

ALABAMA WATERFOWL SURVEY

ANNUAL REPORT, 2013-2014

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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

2013-2014 ANNUAL WATERFOWL REPORT

STATE: Alabama

Grant Number: W-35

Time Period: July 1, 2013-June 30, 2014

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 2013 at the following locations in Alabama:

- Near Tanner in Limestone County
- Near Decatur in Morgan County
- Near Stevenson in Jackson County
- Near Hollywood 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 Union Springs in Macon County
- Near Goodwater in Coosa County
- Near Midway in Barbour County
- Near Opp in Covington County
- Near Bay Minette in Baldwin County

A total of 264 wood ducks were banded this year with most birds being collected in Jackson County. The banding quota recommended for our agency in the Banding Needs document is 499. The classification of birds banded during the 2013 banding season is outlined in Table 1.

Table 1. Number of Wood Ducks Banded by Sex and Age During the 2013 Banding Season.

<u>Age</u>	<u>Sex</u>	<u>Number</u>
AHY	M	61
AHY	F	56
HY	M	81
HY	F	65
U	U	1

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. Widespread flooding during the summer was also a major issue for most banding locations. Trapping efforts will continue to be expanded to other sites in Alabama for the 2014 trapping season.

Recommendations: This project will incorporate additional banding sites in order to meet the quota set for our agency. Additionally, different trapping methods such as floating traps, rocket nets, above-water platform traps, electric fenced trapping areas, and traps partially submerged in water will be investigated. Additionally, volunteer assistance from local DU Chapters and student interns will be utilized to increase man hour efforts across the state.

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
13-14	3.8	1.2	2.4	1.2
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

The composition of the Alabama duck harvest by species for 2013-2014 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 2013-2014 Season on the Tennessee River and Mobile Bay and Delta.

	Tennessee River	Mobile Bay and Delta
	%	%
Mallard	16.8	1.3
Black Duck	1.0	0.2
Gadwall	44.3	21.1
Wigeon	1.6	2.5
GW Teal	3.6	6.1
Pintail	1.6	3.4
Canvasback	1.8	2.0
Scaup	0.3	8.8
Ringneck	13.0	0.8
Wood Duck	7.1	13.9
Goldeneye	0.2	0.0
Bufflehead	0.5	6.8
Merganser	0.4	0.7
BW Teal	0.2	2.7
Shoveler	3.1	16.2
Ruddy Duck	0.4	2.7
Redhead	4.1	9.7
Mottled Duck	0.0	1.1

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	4 Yr. Avg
# hunters checked							<u>4059</u>	3482	747	1054	2335
# ducks checked							<u>4767</u>	3025	1346	1707	2711
Mallard							16.8	11.5	6.4	17.7	13.1
Black Duck							1.0	0.4	0.2	0.9	0.6
Gadwall							44.3	32.4	42.6	46.8	41.5
Wigeon							1.6	1.5	0.7	1.5	1.3
GW Teal							3.6	3.3	2.5	2.5	2.9
Pintail							1.6	0.7	0.4	0.6	0.8
Canvasback							1.8	0.6	0.5	2.1	1.3
Scaup							0.3	3.5	1.8	1.1	1.7
Ringneck							13.0	19.0	26.5	10.6	17.3
Wood Duck							7.1	18.1	14.0	8.6	12.0
Goldeneye							0.2	0.3	0.1	0.3	0.2
Bufflehead							0.5	0.5	1.1	1.5	0.9
Merganser							0.4	1.5	0.4	2.0	1.1
BW Teal							0.2	1.1	0.3	0.3	0.5
Shoveler							3.1	3.7	2.4	3.2	3.1
Ruddy Duck							0.4	0.5	0.0	0.2	0.3
Redhead							4.1	1.4	0.0	0.1	1.4
Mottled Duck							0.0	0.0	0.0	0.0	0.0
Oldsquaw							<u>0.0</u>	<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	4 Yr. Avg
# hunters checked							365	276	297	205	259
# ducks checked							444	571	632	307	503
Mallard							1.3	0.5	0.5	2.0	1.1
Black Duck							0.2	0.0	0.0	0.0	0.1
Gadwall							21.1	22.9	29.4	40.2	28.4
Wigeon							2.5	0.9	1.9	0.0	1.3
GW Teal							6.1	2.4	12.7	2.6	6.0
Pintail							3.4	0.2	0.3	0.0	0.9
Canvasback							2.0	0.0	0.3	0.0	0.6
Scaup							8.8	53.5	6.3	13.1	20.4
Ringneck							0.8	0.0	0.3	0.9	0.5
Wood Duck							13.9	2.3	2.1	33.6	12.9
Goldeneye							0.0	0.2	0.0	2.0	0.5
Bufflehead							6.8	2.1	7.9	0.0	4.2
Merganser							0.7	0.0	0.6	1.3	0.7
BW Teal							2.7	1.6	0.9	0.3	1.4
Shoveler							16.2	5.8	19.5	2.0	10.9
Ruddy Duck							2.7	0.5	2.7	0.0	1.5
Redhead							9.7	6.7	13.9	0.0	7.6
Mottled Duck							1.1	0.4	0.6	2.0	1.0
Oldsquaw							0.0	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 4.7 hunting trips. The Tennessee Valley averaged only one coot taken for each 58.8 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 there were no reports of Canada goose harvest.

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 2013 Special Goose Season was 15 days beginning on September 1st and ending September 15th. 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 3.16 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 21st – October 8th, outside the Southern James Bay Population zone. The 2nd split of the Canada goose season ran from November 28 through January 26th and resulted in 4 Canada geese recorded in the harvest checks. Goose harvest during the regular season decreased slightly as compared to the 2012-13 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 hunting 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. Even though these seasons were implemented early in the population growth stage of resident Canada geese in the state, it is unclear if the harvest is serving successfully as a control measure, and remains 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 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
9/1/13-9/15/13	3.16
9/21/13 -10/8/13	N/A
11/28/13-1/26/14	1 goose/ 1,015 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. 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 2013 pre-season surveys were up 11% in the Tennessee Valley (northern) region and down 54% in the Mobile Delta (southern) versus the 2012 survey. Goose numbers surveyed for both regions numbered 601, which was an increase by 24% as compared to 2012.

The 2014 Mid-winter counts reflected a decrease in duck numbers by 13% in the Tennessee Valley and a decrease of 71% in the Mobile Bay and Delta versus the 2013 survey. Compared to the 10 year averages, 2014 mid-winter duck survey numbers were up 6% in the Tennessee Valley and down 46% in the Delta. Mid-Winter goose numbers decreased by 7% in the Tennessee Valley over 2013 but were up 36% 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 677% over the past 10 years.

USFWS personnel reported that the migrant Canada goose numbers continue to decline in general and reported 180 geese were observed during the midwinter waterfowl survey. This number is below the 618 birds observed during the midwinter survey in 2013, and well below the historical average. Snow goose numbers were reported at 2,700 birds, fewer than in 2013, although the annual variation in snow goose numbers seems to correlate with population fluctuations. Greater white front geese numbers were reported at 245, which is more than twice the reported number in 2013. Duck numbers at Wheeler were reported at 36,897 during the midwinter survey and peaked at 45,890, which was a significant decrease from the peak of 69,756 during the 2012-13 season.

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

Tennessee River		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
11/24/13	29	0.4	33,325	11%	601	24%	40,751	-29%
01/08/14	27	0.4	78,525	-13%	4,433	-7%	34,819	8%
Mobile Bay and Delta		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
11/25/13	46	normal	1,080	-54%	0	N/A	9,880	1%
01/07/14	27	normal	1,114	-71%	73	62%	1,335	-73%

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.

Guntersville Reservoir							
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
11/24/13	120 min.	37	593.66	65,169	27,290	415	25,100
01/08/14	120 min.	34	593.2	63,838	36,524	785	27,000
Wheeler Reservoir							
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
11/24/13	45 min.	29	551.4	50,461*	2,146	91	2,275
01/08/14	45 min.	27	550.0	45,450*	1,298	10	1,625
*Note: The acreage shown is for the entire reservoir, the inventory area is about 21,000 acres less.							
Wilson Reservoir							
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
11/24/13	30 min	29	507.5	15,421	82	0	256
01/08/14	30 min	27	504.7	15,000	182	158	465
Pickwick Reservoir							
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
11/24/12	60 min	29	408.6	37,093	3,877	95	13,120
01/08/14	60 min	27	408.0	37,000	3,624	355	5,045

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

Decade of the 2010's							
Date	Season	# of Ducks	% Change from Previous Season	# of Geese	% Change from Previous Season	# of Coots	% Change from Previous Season
11/24/13	2013-14	33,325	11%	601	24%	40,752	-29%
11/19/12	2012-13	29,925	-6%	495	14%	57,762	10%
11/20/11	2011-12	32,030	39%	433	-49%	52,223	23%
11/22/10	2010-11	23,020	-38%	855	45%	42,425	-16%
Low Value for Decade		23,020		433		40,752	
High Value for Decade		33,325		855		57,762	
Average for 2010s		29,575		596		48,291	
Decade of the 2000's							
Date	Season	# of Ducks	% Change from Previous Season	# of Geese	% Change from Previous Season	# of Coots	% Change from Previous Season
11/23/09	2009-10	37,422	.04%	588	99%	76,260	11%
11/25/08	2008-09	37,250	-24%	296	-60%	68,588	-29%
11/20/07	2007-08	48,744	275%	748	279%	96,728	252%
11/21/06	2006-07	17,722	-47%	268	-70%	38,259	70%
11/22/05	2005-06	33,681	261%	910	139%	22,445	-16%
11/20/04	2004-05	9,316	-59%	380	-28%	26,718	-47%
11/23/03	2003-04	22,546	-11%	529	-12%	50,002	4%
11/22/02	2002-03	25,212	7%	600	20%	48,088	-23%
11/18/01	2001-02	23,545	-26%	502	-50%	62,116	83%
12/05/00	2000-01	31,786	47%	1,003	-3%	33,919	-2%
Low Value for Decade		9,316		380		22,445	
High Value for Decade		48,744		1,003		96,728	
Average for 2000s		23,401		599		40,221	
Decade of the 1990's							
Date	Season	# of Ducks	% Change from Previous Season	# of Geese	% Change from Previous Season	# of Coots	% Change from Previous Season
12/07/99	99-00	21,636	-26%	1,036	-4%	34,738	-18%
12/08/98	98-99	29,126	5%	1,075	5%	42,196	3%
11/17/97	97-98	27,853	3%	1,025	66%	40,809	29%
11/29/96	96-97	27,011	-20%	619	-32%	31,740	41%
11/29/95	95-96	33,681	77%	910	22%	22,445	33%
12/02/94	94-95	19,041	-54%	745	-44%	16,886	-36%
12/16/93	93-94	41,678	12%	1,331	37%	26,328	-29%
12/14/92	92-93	37,330	26%	975	-29%	37,120	36%
	91-92	29,634	75%	1,370	116%	27,330	13%
	90-91	16,904	7%	633	1%	24,235	27%
Low Value for Decade		16,904		745		16,886	
High Value for Decade		41,678		1,370		42,196	
Average for 1990's		28,389		972		30,383	

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

Decade of the 1980's							
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.

Decade of the 2010s

Date	Season	Ducks	% Change from Previous Season	Geese	% Change from Previous Season	Coots	% Change from Previous Season
11/25/13	2013-14	1,080	-54%	0	N/A	9,880	1%
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		1,080		0		3,132	
High Value for Decade		3,047		10		10,875	
Average for 2010s		1,906		3		8,417	
Decade of the 2000s							
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	
Decade of the 1990s							
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.

Decade of the 1980s							
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.

Decade of the 2010s							
Date	Season	Ducks	% Change from Previous Season	Geese	% Change from Previous Season	Coots	% Change from Previous Season
1/8/14	2013-14	78,525	-13%	4,433	-7%	34,819	8%
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		79,521		3,520		37,920	
Decade of the 2000s							
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	
Decade of the 1990s							
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.

Decade of the 1980s							
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. Historical Number of Waterfowl Seen During Mid-winter Inventories of the Mobile Bay and Delta.

Decade of the 2010s

Date	Season	Ducks	% Change from Previous Season	Geese	% Change from Previous Season	Coots	% Change from Previous Season
1/7/14	2013-14	1,114	-71%	72	63%	1,335	-73%
1/8/13	2012-13	3,790	37%	45	21%	4,889	6%
1/3/12	2011-12	2,757	61%	37	362%	4,607	36%
1/4/11	2010-11	1,710	-13%	8	100%	3,400	49%
Low Value for Decade		1,114		8		1,335	
High Value for Decade		3,790		72		4,889	
Average for 2010s		2,343		41		3,558	
Decade of the 2000s							
Date	Season	Ducks	% Change from Previous Season	Geese	% Change from Previous Season	Coots	% Change from Previous Season
1/05/10	2009-10	1,970	411%	4		2,286	
1/06/09	2008-09	385	-312%	0		0	
1/08/08	2007-08	3,709	356%	0		2,286	-10%
1/9/07	2006-07	814	36%	0		2,532	325%
1/6/06	2005-06	599	-52%	0		596	-80%
1/4/05	2004-05	1,259	13%	0		3,017	10%
1/8/04	2003-04	1,118	98%	0		2,751	134%
1/8/03	2002-03	562	-80%	0		1,175	-65%
1/8/02	2001-02	2,779	-35%	0		3,390	0%
1/3/01	2000-01	4,331	-28%	0		3,395	-68%
Low Value for Decade		562		0		596	
High Value for Decade		4,331		0		3,395	
Average for 2000s		1,637		0		2,408	
Decade of the 1990s							
Date	Season	Ducks	% Change from Previous Season	Geese	% Change from Previous Season	Coots	% Change from Previous Season
1/05/00	99-00	6,046	-25%	0		10,657	-35%
1/07/99	98-99	8,017	167%	0		16,409	175%
1/08/98	97-98	3,000	-38%	0		5,969	-36%
1/09/97	96-97	4,832	-4%	8		9,372	8%
1/05/96	95-96	5,054	99%	0		8,718	-46%
	94-95	2,538	12%	9		16,018	131%
	93-94	2,262	35%	4		6,930	135%
	92-93	1,673	-63%	0		2,954	-36%
	91-92	4,496	-63%	0		4,631	-20%
	90-91	12,229	-18%	0		5,816	-12%
Low Value for Decade		1,673		0		2,954	
High Value for Decade		12,229		9		16,409	
Average for 1990s		5,015		2		8,747	

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

Decade of the 1980s							
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.