

MISSISSIPPI MAIL SURVEY OF GAME
HARVEST AND HUNTER EFFORT FOR 1985-86

by

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Federal Aid Project No. W-48-33

Job VI-1

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1986

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INTRODUCTION

The importance of game harvest surveys is to provide indices which will monitor changes in kill and hunter effort among seasons to determine trends. Changes in harvest regulations, habitat conditions, game population numbers and the socio-economic environment may be reflected in and monitored by changes in hunting (kill and effort) indices.

Mail surveys to obtain game harvest data result in parameter estimates (e.g. total harvest, average daily kill, average seasonal harvest, total man-days hunting) which contain serious sampling, response and nonresponse biases. As a result, the accuracy of these estimates is unknown. Fillion (1980) provided a good review of these biases and their effect on the estimates.

Although there are public relation benefits from obtaining accurate figures pertaining to hunter harvest and effort, management practices require only indices of kill and effort. Parameter estimates obtained from mail surveys may not be accurate, but assuming all biases remain constant the estimates will provide good indices for trend determination. Further, Wright (1978) noted that until the wildlife profession can develop more accurate methods of estimating population numbers, measures of absolute harvest are relatively meaningless and indices to harvest should be adequate. For consumer purposes, these data (however inaccurate) are often the best available.

Therefore the primary objective of the mail survey for the 1985-86 hunting season was to provide a reliable set of statewide hunting indices for each game species in Mississippi. No attempt was made to identify

potential biases and correct for their effect. For dissemination to the public these indices were to also serve as harvest and effort estimators. Secondary objectives were to obtain these indices on a regional basis and to evaluate hunter attitudes and responses on specific issues.

METHODS

An initial sample of 9,156 sportsmen to be mailed a survey questionnaire was selected from the 1985-86 file of licenses sold. The sampling frame was restricted to only resident holders of Sportsman's (Type 00), All Game Hunting and Fishing (Type 01), Small Game Hunting (Type 02) and Small Game Hunting and Fishing (Type 05) licenses who made their purchase during the 1985-86 fiscal year.

A 7 percent sample of hunting license buyers was selected from the 205,950 hunting license sales stubs (Types 01, 02, and 05) processed by the end of January, 1986. An approximate random sample was achieved by selecting stubs whose license numbers ended in predetermined but randomly selected sets of terminal digits between 00 and 99 (7 sets of digits were selected for each license type). An optical scanning device (S6000 Burroughs Document Processor) was used to mechanically make the stub selections. Discontinuing sampling at the end of January expedited the survey mailing as soon as possible after the close of the hunting season in February.

Since approximately 43 percent of the selected license stubs lacked complete names and addresses for mailing purposes, the 7 percent sample of stubs resulted in a 4.01 percent sample of usable licenses (8,249). Names and addresses were manually keypunched for each usable stub sampled.

Based on a 4 year average (80/81 - 83/84), the hunting license (Types 01, 02, 05) sales through the end of January accounted for about 91.2 percent of the year-end (June) sales of these license types. Therefore a 4.01 percent sample of license holders based on the January figure would be about a 3.657 percent ($0.912 \times 0.0401 \times 100$) sample of the expected June sales.

Because of the computerized and renewable aspects of Sportsman's licenses (Type 00), virtually all 85-86 Sportsman's license holders were accounted for by the end of January (24,788 Sportsman's license holders). To achieve a sample of Sportsman license holders comparable to the other types, a computer generated random sample of 907 (3.657%) hunters was selected. Both stub and Sportsman's license samples were combined into a single computer file for mailing purposes.

The initial mailing consisting of the questionnaire (Figure 1), a cover letter (Figure 2) and a No. 9 postage-paid business reply envelope was mailed in a No. 10 window envelope on March 27, 1986 to the sampled hunters. About three weeks after the initial mailing (April 22, 1986), reminder post cards (Figure 3) were mailed to 6,053 sampled hunters who had not returned their questionnaires by April 21, 1986. The final mailing composed of an identical questionnaire, cover letter (Figure 4) and business reply envelope was mailed about three weeks after the reminder post card mailing (May 14, 1986) to the 5,269 nonrespondents as of May 12, 1986. First mailing questionnaires were given identification numbers from 100,001 to 109,156 while the final mailing was given a 200,000 numbering sequence to differentiate responses between mailings.

Questionnaires returned four weeks after the final mailing (after June 17, 1986) were not considered in the analyses.

Questionnaire design and mailing procedures were outlined by Steffen (1981). Procedures for editing and data entry of returned questionnaires were also identical to Steffen (1981).

Estimates (and their standard errors) for each species were calculated for the following indices; total kill, average seasonal kill per hunter, proportion of licensed hunters, total licensed hunters, proportion of hunters who were successful, total man-days spent hunting, average days afield per hunter and the average daily kill. These indices were calculated both on a statewide and regional (as shown by the questionnaire, Figure 1) basis.

The 1985-86 survey, like the previous surveys, obtained information about two different hunting seasons or license years (i.e., spring 1985 turkey hunters hunted during the 1984-85 license year while hunters of the other surveyed species hunted during the 1985-86 fiscal year). Because of prior irregularities in the license sales structure, only surveys beginning with the 1982-83 season had well defined sampling frames with a known number of license buyers (Steffen 1981, 1983a, b). Therefore spring 1985 turkey hunting indices were calculated based on the total number of resident big game hunters during 1984-85 and on the respondents who also purchased a big game license during the previous July 1, 1984 - June 30, 1985 fiscal year (Questionnaire Part B, question #1).

Estimates and standard errors of total turkey harvest and man-days of effort were calculated as a linear combination of the spring 1985 estimates plus the fall 1985 estimates. The computer programs were

altered to reflect these changes. All other calculations follow Steffen (1981).

RESULTS

Based on all three mailings, 840 (9.2%) of the 9,156 questionnaires were returned as non-deliverable by the post office. Therefore 8,316 individuals were assumed to have been contacted to participate in the survey. Of these, 4,782 (57.5%) returned their questionnaires for possible analysis and 3,534 (42.5%) were nonresponses. Based on those questionnaires returned 4,666 were answered and usable to some extent, 88 were returned after the acceptance deadline (4 weeks after the final mailing) and only 28 were considered completely useless.

Statewide expansions were calculated based on the 253,846 total hunting licenses sold and accounted for by the end of June 1986. The total sales for each resident hunting license type were as follows: Type 00 = 24,808, Type 01 = 202,546, Type 02 = 13,768 and Type 05 = 12,724. Therefore there existed 253,846 individuals licensed to hunt small game and 227,354 (Types 00 + 01) of these license holders also were eligible to pursue big game (deer and turkey) during the 1985-86 hunting seasons. The spring, 1985 turkey hunting estimates were based on the 233,105 big game license holders accounted for in the 1984-85 license sales totals.

Based on the 4,666 usable responses, 93.7 ± 0.4 (SE) percent of all resident license holders actually participated in a hunting activity during the 1985-86 hunting season. Therefore an estimated 237,854 ± 914 (SE) licensees actually utilized their license for hunting purposes.

The expanded statewide summaries of total harvest, average daily kill,

average seasonal kill, the percent of hunters successful, total man-days, average seasonal days hunting, total hunters and the percent of total licensees that hunted are provided in Table 1 for all game species included in the survey. Table 2 provides the expanded statewide estimates of total harvest and the variability of these estimates (standard errors and 95 percent confidence limits) for all game species surveyed. Tables 3 - 8 summarize small game hunting on a statewide and regional basis. Waterfowl hunting is summarized in Tables 9 - 11. Tables 12 - 15 summarize fox (red and gray), bobcat and coyote hunting. Statewide and regional summaries of deer (buck and doe data from the archery, primitive weapon and gun seasons) and turkey hunting are provided in Tables 16 - 23. Statewide totals will not necessarily equal the sum of the regional totals. All figures were calculated independently and were the best statistical estimates available.

The analysis of the hunter attitude and opinion questions (Part B of the questionnaire) has been completed. Results will be released as separate reports or will be available upon request from the Mississippi Department of Wildlife Conservation.

DISCUSSION AND RECOMMENDATIONS

For management purposes, it should be reemphasized that the hunting data provided are only indices to harvest and effort, for use in conjunction with past (and future) mail surveys to determine trends. The current survey was conducted similarly to all past surveys and is therefore useful for comparison purposes.

Response and nonresponse biases continue to exist with the survey as previously noted by Steffen (1981). Therefore discretion must be used when considering these data as absolute estimates. Assuming the biases remain consistent over time, the best uses of these data are as indices for trend determinations.

Since the 1985-86 survey was conducted with an expanded sample of sportsmen (> 9,000), regional harvest and effort estimates were relatively precise. Precision was also improved for those species of lesser hunting importance (e.g., woodcock, bobcat).

As previously recommended by Steffen (1981), the annual survey should be continued with a sample of 3,000 - 4,000 sportsmen. Periodically (e.g., every 5 years) a survey of 11,000 - 12,000 hunters should be conducted to provide more precise estimates on a regional basis. The next large sample survey should be conducted after the 1990-91 hunting seasons. To avoid changes in biases, attention to the consistency of survey methodology should be continued in future surveys.

ACKNOWLEDGEMENTS

This survey could not have been accomplished without the conscientious efforts of many MDWC personnel from all divisions. Special thanks goes to G.M. Allen, L.F. Franklin, B. Howard, C.M. Rasberry and V.L. Womack for their significant contributions to the success of the survey.

Assistance at various stages was also provided by L.G. Blackwell, D. Cain, J.E. Dale, B.M. Ellison, B. Endris, D. Epps, C.J. Evans, E.J. Hackett, W.J. Hamrick, J. Hazelwood, A. Herrington, C. Hunt, P. Lay, D.M. Lewis, J. Lipe, D. McCallum, P. McDaniel, M. McMinn, C. Phillips, S. Pourrier, J. Ray,

F. Slade, R. Spencer, C. Thomas, B. Thomason, J. Tindall, J. Webb, L. Wesley, D. Windham, and T. Zeino. Accounting and data processing coordination was assisted by C.K. Briscoe and J.L. Given, respectively.

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TABLE 1. EXPANDED STATEWIDE SUMMARY OF THE 1985-86 MISSISSIPPI MAIL SURVEY OF GAME HARVEST BASED ON 253,846 SMALL GAME LICENSE HOLDERS AND 227,354 BIG GAME LICENSE HOLDERS.

SPECIES	TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS	TOTAL MAN-DAYS	AVERAGE SEASONAL DAYS HUNTING	TOTAL HUNTERS	PERCENT OF TOTAL LICENSEES(A)
DOVE	2,538,405	5.72	23.00	93.1	439,252	4.00	110,602	43.6
QUAIL	708,449	2.56	17.42	84.7	275,086	6.88	40,748	16.1
WOODCOCK	22,958	0.80	3.93	87.7	25,739	4.97	5,767	2.3
RABBIT	1,077,563	1.61	11.08	90.4	652,794	6.86	97,654	38.5
SQUIRREL	2,268,034	2.47	15.12	93.2	897,312	6.06	150,480	59.3
RACCOON	188,996	0.78	9.10	90.1	224,075	11.71	20,945	8.3
ALL DUCKS	409,673	1.65	11.88	83.0	236,886	7.05	34,818	13.7
MALLARD	189,241	0.76	5.48	57.5				
WOOD DUCK	118,698	0.46	3.44	58.7				
OTHER DUCKS	106,028	0.44	3.07	32.1				
GEESE	2,775	0.16	0.96	45.3	14,650	5.49	2,938	1.2
RED FOX	3,591	0.11	1.08	69.4	24,789	10.09	3,373	1.3
GRAY FOX	1,850	0.06	0.79	63.6	22,626	12.21	2,394	0.9
BOBCAT	7,346	0.28	1.29	84.0	14,716	4.25	5,767	2.3
COYOTE	36,800	0.21	1.89	82.1	103,010	7.51	19,476	7.7
TOTAL DEER	234,955	0.078	1.26	53.5	2,899,327	15.69	187,257	82.4
BUCK	183,164	0.061	0.98	49.1				
DOE	51,882	0.017	0.28	19.3				
ARCHERY DEER	18,120	0.051	0.47	30.1	333,348	8.95	38,696	17.0
BUCK	8,567	0.024	0.22	16.7				
DOE	9,553	0.027	0.25	19.7				
PRIMITIVE DEER	29,016	0.119	0.60	42.2	232,494	4.96	48,863	21.5
BUCK	13,704	0.056	0.28	23.6				
DOE	15,313	0.063	0.31	25.9				
GUN DEER	187,943	0.077	1.03	51.3	2,320,690	12.84	183,367	80.7
BUCK	160,990	0.066	0.88	48.0				
DOE	26,956	0.011	0.15	12.0				
TOTAL TURKEY	52,989	0.117	1.00	54.2	433,284	8.45	52,876	22.7
SPRING 1985	52,989	0.117	1.00	54.2	433,284	8.45	52,876	22.7
FALL 1985	0	.	.	.	0	.	0	0.0

(A) DEER AND TURKEY PERCENTAGES BASED ON BIG GAME LICENSE HOLDERS; ALL OTHERS BASED ON SMALL GAME LICENSE HOLDERS.

TABLE 2. EXPANDED STATEWIDE ESTIMATES OF TOTAL HARVEST (AND THE VARIABILITY OF THE ESTIMATES) FOR ALL GAME SPECIES IN MISSISSIPPI DURING THE 1985-86 HUNTING SEASON.

SPECIES	TOTAL HARVEST	STANDARD ERROR		95% CONFIDENCE INTERVAL	
		SE	AS % OF TOTAL (A)	LOWER LIMIT	UPPER LIMIT
DOVE	2,538,405	77,291	3.0	2,383,823	2,692,987
QUAIL	708,449	50,055	7.1	608,339	808,559
WOODCOCK	22,958	3,291	14.3	16,376	29,540
RABBIT	1,077,563	48,562	4.5	980,439	1,174,687
SQUIRREL	2,268,034	61,884	2.7	2,144,266	2,391,802
RACCOON	188,996	22,923	12.1	143,150	234,842
ALL DUCKS	409,673	28,786	7.0	352,101	467,245
MALLARD	189,241	15,957	8.4	157,327	221,155
WOOD DUCK	118,698	8,946	7.5	100,806	136,590
OTHER DUCKS	106,028	11,155	10.5	83,718	128,338
GEESE	2,775	786	28.3	1,203	4,347
RED FOX	3,591	728	20.3	2,135	5,047
GRAY FOX	1,850	399	21.6	1,052	2,648
BOBCAT	7,346	957	13.0	5,432	9,260
COYOTE	36,800	3,913	10.6	28,974	44,626
TOTAL DEER	234,955	5,524	2.4	223,907	246,003
BUCK	183,164	4,406	2.4	174,352	191,976
DOE	51,882	2,182	4.2	47,518	56,246
ARCHERY DEER	18,120	1,391	7.7	15,338	20,902
BUCK	8,567	851	9.9	6,865	10,269
DOE	9,553	838	8.8	7,877	11,229
PRIMITIVE DEER	29,016	1,588	5.5	25,840	32,192
BUCK	13,704	955	7.0	11,794	15,614
DOE	15,313	1,032	6.7	13,249	17,377
GUN DEER	187,943	4,417	2.4	179,109	196,777
BUCK	160,990	3,885	2.4	153,220	168,760
DOE	26,956	1,435	5.3	24,086	29,826
TOTAL TURKEY	52,989	2,594	4.9	47,801	58,177
SPRING 1985	52,989	2,594	4.9	47,801	58,177
FALL 1985	0	0	.	0	0

(A) % = 100(SE/TOTAL HARVEST)

TABLE 3. EXPANDED STATEWIDE AND REGIONAL SUMMARIES OF DOVE HUNTING IN MISSISSIPPI DURING THE 1985-86 HUNTING SEASON.

REGION	STATISTIC	TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS	TOTAL MANDAYS	AVERAGE SEASONAL DAYS HUNTING	TOTAL HUNTERS	PERCENT HUNTERS PER REGION
1	ESTIMATE (SE) N	611,064 (45,764) 4,624	6.08 (0.23) 420	26.38 (1.55) 422	94.6 (1.1) 425	99,987 (6,756) 4,613	4.32 (0.21) 421	23,341 (1,078) 2,000	21.3 (0.9) 2,000
2	ESTIMATE (SE) N	1,050,079 (48,600) 4,624	5.62 (0.22) 855	22.22 (0.77) 861	94.2 (0.8) 863	186,106 (9,721) 4,613	3.95 (0.17) 857	47,339 (1,453) 2,000	43.2 (1.1) 2,000
3	ESTIMATE (SE) N	1,067,336 (14,530) 4,624	5.41 (0.46) 126	15.02 (1.59) 129	88.4 (2.8) 129	19,095 (2,095) 4,613	2.75 (0.18) 126	7,068 (614) 2,000	6.5 (0.5) 2,000
4	ESTIMATE (SE) N	634,889 (44,351) 4,624	5.70 (0.23) 463	24.72 (1.35) 467	93.4 (1.2) 468	110,222 (6,840) 4,613	4.32 (0.19) 464	25,697 (1,125) 2,000	23.5 (0.9) 2,000
5	ESTIMATE (SE) N	121,049 (18,201) 4,624	5.44 (0.50) 112	19.69 (2.33) 112	86.6 (3.2) 112	22,287 (2,891) 4,613	3.62 (0.33) 112	6,137 (573) 2,000	5.6 (0.5) 2,000
STATEWIDE	ESTIMATE (SE) N	2,538,405 (77,291) 4,656	5.72 (0.13) 2,002	23.00 (0.59) 2,023	93.1 (0.6) 2,029	439,252 (13,001) 4,640	4.00 (0.10) 2,007	110,602 (1,843) 4,666	43.6 (0.7) 4,666

								PERCENT OF TOTAL LICENSEES	

TABLE 4. EXPANDED STATEWIDE AND REGIONAL SUMMARIES OF QUAIL HUNTING IN MISSISSIPPI DURING THE 1985-86 HUNTING SEASON.

REGION	STATISTIC	TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS	TOTAL MANDAYS	AVERAGE SEASONAL DAYS HUNTING	TOTAL HUNTERS	PERCENT HUNTERS PER REGION
1	ESTIMATE (SE) N	102,918 (20,107) 4,637	3.61 (0.29) 90	20.66 (3.44) 91	87.9 (3.4) 91	28,242 (4,752) 4,629	5.72 (0.76) 90	5,034 (520) 722	12.7 (1.2) 722
2	ESTIMATE (SE) N	397,822 (37,850) 4,637	2.45 (0.15) 375	19.22 (1.57) 378	86.0 (1.8) 378	162,376 (13,840) 4,629	7.90 (0.55) 375	20,684 (1,020) 722	52.4 (1.9) 722
3	ESTIMATE (SE) N	22,938 (7,452) 4,637	2.76 (0.62) 36	11.64 (3.30) 36	80.6 (6.7) 36	8,335 (2,112) 4,629	4.22 (0.82) 36	1,970 (327) 722	5.0 (0.8) 722
4	ESTIMATE (SE) N	129,031 (23,644) 4,637	2.51 (0.34) 147	15.61 (2.58) 151	80.8 (3.2) 151	50,780 (7,536) 4,629	6.30 (0.79) 147	8,317 (664) 722	21.1 (1.5) 722
5	ESTIMATE (SE) N	38,266 (9,539) 4,637	2.27 (0.35) 64	10.92 (2.38) 64	81.3 (4.9) 64	16,890 (3,741) 4,629	4.81 (0.89) 64	3,502 (435) 722	8.9 (1.1) 722
STATEWIDE		708,449 (50,055) 4,662	2.56 (0.12) 731	17.42 (1.09) 745	84.7 (1.3) 746	275,086 (17,011) 4,649	6.88 (0.36) 732	40,748 (1,364) 4,666	16.1 (0.5) 4,666
								PERCENT CF TOTAL LICENSEES	

TABLE 5. EXPANDED STATEWIDE AND REGIONAL SUMMARIES OF WOODCOCK HUNTING IN MISSISSIPPI DURING THE 1985-86 HUNTING SEASON.

REGION	STATISTIC	TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS	TOTAL MANDAYS	AVERAGE SEASONAL DAYS HUNTING	TOTAL HUNTERS	PERCENT HUNTERS PER REGION
1	ESTIMATE (SE) N	4,357 (1,470) 4,661	1.52 (0.47) 17	4.21 (1.07) 19	100.0 (0.0) 19	2,619 (1,014) 4,652	2.82 (0.88) 17	1,035 (237) 101	18.8 (3.9) 101
2	ESTIMATE (SE) N	7,080 (1,753) 4,661	0.77 (0.12) 35	3.51 (0.66) 37	83.8 (6.1) 37	9,058 (2,660) 4,652	4.74 (1.16) 35	2,015 (330) 101	36.6 (4.8) 101
3	ESTIMATE (SE) N	2,396 (1,331) 4,661	1.07 (0.24) 5	7.33 (3.03) 6	83.3 (16.7) 6	1,473 (1,109) 4,652	5.40 (3.66) 5	327 (133) 101	5.9 (2.4) 101
4	ESTIMATE (SE) N	6,263 (1,695) 4,661	0.83 (0.21) 22	4.58 (0.89) 24	87.5 (6.9) 24	6,493 (1,852) 4,652	5.41 (1.05) 22	1,307 (266) 101	23.8 (4.3) 101
5	ESTIMATE (SE) N	2,287 (983) 4,661	0.39 (0.15) 13	2.80 (1.00) 15	80.0 (10.7) 15	5,620 (2,539) 4,652	7.92 (2.94) 13	817 (211) 101	14.9 (3.6) 101
STATEWIDE	ESTIMATE (SE) N	22,958 (3,291) 4,666	0.80 (0.10) 95	3.93 (0.43) 106	87.7 (3.2) 106	25,739 (4,382) 4,655	4.97 (0.68) 95	5,767 (554) 4,666	2.3 (0.2) 4,666
									PERCENT CF TOTAL LICENSEES

TABLE 6. EXPANDED STATEWIDE AND REGIONAL SUMMARIES OF RABBIT HUNTING IN MISSISSIPPI DURING THE 1985-86 HUNTING SEASON.

REGION	STATISTIC	TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS	TOTAL MANDAYS	AVERAGE SEASONAL DAYS HUNTING	TOTAL HUNTERS	PERCENT HUNTERS PER REGION
1	ESTIMATE (SE) N	238,110 (23,417) 4,549	2.11 (0.16) 302	13.81 (1.13) 309	93.6 (1.4) 312	110,921 (11,017) 4,513	6.51 (0.54) 303	17,535 (953) 1,689	18.7 (0.9) 1,689
2	ESTIMATE (SE) N	330,742 (30,892) 4,549	1.54 (0.12) 557	10.32 (0.88) 574	88.7 (1.3) 574	205,642 (15,009) 4,513	6.56 (0.40) 557	31,953 (1,247) 1,689	34.0 (1.2) 1,689
3	ESTIMATE (SE) N	80,802 (10,950) 4,549	1.66 (0.17) 156	9.11 (1.01) 159	92.5 (2.1) 159	49,104 (6,271) 4,513	5.56 (0.56) 157	8,907 (692) 1,689	9.5 (0.7) 1,689
4	ESTIMATE (SE) N	233,590 (18,465) 4,549	1.32 (0.09) 429	9.47 (0.62) 440	91.6 (1.3) 441	173,918 (16,590) 4,513	7.19 (0.51) 430	24,605 (1,112) 1,689	26.2 (1.1) 1,689
5	ESTIMATE (SE) N	155,020 (23,099) 4,549	1.73 (0.16) 194	14.17 (1.87) 196	88.8 (2.2) 197	89,996 (10,381) 4,513	8.21 (0.75) 195	11,022 (766) 1,689	11.7 (0.8) 1,689

STATEWIDE	ESTIMATE (SE) N	1,077,563 (48,562) 4,650	1.61 (0.06) 1,717	11.08 (0.46) 1,779	90.4 (0.7) 1,785	652,794 (25,707) 4,594	6.86 (0.24) 1,723	97,654 (1,808) 4,666	38.5 (0.7) 4,666

								PERCENT OF TOTAL LICENSEES	

TABLE 7. EXPANDED STATEWIDE AND REGIONAL SUMMARIES OF SQUIBBEL HUNTING IN MISSISSIPPI DURING THE 1985-86 HUNTING SEASON.

REGION	STATISTIC	TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS	TOTAL MANDAYS	AVERAGE SEASONAL DAYS HUNTING	TOTAL HUNTERS	PERCENT HUNTERS PER REGION
1	ESTIMATE (SE) N	388,570 (27,550) 4,507	2.98 (0.15) 417	16.16 (0.87) 427	95.1 (1.0) 430	129,204 (9,175) 4,452	5.42 (0.29) 418	24,264 (1,109) 2,630	16.5 (0.7) 2,630
2	ESTIMATE (SE) N	729,152 (38,661) 4,507	2.27 (0.08) 943	13.39 (0.60) 966	91.8 (0.9) 968	317,821 (15,256) 4,452	5.89 (0.23) 946	54,524 (1,549) 2,630	37.0 (0.9) 2,630
3	ESTIMATE (SE) N	303,692 (24,733) 4,507	2.81 (0.18) 315	16.75 (1.03) 322	97.5 (0.9) 322	105,997 (9,191) 4,452	5.88 (0.40) 316	18,100 (971) 2,630	12.3 (0.6) 2,630
4	ESTIMATE (SE) N	579,165 (36,543) 4,507	2.37 (0.10) 625	15.92 (0.82) 646	93.1 (1.0) 648	233,262 (13,370) 4,452	6.52 (0.29) 627	36,424 (1,322) 2,630	24.7 (0.8) 2,630
5	ESTIMATE (SE) N	226,192 (22,819) 4,507	2.44 (0.19) 243	16.26 (1.30) 247	90.7 (1.8) 248	93,168 (8,563) 4,452	6.67 (0.45) 245	14,065 (863) 2,630	9.5 (0.6) 2,630

STATEWIDE	ESTIMATE (SE) N	2,268,034 (61,884) 4,639	2.47 (0.05) 2,649	15.12 (0.37) 2,740	93.2 (0.5) 2,749	897,312 (23,002) 4,560	6.06 (0.14) 2,660	150,480 (1,826) 4,666	59.3 (0.7) 4,666

								PERCENT OF TOTAL LICENSEES	

TABLE 8. EXPANDED STATEWIDE AND REGIONAL SUMMARIES OF RABBIT HUNTING IN MISSISSIPPI DURING THE 1985-86 HUNTING SEASON.

REGION	STATISTIC	TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS	TOTAL MANDAYS	AVERAGE SEASONAL DAYS HUNTING	TOTAL HUNTERS	PERCENT HUNTERS PER REGION
1	ESTIMATE	48,206	1.23	12.57	88.7	36,924	10.01	3,886	19.9
	(SE) N	(14,390) 4,634	(0.25) 66	(3.47) 70	(3.8) 71	(8,955) 4,613	(2.12) 67	(458) 357	(2.1) 357
2	ESTIMATE	85,455	0.86	12.58	89.6	91,622	14.35	6,841	35.0
	(SE) N	(16,578) 4,634	(0.14) 116	(2.18) 124	(2.7) 125	(14,908) 4,613	(1.94) 116	(604) 357	(2.5) 357
3	ESTIMATE	12,325	0.97	5.92	92.1	12,106	6.11	2,135	10.9
	(SE) N	(3,165) 4,634	(0.14) 36	(1.20) 38	(4.4) 38	(3,072) 4,613	(1.19) 36	(340) 357	(1.7) 357
4	ESTIMATE	28,266	0.40	5.27	89.8	69,721	13.77	5,418	27.7
	(SE) N	(5,481) 4,634	(0.13) 92	(0.88) 98	(3.1) 98	(22,750) 4,613	(4.29) 92	(539) 357	(2.4) 357
5	ESTIMATE	6,354	0.85	4.96	91.3	7,264	6.29	1,259	6.4
	(SE) N	(2,516) 4,634	(0.26) 21	(1.75) 23	(6.0) 23	(2,578) 4,613	(1.80) 21	(262) 357	(1.3) 357
STATEWIDE		188,996	0.78	9.10	90.1	224,075	11.71	20,945	8.3
		(22,923) 4,662	(0.11) 348	(1.01) 381	(1.5) 383	(28,800) 4,630	(1.38) 349	(1,023) 4,666	(0.4) 4,666
									PERCENT OF TOTAL LICENSEES

TABLE 9. EXPANDED STATEWIDE AND REGIONAL SUMMARIES OF ALL-DUCK HUNTING IN MISSISSIPPI DURING THE 1985-86 HUNTING SEASON.

REGION	STATISTIC	TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS	TOTAL HANDAYS	AVERAGE SEASONAL DAYS HUNTING	TOTAL HUNTERS	PERCENT HUNTERS PER REGION
1	ESTIMATE (SE) N	212,415 (23,489) 4,632	2.11 (0.10) 205	18.37 (1.62) 211	90.6 (2.0) 212	94,856 (8,827) 4,619	8.38 (0.53) 206	11,655 (780) 613	34.7 (1.9) 613
2	ESTIMATE (SE) N	95,685 (12,055) 4,632	1.22 (0.09) 205	8.31 (0.89) 210	79.1 (2.8) 211	77,160 (7,541) 4,619	6.82 (0.48) 206	11,546 (777) 613	34.4 (1.9) 613
3	ESTIMATE (SE) N	38,088 (8,622) 4,632	2.07 (0.21) 49	14.18 (2.52) 49	83.7 (5.3) 49	18,466 (3,575) 4,619	6.86 (0.91) 49	2,681 (381) 613	8.0 (1.1) 613
4	ESTIMATE (SE) N	31,840 (5,774) 4,632	1.07 (0.09) 96	5.75 (0.88) 101	73.3 (4.4) 101	27,698 (4,154) 4,619	5.20 (0.58) 97	5,636 (549) 613	16.8 (1.5) 613
5	ESTIMATE (SE) N	17,975 (5,314) 4,632	1.46 (0.20) 33	9.37 (2.31) 35	82.9 (6.5) 35	14,069 (3,682) 4,619	7.31 (1.49) 35	2,025 (332) 613	6.0 (1.0) 613

STATEWIDE	ESTIMATE (SE) N	409,673 (28,786) 4,659	1.65 (0.06) 609	11.88 (0.71) 633	83.0 (1.5) 635	236,886 (13,060) 4,640	7.05 (0.28) 614	34,818 (1,279) 4,666	13.7 (0.5) 4,666

								PERCENT OF TOTAL LICENSEES	

TABLE 10. EXPANDED STATEWIDE AND REGIONAL SUMMARIES OF BALLARD, WOOD DUCK, AND OTHER DUCK HUNTING IN MISSISSIPPI DURING THE 1985-86 HUNTING SEASON.

REGION(1)	STATISTIC	BALLARDS				WOOD DUCKS				OTHER DUCKS			
		TOTAL HARVEST	AVERAGE DAILY KILL	SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS	TOTAL HARVEST	AVERAGE DAILY KILL	SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS	TOTAL HARVEST	AVERAGE DAILY KILL	SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS
1	ESTIMATE (SE) N	125,142 (14,453) 4,633	1.24 (0.08) 206	10.77 (1.01) 212	81.6 (2.7) 212	35,395 (4,942) 4,633	0.32 (0.03) 206	3.05 (0.38) 212	54.2 (3.4) 212	56,228 (8,043) 4,632	0.56 (0.06) 205	4.86 (0.62) 211	66.2 (3.4) 212
2	ESTIMATE (SE) N	34,409 (4,619) 4,633	0.44 (0.04) 205	2.99 (0.35) 210	53.1 (3.4) 211	37,806 (5,166) 4,633	0.49 (0.05) 205	3.29 (0.39) 210	60.7 (3.4) 211	23,456 (5,700) 4,632	0.29 (0.06) 205	2.04 (0.48) 210	27.0 (3.1) 211
3	ESTIMATE (SE) N	19,779 (5,011) 4,633	1.07 (0.15) 49	7.37 (1.56) 49	63.3 (7.0) 49	7,999 (2,305) 4,633	0.43 (0.09) 49	2.98 (0.75) 49	51.0 (7.2) 49	10,303 (2,766) 4,632	0.56 (0.11) 49	3.84 (0.88) 49	38.8 (7.0) 49
4	ESTIMATE (SE) N	3,397 (815) 4,633	0.11 (0.03) 96	0.61 (0.13) 101	23.8 (4.3) 101	22,903 (3,793) 4,633	0.76 (0.07) 96	4.14 (0.55) 101	63.6 (4.8) 101	5,535 (2,626) 4,632	0.20 (0.08) 96	1.00 (0.47) 101	10.9 (3.1) 101
5	ESTIMATE (SE) N	2,685 (940) 4,633	0.21 (0.04) 33	1.40 (0.44) 35	34.3 (8.1) 35	7,123 (1,917) 4,633	0.58 (0.12) 33	3.71 (0.79) 35	65.7 (8.1) 35	8,166 (3,721) 4,632	0.67 (0.23) 33	4.26 (1.83) 35	34.3 (8.1) 35
STATEWIDE	ESTIMATE (SE) N	189,241 (15,957) 4,660	0.76 (0.05) 610	5.48 (0.42) 634	57.5 (2.0) 635	118,698 (8,946) 4,660	0.46 (0.02) 610	3.44 (0.23) 634	58.7 (2.0) 635	104,028 (11,155) 4,659	0.44 (0.04) 609	3.07 (0.30) 633	32.1 (1.9) 635

TABLE 11. EXPANDED STATEWIDE AND REGIONAL SUMMARIES OF GOOSE HUNTING IN MISSISSIPPI DURING THE 1985-86 HUNTING SEASON.

REGION	STATISTIC	TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS	TOTAL MANDAYS	AVERAGE SEASONAL DAYS HUNTING	TOTAL HUNTERS	PERCENT HUNTERS PER REGION
1	ESTIMATE (SE) N	817 (331) 4,659	0.22 (0.11) 14	1.00 (0.32) 15	53.3 (13.3) 15	2,998 (1,003) 4,657	3.93 (0.82) 14	817 (211) 48	31.3 (6.8) 48
2	ESTIMATE (SE) N	1,744 (702) 4,659	0.17 (0.07) 23	1.28 (0.46) 25	52.0 (10.2) 25	8,394 (2,143) 4,657	6.70 (1.01) 23	1,362 (272) 48	52.1 (7.3) 48
3	ESTIMATE (SE) N	0 (0) 4,659	0.00 (0.00) 2	0.00 (0.00) 2	0.0 (0.0) 2	818 (609) 4,657	7.50 (2.50) 2	109 (77) 48	4.2 (2.9) 48
4	ESTIMATE (SE) N	0 (0) 4,659	0.00 (0.00) 4	0.00 (0.00) 4	0.0 (0.0) 4	709 (553) 4,657	3.25 (2.25) 4	218 (109) 48	8.3 (4.0) 48
5	ESTIMATE (SE) N	0 (0) 4,659	0.00 (.) 1	0.00 (.) 1	0.0 (.) 1	1,036 (983) 4,657	9.50 (8.50) 2	109 (77) 48	4.2 (2.9) 48

STATEWIDE	ESTIMATE (SE) N	2,775 (786) 4,665	0.16 (0.05) 48	0.96 (0.24) 53	45.3 (6.9) 53	14,650 (2,711) 4,661	5.49 (0.66) 49	2,938 (398) 4,666	1.2 (0.2) 4,666

								PERCENT OF TOTAL LICENSEES	

TABLE 12. EXPANDED STATEWIDE AND REGIONAL SUMMARIES OF BED_EOX HUNTING IN MISSISSIPPI DURING THE 1985-86 HUNTING SEASON.

REGION	STATISTIC	TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS	TOTAL MANDAYS	AVERAGE SEASONAL DAYS HUNTING	TOTAL HUNTERS	PERCENT HUNTERS PER REGION
1	ESTIMATE	981	0.64	2.00	100.0	1,366	3.57	490	16.1
	(SE) N	(449) 4,659	(0.12) 7	(0.67) 9	(0.0) 9	(710) 4,646	(1.38) 7	(163) 56	(5.0) 56
2	ESTIMATE	708	0.03	0.72	52.6	12,567	17.69	1,035	33.9
	(SE) N	(261) 4,659	(0.02) 13	(0.21) 18	(11.8) 19	(5,088) 4,646	(5.44) 13	(237) 56	(6.4) 56
3	ESTIMATE	109	0.03	0.50	50.0	3,661	16.75	218	7.1
	(SE) N	(77) 4,659	(0.03) 4	(0.29) 4	(28.9) 4	(2,839) 4,646	(11.47) 4	(109) 56	(3.5) 56
4	ESTIMATE	981	0.12	0.95	78.9	5,955	7.27	1,035	33.9
	(SE) N	(267) 4,659	(0.08) 15	(0.14) 19	(9.6) 19	(3,508) 4,646	(3.98) 15	(237) 56	(6.4) 56
5	ESTIMATE	327	0.29	1.20	80.0	765	4.67	272	8.9
	(SE) N	(189) 4,659	(0.32) 3	(0.49) 5	(20.0) 5	(573) 4,646	(2.73) 3	(122) 56	(3.8) 56

STATEWIDE	ESTIMATE	3,591	0.11	1.08	69.4	24,789	10.09	3,373	1.3
	(SE) N	(728) 4,665	(0.04) 45	(0.17) 61	(5.9) 62	(6,858) 4,649	(2.38) 45	(426) 4,666	(0.2) 4,666

									PERCENT OF TOTAL LICENSEES

TABLE 13. EXPANDED STATEWIDE AND REGIONAL SUMMARIES OF GAY_EOX HUNTING IN MISSISSIPPI DURING THE 1985-86 HUNTING SEASON.

REGION	STATISTIC	TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS	TOTAL MANDAYS	AVERAGE SEASONAL DAYS HUNTING	TOTAL HUNTERS	PERCENT HUNTERS PER REGION
1	ESTIMATE	163	0.43	1.00	66.7	382	2.33	163	7.5
	(SE) N	(122) 4,661	(0.41) 3	(0.58) 3	(33.3) 3	(250) 4,654	(0.88) 3	(94) 40	(4.2) 40
2	ESTIMATE	926	0.04	0.85	61.9	12,381	15.13	1,143	52.5
	(SE) N	(313) 4,661	(0.02) 15	(0.22) 20	(10.9) 21	(5,070) 4,654	(4.98) 15	(249) 40	(8.0) 40
3	ESTIMATE	218	0.04	0.80	80.0	4,036	18.50	272	12.5
	(SE) N	(109) 4,661	(0.05) 4	(0.20) 5	(20.0) 5	(3,820) 4,654	(17.17) 4	(122) 40	(5.3) 40
4	ESTIMATE	381	0.07	0.78	66.7	4,745	10.88	490	22.5
	(SE) N	(163) 4,661	(0.06) 8	(0.22) 9	(16.7) 9	(3,350) 4,654	(7.10) 8	(163) 40	(6.7) 40
5	ESTIMATE	109	0.13	1.00	100.0	818	7.50	109	5.0
	(SE) N	(77) 4,661	(0.12) 2	(0.00) 2	(0.0) 2	(766) 4,654	(6.50) 2	(77) 40	(3.5) 40
-----									PERCENT OF
STATEWIDE									TOTAL
ESTIMATE									LICENSEES
(SE)									
N									
1,850									2,394
(399)									(359)
4,665									4,666
0.06									12.21
(0.02)									(3.34)
34									34
0.79									63.6
(0.12)									(7.3)
43									44
22,626									22,626
(7,218)									(7,218)
4,656									4,656

TABLE 14. EXPANDED STATEWIDE AND REGIONAL SUMMARIES OF BOBCAI HUNTING IN MISSISSIPPI DURING THE 1985-86 HUNTING SEASON.

REGION	STATISTIC	TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS	TOTAL HANDAYS	AVERAGE SEASONAL DAYS HUNTING	TOTAL HUNTERS	PERCENT HUNTERS PER REGION
1	ESTIMATE (SE) N	654 (204) 4,657	0.09 (0.08) 7	0.80 (0.14) 15	73.3 (11.8) 15	1,757 (1,147) 4,622	4.57 (2.63) 7	817 (211) 98	15.3 (3.7) 98
2	ESTIMATE (SE) N	2,616 (538) 4,657	0.22 (0.09) 25	1.30 (0.16) 37	84.2 (6.0) 38	7,414 (2,830) 4,622	5.40 (1.79) 25	2,071 (335) 98	38.8 (4.9) 98
3	ESTIMATE (SE) N	1,036 (381) 4,657	0.83 (0.16) 7	1.73 (0.38) 11	100.0 (0.0) 11	659 (320) 4,622	1.71 (0.57) 7	599 (181) 98	11.2 (3.2) 98
4	ESTIMATE (SE) N	1,962 (571) 4,657	0.40 (0.08) 19	1.44 (0.31) 25	80.0 (8.2) 25	3,844 (1,597) 4,622	3.68 (1.31) 19	1,362 (272) 98	25.5 (4.4) 98
5	ESTIMATE (SE) N	709 (322) 4,657	0.28 (0.22) 4	1.44 (0.47) 9	88.9 (11.1) 9	989 (781) 4,622	4.50 (3.18) 4	490 (163) 98	9.2 (2.9) 98

STATEWIDE	ESTIMATE (SE) N	7,346 (957) 4,665	0.28 (0.06) 63	1.29 (0.11) 105	84.0 (3.6) 106	14,716 (3,543) 4,623	4.25 (0.88) 63	5,767 (554) 4,666	2.3 (0.2) 4,666

PERCENT OF TOTAL LICENSEES									

TABLE 15. EXPANDED STATEWIDE AND REGIONAL SUMMARIES OF QUOTE HUNTING IN MISSISSIPPI DURING THE 1985-86 HUNTING SEASON.

REGION	STATISTIC	TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS	TOTAL MANDAYS	AVERAGE SEASONAL DAYS HUNTING	TOTAL HUNTERS	PERCENT HUNTERS PER REGION
1	ESTIMATE	8,317	0.50	2.50	88.3	7,929	3.38	3,281	18.0
	(SE) N	(2,903) 4,639	(0.07) 42	(0.83) 60	(4.2) 60	(1,840) 4,546	(0.60) 42	(421) 334	(2.1) 334
2	ESTIMATE	14,829	0.24	1.82	80.0	41,880	6.76	8,257	45.2
	(SE) N	(2,010) 4,639	(0.04) 109	(0.20) 148	(3.3) 150	(7,112) 4,546	(0.96) 111	(661) 334	(2.7) 334
3	ESTIMATE	4,815	0.56	2.00	93.2	5,193	3.44	2,406	13.2
	(SE) N	(1,067) 4,639	(0.12) 27	(0.33) 44	(3.8) 44	(1,577) 4,546	(0.83) 27	(361) 334	(1.9) 334
4	ESTIMATE	5,144	0.08	1.49	77.8	36,296	14.13	3,445	18.9
	(SE) N	(1,078) 4,639	(0.04) 46	(0.25) 63	(5.3) 63	(18,174) 4,546	(6.84) 46	(431) 334	(2.1) 334
5	ESTIMATE	1,423	0.14	1.63	68.8	8,934	13.33	875	4.8
	(SE) N	(589) 4,639	(0.05) 12	(0.55) 16	(12.0) 16	(5,872) 4,546	(8.22) 12	(218) 334	(1.2) 334
-----									PERCENT OF TOTAL LICENSEES
STATEWIDE	ESTIMATE	36,800	0.21	1.89	82.1	103,010	7.51	19,476	7.7
	(SE) N	(3,913) 4,663	(0.04) 244	(0.18) 355	(2.0) 357	(20,503) 4,554	(1.42) 246	(989) 4,666	(0.4) 4,666

TABLE 16. EXPANDED STATEWIDE AND REGIONAL SUMMARIES OF ARCHERY-BEER HUNTING IN MISSISSIPPI DURING THE 1985-86 HUNTING SEASON.

REGION	STATISTIC	TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS	TOTAL MANDAYS	AVERAGE SEASONAL DAYS HUNTING	TOTAL HUNTERS	PERCENT HUNTERS PER REGION
1	ESTIMATE (SE) N	4,235 (656) 4,348	0.066 (0.008) 140	0.56 (0.07) 144	36.8 (4.0) 144	64,380 (6,734) 4,326	8.75 (0.56) 140	7,523 (617) 715	20.1 (1.5) 715
2	ESTIMATE (SE) N	4,549 (716) 4,348	0.043 (0.006) 223	0.38 (0.05) 231	23.8 (2.8) 231	101,642 (8,803) 4,326	8.67 (0.50) 223	12,120 (774) 715	32.4 (1.8) 715
3	ESTIMATE (SE) N	2,510 (483) 4,348	0.049 (0.008) 105	0.44 (0.07) 110	30.9 (4.4) 110	48,981 (5,990) 4,326	8.88 (0.67) 105	5,747 (541) 715	15.4 (1.4) 715
4	ESTIMATE (SE) N	5,124 (786) 4,348	0.058 (0.007) 162	0.58 (0.08) 169	35.5 (3.7) 169	80,777 (7,751) 4,326	9.43 (0.54) 163	8,881 (668) 715	23.8 (1.6) 715
5	ESTIMATE (SE) N	1,307 (401) 4,348	0.044 (0.012) 56	0.44 (0.12) 57	26.3 (5.9) 57	30,745 (5,094) 4,326	10.09 (1.04) 58	3,082 (399) 715	8.3 (1.0) 715

STATEWIDE	ESTIMATE (SE) N	18,120 (1,391) 4,379	0.051 (0.003) 710	0.47 (0.03) 742	30.1 (1.7) 742	333,348 (15,047) 4,350	8.95 (0.26) 713	38,696 (1,291) 4,383	17.0 (0.6) 4,383

PERCENT OF TOTAL LICENSEE(A)

(A) CALCULATED AS A PERCENT OF BIG GAME LICENSE HOLDERS ONLY.

TABLE 17. EXPANDED STATEWIDE AND REGIONAL SUMMARIES OF ARCHERY-BUCK_AND_DOE HUNTING IN MISSISSIPPI DURING THE 1985-86 HUNTING SEASON.

REGION	STATISTIC	BUCKS				DOES			
		TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS	TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS
1	ESTIMATE	1,307	0.020	0.17	15.3	2,928	0.046	0.39	29.9
	(SE) N	(290) 4,348	(0.004) 140	(0.04) 144	(3.0) 144	(483) 4,348	(0.006) 140	(0.06) 144	(3.8) 144
2	ESTIMATE	2,562	0.024	0.21	15.6	1,987	0.019	0.16	13.4
	(SE) N	(475) 4,348	(0.004) 223	(0.04) 231	(2.4) 231	(376) 4,348	(0.003) 223	(0.03) 231	(2.2) 231
3	ESTIMATE	1,255	0.026	0.22	18.2	1,255	0.024	0.22	18.2
	(SE) N	(322) 4,348	(0.006) 105	(0.05) 110	(3.7) 110	(295) 4,348	(0.005) 105	(0.05) 110	(3.7) 110
4	ESTIMATE	2,562	0.028	0.29	20.7	2,562	0.030	0.29	21.9
	(SE) N	(486) 4,348	(0.005) 162	(0.05) 169	(3.1) 169	(457) 4,348	(0.005) 162	(0.05) 169	(3.2) 169
5	ESTIMATE	627	0.021	0.21	14.0	680	0.023	0.23	19.3
	(SE) N	(245) 4,348	(0.008) 56	(0.08) 57	(4.6) 57	(215) 4,348	(0.006) 56	(0.07) 57	(5.3) 57
STATEWIDE	ESTIMATE	8,567	0.024	0.22	16.7	9,553	0.027	0.25	19.7
	(SE) N	(851) 4,379	(0.002) 710	(0.02) 742	(1.4) 742	(838) 4,379	(0.002) 710	(0.02) 742	(1.5) 742

TABLE 18. EXPANDED STATEWIDE AND REGIONAL SUMMARIES OF PRIMITIVE-WEAPON-DEER HUNTING IN MISSISSIPPI DURING THE 1985-86 HUNTING SEASON.

REGION	STATISTIC	TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS	TOTAL MANDAYS	AVERAGE SEASONAL DAYS HUNTING	TOTAL HUNTERS	PERCENT HUNTERS PER REGION
1	ESTIMATE (SE) N	6,596 (838) 4,343	0.143 (0.014) 163	0.75 (0.08) 168	50.0 (3.9) 168	44,373 (4,026) 4,309	5.16 (0.25) 163	8,789 (665) 905	18.6 (1.3) 905
2	ESTIMATE (SE) N	6,387 (707) 4,343	0.094 (0.009) 263	0.44 (0.04) 275	33.5 (2.9) 275	65,637 (4,692) 4,309	4.73 (0.19) 263	14,438 (841) 905	30.5 (1.5) 905
3	ESTIMATE (SE) N	5,130 (678) 4,343	0.129 (0.014) 156	0.60 (0.06) 163	42.3 (3.9) 163	38,992 (3,591) 4,309	4.74 (0.23) 156	8,527 (655) 905	18.0 (1.3) 905
4	ESTIMATE (SE) N	8,009 (872) 4,343	0.129 (0.012) 208	0.70 (0.06) 218	48.6 (3.4) 218	58,514 (4,718) 4,309	5.31 (0.23) 209	11,457 (754) 905	24.2 (1.4) 905
5	ESTIMATE (SE) N	2,251 (476) 4,343	0.111 (0.019) 76	0.55 (0.10) 78	41.0 (5.6) 78	20,050 (2,695) 4,309	4.94 (0.36) 77	4,133 (461) 905	8.7 (0.9) 905

STATEWIDE	ESTIMATE (SE) N	29,016 (1,588) 4,380	0.119 (0.005) 892	0.60 (0.03) 939	42.2 (1.6) 939	232,494 (8,497) 4,335	4.96 (0.10) 894	48,863 (1,411) 4,383	21.5 (0.6) 4,383

(A) CALCULATED AS A PERCENT OF BIG GAME LICENSE HOLDERS ONLY.

TABLE 19. EXPANDED STATEWIDE AND REGIONAL SUMMARIES OF PRIMITIVE WEAPON-BUCK-AND-DOE HUNTING IN MISSISSIPPI DURING THE 1985-86 HUNTING SEASON.

REGION	STATISTIC	BUCKS					DOES				
		TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS	TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS		
1	ESTIMATE (SE) N	3,141	0.069	0.36	28.6	3,455	0.074	0.39	29.8		
		(483) 4,343	(0.009) 163	(0.05) 168	(3.5) 168	(526) 4,343	(0.010) 163	(0.05) 168	(3.5) 168		
2	ESTIMATE (SE) N	3,141	0.047	0.22	19.3	3,246	0.047	0.23	20.0		
		(448) 4,343	(0.006) 263	(0.03) 275	(2.4) 275	(454) 4,343	(0.006) 263	(0.03) 275	(2.4) 275		
3	ESTIMATE (SE) N	2,408	0.061	0.28	22.1	2,722	0.068	0.32	28.8		
		(430) 4,343	(0.010) 156	(0.05) 163	(3.3) 163	(410) 4,343	(0.009) 156	(0.04) 163	(3.6) 163		
4	ESTIMATE (SE) N	3,926	0.064	0.34	29.8	4,083	0.064	0.36	28.4		
		(512) 4,343	(0.007) 208	(0.04) 218	(3.1) 218	(565) 4,343	(0.008) 208	(0.04) 218	(3.1) 218		
5	ESTIMATE (SE) N	681	0.032	0.17	15.4	1,570	0.080	0.38	30.8		
		(203) 4,343	(0.009) 76	(0.05) 78	(4.1) 78	(354) 4,343	(0.015) 76	(0.06) 78	(5.3) 78		
STATEWIDE	ESTIMATE (SE) N	13,704	0.056	0.28	23.6	15,313	0.063	0.31	25.9		
		(955) 4,360	(0.004) 892	(0.02) 939	(1.4) 939	(1,032) 4,380	(0.004) 892	(0.02) 939	(1.4) 939		

TABLE 20. EXPANDED STATEWIDE AND REGIONAL SUMMARIES OF REGULAR SUN-DEER HUNTING IN MISSISSIPPI DURING THE 1985-86 HUNTING SEASON.

REGION	STATISTIC	TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS	TOTAL HANDAYS	AVERAGE SEASONAL DAYS HUNTING	TOTAL HUNTERS	PERCENT HUNTERS PER REGION
1	ESTIMATE (SE) N	34,260 (2,228) 4,214	0.107 (0.005) 493	1.23 (0.06) 517	60.0 (2.2) 517	318,836 (17,097) 4,036	11.48 (0.38) 493	27,908 (1,148) 3,380	15.4 (0.6) 3,380
2	ESTIMATE (SE) N	63,609 (2,998) 4,214	0.071 (0.003) 1,189	0.94 (0.04) 1,251	47.2 (1.4) 1,252	849,198 (27,119) 4,036	12.67 (0.26) 1,190	67,432 (1,597) 3,380	37.1 (0.8) 3,380
3	ESTIMATE (SE) N	32,695 (2,242) 4,214	0.091 (0.005) 448	1.29 (0.07) 470	61.1 (2.3) 470	352,241 (19,130) 4,036	13.93 (0.43) 449	25,327 (1,100) 3,380	13.9 (0.6) 3,380
4	ESTIMATE (SE) N	44,672 (2,445) 4,214	0.070 (0.003) 787	0.98 (0.04) 847	49.9 (1.7) 849	594,523 (23,870) 4,036	13.36 (0.33) 790	45,761 (1,402) 3,380	25.2 (0.7) 3,380
5	ESTIMATE (SE) N	13,704 (1,399) 4,214	0.065 (0.005) 264	0.90 (0.08) 281	47.2 (3.0) 282	201,329 (14,667) 4,036	13.44 (0.57) 266	15,325 (877) 3,380	8.4 (0.5) 3,380
STATEWIDE	ESTIMATE (SE) N	187,943 (4,417) 4,367	0.077 (0.002) 3,287	1.03 (0.02) 3,519	51.3 (0.8) 3,524	2,320,690 (33,871) 4,142	12.84 (0.16) 3,294	183,367 (1,357) 4,383	80.7 (0.6) 4,383
PERCENT OF TOTAL LICENSEE(A)									

(A) CALCULATED AS A PERCENT OF BIG GAME LICENSE HOLDERS ONLY.

TABLE 21. EXPANDED STATEWIDE AND REGIONAL SUMMARIES OF REGULAR_GUN_BUCK_AND_DOE HUNTING IN MISSISSIPPI DURING THE 1985-86 HUNTING SEASON.

REGION	STATISTIC	BUCKS				DOES			
		TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS	TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS
1	ESTIMATE	27,839	0.086	1.00	55.3	6,417	0.020	0.23	18.4
	(SE) N	(1,868) 4,214	(0.004) 493	(0.03) 517	(2.2) 517	(719) 4,216	(0.002) 493	(0.02) 517	(1.7) 517
2	ESTIMATE	54,761	0.061	0.81	44.7	8,844	0.010	0.13	10.8
	(SE) N	(2,598) 4,214	(0.002) 1,189	(0.03) 1,251	(1.4) 1,252	(831) 4,216	(0.001) 1,189	(0.01) 1,251	(0.9) 1,251
3	ESTIMATE	27,354	0.077	1.08	56.4	5,339	0.015	0.21	17.0
	(SE) N	(1,921) 4,214	(0.004) 448	(0.06) 470	(2.3) 470	(658) 4,216	(0.002) 448	(0.02) 470	(1.7) 470
4	ESTIMATE	39,978	0.063	0.87	47.2	4,746	0.007	0.10	8.8
	(SE) N	(2,249) 4,214	(0.003) 787	(0.04) 847	(1.7) 849	(648) 4,216	(0.001) 788	(0.01) 848	(1.0) 849
5	ESTIMATE	11,816	0.057	0.78	42.9	1,887	0.009	0.12	9.6
	(SE) N	(1,249) 4,214	(0.005) 264	(0.07) 281	(3.0) 282	(490) 4,216	(0.002) 264	(0.03) 282	(1.8) 282
STATEWIDE	ESTIMATE	160,990	0.066	0.88	48.0	26,956	0.011	0.15	12.0
	(SE) N	(3,885) 4,214	(0.002) 3,287	(0.02) 3,520	(0.8) 3,524	(1,435) 4,214	(0.001) 3,288	(0.01) 3,521	(0.5) 3,523

TABLE 22. EXPANDED STATEWIDE AND REGIONAL SUMMARIES OF SPRING-TUBBEY HUNTING IN MISSISSIPPI DURING THE 1985 HUNTING SEASON.

REGION	STATISTIC	TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS	TOTAL MANDAYS	AVERAGE SEASONAL DAYS HUNTING	TOTAL HUNTERS	PERCENT HUNTERS PER REGION
1	ESTIMATE	4,468	0.107	0.73	37.9	42,159	6.83	6,192	12.1
	(SE) N	(780) 3,913	(0.012) 103	(0.11) 103	(4.8) 103	(6,037) 3,887	(0.72) 103	(599) 861	(1.1) 861
2	ESTIMATE	10,663	0.103	0.90	48.7	97,632	8.44	11,849	23.1
	(SE) N	(1,242) 3,913	(0.008) 193	(0.06) 199	(3.6) 199	(9,242) 3,887	(0.54) 193	(818) 861	(1.4) 861
3	ESTIMATE	13,364	0.147	1.24	62.4	87,497	8.39	10,777	21.0
	(SE) N	(1,381) 3,913	(0.009) 174	(0.09) 181	(3.6) 181	(8,446) 3,887	(0.52) 174	(782) 861	(1.4) 861
4	ESTIMATE	19,897	0.120	1.06	60.9	157,782	8.77	18,636	36.4
	(SE) N	(1,625) 3,913	(0.007) 299	(0.06) 312	(2.8) 312	(12,127) 3,887	(0.47) 300	(1,011) 861	(1.6) 861
5	ESTIMATE	3,932	0.097	1.03	51.6	40,900	10.83	3,811	7.4
	(SE) N	(737) 3,913	(0.010) 63	(0.15) 64	(6.3) 64	(6,402) 3,887	(1.03) 63	(472) 861	(0.9) 861
-----									PERCENT CF
STATEWIDE									TOTAL
ESTIMATE									LICENSEE(A)
(SE)									
N									
52,989									8.45
(2,594)									(0.26)
3,946									861
54.2									52,876
(1.7)									(1,553)
893									3,950
433,284									
(18,630)									
3,915									

(A) CALCULATED AS A PERCENT OF BIG GAME LICENSE HOLDERS ONLY.

TABLE 23 . EXPANDED STATEWIDE SUMMARIES OF ALL-DEER, BUCK, AND DOE HUNTING IN MISSISSIPPI DURING THE 1985-86 HUNTING SEASON AND ALL TURKEY HUNTING (COMBINING SPRING AND FALL DATA) DURING THE 1985 CALENDAR YEAR IN MISSISSIPPI.

SPECIES	STATISTIC	TOTAL HARVEST	AVERAGE DAILY KILL	AVERAGE SEASONAL HARVEST	PERCENT SUCCESSFUL HUNTERS	TOTAL MANDAYS	AVERAGE SEASONAL DAYS HUNTING	TOTAL HUNTERS	PERCENT OF TOTAL LICENSEES(A)
DEER	ESTIMATE	234,955	0.078	1.26	53.5	2,899,327	15.69	187,257	82.4
	(SE) N	(5,524) 4,367	(0.002) 3,353	(0.03) 3,594	(0.8) 3,599	(45,623) 4,133	(0.22) 3,360	(1,309) 4,383	(0.6) 4,383
BUCK	ESTIMATE	183,164	0.061	0.98	49.1				
	(SE) N	(4,406) 4,368	(0.001) 3,353	(0.02) 3,595	(0.8) 3,599				
DOE	ESTIMATE	51,882	0.017	0.28	19.3				
	(SE) N	(2,182) 4,369	(0.001) 3,354	(0.01) 3,596	(0.7) 3,598				
TURKEY	ESTIMATE	52,989	0.117	1.00	54.2	433,284	8.45	52,876	22.7
	(SE) N	(2,594) .	(0.004) 858	(0.04) 892	(1.7) 893	(18,630) .	(0.26) 861	(1,553) 3,950	(0.7) 3,950

(A) CALCULATED AS A PERCENT OF BIG GAME LICENSE HOLDERS ONLY.



1985-86 MISSISSIPPI HUNTER QUESTIONNAIRE

REGISTRATION	TOTAL KILLS	DEER KILLS	BOBCAT KILLS
REGULAR			
ADULT			
JUVENILE			
SEASON CLOSURE	-----SEASON CLOSED-----		
ADULT			
JUVENILE			
ADULT			
JUVENILE			

B. Please answer the following questions.

- The 1985-86 fall and winter hunting seasons have just been completed. Did you purchase a license to hunt deer and turkey during the previous **1984-85** hunting seasons (not the one just completed)?
 - 1 Yes
 - 2 No
- How many bobcats did you **see** while **deer hunting** during the 1985-86 regular gun season?
 bobcat(s)
- If you killed a bobcat during the 1985-86 hunting seasons, how many did you kill while:
 - deer hunting during regular gun season?
 bobcat(s)
 - hunting for other game?
 bobcat(s)
 - hunting specifically for bobcat?
 bobcat(s)
- Did you hunt on a Mississippi Department of Wildlife Conservation Wildlife Management Area during the 1985-86 hunting seasons?
 - 1 Yes
 - 2 No
 - 3 Not sure
- In order to hunt State Wildlife Management Areas, would you purchase a \$10 yearly permit if the money was used to benefit public hunting?
 - 1 Yes
 - 2 No
 - 3 Not sure

- If the Department of Wildlife Conservation offered **lifetime** licenses to hunt and fish, would you purchase a:
 - Lifetime combination (all game hunting and fishing) license for \$500.
 - 1 Yes
 - 2 No
 - 3 Maybe
 - Lifetime all game hunting license for \$300?
 - 1 Yes
 - 2 No
 - 3 Maybe
- Do you think the length of the current gun deer season is:
 - 1 Too long
 - 2 Too short
 - 3 Just right
- If you hunted ducks or geese please answer the following questions:
 - In general, which statement best describes your feelings concerning the use of steel shot for waterfowl hunting?
 - 1 I am opposed to steel shot
 - 2 I am undecided about steel shot
 - 3 I favor steel shot
 - If a box of steel shot cost the same as a box of lead shot, which statement would best describe your feelings concerning the use of steel shot for waterfowl hunting?
 - 1 I would be opposed to steel shot
 - 2 I would be undecided about steel shot
 - 3 I would favor steel shot
 - Have you ever used steel shot to hunt waterfowl?
 - 1 Yes
 - 2 No
- Your age: _____ yrs.

Fig. 1 Questionnaire used for the 1985-86 mail survey of game harvest and hunter effort in Mississippi.



MISSISSIPPI DEPARTMENT OF WILDLIFE CONSERVATION

P. O. Box 451 • Phone (601) 961-5300 • Jackson, MS 39205

Lon Strong, Executive Director

Dear Sportsman:

We need your help! The Department of Wildlife Conservation is surveying Mississippi hunters to obtain information concerning the 1985-86 hunting season and last spring's (1985) turkey season. You have been selected as a representative hunter to participate in the survey.

The purpose of this survey is to obtain reasonable estimates of game harvest, hunter effort and hunter opinions for the season just completed. Information supplied by you and other selected hunters will assist us in managing our game resources for the greatest public benefit.

For meaningful results, information is needed from everyone receiving a questionnaire since only a limited number of sportsmen can be contacted. Please fill in the enclosed questionnaire as accurately as possible (even if you did not hunt) and return it in the self-addressed, postage-paid envelope.

Our records are often difficult to read and we apologize if your name or address has been misspelled. A prompt reply will be sincerely appreciated.

Survey Section
DEPARTMENT OF WILDLIFE CONSERVATION
P. O. Box 451
JACKSON, MISSISSIPPI 39205



PRESORTED
FIRST CLASS MAIL
U.S. POSTAGE PAID
PERMIT NO. 141

Dear Sportsman:

Recently we mailed you a questionnaire on your hunting experiences. If you have not yet answered the questionnaire, will you please do so today? If you have already returned the questionnaire, disregard this notice and we thank you very much for your cooperation.

Your response is important. It is the only way we have of estimating the harvest, effort and opinions of hunters in Mississippi for management purposes.

Sincerely,

A handwritten signature in cursive script that reads "Lon Strong".

Lon Strong
Executive Director

Fig. 3. Post card used as the first reminder mailing to nonrespondents during the 1985-86 survey of game harvest and hunter effort in Mississippi.



MISSISSIPPI DEPARTMENT OF WILDLIFE CONSERVATION

P. O. Box 451 • Phone (601) 961-5300 • Jackson, MS 39205

Lon Strong, Executive Director

Dear Sportsman:

The Department of Wildlife Conservation is striving to provide quality hunting for Mississippi sportsmen. While not wanting to impose, we are depending on you to help us evaluate hunting activity and success for the 1985-86 hunting season and last spring's (1985) turkey season.

Another copy of the questionnaire is enclosed which we hope you will complete and return as soon as possible in the enclosed self-addressed, postage-paid envelope. If you have already returned the questionnaire please disregard this notice.

Remember, you can be of assistance even if you did not hunt or were not successful in your efforts. Your cooperation is needed and will be sincerely appreciated.

Sincerely for better conservation,

Lon Strong
Executive Director

LS/cap

Enclosure

Fig. 4. Cover letter mailed with the second (and final) reminder mailing to nonrespondents during the 1985-68 survey of game harvest and hunter effort in Mississippi.