8	18.2	13.1	2.5	3.4	2.5	3.9	4.8	9.2
Pintail	2.1	4.0	5.8	1.5	5.8	2.3	1.8	2.5	5.1	8.5	3.9
Canvasback	0.0	0.8	0.4	0.1	0.7	1.3	0.7	0.7	1.1	1.6	0.7
Scaup	4.8	5.6	4.1	3.1	5.6	3.1	1.3	3.7	1.3	0.6	3.3
Ringneck	10.1	8.1	12	14.4	16.4	19.4	5.5	7.8	17.9	13.2	12.5
Wood Duck	9.8	1.3	2.4	2.9	5.6	8.3	1.6	17.3	17.9	9.5	7.7
Goldeneye	3.5	2.5	2.4	1.2	1.5	1.1	0.5	1.9	2.3	0.9	1.8
Bufflehead	1.0	3.2	1.3	2.8	1.3	0.6	0.1	0.5	3.5	2.7	1.7
Merganser	0.7	3.3	4.7	3.0	0.9	0.6	0.4	0.8	1.4	0.5	1.6
BW Teal	0.0	0.1	0.4	1.8	0.4	0.5	0.1	0.1	0.3	0.0	0.4
Shoveler	9.5	2.7	4.2	0.3	2.3	0.9	1.8	1.8	0.5	1.1	2.5
Ruddy Duck	0.6	0.7	0.7	0.3	0.7	0.5	0.1	0.1	0.0	0.2	0.4
Redhead	0.2	0.0	0.1	0.6	0.7	0.3	0.8	0.8	0.1	0.2	0.4
Mottled Duck	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oldsquaw	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0

Table 9. Percentage of Ducks by Species in the Alabama Hunter Bag Checks Conducted During the Decade of the 2010's in the Mobile Bay and Delta.

Season	19-20	18-19	17-18	16-17	15-16	14-15	13-14	12-13	11-12	10-11	3 Yr. Avg
# hunters checked								276	297	205	259
# ducks checked								571	632	307	503
Mallard								0.5	0.5	2.0	1.0
Black Duck								0.0	0.0	0.0	0.0
Gadwall								22.9	29.4	40.2	30.8
Wigeon								0.9	1.9	0.0	0.9
GW Teal								2.4	12.7	2.6	5.9
Pintail								0.2	0.3	0.0	0.2
Canvasback								0.0	0.3	0.0	0.1
Scaup								53.5	6.3	13.1	24.3
Ringneck								0.0	0.3	0.9	0.4
Wood Duck								2.3	2.1	33.6	12.7
Goldeneye								0.2	0.0	2.0	0.7
Bufflehead								2.1	7.9	0.0	3.3
Merganser								0.0	0.6	1.3	0.6
BW Teal								1.6	0.9	0.3	0.9
Shoveler								5.8	19.5	2.0	9.1
Ruddy Duck								0.5	2.7	0.0	1.1
Redhead								6.7	13.9	0.0	6.9
Mottled Duck								0.4	0.6	2.0	1.0
Oldsquaw								0.0	0.0	0.0	0.0

Table 10. Percentage of Ducks by Species in the Alabama Hunter Bag Checks Conducted During the Decade of the 2000's in the Mobile Bay and Delta.

Season	09-10	08-09	07-08	06-07	05-06	04-05	03-04	02-03	01-02	00-01	10 Yr. Avg
# hunters checked	211	239	153	289	387	348	300	408	368	178	325
# ducks checked	338	331	252	260	741	344	415	402	676	243	440
Mallard	1.0	0.3	1.0	0.7	0.6	0.3	1.0	2.4	0.3	5.9	1.5
Black Duck	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gadwall	52.8	50.8	43.5	48.5	62.1	59.2	37.8	36.2	49.9	21.8	44.9
Wigeon	3.1	3.1	3.0	1.2	0.9	0.6	2.7	0.5	0.9	3.7	1.7
GW Teal	3.7	3.7	10.3	20.0	14.9	3.2	11.8	13.7	10.1	30.5	14.3
Pintail	0.0	0.0	0.0	0.3	1.5	0.0	0.0	0.0	1.9	1.6	0.7
Canvasback	0.0	0.0	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.8	0.2
Scaup	12.5	13.3	10.3	6.2	5.0	6.4	5.8	25.3	18.0	8.2	10.7
Ringneck	0.0	0.3	4.0	0.7	3.1	5.2	6.3	3.0	4.6	6.6	4.2
Wood Duck	7.3	7.3	8.6	4.2	2.6	11.9	17.3	3.2	1.8	8.6	7.3
Goldeneye	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bufflehead	2.4	3.1	4.7	0.0	0.7	4.1	2.4	5.2	6.2	4.1	3.4
Merganser	2.3	2.3	0.8	0.7	0.3	0.3	0.7	0.2	0.3	0.0	0.4
BW Teal	8.8	8.8	1.7	2.7	0.7	1.5	1.9	0.0	1.8	2.5	1.6
Shoveler	5.9	5.9	1.3	4.2	4.9	3.5	5.1	2.7	0.7	2.0	3.1
Ruddy Duck	0.0	0.0	0.0	0.0	0.3	0.9	0.5	1.2	0.6	0.4	0.6
Redhead	0.0	0.3	8.2	6.9	0.9	0.6	5.3	0.5	2.2	0.4	3.1
Mottled Duck	0.2	0.1	2.2	3.0	1.5	2.3	1.4	5.9	0.7	2.9	2.5
Oldsquaw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 11. Percentage of Ducks by Species in the Alabama Hunter Bag Checks Conducted During the Decade of the 1990's in the Mobile Bay and Delta.

Season	99-00	98-99	97-98	96-97	95-96	94-95	93-94	92-93	91-92	90-91	10 Yr. Avg
# hunters checked	287	201	213								
# ducks checked	565	413	411								
Mallard	3.6	0.5	0.7	3.6	5.2	5.0	7.8	3.9	6.1	10.0	4.6
Black Duck	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.4	3.9	0.5
Gadwall	35.5	19.9	4.6	8.1	6.0	4.6	2.3	4.8	2.4	2.2	9.0
Wigeon	4.1	3.7	1.9	1.1	1.8	7.4	2.0	3.3	0.8	3.1	2.9
GW Teal	28.4	48.2	25.0	15.5	35.0	32.2	34.6	32.7	32.7	27.9	31.2
Pintail	1.6	1.0	1.2	1.3	3.4	2.0	3.8	1.5	2.9	5.2	2.4
Canvasback	1.5	1.7	1.2	1.7	1.1	0.0	0.0	0.0	0.0	0.4	0.8
Scaup	7.5	9.7	17.0	25	4.3	5.8	4.9	19.8	5.7	3.1	10.3
Ringneck	2.3	2.9	14.0	9.2	7.6	7.0	2.6	1.8	8.2	11.8	6.7
Wood Duck	1.8	0.5	1.0	1.4	0.0	3.3	0.0	0.0	0.4	1.3	1.0
Goldeneye	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bufflehead	4.1	2.7	1.4	1.6	1.5	0.0	0.8	3.0	0.0	0.0	1.4
Merganser	1.8	0.5	0.7	0.9	0.2	0.8	1.1	0.6	0.0	0.0	0.7
BW Teal	0.6	3.7	15.0	16.1	11.5	17.0	13.8	17.2	22.0	23.1	14.0
Shoveler	3.8	1.7	10.0	5.2	14.4	2.9	10.5	6.9	9.0	3.5	6.8
Ruddy Duck	1.6	0.3	0.2	1.2	1.1	2.9	2.0	0.0	0.8	2.2	1.2
Redhead	0.7	2.5	1.0	2.6	2.4	3.3	1.7	0.0	0.4	2.2	1.7
Mottled Duck	1.1	1.0	2.9	6.1	4.5	5.8	11.9	4.5	8.2	0.0	4.6
Oldsquaw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 12. Percentage of Ducks by Species in the Alabama Hunter Bag Checks Conducted During the Decade of the 1980's in the Mobile Bay and Delta.

Season	89-90	88-89	87-88	86-87	85-86	84-85	83-84	82-83	81-82	80-81	10 Yr. Avg
Mallard	6.1	14.5	11.8	0.8	0.0	0.9	3.8	8.4	5.1	3.0	5.4
Black Duck	1.7	2.4	0.4	2.7	1.6	0.6	0.3	0.0	0.3	0.0	1.0
Gadwall	5.8	20.8	13.2	15.6	1.6	1.9	6.2	8.1	3.5	14.6	9.1
Wigeon	4.7	6.8	3.2	3.1	0.0	0.3	3.5	4.1	2.7	12.9	4.1
GW Teal	35.3	29.5	29.3	7.0	1.6	20.1	33.2	38.2	41.7	24.6	26.1
Pintail	6.1	3.4	2.0	1.6	0.0	1.3	2.2	2.5	2.9	3.9	2.6
Canvasback	0.0	0.0	0.0	0.1	0.0	0.3	2.5	0.7	0.2	0.0	0.4
Scaup	3.1	5.8	6.9	14.8	88.5	27.9	4.4	0.0	25.3	3.0	18.0
Ringneck	4.2	2.9	5.1	9.4	0.0	3.8	4.9	1.0	1.4	4.5	3.7
Wood Duck	0.6	3.9	1.4	0.0	0.0	8.3	.5	0.3	1.1	3.7	2.0
Goldeneye	0.6	2.5	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.3
Bufflehead	0.6	1.0	1.6	7.8	0.0	0.6	0.3	0.5	0.6	0.0	1.3
Merganser	1.1	2.4	1.0	1.6	0.0	0.6	1.4	0.0	0.3	0.0	.8
BW Teal	24.4	4.8	7.5	9.4	1.6	30.1	17.4	13.5	6.7	7.7	12.3
Shoveler	2.2	1.4	11.4	7.0	0.0	5.3	9.0	5.7	3.0	7.9	5.3
Ruddy Duck	1.9	0.5	0.8	10.2	1.6	4.4	8.5	2.7	4.3	13.9	4.9
Redhead	1.1	0.0	3.5	11.7	3.3	1.6	1.9	0.5	0.8	0.7	2.5
Mottled Duck	0.6	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Oldsquaw	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0

One coot was taken in the Mobile Delta for each 3.7 hunting trips. The Tennessee Valley averaged only one coot taken for each 33.3 hunting trips. The low harvest numbers for coot is not indicative of their availability but shows they are not a desirable species for most hunters in Alabama.

The Gulf Coast of Alabama traditionally receives only sparse and sporadic use by geese. This year only 1 Canada goose was reported harvested.

The goose population of the Tennessee Valley contains two distinct segments, resident Canada geese and migrant Canada geese from the Southern James Bay area of Canada. In recent years the resident geese have expanded their numbers to the point of becoming a nuisance in some areas. Alabama has incorporated an early season to improve management of resident geese. This allows hunters more opportunity in the field and the harvest can serve act as a tool to contain a goose population explosion. The 2012-2013 Special Goose Season was 15 days beginning on September 1st and ending September 15<sup>th</sup>. Success during this season continues to depend on local giant Canada geese populations and increasing hunter participation. Bag checks reflected harvest success estimates during this special season to be 1.8 geese harvested per hunter trip; however, these data are biased considering only a handful of private properties were included in the data set. No Canada geese were reported during the first split of regular Canada goose season, September 22<sup>nd</sup> – October 9<sup>th</sup>, outside the Southern James Bay Population zone. The 2<sup>nd</sup> split of the Canada goose season ran from November 23-24, then December 1<sup>st</sup> through January 27<sup>th</sup> and resulted in 9 Canada geese recorded in the harvest checks. Goose harvest during the regular season increased slightly as compared to the 2011-12 season. In recent years, migrant Canada goose numbers, most of which winter at Wheeler NWR, were at levels well below historical averages. The small, but presently stable, group of Snow geese that winter in Alabama congregates at Wheeler Refuge where there is no open season. Most goose hunting opportunity is presently in the form of hunting resident Canada geese, which by their nature are harvested more frequently during special seasons or early segments of the regular seasons. These seasons are currently growing slowly in popularity and are providing the most substantial portion of the goose harvest in Alabama. Since these seasons were implemented early in the population growth stage of resident Canada geese in the state, the harvest is presently serving somewhat successfully as a control measure, yet remaining small by flyway standards. These “resident” season harvests are not normally subjected to the more drastic harvest swings sometimes associated with weather related migrations of “interiors”. Therefore, harvest will not tend to vary as greatly from year to year. Harvest of geese in Alabama is expected to continue to track the growth and availability of resident goose harvest opportunity within the state. Table 13 is a comparison of hunter activity measured in the number of trips to harvest one Canada Goose at times outside and concurrent with the duck season.

Table 13. Comparison of Number of Hunter Trips to Harvest One Canada Goose in Tennessee Valley.

Dates	Geese/Trip
9/1/12-9/15/12	1.8
9/22/12 -10/9/12	N/A
11/23/12-11/24/12 12/1/12-1/27/13	1 goose/ 387 trips

Recommendations: This project furnishes vital data that is used in developing recommendation on waterfowl season and bag limits for next year. It is recommended that this project continue.

Job I-C. Title: Inventory of Wintering Waterfowl

Job I-C. Objective: To determine periods and variations of distribution or abundance of waterfowl on major waterfowl wintering areas within Alabama.

Activity: Two annual aerial waterfowl inventories were flown on the Tennessee River, Mobile Bay and Delta as in previous years. The first of the surveys is termed the pre-season inventory and the second is conducted in cooperation with the U.S. Fish and Wildlife Service’s mid-winter inventory. The results for the complete Tennessee River and the Mobile Bay and Delta inventories are represented in the tables below. The pre-season and mid-winter inventories are compared to historical data in Tables 16 and 18 for the Tennessee River and 17 and 19 for the Mobile area.

The water level on the Tennessee River is presented as average number of feet above normal winter pool level. Normal winter pool represents 157,750 acres. The reservoir areas of the Tennessee River change with fluctuations in water elevation. These are presented in Tables 14 and 15. The Mobile Bay and Delta survey covers about 57,600 acres and requires around two hours to survey. The Bay and Delta are tidally influenced; however, the water acreage varies very little under normal tidal conditions.

The 2012 pre-season surveys were down 6% in the Tennessee Valley (northern) region and down 22% in the Mobile Delta (southern) versus the 2011 survey. Goose numbers surveyed for both regions numbered 497, which was an increase by 15% as compared to 2011.

The 2013 Mid-winter counts reflected an increase in ducks numbers by 18% in the Tennessee Valley and an increase of 37% in the Mobile Bay and Delta versus the 2012 survey. Compared to the 10 year averages, 2013 mid-winter duck survey numbers were up 22% in the Tennessee Valley and up 71% in the Delta. Mid-Winter goose numbers increased considerably, by 311% in the Tennessee Valley over 2012 and were up 46% above the last 10 year average. In the Mobile Bay and Delta, mid-winter goose numbers remained very low, but are showing an overall growing trend, increasing 614% over the past 10 years.

USFWS personnel reported that the Canada goose numbers continue to decline in general and reported 618 geese were observed during the midwinter waterfowl survey. This number is above the 466 birds observed during the peak period in 2012, but well below the historical average. Snow goose numbers were reported at 3,650 birds, many more than in 2012, although the annual variation in snow goose numbers seems to correlate with population fluctuations. Greater white front geese numbers were reported at 120, which is roughly half the reported number in 2012. Duck numbers at Wheeler peaked at 68,000, which was a significant increase from 51,000 during the 2011-12 season.

Table 14. Data from Inventories of the Tennessee River and Mobile Bay and Delta for the 2012-2013 Hunting Seasons

<b>Tennessee River</b>		Winter Pool = 157,750 acres			Summer Pool = 196,900 acres			
Date	Temperature	Water Level	Ducks Seen	% Change from Previous Flight	Geese Seen	% Change from Previous Flight	Coots Seen	% Change from Previous Flight
11/19/12	69	0.4	29,925	-6%	495	14%	57,762	10%
01/07/13	45	0.4	90,252	18%	4,775	310%	32,377	-16%
<b>Mobile Bay and Delta</b>		Winter Pool = 57,600 acres			Summer Pool = 57,600 acres			
Date	Temperature	Water Level	Ducks Seen	% Change from Previous Flight	Geese Seen	% Change from Previous Flight	Coots Seen	% Change from Previous Flight
11/20/12	N/A	normal	2,365	-22%	2	-80%	9,780	-10%
01/08/13	55	normal	3,790	37%	45	21%	4,889	6%

The Tennessee River inventory is composed of four segments which correspond to the four reservoirs located within the state. The area of Wheeler Reservoir east of U.S. highway 31 which encompasses approximately 21,000 acres is in the inventory but is not included in the area of the reservoir in Table 15.

Table 15. Data from Inventories of the 4 Reservoirs Comprising the Alabama portion of the Tennessee River during the 2012-2013 Hunting Season.

<b>Guntersville Reservoir</b>							
Winter Pool = 593.0 MSL 62,000 acres				Summer Pool = 595.0 MSL 66,000 acres			
Date	Approximate Survey Time	Air Temp.	Approximate Reservoir Elevation	Approximate Reservoir Acres	Number of Ducks	Number of Geese	Number of Coots
11/19/12	120 min.	69	594.32	64,908	27,811	280	50,940
01/07/13	120 min.	45	593.59	64,821	19,382	270	20,370
<b>Wheeler Reservoir</b>							
Winter Pool = 550.0 MSL 45,450 acres				Summer Pool = 556.0 MSL 67,070 acres			
Date	Approximate Survey Time	Air Temp.	Approximate Reservoir Elevation	Approximate Reservoir Acres	Number of Ducks	Number of Geese	Number Coots
11/19/12	45 min.	N/A	552	50,461*	482	20	550
01/07/13	45 min.	33	552.2	51,535*	494	18	1,340
*Note: The acreage shown is for the entire reservoir, the inventory area is about 21,000 acres less.							
<b>Wilson Reservoir</b>							
Winter Pool = 504.7 MSL 15,000 acres				Summer Pool = 507.7 MSL 15,600 acres			
Date	Approximate Survey Time	Air Temp.	Approximate Reservoir Elevation	Approximate Reservoir Acres	Number of Ducks	Number of Geese	Number Coots
11/19/12	30 min	N/A	507	15,406	5	0	47
01/07/13	30 min	33	505.6	15,159	106	0	250
<b>Pickwick Reservoir</b>							
Winter Pool = 408.0 MSL 37,000 acres				Summer Pool = 414.0 MSL 42,700 acres			
Date	Approximate Survey Time	Air Temp.	Approximate Reservoir Elevation	Approximate Reservoir Acres	Number of Ducks	Number of Geese	Number Coots
11/19/12	60 min	N/A	410	37,220	1,627	195	6,225
01/07/13	60 min	33	411.3	37,820	2,209	97	8925



Table 16 Continued. Historical Data from Alabama Pre-season Inventories of the Tennessee River.

<b>Decade of the 1980's</b>							
Date	Season	# of Ducks	% Change from Previous Season	# of Geese	% Change from Previous Season	# of Coots	% Change from Previous Season
12/05/89	89-90	15,859	-30%	628	-65%	19080	-2%
	88-89	22,776	-10%	1781	134%	19494	-17%
12/03/87	87-88	25,397	23%	762		23594	-4%
	86-87	20,700	31%		-100%	24500	25%
12/03/85	85-86	15,836	-10%	1728	49%	19655	71%
11/29/84	84-85	17,544	40%	1163	37%	11491	-32%
11/29/83	83-84	12,500	51%	850	95%	16800	38%
11/30/82	82-83	8,299	-38%	435	-66%	12206	8%
	81-82	13,406	-6%	1271	24%	11265	102%
11/25/80	80-81	14,322		1028		5563	
Low Value for Decade		8,299		435		5,563	
High Value for Decade		25,397		1,781		24,500	
Average for 1980's		16,664		965		16,365	

Table 17. Historical Number of Waterfowl Seen During Pre-season Inventories of the Mobile Bay and Delta.

<b>Decade of the 2010s</b>							
Date	Season	Ducks	% Change from Previous Season	Geese	% Change from Previous Season	Coots	% Change from Previous Season
11/20/12	2012-13	2,365	-22%	2	-80%	9,780	-10%
11/21/11	2011-12	3,047	169%	10	N/A	10,875	247%
11/23/10	2010-11	1,132	-7%	0	N/A	3,132	152%
Low Value for Decade		1,132		0		3,132	
High Value for Decade		3,047		10		10,875	
Average for 2010s		2,181		4		7,929	
<b>Decade of the 2000s</b>							
Date	Season	Ducks	% Change from Previous Season	Geese	% Change from Previous Season	Coots	% Change from Previous Season
11/23/09	2009-10	1,211	-48%	0		1,239	196%
11/24/08	2008-09	2,356	62%	0		418	-61%
11/19/07	2007-08	1,453	20%	0		1,065	42%
11/20/06	2006-07	1,166	-34%	0		1,850	83%
11/21/05	2005-06	1,790	49%	0		1,007	-55%
11/22/04	2004-05	1,200	-58%	0		2,253	-40%
11/25/03	2003-04	2,889	19%	0		3,781	127%
11/24/02	2002-03	2,421	-40%	0		1,664	-51%
11/20/01	2001-02	4,054	-6%	0		3,390	-59%
12/04/00	2000-01	4,331	-64%	0		8,214	-76%
Low Value for Decade		1,166		0		1,007	
High Value for Decade		4,331		0		8,214	
Average for 2000s		2,550		0		3,165	
<b>Decade of the 1990s</b>							
Date	Season	Ducks	% Change from Previous Season	Geese	% Change from Previous Season	Coots	% Change from Previous Season
12/08/99	99-00	12,088	94%	0		34,152	349%
12/10/98	98-99	6,241	39%	0		7,613	-76%
11/10/97	97-98	4,485	53%	0		31,090	245%
11/12/96	96-97	2,931	54%	0		9,008	-5%
11/13/95	95-96	1,908	71%	0		9,446	48%
11/14/94	94-95	1,116	-33%	0		6,398	34%
11/17/93	93-94	1,654	-75%	0		4,779	-40%
11/17/92	92-93	6,498	32%	0		7,916	-55%
11/22/91	91-92	4,908	29%	0		17,572	314%
11/13/90	90-91	3,802	-2%	0		4,245	-19%
Low Value for Decade		1,116		0		4,245	
High Value for Decade		12,088		0		34,152	
Average for 1990s		4,563		0		13,222	

Table 17 Continued. Historical Number of Waterfowl Seen During Pre-season Inventories of the Mobile Bay and Delta.

<b>Decade of the 1980s</b>							
Date	Season	Ducks	% Change from Previous Season	Geese	% Change from Previous Season	Coots	% Change from Previous Season
11/13/89	89-90	3,888	99%	0		5,215	63%
	88-89	1,955	-44%	0		3,200	-40%
	87-88	3,475	190%	0		5,295	-50%
	86-87	1,200	-54%	0		10,600	64%
	85-86	2,610	-65%	10		6,480	20%
	84-85	7,400	63%	0		5,420	-71%
	83-84	4,530	-42%	0		19,000	86%
	82-83	7,785	1%	6		10,200	-10%
	81-82	7,710	-10%	0		11,330	-54%
	80-81	8,560		0		24,475	
Low Value for Decade		1,200		0		3,200	
High Value for Decade		8,560		10		24,475	
Average for 1980s		4,911		2		10,122	

Table 18. Historical Number of Waterfowl Seen During Mid-winter Inventories of the Tennessee River.

<b>Decade of the 2010s</b>							
Date	Season	Ducks	% Change from Previous Season	Geese	% Change from Previous Season	Coots	% Change from Previous Season
1/7/13	2012-13	90,252	18%	4,775	310%	32,377	-16%
1/4/12	2011-12	76,505	5%	1,163	-69%	38,610	-16%
1/4/11	2010-11	72,800	33%	3,707	38%	45,872	68%
Low Value for Decade		72,800		1,163		32,377	
High Value for Decade		90,252		4,775		45,872	
Average for 2010s		79,852		3,215		38,953	
<b>Decade of the 2000s</b>							
Date	Season	Ducks	% Change from Previous Season	Geese	% Change from Previous Season	Coots	% Change from Previous Season
1/5/10	2009-10	54,866	16.2%	2,677	15.8%	27,269	8.2%
1/6/09	2008-09	47,228	17.7%	2,312	600%	25,213	8.2%
1/7/08	2007-08	40,113	179%	329	-69%	95,307	600%
1/7/07	2006-07	14,384	-50%	1,075	33%	13,500	-69%
1/5/06	2005-06	29,016	25%	811	147%	43,893	11%
1/3/05	2004-05	23,282	-25%	328	21%	39,460	-16%
1/7/04	2003-04	31,035	8%	271	-37%	47,188	5%
1/7/03	2002-03	28,781	19%	427	-56%	44,992	59%
1/8/01	2001-02	24,277	-40%	975	-4%	28,327	-28%
1/3/01	2000-01	40,182	52%	1,020	12%	39,092	-3%
Low Value for Decade		14,384		271		13,500	
High Value for Decade		40,182		1,075		47,188	
Average for 2000s		27,280		701		36,636	
<b>Decade of the 1990s</b>							
Date	Season	Ducks	% Change from Previous Season	Geese	% Change from Previous Season	Coots	% Change from Previous Season
1/4/00	99-00	26,397	-30%	910	-17%	40,502	4%
1/05/99	98-99	37,670	24%	1,101	-32%	38,929	-3%
1/10/98	97-98	30,296	111%	1,608	50%	39,966	196%
1/7/97	96-97	14,384	-45%	1,075	-4%	13,500	-43%
	95-96	26,116	11%	1,123	20%	23,543	35%
	94-95	23,479	-29%	934	-18%	17,428	-44%
	93-94	33,078	11%	1,138	32%	31,023	-7%
	92-93	29,906	-14%	865	37%	33,275	3%
	91-92	34,777	85%	632	11%	32,280	21%
	90-91	18,823	34%	567	-75%	26,692	26%
Low Value for Decade		14,384				13,500	
High Value for Decade		37,670				40,502	
Average for 1990s		27,493				29,714	

Table 18 Continued. Historical Number of Waterfowl Seen During Mid-winter Inventories of the Tennessee River.

<b>Decade of the 1980s</b>							
Date	Season	Ducks	% Change from Previous Season	Geese	% Change from Previous Season	Coots	% Change from Previous Season
	89-90	14,088	-20%	2,274		21,155	-24%
	88-89	17,588	5%	1,336		27,763	6%
	87-88	16,818	11%	773		26,278	10%
	86-87	15,100	17%			23,800	158%
	85-86	12,925	34%	3,188		9,232	-25%
	84-85	9,620	-41%	822		12,385	13%
	83-84	16,200	19%	1,800		11,000	-26%
1/4/83	82-83	13,589	-39%	991		14,931	26%
1/5/82	81-82	22,159	-13%	1,053		11,887	-4%
	80-81	25,426		1,470		12,333	
Low Value for Decade		9,620				9,232	
High Value for Decade		25,426				27,773	
Average for 1980s		16,351				17,076	



Table 19 Continued. Historical Number of Waterfowl Seen During Mid-winter Inventories of the Mobile Bay and Delta.

<b>Decade of the 1980s</b>							
Date	Season	Ducks	% Change from Previous Season	Geese	% Change from Previous Season	Coots	% Change from Previous Season
	89-90	14,916	22%	0		6,605	50%
	88-89	12,258	209%	0		4,400	161%
	87-88	3,972	5%	0		1,685	-65%
	86-87	3,800	-55%	0		4,800	-61%
	85-86	8,367	61%	85		12,365	56%
	84-85	5,188	-44%	0		7,910	-36%
	83-84	9,300	9%	0		12,300	19%
	82-83	8,550	8%	0		10,325	-27%
	81-82	7,895	-42%	0		14,200	-15%
	80-81	13,500				16,700	
Low Value for Decade		3,800		0		1,685	
High Value for Decade		14,916		85		16,700	
Average for 1980s		8,775		9		9,129	

Recommendations: This project furnishes vital data that is used in developing recommendation on waterfowl season and bag limits for next year. It is recommended that this project continue.