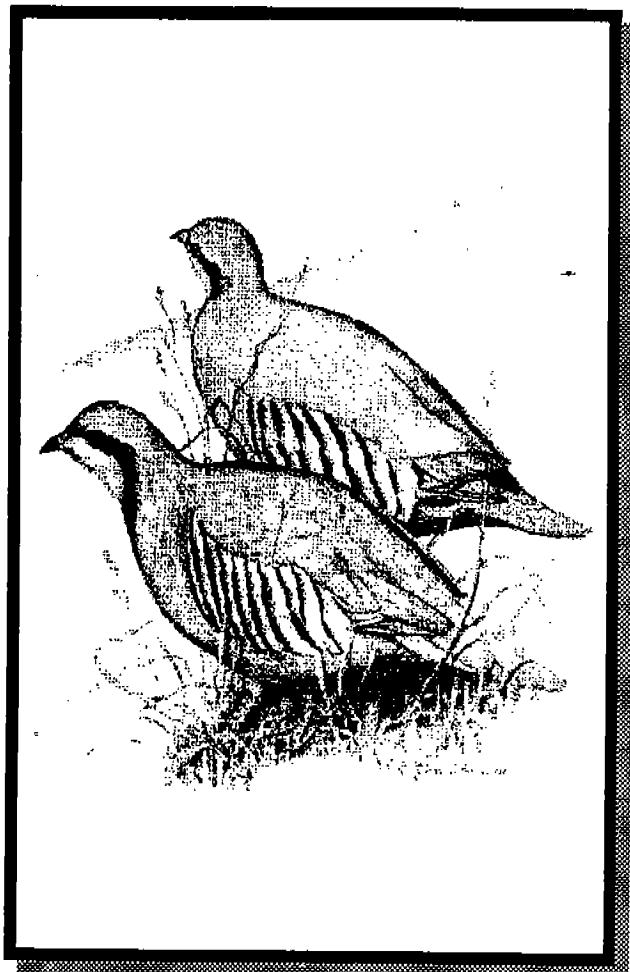


UTAH

UPLAND GAME

ANNUAL REPORT 1994

UTAH
DIVISION OF
WILDLIFE
RESOURCES
DEPARTMENT OF
NATURAL RESOURCES
PUBLICATION NO. 95-10



U T A H
U P L A N D G A M E
Annual Report
1994

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PUBLICATION NO. 95-10

Annual Performance Report for Federal Aid Project W-65-R-40 Job A-4

Utah Department of Natural Resources

DIVISION OF WILDLIFE RESOURCES

An Equal Opportunity Employer

Robert G. Valentine
Director

**"FINDING OUT HOW MANY THERE ARE LEFT IS
THE LEAST OF THE PURPOSES OF GAME CENSUS.
MEASURING THE RESPONSE OF GAME POPULATIONS
TO CHANGES - DELIBERATE OR ACCIDENTAL -
IN THEIR ENVIRONMENT IS THE BIG PURPOSE.
CONTINUOUS CENSUS IS THE YARDSTICK OF
SUCCESS OR FAILURE IN CONSERVATION."**

ALDO LEOPOLD 1932

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JOB PERFORMANCE REPORT

RESEARCH PROJECT SEGMENT
(Inventory)

State: U T A H Grant Title: Statewide Wildlife Management Inventory
Project No.: W-65-R Segment No.: 42
Job Title: Statewide Upland Game
Job No.: A-4

Period Covered: October 1, 1993 to September 30, 1994

Abstract: This report includes upland game inventory and harvest data collected during 1993-94. Results of annual inventory and harvest surveys and long-term trends of indices derived by each method are included in the final report. Data obtained in 1994 are compared to 1993 and long-term averages.

Objectives:

1. Conduct efficient breeding and production surveys.
2. Determine annual harvest, hunters, hunter-days and success rates.
3. Inventory critical seasonal habitat.

Procedures:

Annual inventory procedures for ring-necked pheasants included winter sex ratio counts and summer roadside counts. The winter sex ratio counts were conducted from December 15, 1993 through February 10, 1994, as snow cover conditions allowed. Indices derived include hen-cock ratios and pheasants observed per 100 hours. Annual summer roadside counts (three or more per route) were conducted from July 22-August 22 on permanently established routes. Indices derived include pheasants per mile, young per mile, young per hen, mean brood and percent of hens with young.

Mourning dove breeding population trend was determined via the annual call count survey. This survey is part of a nationwide survey administered by the U. S. Fish and Wildlife Service. Call counts are conducted over 15 permanent, 20-mile routes. One count was made on each route between May 20-30.

Random brood counts were conducted on chukar and gray partridge, forest grouse (ruffed and blue), sage grouse, sharp-tailed grouse, wild turkey and quail from June 15-August 22. Indices derived for each species include mean brood size, young per 100 adults and birds observed per 100 hours of effort.

Sage grouse strutting ground counts and sharp-tailed grouse dancing ground counts were conducted from March 15-May 15. Total cocks counted, average cocks per ground and percent change from 1993 for comparable grounds were determined on a county basis.

Gambel's quail long-period waterhole counts were completed in July and August. Limited California quail random brood counts were made in several counties.

Cottontail rabbit roadside counts were conducted over pre-established routes between July 15 and August 22. Indices derived include rabbits per mile and young per 100 adults.

Harvest questionnaires were mailed to determine the harvest of upland game birds, cottontail rabbit, and snowshoe hare. A sample of eligible licensees from the current year's (1994) resident small game license file and 1994 combination license file was used. The modified computerized pull-apart mailer was again used to obtain harvest data. Separate questionnaires were mailed to all band-tailed pigeon, white-tailed ptarmigan and wild turkey permittees. Indices derived include total hunters, hunter-days, total harvest and hunter success per day, plus success for each season.

The upland game questionnaires were processed by the Division of Wildlife Resources Public Services Section. General upland game questionnaires as well as band-tailed pigeon, wild turkey and white-tailed ptarmigan questionnaires were analyzed by Wildlife Section personnel.

Upland game hunters were checked at checking stations, and random field bag checks were made during each hunting season. Indices derived include bag per hunter (per day), bag per 100 hours, average hours per hunter-day and average hours per bird bagged. Additional sex and age composition data were compiled for some species using wing samples collected at checking stations.

Recommendations: This project should be continued for the purpose of determining trends of upland game populations and harvest statistics in Utah.

The objective of Utah's upland game management program is to provide recreational hunting opportunity for sportsmen within the limits of the annual harvestable surplus for each species. It is based on the knowledge that populations of upland game experience relatively high rates of annual turnover. High reproductive rates are naturally compensated for by high death rates, whether hunting is allowed or not. Annual surveys are conducted to measure the production, trend and harvest of each upland game population.

This is the twenty-fourth edition of this Annual Upland Game Report. It is an annual performance report of information compiled during inventory and harvest surveys conducted under Federal Aid Project W-65-R, Job A-4. Information contained herein was compiled by conservation officers, biologists, wildlife managers and the upland game management staff of the Utah Division of Wildlife Resources.

This report serves as a handbook of inventory and harvest data. It is designed primarily for the use of those concerned with the management of upland game. A separate section is devoted to each species of upland game in Utah. Data are presented primarily in tabular form with limited narrative comment. The first page of each section provides a brief summary of population status and trend as indicated by inventory and harvest data.

During 1994, a total of 49,518 Utah sportsmen spent 348,030 days afield in pursuit of various upland game species (Table 1). The harvest of upland game totaled 367,423 animals. The proportion of the total upland game hunters which pursued each species is shown in Table 2 and the percentage failing to bag at least one bird (from general mail questionnaire) of each species in Table 3.

In 1994, Utah upland game hunters were again required to purchase an Upland Game Habitat Stamp in order to pursue pheasants, mourning doves, chukar partridge, sage grouse, forest grouse, quail, Hungarian partridge, cottontail rabbit and snowshoe hare. Funds derived from the Upland Game Habitat Stamp will be used to purchase, develop and protect critical upland game habitat throughout Utah.

The regulations for 1994 upland game hunting seasons are shown in Appendix D.

GENERAL HARVEST QUESTIONNAIRE

Harvest statistics were obtained from a random sample of licensed hunters by their response to a hunter questionnaire. The combined upland game bird and rabbit-hare questionnaire was again used.

A total of 15,526 upland game questionnaires, a 17.21 percent sample, were mailed. Of the total, 939 (6.05%) questionnaires were undeliverable. Of the 14,587 questionnaires delivered, 5,126 (33.02%) useable upland game questionnaires were returned. Of those, 2,314 purchased a license but did not hunt upland game. By dividing the total of 90,197 eligible licensees by the usable returns (5,131, a projection factor of 17.578834 is derived.

The 1994 hunter questionnaire sample size increased from 1993, so a follow-up questionnaire was not sent to those who failed to return the first one. A high rate of return is desirable in order to obtain an adequate sample of harvest estimates in counties where hunting pressure and harvest are limited. Extremely small samples from these counties tend to over-estimate the harvest and thus bias the results. Although harvest, number of hunters and days-afield may be over-estimated where small samples are obtained, harvest per hunter-day should be relatively precise.

Table 1. Summary of harvest statistics from the general mail questionnaire for 1994.

Species	Hunters	Total	Harvest	Hunter-Days	Bag Per Hunter-Day	Bag Per Hunter	Bag Per Hunter For Season
	Afield						
Pheasant	36,705	68,698	129,872	0.53	1.87		
Mourning Dove	20,743	195,089	78,594	2.48	9.41		
Band-Tailed Pigeon	13	51	27	1.92	3.92		
Chukar Partridge	8,455	18,721	28,389	0.66	2.21		
Sage Grouse	5,133	7,084	10,406	0.68	1.38		
Forest Grouse	9,827	18,862	27,510	0.69	1.92		
Quail	2,936	7,822	9,721	0.80	2.66		
Hungarian Partridge	1,899	1,916	3,832	0.50	1.01		
Wild Turkey							
Merriam's	285	57	1,112	0.05	0.20		
Rio Grande	105	79	464	0.17	0.75		
Sharp-Tailed Grouse	--	--	--	--	--		
White-Tailed Ptarmigan	4	0	6	--	--		
Cottontail Rabbit	12,709	47,322	53,175	0.89	3.72		
Snowshoe Hare	1,565	1,722	4,922	0.35	1.10		
Total	--	367,423	348,030	--	--		
Total hunters afield for all species of upland game =					49,518		

Table 2. Number and percent of total upland game hunters afield who reported hunting each species during 1987-94.

Species	Number of Hunters										Percent of Total					
	1987	1988	1989	1990	1991	1992	1993	1994	1987	1988	1989	1990	1991	1992	1993	1994
Pheasant	57,118	54,514	50,382	47,025	42,813	41,640	39,640	36,705	83,80	77,70	75,20	72,50	69,14	71,27	66,52	74,12
Mourning Dove	22,553	22,457	21,696	22,700	22,632	18,021	19,725	20,743	16,50	16,00	16,30	17,30	36,55	30,85	33,10	41,89
Band-Tailed Pigeon*	--	11	23	9	15	18	8	13	--	0,01	0,03	0,01	0,03	0,01	0,01	0,03
Chukar	11,276	11,237	10,910	11,195	10,577	11,125	10,128	8,455	33,00	32,00	32,40	35,00	17,08	19,04	17,00	17,07
Sage Grouse	7,460	8,499	9,002	9,014	8,018	7,393	6,594	5,133	10,40	12,10	13,40	13,90	12,95	12,65	11,07	10,37
Forest Grouse	14,831	16,947	16,988	14,591	14,421	15,000	12,029	9,827	21,80	24,20	25,40	22,50	23,29	25,67	20,19	19,85
Quail	2,549	2,671	3,111	2,614	2,644	2,861	3,649	2,936	3,70	3,80	4,60	4,00	4,27	4,90	6,12	5,93
Hungarian Partridge	2,010	2,471	2,136	2,305	2,662	3,198	2,090	1,899	2,90	3,50	3,20	3,60	4,30	5,47	3,51	3,83
Wild Turkey*	347	421	477	531	532	484	466	285	0,50	0,60	0,70	0,80	0,86	0,83	0,78	0,58
Merriman's Rio Grande					18	20	41	105					0,03	0,03	0,07	0,21
Sharp-Tailed Grouse**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
White-Tailed Ptarmigan*	9	15	3	11	13	11	9	4	0,01	0,02	0,02	0,02	0,02	0,02	0,02	0,01
Cottontail Rabbit	20,322	24,076	22,878	23,079	21,137	20,509	17,578	12,709	29,80	34,30	34,20	35,60	34,13	35,10	29,50	25,67
Snowshoe Hare	3,702	4,725	4,895	4,095	3,427	3,732	2,755	1,565	5,40	6,70	7,30	6,30	5,53	6,39	4,62	3,16
Total Hunters**	68,174	70,142	67,017	64,868	61,922	58,423	59,500	49,518								

*Although wild turkey, sharp-tailed grouse, band-tailed pigeon and white-tailed ptarmigan harvest was determined by separate questionnaires, it is assumed that these hunters are derived from the same group of hunters who reported hunting other upland game bird species.

**This is not the total of the columns because many upland game hunters hunted more than one species.

Table 3. Percent of hunter trips resulting in failure to bag at least one bird, 1961-94.

	Pheasant			Mourning Dove			Chukar			Sage Grouse			Forest Grouse			Quail			Hungarian Partridge		
Year	No Bag	Hunting Trips	% Bag	No Bag	Hunting Trips	% Bag	No Bag	Hunting Trips	% Bag	No Bag	Hunting Trips	% Bag	No Bag	Hunting Trips	% Bag	No Bag	Hunting Trips	% Bag			
1961	714	3,204	22	51	583	9	318	539	59	--	--	--	--	109	383	28	72	123	59		
1962	500	2,685	19	39	456	9	147	362	41	--	--	--	--	62	201	31	36	108	33		
1963	795	3,317	24	53	691	8	248	550	45	220	468	47	188	281	67	71	305	23	59	177	
1964	911	3,115	29	60	681	9	266	568	47	45	154	29	144	229	63	94	316	30	62	150	
1965	1,165	4,009	29	--	--	--	486	851	57	82	168	49	225	311	72	128	371	34	93	233	
1966	1,242	4,297	29	136	1,067	13	523	881	48	54	131	41	133	331	40	106	315	34	63	219	
1967	1,353	4,833	28	153	1,319	12	477	915	52	138	266	52	194	475	41	161	424	38	116	315	
1968	1,422	5,223	27	236	1,312	18	495	1,095	45	185	449	41	177	665	27	171	457	39	132	347	
1969	1,897	5,335	36	214	1,568	14	647	1,250	62	241	648	37	273	656	42	182	465	39	148	292	
1970	1,546	4,686	33	193	1,274	15	466	962	48	257	603	43	209	666	31	126	314	40	101	210	
1971	1,783	5,049	35	210	1,333	16	464	934	50	234	625	37	223	673	33	162	385	42	87	210	
1972	1,743	4,617	38	270	1,421	19	457	827	55	259	593	44	271	794	34	154	339	45	120	224	
1973	1,659	4,699	35	209	1,596	13	414	824	50	226	553	41	329	1,019	32	128	311	41	97	196	
1974	2,347	5,323	44	323	1,951	17	511	955	54	292	668	44	388	1,259	31	157	333	47	108	227	
1975	2,472	5,604	44	329	2,554	13	607	1,105	55	374	901	42	535	1,354	40	177	406	44	121	220	
1976	1,739	4,294	40	273	1,709	16	408	781	52	259	783	33	371	1,131	33	105	266	39	87	184	
1977	1,874	5,175	36	295	1,967	15	511	943	54	394	972	41	528	1,388	38	125	299	42	106	247	
1978	1,507	4,858	31	279	1,986	14	343	882	39	301	853	35	419	1,419	30	103	306	34	85	246	
1979	2,222	7,024	32	343	2,671	13	528	1,150	46	400	1,215	33	585	1,691	35	130	403	32	119	243	
1980	1,684	5,867	29	258	2,145	12	458	1,008	45	392	944	42	501	1,283	39	87	254	34	75	206	
1981	1,305	4,637	28	239	1,558	15	302	669	45	184	493	37	297	741	40	97	241	40	57	172	
1982	1,768	6,725	26	363	2,338	16	406	824	49	269	620	43	325	919	35	128	292	44	89	176	
1983	1,645	7,153	23	348	2,381	15	362	880	41	294	729	40	300	1,118	27	105	310	34	82	225	
1984	1,245	4,643	27	274	1,711	16	287	548	52	202	435	46	270	640	42	84	189	44	51	76	
1985	1,207	4,017	30	221	1,500	15	208	426	49	161	376	43	228	656	35	61	148	41	35	65	
1986	1,211	3,615	33	224	1,476	15	237	537	44	139	368	38	221	667	33	58	125	46	36	61	
1987	863	2,837	30	140	1,047	13	194	537	36	90	307	29	143	671	21	46	111	41	34	94	
1988	1,372	3,953	35	244	1,525	16	398	77	40	187	557	34	224	1,184	19	63	171	37	73	154	
1989	1,126	2,985	38	184	1,184	16	263	614	43	183	468	39	257	961	27	68	160	43	53	108	
1990	988	2,745	36	161	1,234	13	282	632	45	162	483	34	233	810	39	54	132	41	46	117	
1991	1,062	2,461	43	205	1,301	16	309	608	51	198	461	43	262	829	32	69	152	45	67	153	
1992	905	2,760	33	156	1,150	14	298	701	43	169	432	39	208	969	21	68	168	40	67	186	
1993	1,035	2,086	50	194	1,038	19	354	533	66	191	347	55	346	633	55	85	192	44	75	110	
1994	889	2,088	43	230	1,180	19	278	481	58	148	292	51	243	559	43	64	167	38	78	108	
AVERAGES (1961-93)			32	14	49	38	35	35	39	39	35	35	35	39	39	39	39	39	45		

The upland game questionnaire is designed to monitor statewide harvest trend from year to year. The more extensively a species is hunted, the more accurately the questionnaire measures the trend data. In an effort to improve the accuracy of indices for species which receive very little hunting pressure and harvest, and which have low densities and limited distribution, a unique questionnaire for that species is mailed to the permit holder. This method has been used for band-tailed pigeon, wild turkey, sharp-tailed grouse and white-tailed ptarmigan.

The annual harvest report is sometimes criticized for being inaccurate and without value. However, report users must recognize that the accuracy of the questionnaire is based on some basic assumptions. These assumptions are: (1) the returned useable sample is a completely random sample, (2) respondents recorded data correctly, i.e., they clearly understood the questionnaire, (3) respondents recorded data accurately, did not guess or lie, and (4) respondents correctly identified species hunted. If these assumptions are not met, projections of harvest by county may be over-estimated due to nonrespondent or memory biases. Extreme caution should be used in the interpretation of estimated harvest and hunters for specific species in specific counties. Rather, the long-term trend in these indices should be used in managing the populations.

Presently, the Upland Game Annual Report contains the best data available and therefore constitutes the basic facts of upland game management. Although this report has its limitations, the trend data is valuable in making professional judgments regarding upland game populations and harvest.

The annual report is used in wildlife planning. It can be used to establish relative importance among species and for developing new resources through transplants or habitat developments. It points out areas of needed research by indicating problems and possible causes. It documents population trends and it combines all this inventory information into one easily accessible publication. Thus it is used extensively by federal land management agencies in environmental impact statements and management plans. It will become increasingly more important in developing management plans and assessing impacts on wildlife habitat.

The 1993-94 winter was mild compared to 1992-93. Temperatures were above normal in December and January, while precipitation was below normal November through January. Because the most limiting factor for pheasants in Utah is significant winter cover adjacent to winter food sources, survival of pheasant brood stock was good.

Weather conditions during the nesting season, however, were questionable in 1994. Statewide monthly average temperatures were above normal (March-September). Average precipitation was below normal across several climatic subdivisions (May-September). Pheasants observed on roadside routes was above 1993, and hens appeared to have less young.

Harvest statistics compiled from the questionnaire indicated a slight increase in success compared to 1993. Harvest increased 28 percent from 1993, but remained 67 percent below the long-term average. Opening weekend success was down comparable to the previous year based upon field bag check data.

The pheasant hunt is the second most popular hunt in Utah. Mule deer hunting ranks first. Despite its popularity among Utah sportsmen, Utah's pheasant population continues to decline steadily. Primary reasons for population declines are due to outright losses of critical habitat and degradation of remaining habitat.

The Conservation Reserve Program (CRP), begun in 1985, has done little for Utah pheasant populations. Most CRP lands in Utah are in dryland farming areas. Pheasants prefer irrigated agricultural areas.

In 1992, the Utah Legislature authorized an Upland Game Habitat Stamp. Seventy-two percent of the funds generated by the stamp are to be used on pheasant habitat projects. Since 1992, funds have been used to acquire critical wintering habitat for pheasants in Myton and Richfield, develop food plots on private lands and transplant wild birds from urbanized areas.

Winter Sex Ratio Counts

Winter sex ratio counts provide an index as to how harvest of roosters only is affecting the pheasant populations. In Utah, one rooster for every two, three or four hens is most common. One rooster for every ten hens is biologically acceptable in that one rooster can easily service ten hens in the wild. Based on this biological concept, hunting of rooster pheasants only does not appear to be affecting the population.

Results of the survey for the winter of 1993-94 and long-term trends are shown in Tables 1, 2 and Figure 1 of this section. Statewide comparisons to the winter of 1992-93 and the 10-year (1984-93) average are as follows:

	<u>Winter of 1993-94</u>	<u>Percent change from 1992-93</u>	<u>Average</u>
Total pheasants counted (roadside)	322	-37	-77
Hens per cock	3.81	+67	+27
Pheasants observed per 100 hours	641	-66	-49
Total hours effort (roadside)	58	+115	-53

Winter sex ratio counts indicated a 37 percent decrease in pheasants observed per unit of effort. However, density estimates can be biased due to the non-random nature of the survey technique if effort is minimal as in 1994. The hen-cock ratio increased 67 percent from 1993, and was 27 percent above the long-term average. Effort to collect winter sex ratio data increased 115 percent from 1993. Effort was expended only in the Central Region.

Roadside Counts

A summary of summer roadside pheasant counts for 1994 is shown in Table 3. Long-term trends of pheasants per mile, young per mile, young per hen, percent of hens with young and mean brood size are found in Tables 4-8 and Figure 2. Summer 1994 survey results compared to 1993 and the previous 10-year (1984-93) average follow:

	<u>1994</u>	<u>Percent change from 1993</u>	<u>Average</u>
Total pheasants observed	642	+23	-55
Total miles driven	945	-28	-47
Pheasants per mile	0.68	+70	-11
Average brood size	4.68	-19	-7
Young per hen	2.84	-34	-27
Percent of hens with young	69	-19	-10

Total pheasants observed increased 23 percent and pheasants per mile increased 70 percent. Percent of hens with young decreased 19 percent while average brood size decreased 19 percent.

It appears that slightly more adult pheasants were observed on roadside counts in 1994 than in 1993. However, reproductive success per adult hen was down from the previous year. Higher than normal temperatures and below normal precipitation during the nesting and brood-rearing season (May-September) may account for poor reproductive success.

Harvest

Hunter Questionnaire

Results of the hunter questionnaire for 1994 are shown in Table 9. Long-term trends of pheasants bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 10-12, and total statewide harvest statistics in Table 13. A comparison of 1994 harvest statistics to 1993 and the previous 46-year average follow:

	<u>1994</u>	<u>Percent change from 1993</u>	<u>Average</u>
Pheasant hunters	39,705	-7	-52
Pheasants harvested	68,698	+8	-67
Hunter-days afield	129,872	-8	-39
Pheasants per hunter-day	0.53	+18	-42
Pheasants per hunter	1.87	+17	-28

Total hunters decreased 7 percent from 1993 and remained 52 percent below the long-term average. Total harvest increased 8 percent from 1993. Hunter success (pheasants per hunter-day) increased 18 percent from 1993. Pheasants per hunter increased 17 percent and remains 28 percent below the long-term average.

Long-term trends (1948-94) of total hunters, hunter-days, harvest and hunter success are shown in Figures 3 and 4. Generally, the recent trend is toward less hunter-days with declines in total pheasants harvested and hunter success. We believe this is the result of the accumulated effects of loss of quantity and quality of habitat due to urbanization, flooding, modern agricultural practices, and habitat fragmentation resulting in increased predation.

Utah County accounted for one-quarter of the entire pheasant harvest, while Box Elder County accounted for 12 percent and Cache County for 11.72 percent.

FIGURE 1. PHEASANT WINTER SEX RATIO
INDICES, 1965-94.

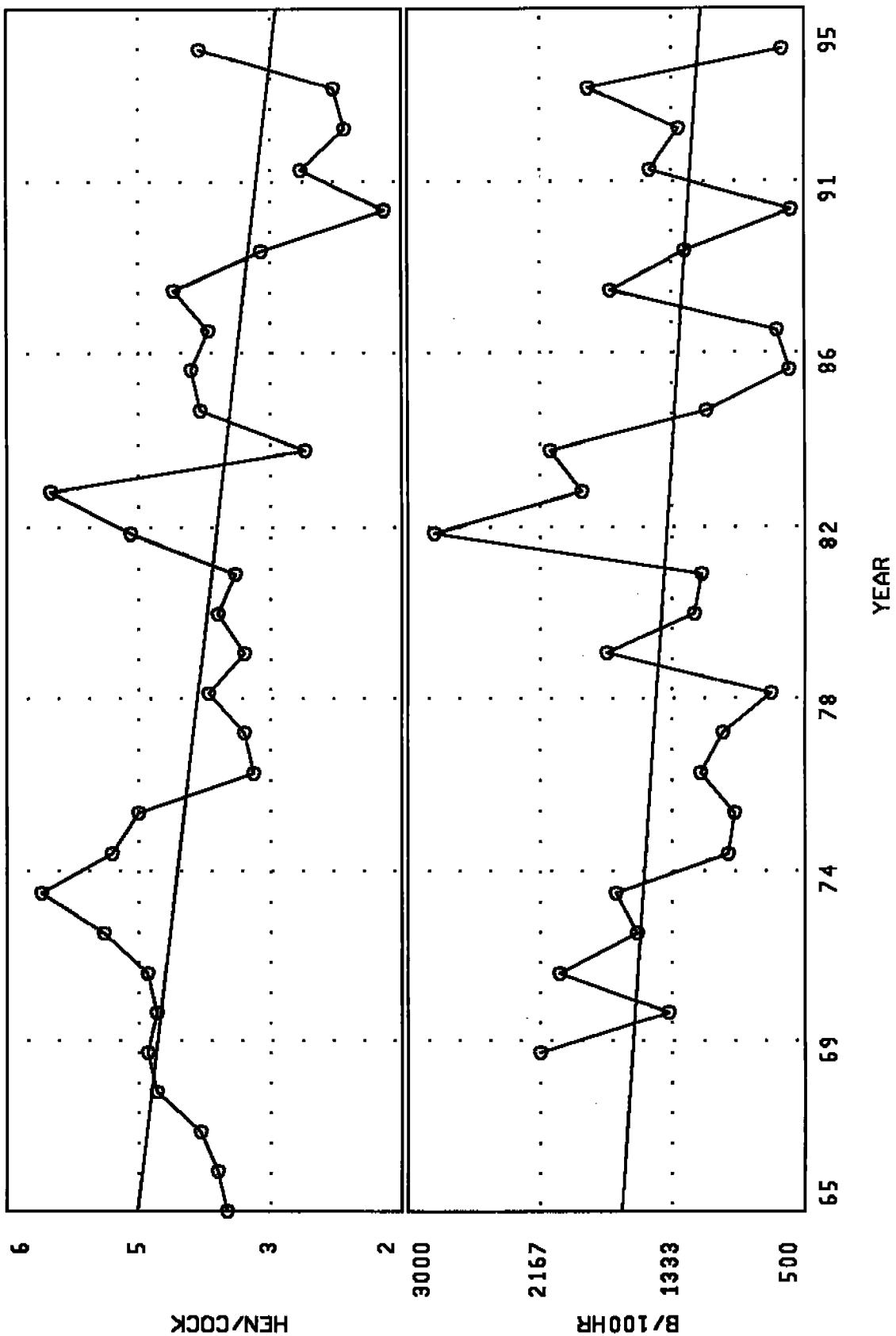
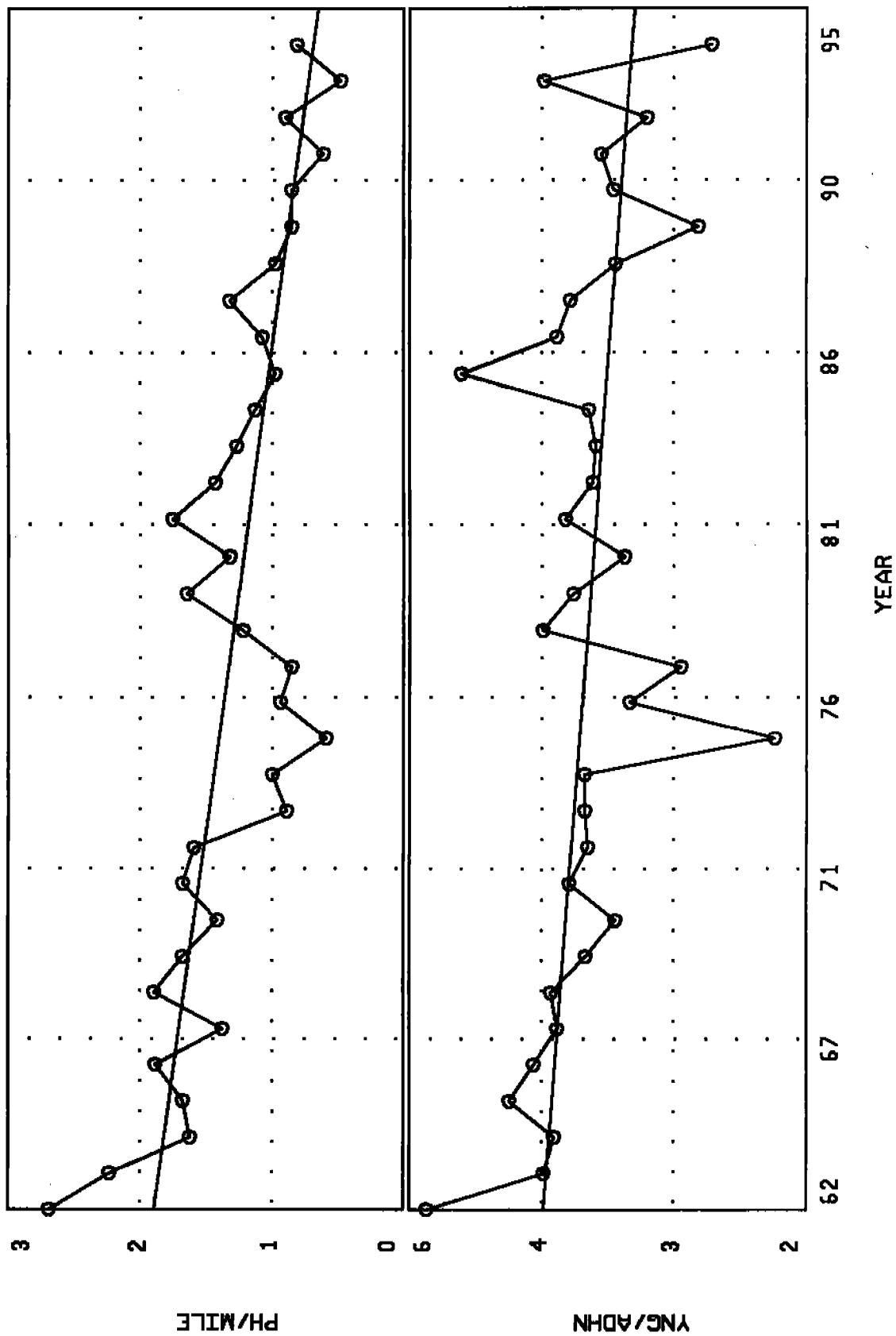


FIGURE 2. PHEASANT PRODUCTION
INDICES, 1962-94.



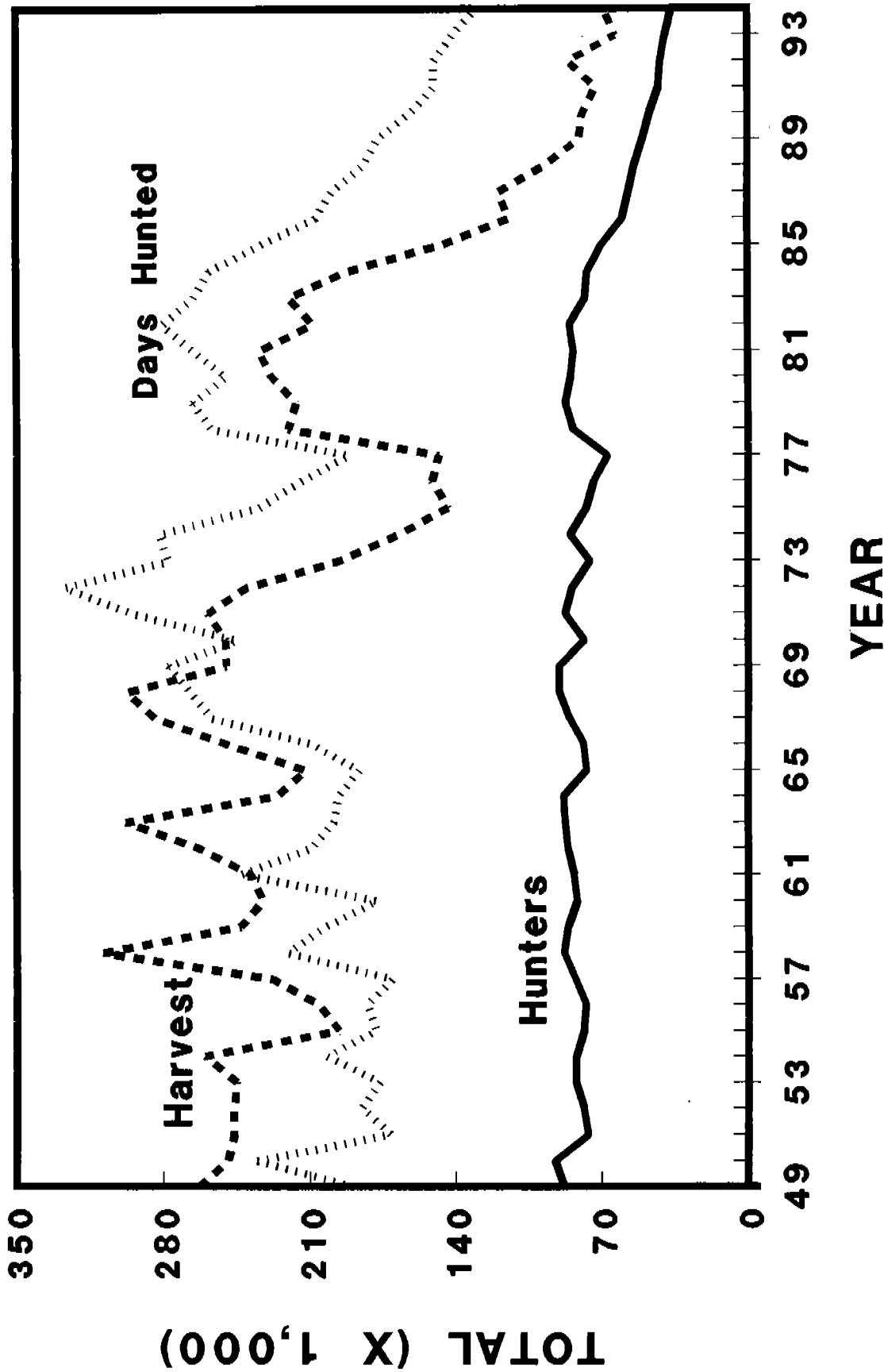


Figure 3. Statewide trends of pheasant harvest statistics, 1949-94.

PHEASANTS PER HUNTER AND PER DAY

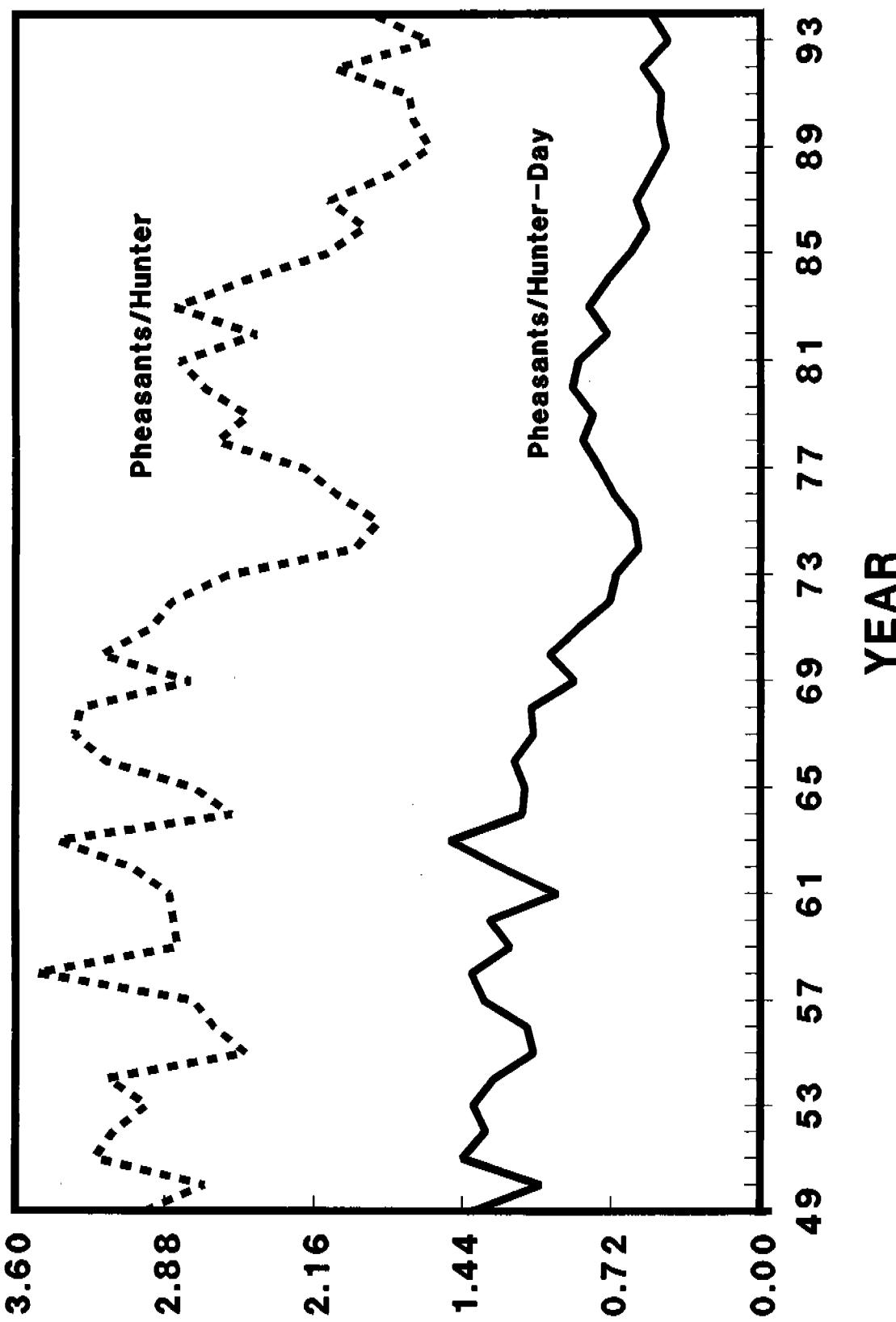
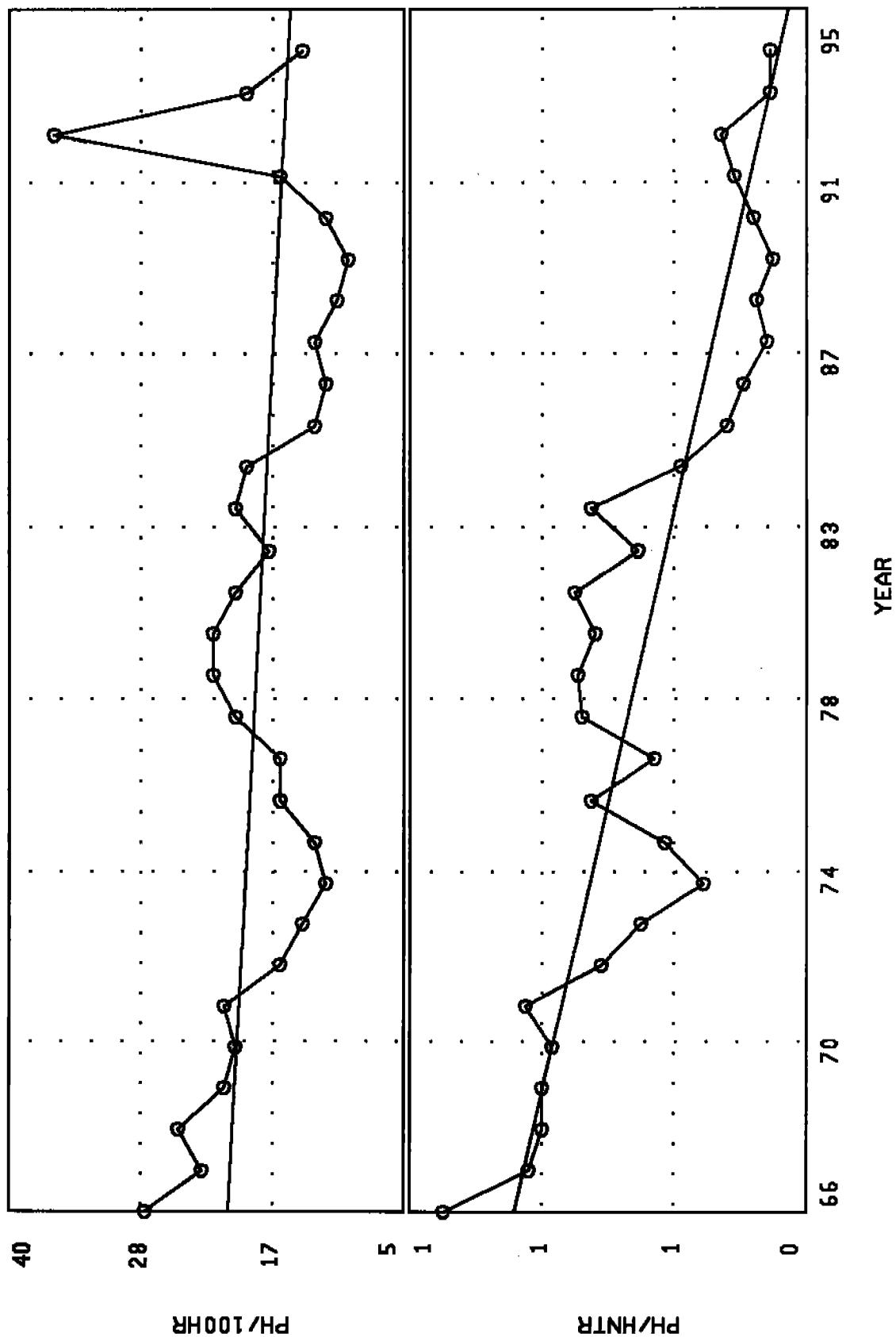


Figure 4. Statewide trends of pheasant hunter success rates, 1949-94.

FIGURES. PHEASANT FIELD BAG CHECK
INDICES, 1966-94.



Field Bag Checks

Field bag checks provide an index of opening day or weekend hunter harvest success rates.

A summary of pheasant field bag check data for 1994 is shown in Table 14. The hunter success trend determined via bag checks since 1989 is found in Table 15 and Figure 5. A comparison of 1994 data, on a statewide basis, to 1993 and the previous 10-year (1984-93) average follow:

		<u>Percent change from</u>	
	<u>1994</u>	<u>1993</u>	<u>Average</u>
Total hunters checked	197	-53	-90
Total hours hunted	436	-38	-92
Pheasants per hunter (complete hunts)	0.31	0	-21
Pheasants bagged per 100 hours	14	-26	-13
Average hours per hunter-day (complete hunts)	2.21	+32	-18
Hours hunted per pheasant bagged (complete hunts)	3.35	-38	-53

Hunting pressure was down again in most of Utah. This is attributed to decreasing pheasant populations and to less land being accessible to hunters.

In 1994, hunters spent 32 percent more time afield on an average day. Hours hunted per pheasant bagged decreased 38 percent.

Table 1. Summary of pheasant winter sex ratio counts, 1993-94.

Region and County	Roadside Observations					Flushing Observations					Effort Expended			Pheas. Obs./ 100 Hours of Road. Obs.
	Cocks	Hens	Total	Cock	Hens	Cocks	Hens	Total	Cock	Hens	Miles	Vehicle	Hours of Effort	
Northern Region														
Box Elder	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cache	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Davis	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Morgan	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rich	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Summit	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weber	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Central Region														
Juab	-	-	-	-	-	-	-	-	-	-	49	2	1	3
Salt Lake	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sanpete	2	1	3	0.50	200	3	23	26	7.67	13	428	16	6	19
Tooele	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Utah	65	254	319	3.91	26	-	-	-	-	-	363	33	1	34
Wasatch	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	67	255	322	3.81	26	3	23	26	7.67	13	840	50	8	58
Southern Region														
Beaver	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kane	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Millard	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Puute	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sheriff	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wayne	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern Region														
Daggett	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Duchesne	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uintah	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern Region														
Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Emery	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grand	-	-	-	-	-	-	-	-	-	-	-	-	-	-
San Juan	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STATE TOTALS	67	255	322	3.81	26	3	23	26	7.67	13	840	50	8	58
														641

Table 2. Trend of pheasant winter sex ratio counts, 1988-94.

Region and County	1988-89			1989-90			1990-91			1991-92			1992-93			1993-94		
	Hens/ Cock	Birds/ 100 Hr																
Northern Region																		
Box Elder	4.20	3,100	3.60	533	2.47	-	-	-	-	-	-	-	-	-	-	-	-	
Cache	2.70	386	1.30	253	3.43	-	-	-	-	-	-	-	-	-	-	-	-	
Davis	7.30	2,014	1.50	143	6.90	1,317	1.38	317	-	-	-	-	-	-	-	-	-	
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Weber	4.20	700	3.30	30	3.11	-	4.52	1,055	2.33	333	-	-	-	-	-	-	-	
REGIONAL TOTALS	4.10	833	2.10	321	3.48	4,183	3.66	794	2.33	333	--	--	3.13	1,293	--	--	--	
Central Region																		
Juab	2.40	1,100	2.10	1,100	3.56	2,050	-	-	500	1.40	686	-	-	-	-	-	-	
Salt Lake	--	--	1.30	533	1.73	600	0.25	-	-	-	-	-	-	-	-	-	-	
Sanpete	--	--	--	--	--	--	-	4.82	640	-	-	0.50	19	-	-	-	-	
Tooele	--	--	0.80	2,600	-	-	2.50	2,100	3.30	-	-	-	-	-	-	-	-	
Utah	10.00	2,200	2.60	1,016	4.96	1,787	1.99	2,329	1.82	-	3.91	974	-	-	-	-	-	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	3.50	1,344	1.70	1,119	4.22	1,541	2.27	1,706	2.24	18,857	3.81	641	6.54	4,913	--	--	--	
Southern Region																		
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Millard	1.60	900	--	--	--	2.21	2,033	--	--	2.87	800	--	--	--	--	--	--	
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Sevier	12.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	3.60	2,778	--	--	2.21	2,033	--	--	2.87	800	--	--	1.74	1,122	--	--	--	
Northeastern Region																		
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	1.60	1,425	0.80	550	1.75	200	1.21	525	0.89	1,700	--	--	--	--	--	--	--	
Uintah	2.50	5,600	1.20	773	1.03	1,600	1.41	1,382	2.00	1,500	--	--	--	--	--	--	--	
REGIONAL TOTALS	1.80	1,889	1.10	660	1.12	728	1.37	1,021	1.29	1,600	--	--	1.33	1,180	--	--	--	
Southeastern Region																		
Carbon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	3.10	1,251	1.70	582	2.65	1,468	2.15	1,293	2.28	1,864	3.81	641	2.38	1,292	--	--	--	--
STATE TOTALS	--	--	--	--														

Table 3. Pheasant summer inventory, 1994.

Region and County	No. Routes	Total Miles	Total	Hens	Young	Cocks	Hens	Total	Total Cocks	Total Hens	Total Pheas.	Mean Mile	Young/ Mile	Mean Brood	Young/ Ad. Hen	% Hens w/ Young		
Northern Region																		
Box Elder	3	180	9	9	61	10	32	8	9	28	93	8	129	0.72	0.52	6.78	3.32	68
Cache	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Davis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Morgan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Rich	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Summit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Weber	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	3	180	9	9	61	10	32	8	9	28	93	8	129	0.72	0.52	6.78	3.32	68
Central Region																		
Juab	1	36	1	1	3	0	0	0	1	2	3	0	5	0.14	0.08	3.00	1.50	50
Salt Lake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sanpete	2	170	11	11	46	5	12	5	11	27	58	5	90	0.53	0.34	4.18	2.15	59
Tooele	1	60	1	1	1	3	5	0	6	10	6	0	16	0.27	0.10	1.00	0.60	40
Utah	3	202	38	38	157	20	70	15	19	77	227	15	319	1.58	1.12	4.13	2.95	75
Wasatch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	7	468	51	51	207	28	87	20	37	116	294	20	430	0.92	0.63	4.06	2.53	68
Southern Region																		
Beaver	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Garfield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Iron	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Kane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Millard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Pruite	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sherman	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Washington	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Wayne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Northeastern Region																		
Daggett	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Duchesne	2	166	3	3	17	0	0	14	2	5	17	14	36	0.22	0.10	5.67	3.40	60
Uintah	2	131	5	5	33	0	0	9	0	5	33	9	47	0.36	0.25	6.60	6.60	100
REGIONAL TOTALS	4	297	8	8	50	0	0	23	2	10	50	23	83	0.28	0.17	6.25	5.00	80
Southeastern Region																		
Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Emery	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Grand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
San Juan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
STATE TOTALS	14	945	68	68	318	38	119	51	48	154	437	51	642	0.68	0.46	4.68	2.84	69

Table 4. Trend of pheasants observed per mile during summer roadside pheasant counts, 1984-94.

Region and County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Average 1984-93
Northern Region												
Box Elder	0.46	0.91	0.44	0.81	0.63	0.19	0.32	0.21	0.56	0.34	0.72	
Cache	0.19	0.03	0.01	0.29	0.13	0.23	0.09	0.41	0.59	1.09	-	
Davis	0.34	0.71	1.04	1.30	0.70	0.41	0.48	0.39	0.15	0.01	-	
Morgan	-	-	-	-	-	-	-	-	-	-	-	
Rich	-	-	-	-	-	-	-	-	-	-	-	
Summit	-	-	-	-	-	-	-	-	-	-	-	
Weber	1.56	-	0.86	-	-	0.52	1.26	0.48	1.05	-	-	
REGIONAL TOTALS	0.48	0.50	0.43	0.71	0.40	0.30	0.42	0.35	0.58	0.24	0.72	0.44
Central Region												
Juab	0.77	0.48	0.71	-	0.38	0.50	0.14	-	0.77	0.16	0.14	
Salt Lake	1.80	0.46	2.10	1.08	-	-	1.26	1.24	-	0.31	-	
Sanpete	0.99	1.87	1.15	1.63	1.18	1.70	1.23	0.85	0.67	0.35	0.53	
Tooele	-	-	0.20	0.08	0.15	-	0.17	0.55	0.14	-	0.27	
Utah	2.21	-	2.13	2.35	2.00	1.00	1.45	0.58	2.56	0.93	1.58	
Wasatch	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	1.49	1.35	1.61	1.79	1.42	1.50	1.09	0.73	1.79	0.48	0.92	1.33
Southern Region												
Beaver	0.11	0.63	0.23	0.08	0.17	-	-	-	-	-	-	
Garfield	-	-	-	-	-	-	-	-	-	-	-	
Iron	-	0.06	0.01	-	-	-	-	-	-	-	-	
Kane	-	-	-	-	-	-	-	-	-	-	-	
Millard	1.09	2.27	0.98	0.67	0.67	-	-	0.34	0.38	-	1.38	
Piute	-	-	-	-	-	-	-	-	-	-	-	
Sevier	1.52	0.62	1.82	1.95	1.30	-	-	-	-	-	-	
Washington	-	0.13	1.30	0.47	0.22	0.06	-	-	-	-	-	
Wayne	-	0.39	0.38	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	1.09	1.25	1.07	1.44	0.78	0.06	0.34	0.38	-	1.38	-	0.86
Northeastern Region												
Daggett	-	-	-	-	-	-	-	-	-	-	-	
Duchesne	0.68	0.16	0.44	0.38	0.58	0.39	0.93	0.59	0.22	0.14	0.22	
Uintah	1.33	0.35	0.46	0.55	0.45	0.24	0.52	0.29	0.18	0.18	0.36	
REGIONAL TOTALS	0.91	0.22	0.45	0.45	0.54	0.32	0.71	0.51	0.17	0.16	0.28	0.44
Southeastern Region												
Carbon	-	0.12	0.26	-	-	-	-	-	-	-	-	
Emery	0.66	0.83	0.73	0.72	1.06	1.00	0.61	0.28	0.56	0.39	-	
Grand	-	-	-	-	-	-	-	-	-	-	-	
San Juan	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	0.66	0.59	0.61	0.72	1.06	1.00	0.61	0.28	0.56	0.39	-	0.65
STATE TOTALS	0.94	0.81	0.80	1.10	0.81	0.71	0.71	0.51	0.75	0.40	0.68	0.75

Table 5. Trend of young observed per mile during summer roadside pheasant counts, 1984-94.

Region and County	Year							Average			
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region											
Box Elder	0.26	0.65	0.29	0.62	0.39	0.16	0.27	0.14	0.41	0.28	0.52
Cache	0.13	0.02	0.00	0.25	0.09	0.14	0.06	0.23	0.42	0.94	--
Davis	0.16	0.35	0.85	0.98	0.52	0.22	0.31	0.26	0.04	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--
Weber	1.27	--	0.76	--	--	0.39	0.97	0.30	0.77	--	--
REGIONAL TOTALS	0.32	0.33	0.32	0.55	0.28	0.20	0.32	0.21	0.41	0.19	0.52
Central Region											0.31
Juab	0.58	0.39	0.57	--	0.17	0.08	0.09	--	0.62	0.08	0.08
Salt Lake	1.26	0.31	1.62	0.79	--	--	0.97	0.93	--	0.24	--
Sanpete	0.76	1.54	0.90	1.23	0.96	1.30	0.91	0.67	0.53	0.28	0.34
Tooele	--	--	0.08	0.07	0.07	--	0.10	0.53	0.11	--	0.10
Utah	1.36	--	1.68	1.81	1.57	1.00	1.15	0.49	1.97	0.69	1.12
Wasatch	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	0.99	1.09	1.26	1.37	1.11	1.10	0.87	0.59	1.38	0.37	0.63
Southern Region											1.01
Beaver	0.08	0.51	0.14	0.07	0.10	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--
Iron	--	0.05	--	0.00	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--
Millard	0.89	0.20	0.76	1.55	0.50	--	0.31	0.28	--	1.18	--
Piute	--	--	--	--	--	--	--	--	--	--	--
Sevier	1.19	1.25	1.48	1.54	0.95	--	--	--	--	--	--
Washington	--	--	0.86	0.22	0.16	--	--	--	--	--	--
Wayne	--	0.28	0.19	--	--	--	--	--	--	--	--
REGIONAL TOTALS	0.86	1.03	0.84	1.12	0.57	--	0.31	0.28	--	1.18	--
Northeastern Region											0.77
Daggett	--	--	--	--	--	--	--	--	--	--	--
Duchesne	0.46	0.07	0.29	0.25	0.32	0.20	0.58	0.42	0.08	0.02	0.10
Uintah	1.12	0.29	0.33	0.40	0.30	0.14	0.35	0.21	0.10	0.13	0.25
REGIONAL TOTALS	0.69	0.14	0.30	0.31	0.32	0.17	0.46	0.37	0.98	0.07	0.17
Southeastern Region											
Carbon	--	0.02	0.15	--	--	--	--	--	--	--	--
Emery	0.45	0.63	0.56	0.59	0.86	1.00	0.43	0.22	0.43	0.29	--
Grand	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	0.45	0.42	0.34	0.59	0.86	1.00	0.43	0.22	0.43	0.29	0.50
STATE TOTALS	0.66	0.60	0.61	0.79	0.63	0.62	0.48	0.38	0.55	0.30	0.46
											0.56

Table 6. Trend of young per adult hen ratios found during summer roadside pheasant counts, 1984-94.

Region and County	Year									Average 1984-93
	1984	1985	1986	1987	1988	1989	1990	1991	1992	
Northern Region										
Box Elder	2.44	3.63	2.38	4.42	2.21	7.00	5.86	1.92	3.04	4.67
Cache	3.40	1.50	--	7.17	2.33	2.60	5.50	1.57	3.38	6.00
Davis	1.67	1.26	5.92	3.30	6.86	1.30	2.41	3.00	1.00	--
Morgan	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--
Weber	5.50	--	7.33	--	--	4.80	5.50	2.60	3.35	--
REGIONAL TOTALS	3.23	2.60	3.92	4.18	3.44	2.90	3.86	2.02	3.05	4.80
Central Region										
Juab	4.20	4.33	4.00	--	2.00	0.23	4.00	--	8.00	1.00
Salt Lake	3.58	3.13	5.10	3.88	--	--	3.80	4.22	--	10.00
Sanpete	5.38	6.10	3.98	3.25	4.48	3.20	3.34	4.17	4.60	4.77
Tooele	--	--	1.50	4.00	2.00	--	2.00	--	3.00	--
Utah	1.66	--	4.16	4.18	3.94	3.80	4.31	6.41	4.22	3.76
Wasatch	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	2.59	5.61	4.18	3.89	4.00	4.70	3.92	5.27	4.28	3.92
Southern Region										
Beaver	2.33	5.11	2.60	6.00	1.80	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--
Iron	--	3.00	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--
Millard	6.24	4.33	4.04	3.99	3.64	--	15.00	4.86	--	7.23
Piute	--	--	--	--	--	--	--	--	--	--
Sevier	4.64	4.58	5.22	5.14	3.77	--	--	--	--	--
Washington	--	--	2.78	1.11	3.50	--	--	--	--	--
Wayne	--	3.17	2.43	--	--	--	--	--	--	--
REGIONAL TOTALS	5.05	5.92	4.43	4.32	3.61	--	15.00	4.86	--	7.23
Northeastern Region										
Daggett	--	--	--	--	--	--	--	--	--	--
Duchesne	3.81	3.00	3.73	3.40	2.36	1.68	2.60	3.81	0.86	1.00
Uintah	13.00	11.50	4.13	3.65	3.67	2.33	3.30	3.33	1.70	3.33
REGIONAL TOTALS	6.38	5.83	3.88	3.52	2.64	2.01	2.82	3.73	1.02	2.40
Southeastern Region										
Carbon	--	0.50	3.00	--	--	--	--	--	--	--
Emery	3.75	4.17	5.15	6.63	6.42	3.60	3.50	5.00	6.50	3.71
Grand	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	3.75	3.80	4.04	6.63	6.42	3.60	3.50	5.00	6.50	3.71
STATE TOTALS	3.92	5.04	4.20	4.08	3.68	2.95	3.70	3.81	3.40	4.31
										3.91

Table 7. Trend of the percent of hens observed with broods during summer roadside pheasant counts, 1984-94.

Region and County	Year									Average	
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region											
Box Elder	56	74	48	75	64	100	100	83	74	89	68
Cache	100	50	-	83	50	56	67	70	38	100	-
Davis	33	42	85	89	86	47	50	50	0	-	-
Morgan	-	-	-	-	-	-	-	-	-	-	-
Rich	-	-	-	-	-	-	-	-	-	-	-
Summit	-	-	-	-	-	-	-	-	-	-	-
Weber	92	-	100	-	-	100	80	60	85	-	-
REGIONAL TOTALS	66	60	62	82	67	76	74	69	67	90	68
Central Region											
Juab	80	100	100	-	50	6	100	-	-	100	50
Salt Lake	79	63	90	88	-	-	67	89	-	100	-
Sanpete	90	92	76	85	88	81	78	83	90	85	59
Tooele	-	-	50	100	50	-	-	-	-	-	40
Utah	63	-	86	94	81	66	89	76	86	94	75
Wasatch	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	70	56	84	91	82	51	81	80	87	92	68
Southern Region											
Beaver	33	89	80	100	40	-	-	-	-	-	-
Garfield	-	-	-	-	-	-	-	-	-	-	-
Iron	-	100	-	-	-	-	-	-	-	-	-
Kane	-	-	-	-	-	-	-	-	-	-	-
Millard	100	84	98	86	86	-	100	100	-	-	85
Piute	-	-	-	-	-	-	-	-	-	-	-
Sevier	91	88	87	86	69	-	-	-	-	-	-
Washington	-	-	64	22	50	-	-	-	-	-	-
Wayne	-	83	100	-	-	-	-	-	-	-	-
REGIONAL TOTALS	91	85	88	82	74	-	100	100	-	85	-
Northeastern Region											
Daggett	-	-	-	-	-	-	-	-	-	-	-
Duchesne	67	75	73	96	39	61	60	84	-	50	60
Uintah	86	75	73	91	75	56	79	100	-	67	100
REGIONAL TOTALS	72	75	73	94	46	59	67	86	-	60	80
Southeastern Region											
Carbon	-	50	66	-	-	-	-	-	-	-	-
Emery	65	67	92	100	100	64	64	100	83	57	-
Grand	100	-	-	-	-	-	-	-	-	-	-
San Juan	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	65	65	91	100	100	64	64	100	83	57	-
STATE TOTALS	75	62	83	87	72	64	76	79	85	85	69
											77

Table 8. Trend of average brood size for pheasants, 1984-94.

Region and County		Year						Average				
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1984-93
Northern Region												
Box Elder	4.63	5.77	5.33	6.00	4.80	8.00	5.40	3.20	4.00	5.40	6.78	
Cache	3.40	3.00	--	4.80	4.00	4.50	5.20	4.67	6.00	--	--	
Davis	3.33	3.50	5.12	4.40	6.60	4.50	4.20	6.00	--	--	--	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	6.00	6.33	--	--	5.50	4.30	--	4.33	3.94	--	--	
REGIONAL TOTALS	4.72	5.11	5.41	5.10	5.40	5.40	5.00	4.53	4.03	5.50	6.78	5.02
Central Region												
Juab	6.00	4.33	4.67	--	4.00	4.00	4.00	--	8.00	2.00	3.00	
Salt Lake	4.75	5.00	5.70	3.80	3.80	--	5.00	4.25	--	7.00	--	
Sanpete	6.38	8.28	5.10	4.80	5.80	4.20	4.40	5.00	4.00	5.89	4.18	
Tooele	--	--	3.00	4.00	4.00	--	3.00	--	--	--	1.00	
Utah	2.95	--	4.75	4.90	4.80	5.10	5.00	5.13	5.44	3.78	4.13	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	3.75	7.42	4.89	4.80	5.00	4.40	4.70	4.92	5.35	4.32	4.06	4.95
Southern Region												
Beaver	7.00	5.75	3.25	6.00	4.50	--	--	--	--	--	--	
Garfield	--	--	--	--	--	--	--	--	--	--	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	6.00	40.63	3.72	5.30	4.90	--	3.80	5.40	--	--	--	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	5.10	5.17	5.69	5.80	5.60	--	--	--	--	--	--	
Washington	--	--	4.14	5.00	7.00	--	--	--	--	--	--	
Wayne	--	3.33	2.25	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	5.42	7.35	4.70	5.60	5.30	--	3.80	5.40	--	--	5.37	--
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	5.87	4.00	5.75	3.90	5.30	2.70	5.30	4.50	4.50	0.68	2.00	5.67
Uintah	5.50	6.33	5.71	4.40	5.30	4.20	4.90	3.33	3.00	4.75	6.60	
REGIONAL TOTALS	5.72	4.78	5.74	4.10	5.30	3.50	5.10	4.18	0.80	3.83	6.25	4.31
Southeastern Region												
Carbon	--	1.00	--	--	--	--	--	--	--	--	--	
Emery	5.00	5.20	6.89	5.00	7.10	5.70	5.60	4.50	7.00	6.50	--	
Grand	--	--	--	--	--	--	--	--	--	--	--	
San Juan	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	5.00	4.82	5.46	5.00	7.10	5.70	5.60	4.50	7.00	6.50	--	5.67
STATE TOTALS	4.78	6.71	4.94	5.10	5.30	4.60	4.80	4.61	3.93	5.81	4.68	5.06

Table 9. Summary of pheasant hunter success and distribution of harvest and hunting pressure by region and county, 1994.

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD	BIRDS BAGGED	BIRDS PER HUNTER-DAY	% OF PRESSURE	% OF HARVEST
NORTHERN REGION						
BOX ELDER	299	14,924	8,262	0.55	11.49	12.03
CACHE	241	13,412	8,051	0.60	10.33	11.72
DAVIS	146	7,875	2,671	0.34	6.06	3.89
MORGAN	5	281	298	1.06	0.22	0.44
RICH	1	35	35	1.00	0.03	0.05
SUMMIT	1	17	0	0.00	0.01	0.00
WEBER	243	13,289	3,814	0.29	10.23	5.55
REGIONAL TOTALS	936	49,835	23,133	0.46	38.37	33.67
CENTRAL REGION						
JUAB	91	4,236	2,091	0.49	3.26	3.05
SALT LAKE	60	2,478	1,371	0.55	1.91	2.00
SANPETE	142	6,803	3,990	0.59	5.24	5.81
TOOELE	55	2,267	755	0.33	1.75	1.10
UTAH	545	29,848	17,297	0.58	22.98	25.18
WASATCH	1	17	35	2.00	0.01	0.05
REGIONAL TOTALS	894	45,652	25,542	0.56	35.15	37.18
SOUTHERN REGION						
BEAVER	19	1,318	509	0.39	1.02	0.74
GARFIELD	2	17	17	1.00	0.01	0.03
IRON	19	1,107	492	0.44	0.85	0.72
KANE	0	0	0	0.00	0.00	0.00
MILLARD	159	8,543	5,326	0.62	6.58	7.75
PIUTE	5	140	87	0.63	0.11	0.13
SEVIER	116	6,345	2,601	0.41	4.89	3.79
WASHINGTON	26	2,021	1,125	0.56	1.56	1.64
WAYNE	6	246	140	0.57	0.19	0.20
REGIONAL TOTALS	352	19,741	10,301	0.52	15.20	14.99
NORTHEASTERN REGION						
DAGGETT	0	0	0	0.00	0.00	0.00
DUCHESNE	76	3,550	3,023	0.85	2.73	4.40
UINTAH	64	2,900	2,320	0.80	2.23	3.38
REGIONAL TOTALS	140	6,451	5,343	0.83	4.97	7.78
SOUTHEASTERN REGION						
CARBON	50	2,267	685	0.30	1.75	1.00
EMERY	90	5,467	3,410	0.62	4.21	4.96
GRAND	6	404	246	0.61	0.31	0.36
SAN JUAN	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	146	8,139	4,341	0.53	6.27	6.32
UNKNOWN	37	52	35	0.67	0.04	0.05
STATE TOTALS	2,505	129,872	68,698	0.53	100.00	100.00

* Total hunter trips from questionnaire returns.

Table 10. Summary of pheasants bagged per hunter-day by region and county, 1987-94.

Region and County	Year							
	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	0.62	0.49	0.40	0.58	0.53	0.64	0.44	0.55
Cache	0.52	0.47	0.32	0.46	0.51	0.59	0.48	0.60
Davis	0.43	0.32	0.28	0.26	0.34	0.29	0.21	0.34
Morgan	0.70	1.71	0.40	(0.67)	(0.15)	(0.00)	0.00	1.06
Rich	(1.00)	(0.18)	(0.17)	0.00	0.00	(0.00)	0.33	1.00
Summit	(0.67)	0.00	(0.67)	0.00	(0.05)	(0.00)	0.00	0.00
Weber	0.40	0.34	0.29	0.34	0.37	0.39	0.20	0.29
<u>REGIONAL TOTALS</u>	0.49	0.40	0.32	0.42	0.44	0.50	0.33	0.46
<u>Central Region</u>								
Juab	0.66	0.49	0.38	0.39	0.57	0.66	0.40	0.49
Salt Lake	0.45	0.26	0.32	0.51	0.32	0.39	0.53	0.55
Sanpete	0.73	0.80	0.65	0.57	0.59	0.60	0.44	0.59
Tooele	0.56	0.31	0.29	0.36	0.44	0.24	0.15	0.33
Utah	0.68	0.64	0.58	0.53	0.55	0.65	0.48	0.58
Wasatch	(0.32)	(0.60)	(1.33)	0.00	0.68	(0.30)	0.50	2.00
<u>REGIONAL TOTALS</u>	0.65	0.50	0.54	0.51	0.53	0.59	0.45	0.56
<u>Southern Region</u>								
Beaver	0.37	0.41	0.39	0.68	0.55	0.38	0.28	0.39
Garfield	0.14	2.75	0.71	0.00	0.00	(0.00)	0.00	1.00
Iron	0.28	0.23	0.34	0.34	0.29	0.26	0.29	0.44
Kane	0.00	0.00	0.00	0.00	0.00	(0.00)	0.00	0.00
Millard	0.68	0.60	0.66	0.74	0.59	0.76	0.58	0.62
Piute	0.67	0.42	1.12	(0.50)	(0.10)	(1.00)	0.25	0.63
Sevier	0.65	0.57	0.45	0.42	0.36	0.49	0.32	0.41
Washington	0.21	0.39	0.33	0.38	0.21	0.61	0.93	0.56
Wayne	0.24	0.63	(0.46)	0.00	(0.50)	(1.14)	0.29	0.57
<u>REGIONAL TOTALS</u>	0.60	0.77	0.52	0.56	0.45	0.62	0.47	0.52
<u>Northeastern Region</u>								
Daggett	(0.50)	(0.20)	0.00	0.00	0.00	(0.00)	1.20	0.00
Duchesne	0.87	0.90	0.62	0.78	0.66	0.79	0.77	0.85
Uintah	0.80	0.64	0.42	0.57	0.47	0.68	0.44	0.80
<u>REGIONAL TOTALS</u>	0.83	0.56	0.53	0.69	0.58	0.74	0.67	0.83
<u>Southeastern Region</u>								
Carbon	0.47	0.51	0.39	0.30	0.22	0.48	0.57	0.30
Emery	0.48	0.68	0.44	0.44	0.50	0.53	0.52	0.62
Grand	(0.86)	(0.20)	(0.33)	(0.33)	(0.48)	(1.40)	0.57	0.61
San Juan	1.64	1.50	(2.00)	0.00	(0.36)	(1.00)	0.00	0.00
<u>REGIONAL TOTALS</u>	0.53	0.63	0.43	0.39	0.39	0.53	0.53	0.00
Unknown Counties	0.63	0.54	0.60	0.00	0.00	0.00	1.45	0.53
<u>STATE TOTALS</u>	0.60	0.53	0.46	0.49	0.48	0.57	0.45	0.67

()Data may be biased because small sample size inflated county harvest beyond reasonable estimate for known pheasant populations.

Table 11. Percentage distribution of pheasant harvest by region and county, 1987-94.

Region and County	Year							
	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	9.00	8.30	7.65	12.70	11.67	12.59	9.93	12.03
Cache	4.83	5.09	4.01	7.53	9.68	9.76	8.04	11.72
Davis	6.12	5.48	4.80	3.96	4.38	2.92	2.82	3.89
Morgan	0.14	0.20	0.15	(0.21)	(0.07)	(0.00)	0.00	0.44
Rich	(0.02)	(0.03)	(0.03)	0.00	0.00	(0.00)	0.06	0.05
Summit	(0.04)	0.00	(0.05)	0.00	0.02	(0.00)	0.00	0.00
Weber	5.46	7.42	7.40	8.39	(8.03)	6.59	5.13	5.55
<u>REGIONAL TOTALS</u>	25.63	26.55	24.09	32.79	33.85	31.86	25.98	33.67
<u>Central Region</u>								
Juab	3.47	1.94	1.69	2.09	2.47	3.21	2.16	3.05
Salt Lake	4.48	2.18	2.67	4.30	2.23	2.51	2.76	2.00
Sanpete	9.53	10.63	10.76	7.92	5.94	5.70	4.32	5.81
Tooele	2.79	2.20	2.03	2.19	1.72	1.24	0.93	1.10
Utah	23.70	25.83	27.35	23.44	27.43	28.75	24.51	25.18
Wasatch	(0.12)	(0.15)	(0.51)	0.00	0.50	(0.06)	0.06	0.05
<u>REGIONAL TOTALS</u>	44.12	42.96	45.02	39.94	40.30	41.47	34.74	37.18
<u>Southern Region</u>								
Beaver	0.45	0.56	0.36	0.73	0.69	0.31	0.48	0.74
Garfield	0.02	0.18	0.13	0.00	0.00	(0.00)	0.00	0.03
Iron	0.32	0.25	0.62	0.50	0.55	0.21	0.39	0.72
Kane	0.00	0.00	0.00	0.00	0.00	(0.00)	0.00	0.00
Millard	6.29	6.03	7.99	8.71	7.62	8.04	7.71	7.72
Piute	0.24	0.18	0.74	(0.08)	(0.02)	(0.19)	0.06	0.13
Sevier	7.07	6.34	5.75	3.94	3.62	3.83	4.53	3.79
Washington	0.24	0.22	1.05	0.78	0.43	0.46	2.52	1.64
Wayne	0.16	0.08	(0.15)	0.00	(0.02)	(0.17)	0.06	0.20
<u>REGIONAL TOTALS</u>	14.82	13.88	16.80	14.73	12.96	13.19	15.75	14.99
<u>Northeastern Region</u>								
Daggett	(0.08)	(0.05)	0.00	0.00	0.00	(0.00)	0.18	0.00
Duchesne	5.26	6.34	5.86	5.71	5.73	5.97	8.49	4.40
Uintah	4.74	3.91	3.16	3.15	3.07	3.58	2.40	3.38
<u>REGIONAL TOTALS</u>	10.09	10.30	9.01	8.86	8.79	9.55	11.07	7.78
<u>Southeastern Region</u>								
Carbon	1.37	1.48	1.90	0.76	0.84	1.28	2.19	1.00
Emery	3.00	3.93	2.88	2.76	2.92	2.44	5.10	4.96
Grand	0.37	(0.01)	(0.08)	(0.16)	(0.24)	(0.14)	0.12	0.36
San Juan	0.47	0.10	(0.15)	0.00	(0.10)	(0.06)	0.00	0.00
<u>REGIONAL TOTALS</u>	5.22	5.53	5.01	3.68	4.10	3.94	7.41	6.32
Unknown Counties	0.10	0.75	0.08	0.00	0.00	0.00	5.04	0.05
<u>STATE TOTALS</u>	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

()Data may be biased because small sample size inflated county harvest beyond reasonable estimate for known pheasant populations.

Table 12. Percentage distribution of pheasant hunting pressure by county, 1987-94.

Region and County	Year							
	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	8.67	8.91	8.77	10.67	10.66	11.21	10.00	11.49
Cache	5.59	5.69	5.68	7.98	9.18	9.40	7.55	10.33
Davis	8.43	8.95	7.85	7.32	6.31	5.78	6.01	6.06
Morgan	0.12	0.06	0.18	(0.15)	(0.23)	(0.07)	0.15	0.22
Rich	0.01	0.09	(0.07)	(0.01)	(0.02)	(0.00)	0.08	0.03
Summit	0.03	0.09	(0.04)	(0.01)	(0.23)	(0.00)	0.01	0.01
Weber	8.19	11.42	11.59	12.13	10.47	9.64	11.34	10.23
<u>REGIONAL TOTALS</u>	31.06	35.24	34.17	38.29	37.10	36.11	35.14	38.37
<u>Central Region</u>								
Juab	3.15	2.11	2.02	2.61	2.11	2.79	2.41	3.26
Salt Lake	5.91	4.54	3.84	4.11	3.41	3.71	2.35	1.91
Sanpete	7.76	7.04	7.55	6.81	4.87	5.44	4.41	5.24
Tooele	2.99	3.80	3.17	2.95	1.91	2.99	2.71	1.75
Utah	20.72	21.42	21.39	21.57	24.00	25.12	22.66	22.98
Wasatch	(0.23)	(0.13)	(0.18)	0.00	0.36	(0.12)	0.05	0.01
<u>REGIONAL TOTALS</u>	40.78	39.06	38.15	38.06	36.66	40.18	34.59	35.15
<u>Southern Region</u>								
Beaver	0.73	0.72	0.42	0.52	0.61	0.47	0.78	1.02
Garfield	0.08	0.03	0.08	(0.08)	0.01	(0.00)	0.00	0.01
Iron	0.70	0.58	0.83	0.71	0.92	0.45	0.60	0.85
Kane	0.00	0.00	(0.01)	0.00	0.00	(0.02)	0.00	0.00
Millard	5.49	5.29	5.52	5.74	6.27	6.06	5.97	6.58
Piute	0.22	0.23	0.30	(0.08)	(0.12)	(0.11)	0.11	0.11
Sevier	6.48	5.91	5.79	4.58	4.86	4.48	6.25	4.89
Washington	0.71	0.29	1.47	1.02	1.01	0.43	1.21	1.56
Wayne	0.41	0.07	(0.15)	(0.06)	(0.02)	(0.08)	0.09	0.19
<u>REGIONAL TOTALS</u>	14.85	13.16	14.58	12.80	13.82	12.10	15.01	15.20
<u>Northeastern Region</u>								
Daggett	(0.09)	(0.13)	(0.01)	(0.01)	0.00	(0.00)	0.07	0.00
Duchesne	3.61	3.74	4.27	3.55	4.22	4.33	4.95	2.73
Uintah	3.56	3.22	3.41	2.71	3.16	2.99	2.43	2.23
<u>REGIONAL TOTALS</u>	7.27	7.10	7.70	6.28	7.38	7.32	7.45	4.97
<u>Southeastern Region</u>								
Carbon	(0.06)	1.92	1.76	1.54	2.21	1.51	1.73	1.75
Emery	2.79	3.71	3.05	2.99	2.80	2.63	4.37	4.21
Grand	0.12	0.25	0.04	(0.11)	(0.24)	(0.06)	0.09	0.31
San Juan	0.17	0.03	(0.04)	(0.01)	(0.13)	(0.04)	0.05	0.00
<u>REGIONAL TOTALS</u>	5.91	4.67	5.34	4.57	5.04	4.23	6.25	6.27
Unknown Counties	0.05	0.09	0.74	0.06	0.00	0.05	1.56	0.04
<u>STATE TOTALS</u>	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

()Data may be biased because sample size inflated county harvest beyond reasonable estimate for known pheasant populations.

Table 13. Statewide summary of pheasant harvest statistics, 1948-93.

Year	Total Hunters	Total Harvest	Hunter-Days Afield	Pheasants Per Hunter-Day	Pheasants Per Hunter
1948	96,534	280,914	--	--	2.91
1949	88,369	263,340	189,453	1.39	2.98
1950	92,724	249,428	235,309	1.06	2.69
1951	76,576	246,575	171,233	1.44	3.22
1952	78,773	246,559	185,383	1.33	3.13
1953	82,595	245,307	176,480	1.39	2.97
1954	82,370	260,289	201,774	1.29	3.16
1955	78,793	196,195	178,359	1.10	2.49
1956	77,826	206,239	182,512	1.13	2.65
1957	83,025	228,319	170,387	1.34	2.75
1958	88,290	309,015	220,725	1.40	3.50
1959	86,268	243,276	202,730	1.21	2.82
1960	81,976	232,812	177,719	1.31	2.84
1961	83,493	238,439	243,305	0.98	2.86
1962	86,336	262,448	209,921	1.25	3.04
1963	87,647	297,873	198,582	1.50	3.40
1964	88,242	225,775	196,314	1.15	2.56
1965	77,409	211,876	186,215	1.14	2.74
1966	78,721	249,814	209,082	1.19	3.17
1967	85,664	284,000	257,033	1.10	3.32
1968	90,453	297,752	267,788	1.11	3.29
1969	90,573	250,241	277,887	0.90	2.76
1970	78,585	250,503	244,958	1.02	3.19
1971	87,878	259,189	294,618	0.88	2.95
1972	84,311	240,573	327,669	0.73	2.85
1973	75,968	196,012	278,033	0.70	2.58
1974	85,252	167,408	282,294	0.59	1.96
1975	77,566	143,783	234,615	0.61	1.85
1976	74,029	151,476	214,023	0.71	2.05
1977	67,195	148,168	191,142	0.78	2.21
1978	83,800	220,398	257,305	0.86	2.63
1979	87,462	216,700	266,245	0.81	2.48
1980	84,868	228,442	249,770	0.91	2.69
1981	83,408	234,217	265,381	0.88	2.81
1982	85,368	208,437	280,624	0.74	2.44
1983	77,847	220,074	265,731	0.83	2.83
1984	76,840	192,190	258,169	0.74	2.50
1985	69,889	146,807	233,328	0.63	2.10
1986	59,987	114,389	207,346	0.55	1.91
1987	57,118	119,236	199,470	0.60	2.09
1988	54,514	97,658	184,180	0.53	1.79
1989	50,382	80,769	177,364	0.46	1.60
1990	47,025	78,944	161,634	0.49	1.68
1991	42,813	72,612	150,096	0.48	1.70
1992	41,640	85,803	150,244	0.57	2.06
1993	39,640	63,336	141,399	0.45	1.60
1994	36,705	68,698	129,872	0.53	1.87
Totals					
(1948-94)	3,572,747	9,532,308	9,983,701	--	--
Averages					
(1948-93)	76,870	205,731	214,214	0.92	2.60

Table 14. Pheasant field bag check summary, 1994.

Region and County	All Hunts						Complete Hunts					
	Total Parties	Total Hunters	Total Hours	Total Birds	Birds/100 Hr	Complete Hunts	Total Hunters	Total Hours	Total Birds	Birds/100 Hr	Birds/Hunter	
Northern Region												
Box Elder	88	185	516	88	17	-	-	-	-	-	-	-
Cache	-	-	-	-	-	-	-	-	-	-	-	-
Davis	-	-	-	-	-	-	-	-	-	-	-	-
Morgan	-	-	-	-	-	-	-	-	-	-	-	-
Rich	-	-	-	-	-	-	-	-	-	-	-	-
Summit	-	-	-	-	-	-	-	-	-	-	-	-
Weber	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	88	185	516	88	17	-	-	-	-	-	-	-
Central Region												
Juab	-	-	-	-	-	-	-	-	-	-	-	-
Salt Lake	-	-	-	-	-	-	-	-	-	-	-	-
Sanpete	-	-	-	-	-	-	-	-	-	-	-	-
Tooele	32	82	246	2	1	49	95	213	28	13	0.29	-
Utah	238	396	835	80	10	-	-	-	-	-	-	-
Wasatch	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	270	478	1,081	82	8	49	95	213	28	13	0.29	-
Southern Region												
Beaver	-	-	-	-	-	-	-	-	-	-	-	-
Garfield	-	-	-	-	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-	-	-	-	-
Kane	-	-	-	-	-	-	-	-	-	-	-	-
Millard	-	-	-	-	-	-	-	-	-	-	-	-
Piute	-	-	-	-	-	-	-	-	-	-	-	-
Sherman	-	-	-	-	-	-	-	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-	-	-
Wayne	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern Region												
Daggett	-	-	-	-	-	-	-	-	-	-	-	-
Duchesne	-	-	-	-	-	-	-	-	-	-	-	-
Uintah	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern Region												
Carbon	-	-	-	-	-	-	-	-	-	-	-	-
Emery	80	192	432	55	13	45	102	223	34	15	0.33	-
Grand	-	-	-	-	-	-	-	-	-	-	-	-
San Juan	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	80	192	432	55	13	45	102	223	34	15	0.33	-
STATE TOTALS	438	855	2,028	225	11	94	197	436	62	14	0.31	-

Table 15. Pheasant hunter success trend as determined by field check, 1989-94.

Region and County	1989			1990			1991			1992			1993			1994		
	Birds/ 100 Hr	Birds/ Hunter																
Northern Region																		
Box Elder	8	0.22	18	0.27	100	1.00	-	-	0.30	-	-	0.23	-	-	-	-	-	
Cache	4	0.10	7	0.23	40	0.57	-	-	-	12	0.63	-	-	-	-	-	-	
Davis	2	0.06	8	0.19	-	0.00	-	-	-	-	-	-	-	-	-	-	-	
Morgan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Rich	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Summit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Weber	9	0.12	-	-	27	1.00	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	8	0.18	33	0.27	24	0.30	-	0.30	60	0.26	-	-	-	-	-	-	-	
Central Region																		
Juab	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Salt Lake	-	-	13	0.38	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sanpete	-	-	-	-	17	1.05	13	0.52	12	0.50	-	-	-	-	-	-	-	
Tooele	8	0.26	-	-	-	-	-	-	-	14	0.63	13	0.29	-	-	-	-	
Utah	24	0.53	19	0.40	13	0.34	26	0.76	12	0.36	-	-	-	-	-	-	-	
Wasatch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	19	0.46	17	0.40	14	0.47	22	0.70	12	0.39	13	0.29	-	-	-	-	-	
Southern Region																		
Beaver	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Garfield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Iron	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Kane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Millard	4	0.24	8	0.48	-	-	-	-	-	-	-	-	-	-	-	-	-	
Piute	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sevier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Washington	38	0.71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Wayne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	4	0.24	8	0.05	-	-												
Northeastern Region																		
Daggett	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Duchesne	16	0.85	16	0.84	13	0.50	-	16	1.13	-	-	-	-	-	-	-	-	
Uintah	4	0.15	10	0.43	-	-	-	50	0.50	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	14	0.68	14	0.65	13	0.48	18	0.92	-	-								
Southeastern Region																		
Carbon	25	0.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Emery	26	0.63	9	0.19	22	0.36	34	0.51	22	0.29	15	0.33	-	-	-	-	-	
Grand	-	-	-	-	-	-	-	-	-	42	0.40	-	-	-	-	-	-	
San Juan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	26	0.53	9	0.19	22	0.36	34	0.51	24	0.31	15	0.33	-	-	-	-	-	
STATE TOTALS	10	0.30	12	0.36	16	0.42	36	0.46	19	0.31	14	0.31	-	-	-	-	-	

The breeding density index decreased slightly in 1994, and remained 7 percent below average.

Aging of wings indicated the juvenile per 100 adult ratio decreased to 73 compared to 86 in 1993. Juvenile per 100 adult ratio remains 36 percent below the long-term average. Reproductive success was only fair in 1994.

Harvest statistics derived from the questionnaire indicated an increase in number of hunters and harvest compared to 1993.

Field bag checks indicated a decrease in hunter success on opening day. Hunters who participated hunted more hours per hunter than the previous year, but spent more time afield per dove harvested.

The overall increase in mourning doves harvested probably resulted from more birds being found in the state due to the warm, dry summer of 1994. The lack of inclement weather precluded birds from migrating south.

A band-tailed pigeon hunting permit was required again in 1994 to obtain mailing addresses for a questionnaire. Twenty hunters purchased permits and 13 went afield. Fifty-one pigeons were harvested. The majority of the harvest occurred in Washington County.

MOURNING DOVE

Call Count Survey

Results of the 1994 call count survey are found in Table 1 of this section. The long-term trend of the state's breeding density index (average doves heard per route) is shown in Table 2. Indices shown in each of these tables are unweighted and consequently differ from those published in the annual Mourning Dove Status Report compiled by the U.S. Fish and Wildlife Service. However, indicated trends are similar (Figure 1). The following is a comparison of the results of the 1994 survey compared to 1993 and the average for the period 1964-1993:

		<u>Percent change from</u>	
	<u>1994</u>	<u>1993</u>	<u>Average</u>
Average doves heard per route	11.47	-2	-7
Average doves seen per route	7.27	-20	-47

Coo count data (doves heard per route) indicated slightly decreased breeding activity in late May compared to 1993, and was only 7 percent below the long-term average of doves heard per route.

Harvest

Hunter Questionnaire

Information obtained from the hunter questionnaire for 1994 is summarized in Table 3. Long-term trends of mourning doves bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 4-6 and total statewide harvest statistics in Table 7 and Figures 2 and 3. The following is a comparison of the harvest statistics for 1994 compared to 1993 and the previous 43-year average:

		<u>Percent change from</u>	
	<u>1994</u>	<u>1993</u>	<u>Average</u>
Mourning dove hunters	20,743	+5	-6
Mourning doves harvested	195,089	+14	-5
Hunter-days afield	78,594	+15	+14
Mourning doves per hunter-day	2.48	-1	-25
Mourning doves per hunter	9.41	+9	+4

Hunter success increased slightly from 1993. Total harvest increased 14 percent compared to 1993. Numbers of dove hunters increased 5 percent and hunter-days afield increased 15 percent. Doves per hunter increased 9 percent from 1993.

Long-term harvest trends are depicted in Figure 2.

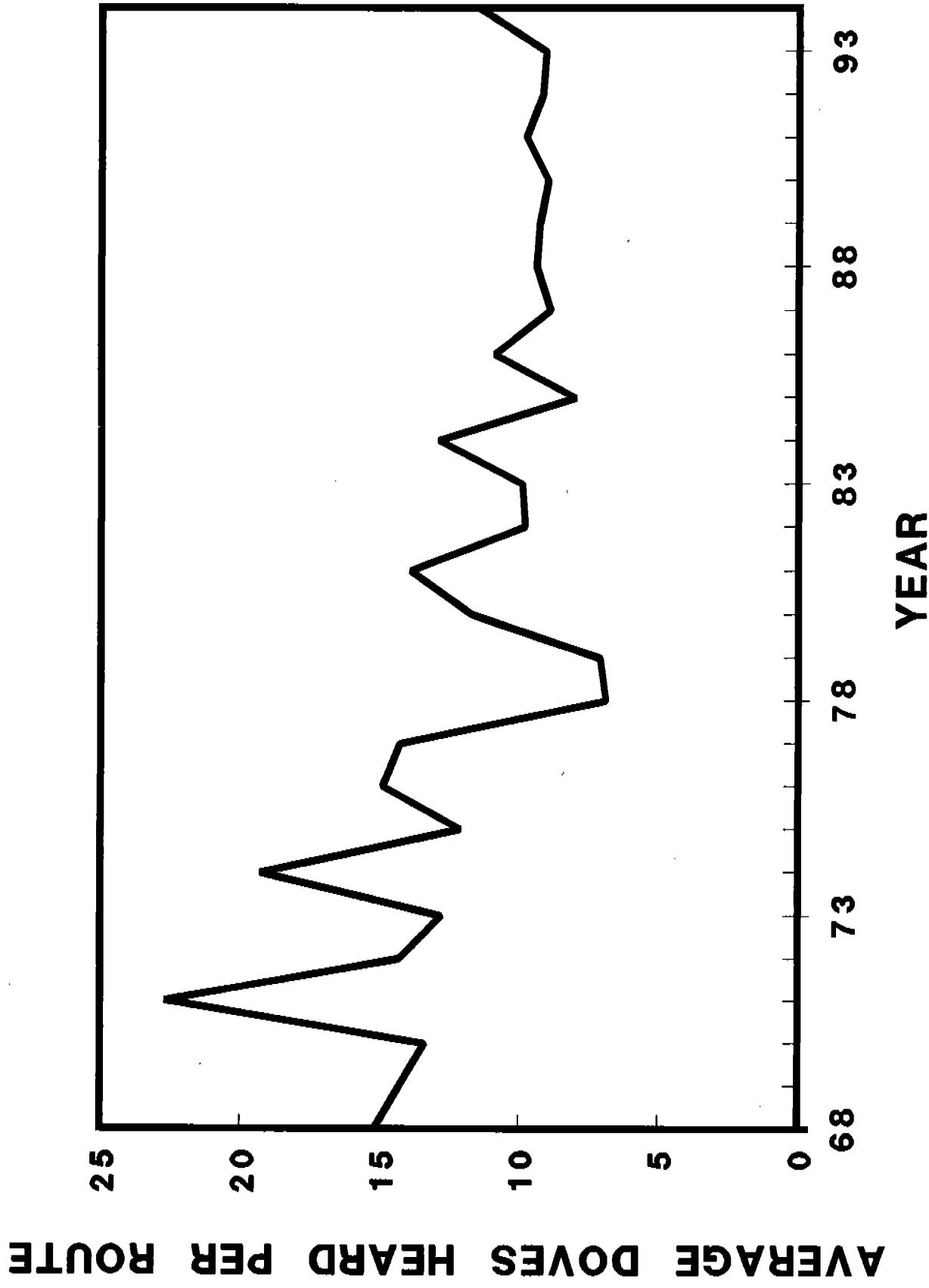


Figure 1. Mourning dove breeding density index trend, 1968-94.

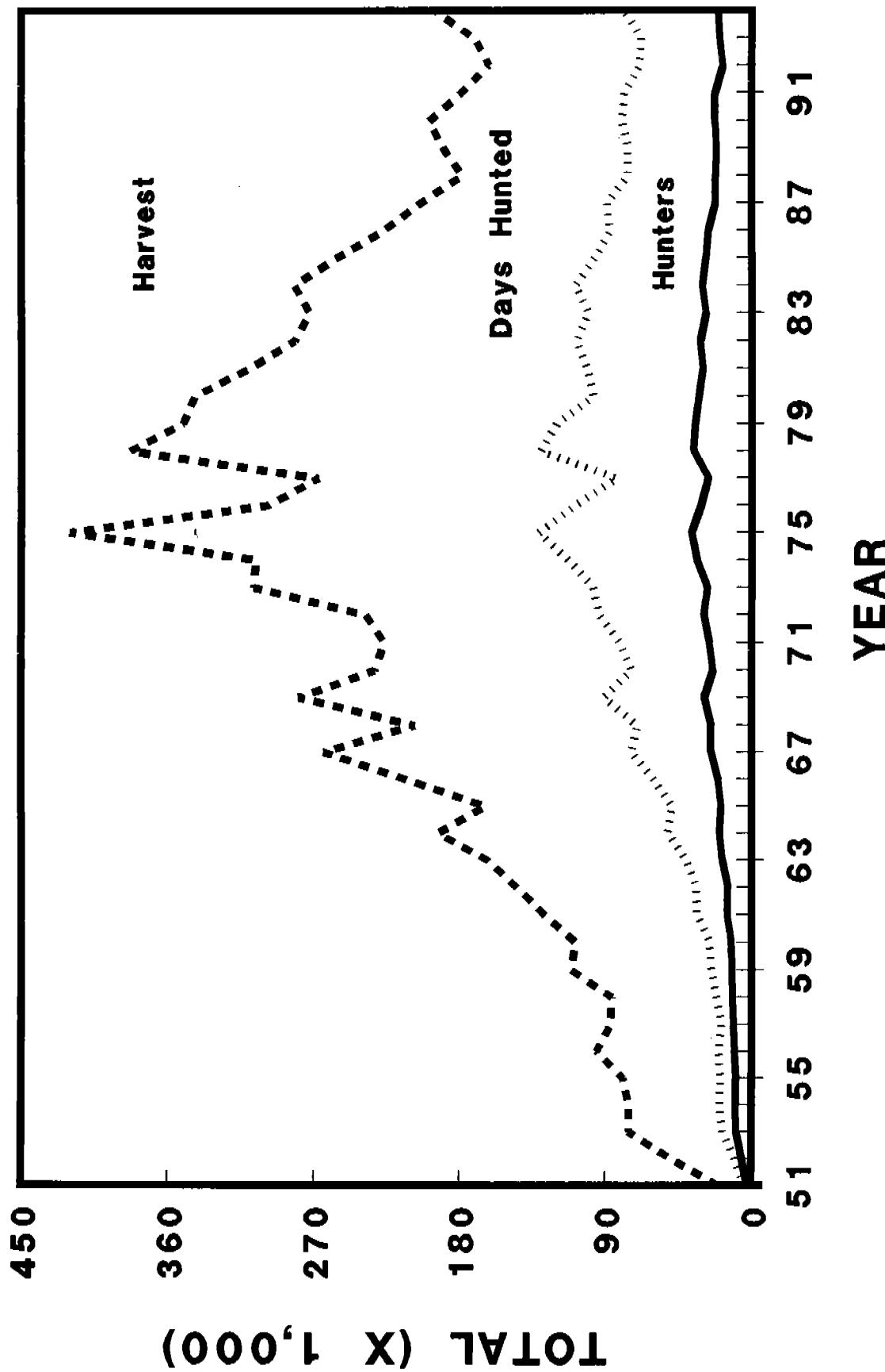


Figure 2. Statewide trends of mourning dove harvest statistics, 1951-94.

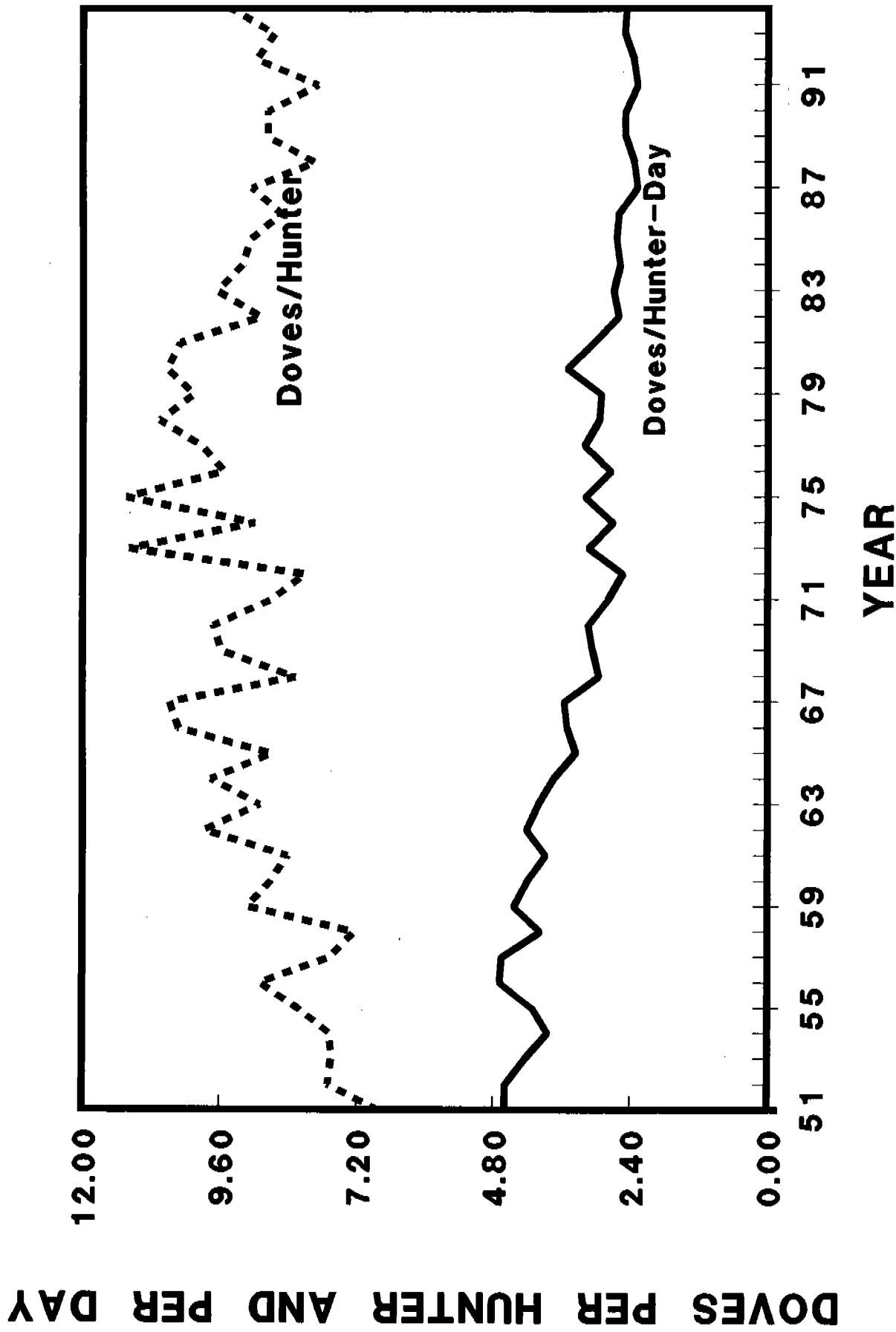
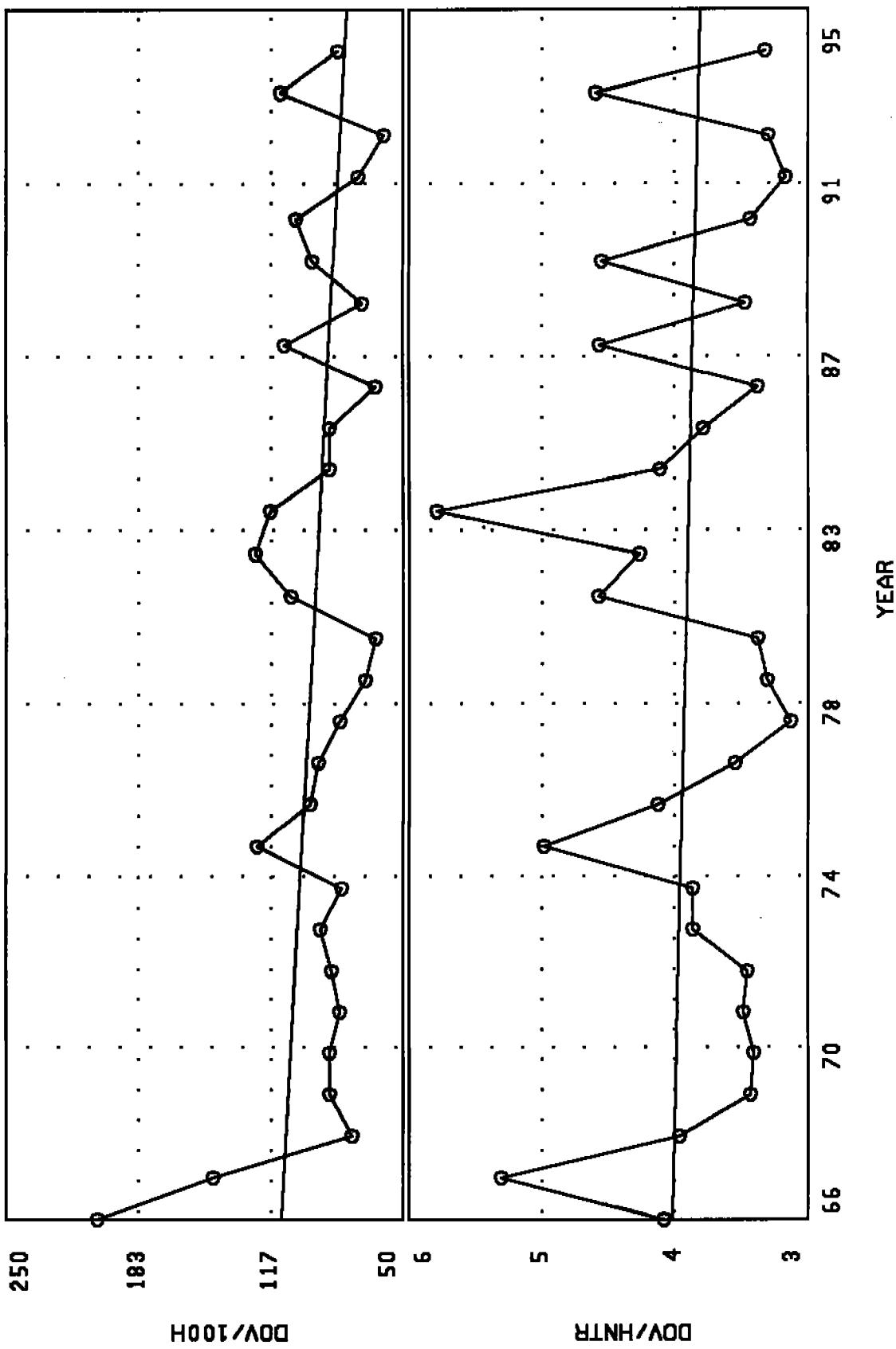


Figure 3. Statewide trends of mourning dove hunter success rates, 1951-94.

FIGURE 4. MOURNING DOVE FIELD BAG
CHECK INDICES, 1966-94.



Field Bag Checks

A summary of field bag check data for 1994 is shown in Table 8. Hunter success trends determined via this method are shown in Table 9. Results of the 1994 survey compared to 1993 and the 10-year average (1984-93) follow:

		<u>Percent change from</u>	
	<u>1994</u>	<u>1993</u>	<u>Average</u>
Total hunters checked	397	-45	-71
Total hours hunted	1,373	-51	-74
Doves per hunter (complete hunts)	2.88	-34	-18
Doves bagged per 100 hours (complete hunts)	83	-22	+19
Average hours per hunter-day (complete hunts)	4.72	+22	+19
Hours hunted per dove bagged (complete hunts)	0.43	-51	-60

Field bag checks indicated an opening day decrease in hunter success. The total number of hunters checked was down 45 percent from 1993. Dove hunters spent more time afield per hunter-day than in 1993, but less time was spent per dove bagged.

Decreased numbers of hunters checked and success may have been a result of the dove season opening on a Thursday in 1994.

Age Composition of the Harvest

A summary of the age composition of harvested mourning doves from 1984 through 1994 is contained in Table 10. Hatching dates for immature doves harvested in the Northern Region since 1985 are shown in Table 11.

Following is a comparison of data collected in 1994 compared to 1993 and long-term averages (1967-93):

		<u>Percent change from</u>	
	<u>1994</u>	<u>1993</u>	<u>Average</u>
Sample size	1,635	-20	-46
Immatures/100 adults	73	-15	-36

Sample size decreased 20 percent in 1994. The 73 immatures per 100 adults in the harvest was down 15 percent from the previous year and 36 percent below the long-term average.

Reproductive success in 1994 was fair at best.

Table 1. Summary of the mourning dove call-count survey for 1994.

Region and County	Route Number	Total Doves Heard / Route	Total Doves Seen / Route
Northern Region			
Box Elder	R1500	7	7
Summit	R1020	4	2
REGIONAL TOTALS		11	9
Central Region			
Juab	R2830	41	28
REGIONAL TOTALS		41	28
Southern Region			
Beaver	R3820	16	17
Garfield	R1090	0	0
Iron	R4001	40	2
Millard	R3640	10	17
Sevier-Sanpete	R0370	6	13
Washington	R4311	20	2
Wayne-Sevier	R0660	0	0
REGIONAL TOTALS		92	51
Northeastern Region			
Duchesne	R0080	--	--
Uintah	R0220	7	9
REGIONAL TOTALS		7	9
Southeastern Region			
Emery	R0540	13	1
San Juan	R1171	8	11
San Juan	R1450	0	0
REGIONAL TOTALS		21	12
STATE TOTALS		172	109
STATE AVERAGES		11.47	7.27
PERCENT CHANGE (from previous year)		-2	-20

Table 2. Regional and county summary of mourning dove breeding population trend as indicated by the number of doves heard per route during random call count surveys, 1978-94.

Region and Route		Number of Doves Heard Per Route																
County	Number	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region																		
Box Elder	R1500	2	9	4	8	--	1	0	0	1	2	0	0	1	1	4	5	7
Summit	R1020	5	6	5	4	5	--	1	4	5	3	5	3	3	3	4	4	4
REGIONAL TOTALS		7	15	9	12	5	1	1	4	6	5	5	3	4	4	8	9	11
Central Region																		
Juab	R2830	31	15	31	22	9	25	19	20	19	16	23	13	36	38	15	42	41
REGIONAL TOTALS		31	15	31	22	9	25	19	20	19	16	23	13	36	38	15	42	41
Southern Region																		
Beaver	R3820	0	5	9	7	13	3	6	6	4	17	13	14	9	--	3	1	16
Garfield	R1090	0	0	0	9	2	3	15	3	1	1	0	16	0	0	3	2	0
Iron	R4001	12	14	40	36	21	19	31	41	26	23	20	10	12	15	26	49	40
Millard	R3640	8	4	2	10	9	5	14	2	2	3	5	4	5	8	7	7	10
Sevier-Sanpete	R0370	0	0	3	0	0	3	5	4	4	3	3	2	6	2	5	2	6
Washington	R4311	1	4	3	6	0	14	1	0	6	7	1	6	12	14	12	16	20
Wayne-Sevier	R0660	1	2	5	14	4	--	17	3	2	0	3	7	5	0	3	6	0
REGIONAL TOTALS		22	29	62	82	49	47	89	59	45	54	45	59	49	39	59	83	92
Northeastern Region																		
Duchesne	R0080	2	2	1	13	7	0	1	8	3	4	8	13	11	11	7	3	2
Uintah	R0220	4	--	49	19	1	9	10	5	20	12	6	0	2	3	2	3	7
REGIONAL TOTALS		6	2	50	32	8	9	11	13	23	16	14	13	13	10	5	5	7
Southeastern Region																		
Emery	R0540	10	9	7	22	7	11	10	3	10	11	15	8	2	5	8	14	13
San Juan	R1171	24	28	14	38	26	30	57	25	60	31	37	43	31	38	34	21	8
San Juan	R1450	3	1	3	0	24	5	7	2	0	1	2	1	0	3	9	1	0
REGIONAL TOTALS		37	38	24	60	57	46	74	30	70	43	54	52	33	46	51	36	21
STATE TOTALS		103	99	176	208	128	128	194	126	163	134	141	140	135	137	138	175	172
STATE AVERAGES		6.87	6.60	11.73	13.87	8.53	8.53	12.93	8.40	10.87	8.93	9.40	9.33	9.00	9.79	9.20	11.67	11.47
PERCENT CHANGE (from previous year)		-52	-4	78	18	-38	0	52	-35	29	-18	5	-1	-4	1	-8	27	-2

Table 3. Summary of mourning dove hunter success and distribution of harvest and hunting pressure by region and county, 1994.

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD	BIRDS BAGGED	BIRDS PER HUNTER-DAY	% OF PRESSURE	% OF HARVEST
NORTHERN REGION						
BOX ELDER	161	8,965	23,608	2.63	11.41	12.10
CACHE	61	3,902	9,896	2.54	4.97	5.07
DAVIS	27	2,197	2,759	1.26	2.80	1.41
MORGAN	17	755	2,214	2.93	0.96	1.14
RICH	13	421	703	1.67	0.54	0.36
SUMMIT	8	316	826	2.61	0.40	0.42
WEBER	74	5,484	8,631	1.57	6.98	4.42
REGIONAL TOTALS	361	22,043	48,640	2.21	28.05	24.93
CENTRAL REGION						
JUAB	97	4,131	11,232	2.72	5.26	5.76
SALT LAKE	45	3,656	10,213	2.79	4.65	5.24
SANPETE	52	3,726	6,644	1.78	4.74	3.41
TOOELE	129	7,172	17,543	2.45	9.13	8.99
UTAH	210	13,113	31,835	2.43	16.69	16.32
WASATCH	8	843	1,810	2.15	1.07	0.93
REGIONAL TOTALS	541	32,643	79,280	2.43	41.53	40.64
SOUTHERN REGION						
BEAVER	29	2,109	7,840	3.72	2.68	4.02
GARFIELD	5	333	492	1.47	0.42	0.25
IRON	27	1,511	5,449	3.60	1.92	2.79
KANE	2	52	158	3.00	0.07	0.08
MILLARD	110	6,627	21,200	3.20	8.43	10.87
PIUTE	2	175	791	4.50	0.22	0.41
SEVIER	49	3,797	8,965	2.36	4.83	4.60
WASHINGTON	29	2,425	5,519	2.28	3.09	2.83
WAYNE	6	316	667	2.11	0.40	0.34
REGIONAL TOTALS	259	17,350	51,084	2.94	22.08	26.19
NORTHEASTERN REGION						
DAGGETT	0	0	0	0.00	0.00	0.00
DUCESNE	13	597	1,828	3.06	0.76	0.94
UINTAH	25	1,089	3,656	3.35	1.39	1.87
REGIONAL TOTALS	38	1,687	5,484	3.25	2.15	2.81
SOUTHEASTERN REGION						
CARBON	21	1,195	1,142	0.96	1.52	0.59
EMERY	32	2,654	5,467	2.06	3.38	2.80
GRAND	4	105	158	1.50	0.13	0.08
SAN JUAN	12	843	3,726	4.42	1.07	1.91
REGIONAL TOTALS	69	4,799	10,494	2.19	6.11	5.38
UNKNOWN	62	70	105	1.50	0.09	0.05
STATE TOTALS	1,330	78,594	195,089	2.48	100.00	100.00

* Total hunter trips from questionnaire returns.

Table 4. Summary of mourning doves bagged per hunter-day by region and county, 1987-94.

Region and County	Year							
	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	3.46	3.41	2.83	2.73	2.27	2.56	2.49	2.63
Cache	1.79	1.92	2.24	1.67	1.97	2.16	1.88	2.54
Davis	1.18	1.51	1.31	1.53	1.77	1.19	1.39	1.26
Morgan	3.00	2.36	1.03	1.73	2.31	2.47	0.88	2.93
Rich	0.00	2.63	1.26	1.95	3.45	2.27	1.18	1.67
Summit	2.50	2.19	1.61	7.00	1.78	3.25	0.25	2.61
Weber	1.15	1.21	1.88	1.48	1.30	1.79	1.50	1.57
<u>REGIONAL TOTALS</u>	<u>2.19</u>	<u>2.09</u>	<u>2.20</u>	<u>2.02</u>	<u>1.99</u>	<u>2.16</u>	<u>2.00</u>	<u>2.21</u>
<u>Central Region</u>								
Juab	2.95	3.25	4.45	3.70	3.33	3.34	4.25	2.72
Salt Lake	1.36	1.84	2.18	2.37	2.02	2.14	1.88	2.79
Sanpete	1.88	2.75	2.40	3.06	2.69	2.06	3.21	1.78
Tooele	2.17	2.31	2.88	1.90	2.29	2.14	2.06	2.45
Utah	2.30	1.97	2.08	2.05	1.89	1.77	2.12	2.43
Wasatch	0.82	1.20	1.22	2.42	2.11	2.37	1.83	2.15
<u>REGIONAL TOTALS</u>	<u>2.11</u>	<u>2.23</u>	<u>2.55</u>	<u>2.41</u>	<u>2.25</u>	<u>2.10</u>	<u>2.51</u>	<u>2.43</u>
<u>Southern Region</u>								
Beaver	1.72	3.50	4.35	1.71	3.32	3.41	1.52	3.72
Garfield	1.67	3.86	2.27	2.34	2.40	1.67	3.50	1.47
Iron	3.10	3.71	2.91	4.38	2.80	3.96	2.42	3.60
Kane	3.06	1.71	3.11	1.00	3.03	4.05	4.09	3.00
Millard	2.83	3.01	3.54	4.42	3.13	3.30	4.40	3.20
Piute	1.67	4.17	0.00	1.45	2.50	1.33	2.83	4.50
Sevier	2.15	2.03	2.70	2.18	2.09	2.42	2.10	2.36
Washington	2.68	3.37	2.12	2.81	3.63	2.54	2.74	2.28
Wayne	5.65	2.29	3.53	0.61	0.75	2.86	1.00	2.11
<u>REGIONAL TOTALS</u>	<u>2.62</u>	<u>2.90</u>	<u>3.01</u>	<u>3.20</u>	<u>2.87</u>	<u>3.09</u>	<u>2.98</u>	<u>2.94</u>
<u>Northeastern Region</u>								
Daggett	0.83	0.00	0.25	2.00	1.00	3.25	7.00	0.00
Duchesne	2.46	2.83	1.42	1.85	2.21	2.24	2.52	3.06
Uintah	2.82	2.68	2.33	3.17	1.06	2.06	2.12	3.35
<u>REGIONAL TOTALS</u>	<u>2.55</u>	<u>2.68</u>	<u>1.82</u>	<u>2.46</u>	<u>1.64</u>	<u>2.15</u>	<u>2.32</u>	<u>3.25</u>
<u>Southeastern Region</u>								
Carbon	1.94	2.06	0.75	1.18	2.15	1.51	2.82	0.96
Emery	2.41	2.87	1.77	2.04	1.68	3.10	3.73	2.06
Grand	2.41	2.00	2.18	4.04	1.13	0.00	2.21	1.50
San Juan	4.08	2.91	4.22	1.69	3.56	2.61	3.46	4.42
<u>REGIONAL TOTALS</u>	<u>2.76</u>	<u>2.56</u>	<u>1.85</u>	<u>2.07</u>	<u>2.14</u>	<u>2.46</u>	<u>3.27</u>	<u>2.19</u>
Unknown Counties	1.93	1.30	2.86	0.00	0.00	0.00	2.40	1.50
<u>STATE TOTALS</u>	<u>2.61</u>	<u>2.28</u>	<u>2.49</u>	<u>2.49</u>	<u>2.28</u>	<u>2.35</u>	<u>2.51</u>	<u>2.48</u>

Table 5. Percentage distribution of mourning dove harvest by region and county, 1987-94.

Region and County	Year							
	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	11.51	10.31	12.06	9.95	9.60	9.09	11.18	12.10
Cache	2.99	2.94	4.87	3.34	5.54	7.20	4.85	5.07
Davis	1.93	3.27	2.01	2.57	2.39	1.15	0.79	1.41
Morgan	0.18	0.61	0.44	0.59	0.65	0.81	0.17	1.14
Rich	0.00	0.66	0.26	0.38	0.97	0.65	0.22	0.36
Summit	0.18	0.65	0.32	0.51	0.16	0.86	0.02	0.42
Weber	2.12	3.67	3.54	3.54	2.39	4.59	3.14	4.42
<u>REGIONAL TOTALS</u>	18.92	22.15	23.50	20.88	21.71	24.35	20.37	24.93
<u>Central Region</u>								
Juab	8.36	8.09	9.79	9.45	8.78	6.74	11.16	5.76
Salt Lake	5.39	4.37	3.56	5.71	5.00	5.15	2.59	5.24
Sanpete	2.88	4.30	4.34	3.23	4.84	3.57	4.10	3.41
Tooele	8.55	10.92	8.58	6.37	8.56	6.66	8.02	8.9
Utah	20.06	16.17	16.27	12.83	16.37	15.16	13.26	16.32
Wasatch	0.61	0.90	0.54	1.08	0.94	0.99	1.22	0.93
<u>REGIONAL TOTALS</u>	45.87	44.78	43.08	38.67	44.50	38.27	40.36	40.64
<u>Southern Region</u>								
Beaver	1.67	1.76	2.28	1.29	1.94	2.10	1.81	4.02
Garfield	0.12	0.25	1.09	0.92	0.35	0.05	0.39	0.25
Iron	3.24	3.22	3.07	6.20	3.07	5.57	2.37	2.79
Kane	0.66	0.33	0.64	0.07	0.91	0.98	1.00	0.08
Millard	9.80	11.73	9.92	13.35	9.29	11.80	13.31	40.87
Piute	0.24	0.46	0.00	0.57	0.68	0.31	0.38	0.41
Sevier	4.67	3.59	6.11	4.05	4.80	5.66	3.72	4.60
Washington	2.28	1.10	2.62	4.99	5.16	1.50	5.54	2.83
Wayne	1.35	0.14	0.73	0.11	0.03	0.22	0.16	0.34
<u>REGIONAL TOTALS</u>	24.05	22.63	26.46	31.57	26.22	28.19	28.68	26.19
<u>Northeastern Region</u>								
Daggett	0.12	0.00	0.02	0.06	0.01	0.14	0.08	0.00
Duchesne	0.76	1.27	0.85	1.62	2.61	1.21	1.74	0.94
Uintah	2.81	2.46	1.70	2.46	1.21	2.01	1.96	1.87
<u>REGIONAL TOTALS</u>	3.70	3.73	2.57	4.15	3.82	3.36	3.77	2.81
<u>Southeastern Region</u>								
Carbon	0.74	1.67	0.44	0.41	1.24	1.16	1.07	0.59
Emery	2.66	3.70	2.23	2.85	1.16	3.64	2.28	2.80
Grand	0.84	0.18	0.26	0.96	0.18	0.00	0.34	0.08
San Juan	2.54	0.59	1.24	0.51	1.18	1.03	0.92	1.91
<u>REGIONAL TOTALS</u>	6.80	6.16	4.17	4.74	3.74	5.84	4.62	5.38
Unknown counties	0.64	0.53	0.22	0.00	0.00	0.00	2.21	0.05
<u>STATE TOTALS</u>	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table 6. Percentage distribution of mourning dove hunting pressure by region and county, 1987-94.

Region and County	Year							
	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	7.59	7.07	10.62	9.07	9.63	8.33	11.24	11.41
Cache	3.81	3.59	5.43	4.96	6.43	7.84	6.47	4.97
Davis	3.75	5.08	3.80	4.19	3.08	2.27	1.42	2.80
Morgan	0.13	0.61	1.06	0.85	0.64	0.77	0.47	0.96
Rich	0.00	0.59	0.52	0.49	0.64	0.67	0.47	0.54
Summit	0.16	0.70	0.49	0.18	0.20	0.62	0.22	0.40
Weber	4.22	7.11	4.70	5.94	4.19	6.03	5.24	6.98
REGIONAL TOTALS	19.69	24.77	26.62	25.67	24.83	26.53	25.54	28.05
<u>Central Region</u>								
Juab	6.47	5.82	5.49	6.35	6.01	4.74	6.58	5.26
Salt Lake	9.02	5.52	4.07	5.99	5.64	5.65	3.46	4.65
Sanpete	3.51	3.65	4.51	2.62	4.10	4.07	3.21	4.74
Tooele	8.99	11.08	7.41	8.33	8.54	7.32	9.76	9.13
Utah	19.93	19.18	19.53	15.52	19.75	20.08	15.70	16.69
Wasatch	1.70	1.77	1.11	1.11	1.02	0.98	1.67	1.07
REGIONAL TOTALS	49.64	47.09	42.12	39.91	45.06	42.85	40.38	41.53
<u>Southern Region</u>								
Beaver	2.22	1.18	1.30	1.88	1.33	1.44	2.98	2.68
Garfield	0.16	0.15	1.20	0.98	0.33	0.08	0.28	0.42
Iron	2.38	2.03	2.63	3.52	2.51	3.30	2.45	1.92
Kane	0.49	0.46	0.52	0.18	0.69	0.57	0.61	0.07
Millard	7.89	9.11	6.98	7.50	6.77	8.40	7.59	8.43
Piute	0.32	0.26	0.05	0.98	0.62	0.54	0.33	0.22
Sevier	4.96	4.14	5.65	4.63	5.24	5.49	4.43	4.83
Washington	1.94	0.76	3.07	4.42	3.24	1.39	5.08	3.09
Wayne	0.54	0.15	0.52	0.46	0.09	0.18	0.39	0.40
REGIONAL TOTALS	20.95	18.26	21.92	24.54	20.81	21.40	24.15	22.08
<u>Northeastern Region</u>								
Daggett	0.32	0.06	0.22	0.08	0.02	0.10	0.03	0.00
Duchesne	0.71	1.05	1.49	2.18	2.68	1.26	1.73	0.76
Uintah	2.27	2.14	1.82	1.93	2.60	2.29	2.31	1.39
REGIONAL TOTAL	3.31	3.26	3.53	4.19	5.30	3.66	4.07	2.15
<u>Southeastern Region</u>								
Carbon	0.87	1.90	1.44	0.87	1.31	1.80	0.95	1.52
Emery	2.52	3.02	3.15	3.47	1.58	2.76	1.53	3.38
Grand	0.79	0.21	0.30	0.59	0.36	0.08	0.39	0.13
San Juan	1.42	0.48	0.73	0.75	0.75	0.93	0.67	1.07
REGIONAL TOTALS	5.62	5.62	5.62	5.68	3.99	5.57	3.54	6.11
Unknown counties	0.76	0.96	0.19	0.00	0.00	0.00	2.31	0.09
STATE TOTALS	100.00							

Table 7. Statewide summary of mourning dove harvest statistics, 1951-94.

Year	Total Hunters	Total Harvest	Hunter-Days Afield	Doves Per Hunter-Day	Doves Per Hunter
1951	3,007	20,448	4,455	4.59	6.80
1952	6,420	49,498	10,784	4.59	7.71
1953	9,887	75,636	17,797	4.25	7.65
1954	9,901	75,941	19,724	3.85	7.67
1955	9,653	79,444	19,282	4.12	8.23
1956	10,744	95,729	20,411	4.69	8.91
1957*	11,298	86,769	18,620	4.66	7.68
1958	11,853	85,934	21,591	3.98	7.25
1959	12,142	110,856	24,911	4.45	9.13
1960	12,440	108,477	25,766	4.21	8.72
1961	15,192	128,001	33,434	3.89	8.42
1962	14,663	144,826	34,281	4.23	9.89
1963	18,258	162,769	40,490	4.02	8.91
1964	19,829	193,538	51,671	3.75	9.76
1965	18,710	164,087	48,835	3.36	8.69
1966	20,594	212,696	60,608	3.51	10.33
1967	25,161	263,949	74,171	3.56	10.49
1968	25,105	207,922	70,186	2.96	8.28
1969	29,131	279,311	90,965	3.07	9.59
1970	23,908	232,469	73,984	3.14	9.72
1971	26,064	226,645	81,271	2.79	8.70
1972	29,341	238,354	94,046	2.53	8.12
1973	27,435	307,062	97,788	3.14	11.19
1974	34,021	306,076	112,967	2.71	9.00
1975	37,378	420,308	131,312	3.20	11.24
1976	31,293	298,505	108,780	2.74	9.54
1977	26,905	267,487	83,218	3.21	9.94
1978	35,985	383,696	130,173	2.95	10.66
1979	34,903	351,161	120,459	2.92	10.06
1980	32,627	343,851	97,644	3.52	10.54
1981	30,060	310,068	101,728	3.05	10.31
1982**	31,756	282,188	107,728	2.62	8.89
1983	28,258	272,979	100,568	2.71	9.66
1984	30,573	282,307	108,793	2.59	9.23
1985	28,183	256,045	96,507	2.65	9.09
1986	26,583	226,985	87,084	2.61	8.54
1987***	22,553	204,030	89,378	2.28	9.05
1988	22,457	178,469	76,219	2.34	7.95
1989	21,696	190,328	76,372	2.49	8.77
1990	22,700	199,007	80,076	2.49	8.77
1991	22,632	178,853	78,405	2.28	7.90
1992	18,021	161,902	68,937	2.35	8.98
1993	19,725	170,834	68,143	2.51	8.66
1994	20,743	195,089	78,594	2.48	9.41
Totals					
(1951-94)	969,788	9,030,529	3,038,156	--	--
Averages					
(1951-93)	22,071	205,475	68,827	3.29	9.04

* Estimated.

**Bag limit increased to 15.

***Bag limit reduced to 10.

Table 8. Mourning dove field bag check summary, 1994.

Region and County	All Hunts						Complete Hunts					
	Total Parties	Total Hunters	Total Hours	Birds/ 100 Hr	Complete Hunts	Total Birds	Total Hours	Hunters	Total Birds	Total Birds/ 100 Hr	Birds/ Hunter	
Northern Region												
Box Elder	-	-	-	-	-	-	-	-	-	-	-	-
Cache	-	-	-	-	-	-	-	-	-	-	-	-
Davis	-	-	-	-	-	-	-	-	-	-	-	-
Morgan	-	-	-	-	-	-	-	-	-	-	-	-
Rich	-	-	-	-	-	-	-	-	-	-	-	-
Summit	-	-	-	-	-	-	-	-	-	-	-	-
Weber	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-
Central Region												
Juab	-	-	-	-	-	-	-	-	-	-	-	-
Salt Lake	-	-	-	-	-	-	-	-	-	-	-	-
Sanpete	-	-	-	-	-	-	-	-	-	-	-	-
Tooele	-	-	-	-	-	-	-	-	-	-	-	-
Utah	-	-	-	-	-	-	-	-	-	-	-	-
Wasatch	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-
Southern Region												
Beaver	-	-	-	-	-	-	-	-	-	-	-	-
Garfield	-	-	-	-	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-	-	-	-	-
Kane	-	-	-	-	-	-	-	-	-	-	-	-
Millard	-	-	-	-	-	-	-	-	-	-	-	-
Piute	-	-	-	-	-	-	-	-	-	-	-	-
Sherman	-	-	-	-	-	-	-	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-	-	-
Wayne	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern Region												
Daggett	-	-	-	-	-	-	-	-	-	-	-	-
Duchesne	-	-	-	-	-	-	-	-	-	-	-	-
Uintah	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern Region												
Carbon	-	-	-	-	-	-	-	-	-	-	-	-
Emery	12	29	74	106	144	3	8	15	49	327	6.13	-
Grand	-	-	-	-	-	-	-	-	-	-	-	-
San Juan	13	33	71	106	149	6	20	53	81	154	4.05	-
REGIONAL TOTALS	25	62	145	212	147	9	28	68	130	193	4.64	-
LEHI CHECK STATION	195	358	1,224	911	74	123	221	780	683	88	3.09	-
NEPHI CHECK STATION	69	152	453	472	104	41	87	259	330	127	3.79	-
THIOKOL CHECK STATION	35	74	143	419	293	29	61	266	--	--	--	-
STATE TOTALS	324	646	1,965	2,014	103	202	397	1,373	1,143	83	2.88	-

Table 9. Mourning dove hunter success trend as determined by field bag checks, 1989-94.

Region and County	1989			1990			1991			1992			1993			1994		
	Birds/ 100 Hr	Birds/ Hunter																
Northern Region																		
Box Elder	110	4.55	38	2.29	200	2.27	-	-	-	-	-	-	-	-	-	-	-	
Cache	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Davis	160	5.00	110	1.77	158	1.88	-	-	-	-	-	-	-	-	-	-	-	
Morgan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Rich	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Summit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Weber	40	0.71	39	0.83	73	1.00	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	109	4.42	42	1.93	147	1.79	-	-	-	-	-	-	-	-	-	-	-	
Central Region																		
Juab	133	6.39	116	4.60	64	2.49	-	-	-	-	110	5.26	-	-	-	-	-	
Salt Lake	37	1.30	-	-	14	0.50	-	-	-	-	-	-	-	-	-	-	-	
Sanpete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tooele	-	-	285	10.00	-	-	-	-	-	-	-	-	-	-	-	-	-	
Utah	91	3.47	65	2.43	76	2.86	-	-	-	-	117	4.42	-	-	-	-	-	
Wasatch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	108	4.28	114	2.95	70	2.69	-	-	-	-	115	4.64	-	-	-	-	-	
Southern Region																		
Beaver	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Garfield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Iron	467	1.40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Kane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Millard	-	-	104	7.78	-	-	-	-	-	-	-	-	-	-	-	-	-	
Piute	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Seargent	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Washington	369	1.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Wayne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	444	1.33	104	7.78	-	-												
Northeastern Region																		
Daggett	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Duchesne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Uintah	214	8.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	214	8.57	-	-														
Southeastern Region																		
Carbon	-	-	-	-	-	-	-	-	-	-	219	7.08	280	7.00	-	-	-	
Emery	-	-	127	4.00	300	7.50	265	4.07	198	7.92	327	6.13	-	-	-	-	-	
Grand	92	2.00	-	-	-	-	-	-	-	-	200	1.00	-	-	-	-	-	
San Juan	-	-	129	6.00	250	5.00	-	-	-	-	-	-	154	4.05	-	-	-	
REGIONAL TOTALS	92	2.00	127	4.00	294	7.14	235	5.46	202	6.93	193	4.64	-	-	-	-	-	
LEHI CHECK STATION	91	3.47	65	2.43	76	2.86	50	2.73	130	4.43	88	3.09	-	-	-	-	-	
NEPHI CHECK STATION	133	6.39	104	7.78	64	2.49	84	4.01	110	5.26	127	3.79	-	-	-	-	-	
THIOKOL CHECK STATION	-	-	-	-	-	-	127	3.64	141	5.21	-	-	-	-	-	-	-	
STATE TOTALS	110	4.31	104	3.00	73	2.70	60	2.85	112	4.36	83	2.88	-	-	-	-	-	

Table 10. Age composition (Immature/100 Adults) of Mourning Doves Harvested, 1984-94.

Region and County		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1984-94 Average
		I/ 100A(n)											
Northern Region													
Box Elder		135	1,172	146	137	131	1,086	128	770	-	-	-	-
Cache		-	-	181	45	-	-	325	17	-	-	-	-
Davis		121	42	85	74	-	-	-	-	-	-	-	-
Morgan		-	-	-	-	-	-	-	-	-	-	-	-
Rich		53	23	600	7	-	-	-	-	-	-	-	-
Summit		-	-	-	-	-	-	-	-	-	-	-	-
Weber		-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS		133	1,237	138	263	131	1,086	132	787	-	82	435	239
Central Region													
Juab		-	-	-	-	-	-	-	-	-	-	-	-
Salt Lake		-	-	-	-	-	-	-	-	-	-	-	-
Sanpete		-	-	-	-	-	-	-	-	-	-	-	-
Tooele		-	-	-	-	-	-	-	-	-	-	-	-
Utah		-	-	-	-	-	-	-	-	-	-	-	-
Wasatch		-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS		-	-	-	-	-	-	-	-	-	-	-	-
Southern Region													
Beaver		-	-	-	-	-	-	-	-	-	-	-	-
Garfield		-	-	-	-	-	-	-	-	-	-	-	-
Iron		-	-	-	-	-	-	-	-	-	-	-	-
Kane		-	-	-	-	-	-	-	-	-	-	-	-
Millard		-	-	-	-	-	-	-	-	-	-	-	-
Piute		-	-	-	-	-	-	-	-	-	-	-	-
Seymour		-	-	-	-	-	-	-	-	-	-	-	-
Washington		-	-	-	-	-	-	-	-	-	-	-	-
Wayne		-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS		-	-	-	-	-	-	-	-	-	-	-	-
Northeastern Region													
Daggett		-	-	-	-	-	-	-	-	-	-	-	-
Duchesne		-	-	-	-	-	-	-	-	-	-	-	-
Uintah		-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS		-	-	-	-	-	-	-	-	-	-	-	-
Southeastern Region													
Carbon		-	-	-	-	-	-	-	-	128	73	-	-
Emery		-	-	52	67	80	187	70	187	55	37	79	143
Grand		-	-	-	-	-	-	50	10	-	-	-	-
San Juan		-	-	-	53	227	63	275	31	42	56	39	93
REGIONAL TOTALS		-	-	53	294	63	462	61	229	56	86	93	353
LEHI CHECK STATION		96	1,517	107	1,391	137	1,396	130	1,283	114	741	92	978
NEPHI CHECK STATION		198	1,130	107	1,678	140	1,137	180	1,004	1,047	671	64	955
THIOKOL CHECK STATION		-	-	-	-	-	-	-	-	-	115	370	90
STATE TOTALS		131	3,884	117	3,332	127	3,913	137	3,516	100	1,641	77	2,454

Table 11. Percent of harvest by hatching date of immature mourning doves in Utah, 1985-94.

Date Hatched	Age (Days)	P	PERCENT OF HARVEST BY HATCH DATE									SAMPLE SIZE										
			1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Aug 3	29	none	44.70	31.20	34.80	--	41.30	52.20	--	37.82	--	53.66	115	192	155	--	81	254	--	118	--	22
Jul 31	32	1	26.80	35.00	21.80	--	30.10	26.70	--	32.05	--	19.51	69	215	97	--	59	130	--	100	--	8
Jul 25	38	2	14.00	15.60	17.50	--	18.40	13.10	--	10.90	--	9.76	36	96	78	--	36	64	--	34	--	4
Jul 18	45	3	3.90	8.60	10.60	--	6.60	4.30	--	9.29	--	7.32	10	53	47	--	13	21	--	29	--	3
Jul 9	54	4	1.90	4.70	5.70	--	2.60	2.30	--	4.49	--	7.32	5	29	25	--	5	11	--	14	--	3
Jun 30	63	5	1.60	2.80	4.30	--	0.50	0.60	--	4.17	--	0.00	4	17	19	--	1	3	--	13	--	0
Jun 21	72	6	0.00	1.30	3.80	--	0.00	0.40	--	0.96	--	2.44	0	8	17	--	0	2	--	3	--	1
Jun 8	85	7	0.00	0.50	1.10	--	0.50	--	--	0.32	--	0.00	0	3	5	--	1	--	--	1	--	0
May 22	102	8	0.00	0.30	0.20	--	0.00	--	--	--	--	0.00	0	2	1	--	0	--	--	--	--	0
Apr 27	127	9	0.00	0.00	0.20	--	0.00	0.40	--	--	--	0.00	0	0	1	--	0	2	--	--	--	0
Apr 21	133	10	7.00	0.00	0.00	--	0.00	0.00	--	--	--	0.00	18	0	0	--	0	--	--	--	--	0
			99.90	100	100	--	100	100	--	100	--	257	615	445	--	196	487	--	312	--	41	

P = Last primary molted.

BAND-TAILED PIGEON

Banding

Between 1969 and 1978, 2,649 total pigeons were banded in Utah and 975 recaptured. Results of banding efforts through 1972 indicated a direct recovery rate of 1.4 percent. If expanded, using an assumed 30 percent band reporting rate, an estimated harvest rate of less than 5 percent of the state's pigeon population is indicated. Addition of an estimated 16 percent crippling loss would result in a total kill rate of from 5-10 percent, well within the harvestable surplus.

Harvest

Results of the 1994 band-tailed pigeon harvest is in Table 13. Permits were required in 1994 and a questionnaire was sent to participants. Only 13 hunters purchased the \$3.00 band-tailed pigeon permit in 1994. Harvest trends since 1970 are shown in Figures 4 & 5 and Table 14.

	<u>1994</u>	<u>Percent change from 1993</u>	<u>Average</u>
Band-tailed pigeon hunters	13	+63	-70
Band-tailed pigeon harvest	51	--	-57
Hunter-days afield	27	+108	-77
Pigeons per hunter-day	1.92	--	+98
Pigeons per hunter	2.70	--	+45

Band-tailed pigeon hunters afield increased from 1993, but remain 70 percent below the long-term average.

Fifty-one pigeons were reported harvested in 1994.

Table 13. Band-tailed pigeon harvest statistics, 1994.

Area Hunted	Participating		Hunters		Hunter-Days Afield		Harvest		Pigeons/ Hunter-Day		Percent Pressure**		Percent Harvest	
	Reported	Calc.	Reported	Calc.	Reported	Calc.	Reported	Calc.	Reported	Calc.	Reported	Calc.	Reported	Calc.
Beaver County	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Blue Mountain-Elk Ridge	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Carbon County	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Garfield County	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Iron County	1	2	3	7	0	0	0.00	0.00	16.67	0.00	0.00	0.00	0.00	0.00
Kane County	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LaSal Mountain	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Millard County	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Pine County	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sanpete County	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Utah County	1	2	1	2	2	4	2.00	2.00	16.67	8.70	8.70	8.70	8.70	8.70
Washington County	4	9	8	18	21	47	2.63	2.63	66.67	66.67	66.67	66.67	66.67	66.67
Wayne County	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Mixed Counties (Washington and Iron)	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Totals	6	13	12	27	23	51	1.92	1.92	100.00	100.00	100.00	100.00	100.00	100.00

**Based on hunter-days.

Projection Factor = 2.222222222222222 (20 permits issued/9 questionnaires returned)

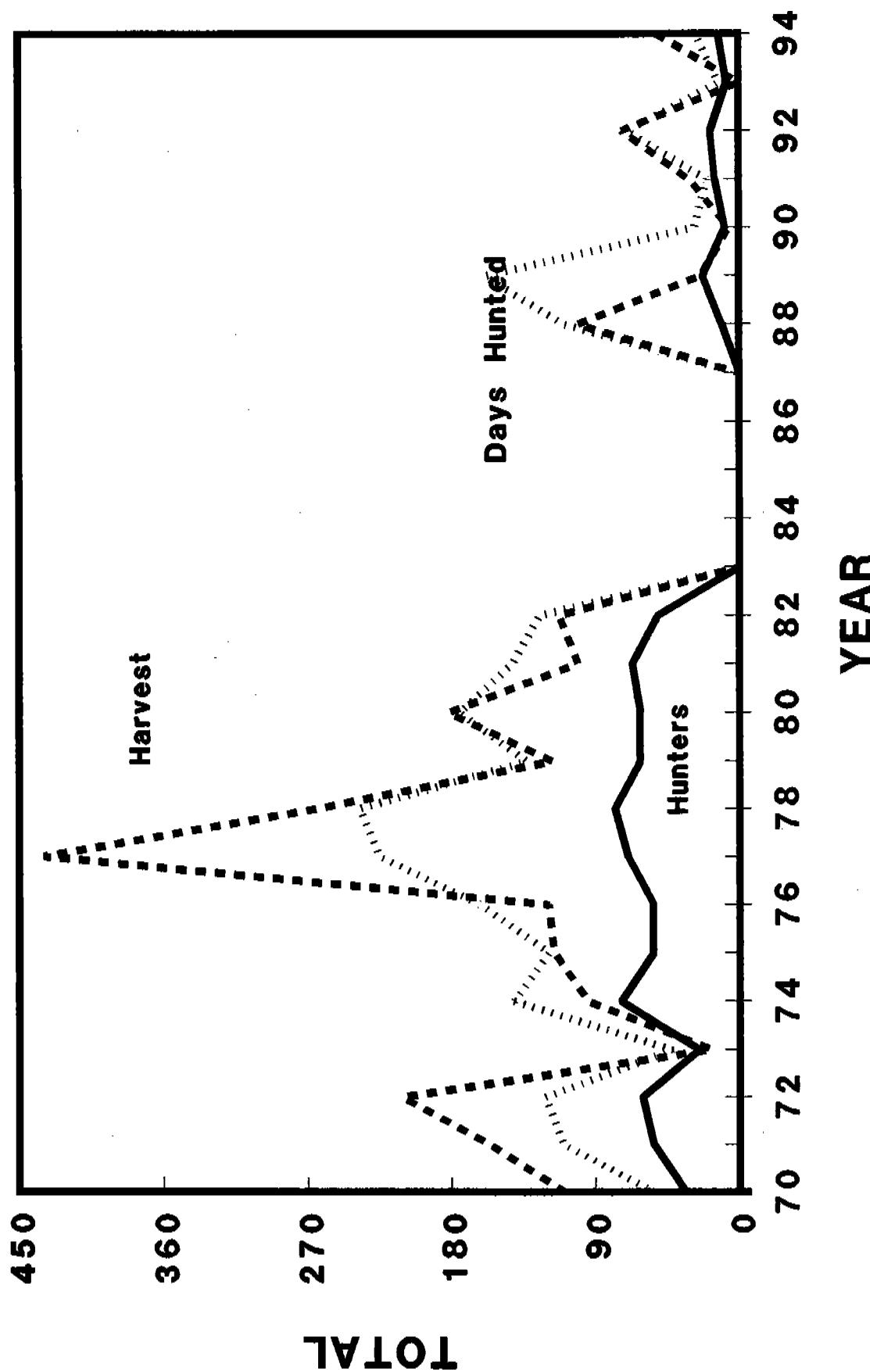


Figure 4. Statewide trends of band-tailed pigeon harvest statistics, 1970-94.

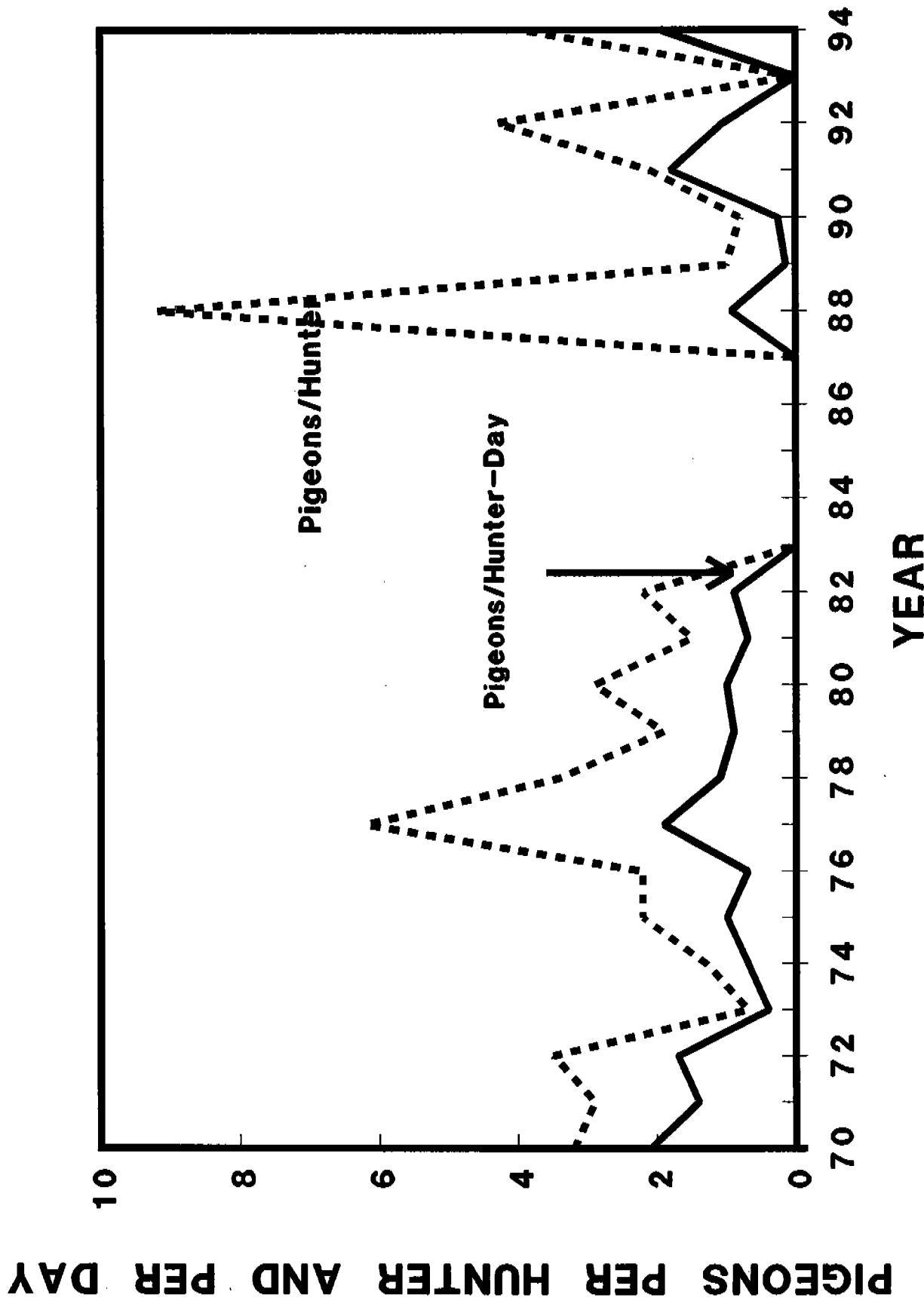


Figure 5. Statewide trends of band-tailed pigeon hunter success rates, 1970-94.

Table 14. Statewide summary of band-tailed pigeon harvest statistics, 1970-94.

Year	Total Hunters	Total Harvest	Hunter-Days Afield	Pigeons/Hunter-Day	Pigeons/Hunter
1970	34	109	53	2.10	3.20
1971	54	156	110	1.40	2.90
1972	61	211	122	1.70	3.50
1973	25	18	42	0.40	0.70
1974	74	95	141	0.70	1.30
1975	54	116	119	1.00	2.20
1976	54	119	162	0.70	2.20
1977	70	435	225	1.90	6.20
1978	78	264	238	1.10	3.40
1979	62	117	133	0.90	1.90
1980	62	182	175	1.00	2.90
1981	67	101	142	0.70	1.50
1982	51	113	125	0.90	2.20
1983	--	--	--	--	--
1984	--	--	--	--	--
1985	--	--	--	--	--
1986	--	--	--	--	--
1987	--	--	--	--	--
1988	11	101	109	0.93	9.20
1989	23	24	159	0.15	1.00
1990	9	7	28	0.26	0.80
1991	15	31	20	1.50	2.10
1992	18	73	70	1.05	4.06
1993	8	0	13	--	--
1994	13	51	27	1.92	3.92
Totals (1970-94)	843	2,323	2,213	--	--
Averages (1970-93)	44	120	115	0.97	2.70

The winter of 1993-94 was mostly normal throughout Utah. Over winter survival of chukar brood stock should have been good.

Late winter and early spring precipitation, critical to successful chukar production, was normal.

Results of the brood survey indicated that brood production was well above average. However, sample sizes were extremely small and probably represent localized conditions.

Harvest statistics from mail questionnaires reflected the same harvest by fewer hunters as in 1993. Hunter success (chukars per hunter-day) increased 20 percent from 1993. Chukar hunters decreased by 17 percent, while time afield decreased 17 percent from 1993.

In 1993, the Springville Game Farm was closed. Prior to 1993, operations at the farm provided approximately 4,000 chukars annually that were released into various areas of Utah to supplement and establish populations.

Also in 1993, the "Day-Old Chukar Chick Program" was eliminated. In addition to birds raised at the Springville Game Farm, this program provided another 1,000-2,000 birds annually for release into the wild.

Brood Counts

Results of the annual random brood survey for 1994 are shown in Table 1 of this section. Long-term trends of young per adult ratios, mean brood size and chukars observed per 100 hours are found in Tables 2-4 and Figure 1. Following are the survey results for 1994 compared to 1993 and the 10-year (1984-93) average:

	<u>1994</u>	<u>Percent change from 1993</u>	<u>Average</u>
Total chukars observed	203	-55	-56
Young per 100 adults	464	+24	+6
Mean brood size	10.67	+88	+49
Chukars observed per 100 hours	3,691	+79	+531
Total hours effort	6	-73	-94

Winter and early spring precipitation (January-April) was average over the entire state (Figure 4). Summer temperatures were above normal over most of Utah from March through September.

Effort on chukar brood counts decreased significantly in 1994 and remained well below average.

Brood count sample sizes were extremely small or nonexistent for all regions. Brood count data was reported only in the Southeastern Region. Because of extremely small sample sizes, this data can only represent localized population trends.

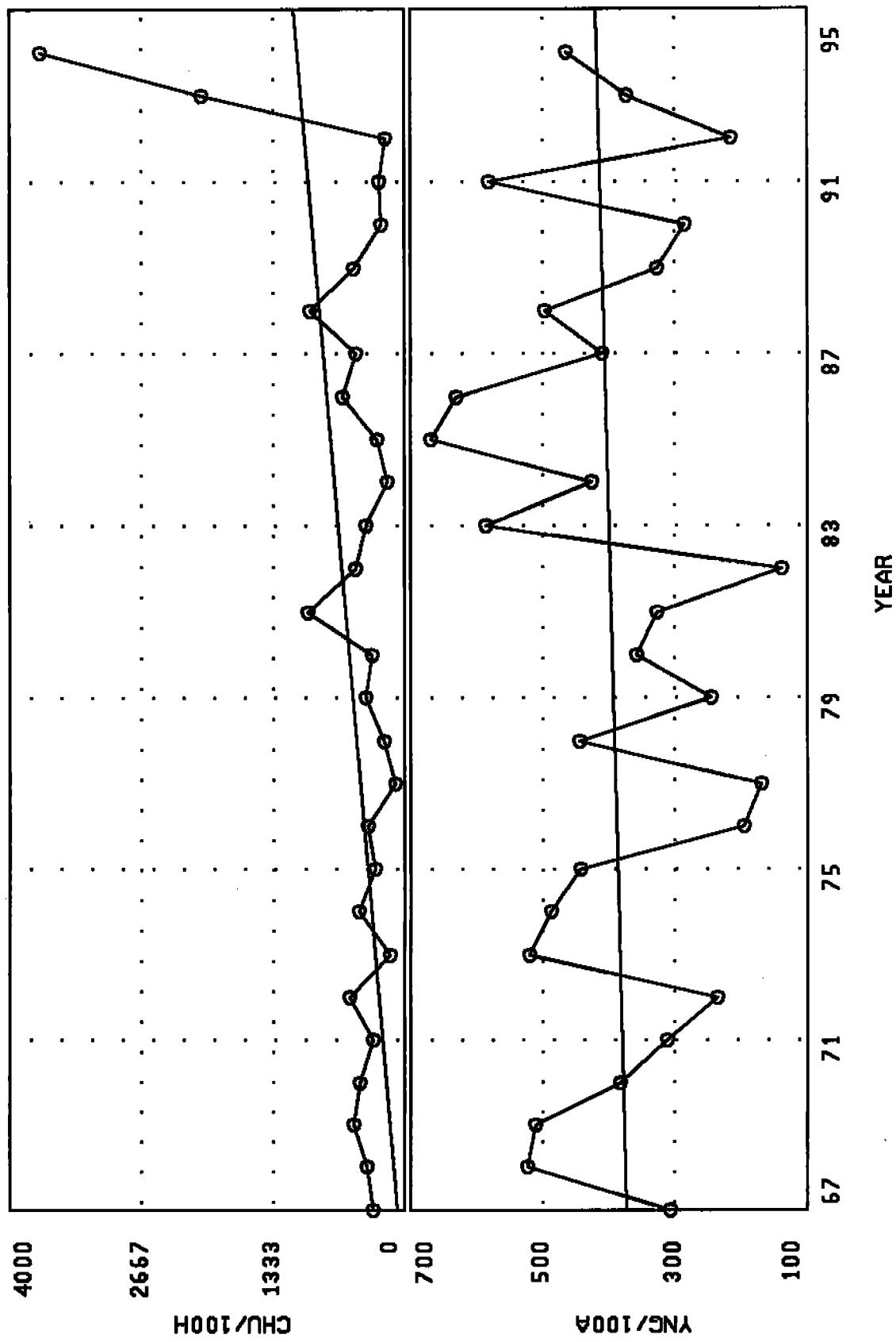
Harvest

Hunter Questionnaire

Results of the hunter questionnaire survey for 1994 are shown in Table 5. Long-term trends of chukars bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 6-8 and total statewide harvest statistics in Table 9 and Figures 2 and 3. Following is a comparison of 1994 harvest statistics to 1993 and the previous 36-year average:

	<u>1994</u>	<u>Percent change from 1993</u>	<u>Average</u>
Chukar hunters	8,455	-17	-39
Chukars harvested	18,721	0	-51
Hunter-days afield	28,389	-17	-32
Chukars per hunter-day	0.66	+20	-26
Chukars per hunter	2.21	+19	-18

FIGURE 1. CHUKAR PRODUCTION
INDICES, 1967-94.



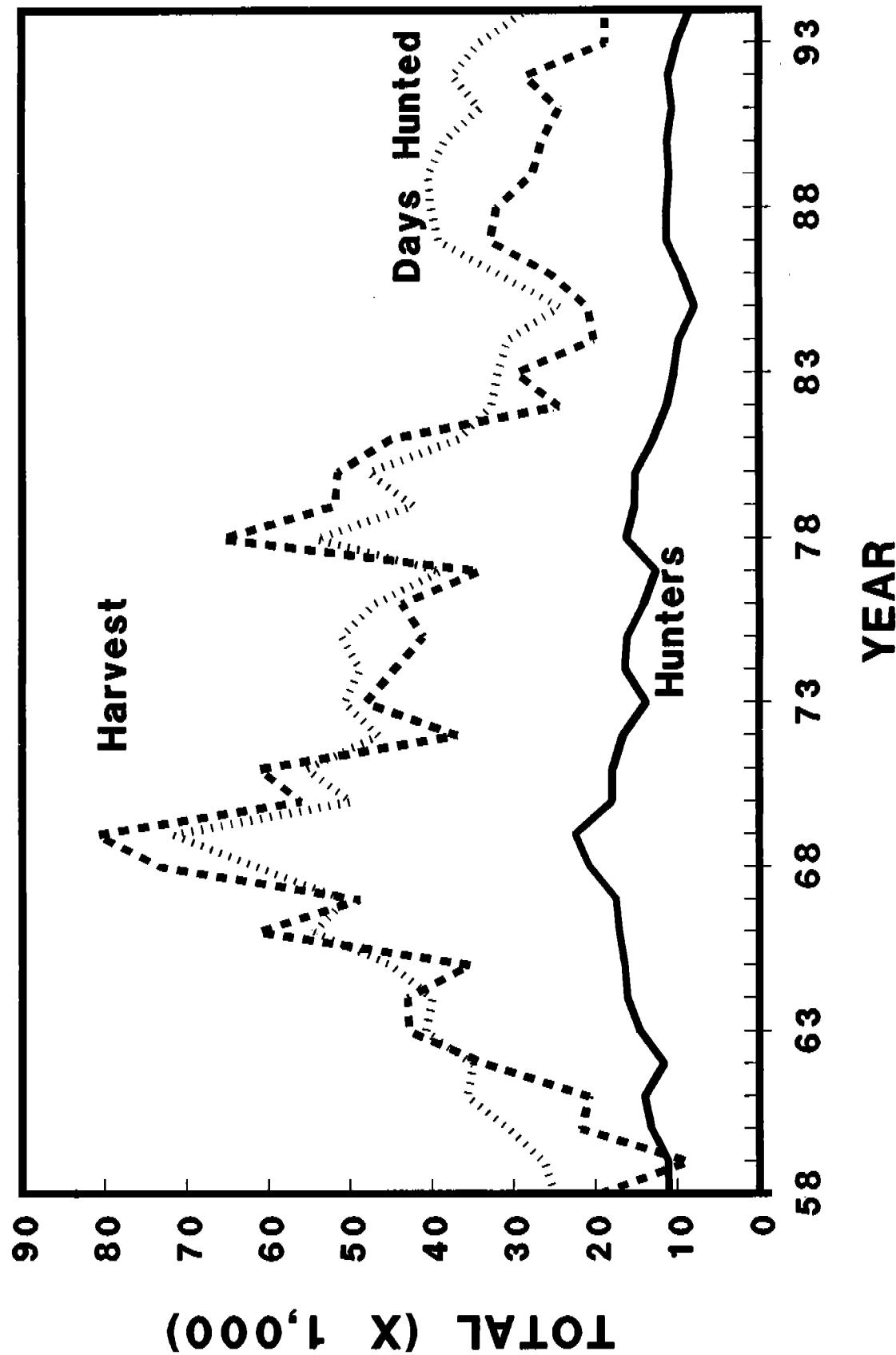


Figure 2. Statewide trends of chukar partridge harvest statistics, 1958-94.

CHUKARS PER HUNTER AND DAY

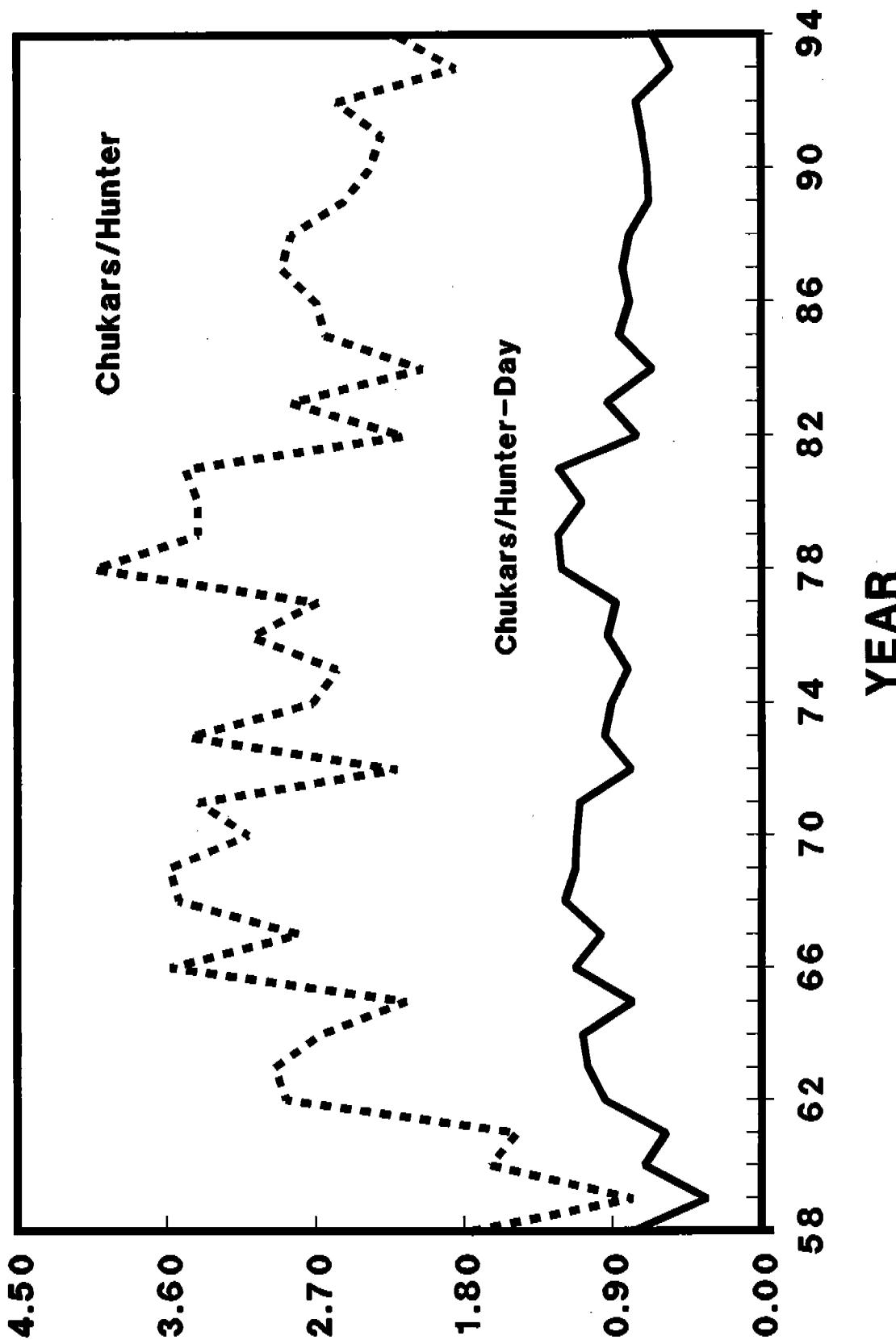


Figure 3. Statewide trends of chukar hunter success rates, 1958-94.

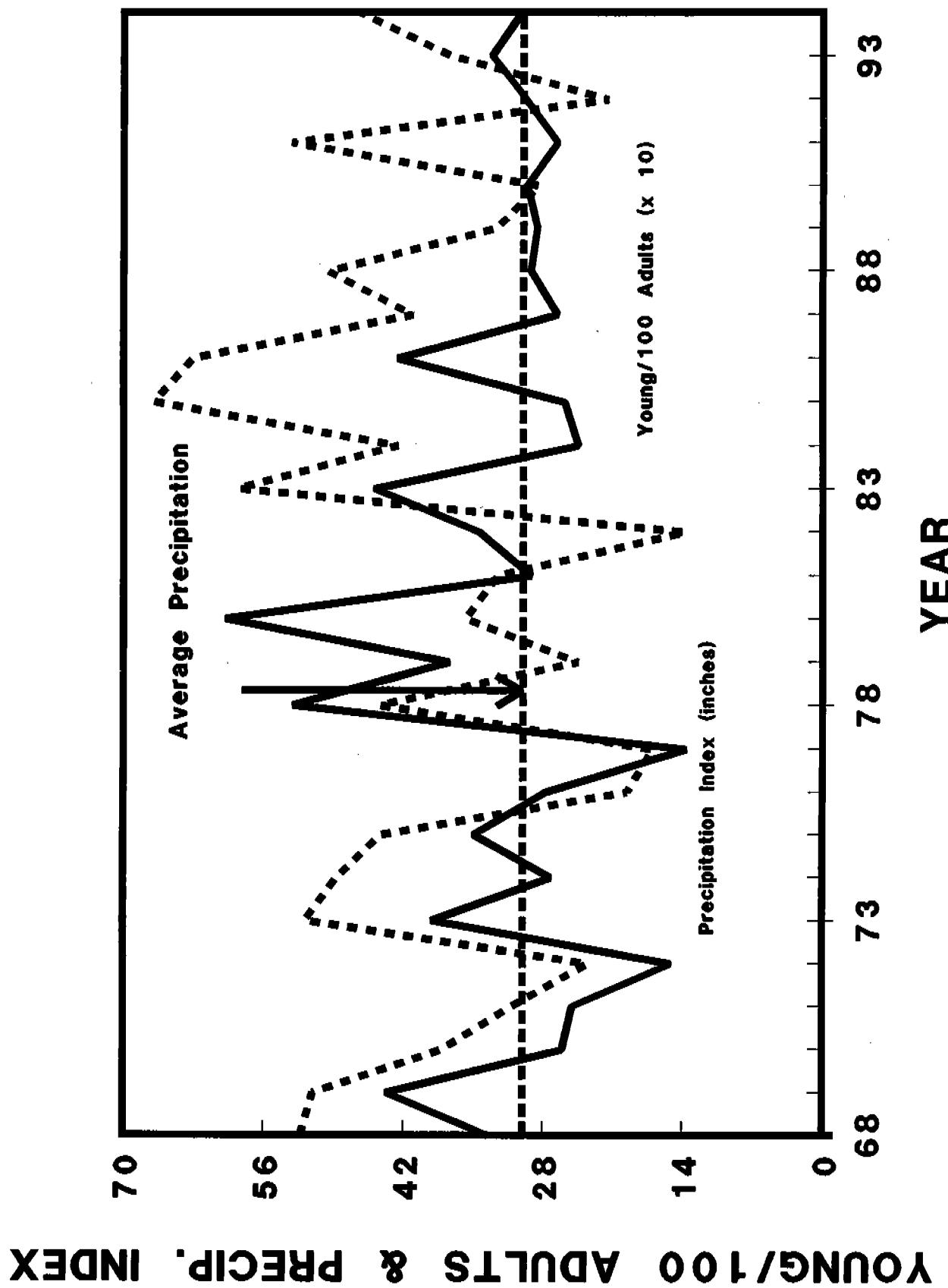
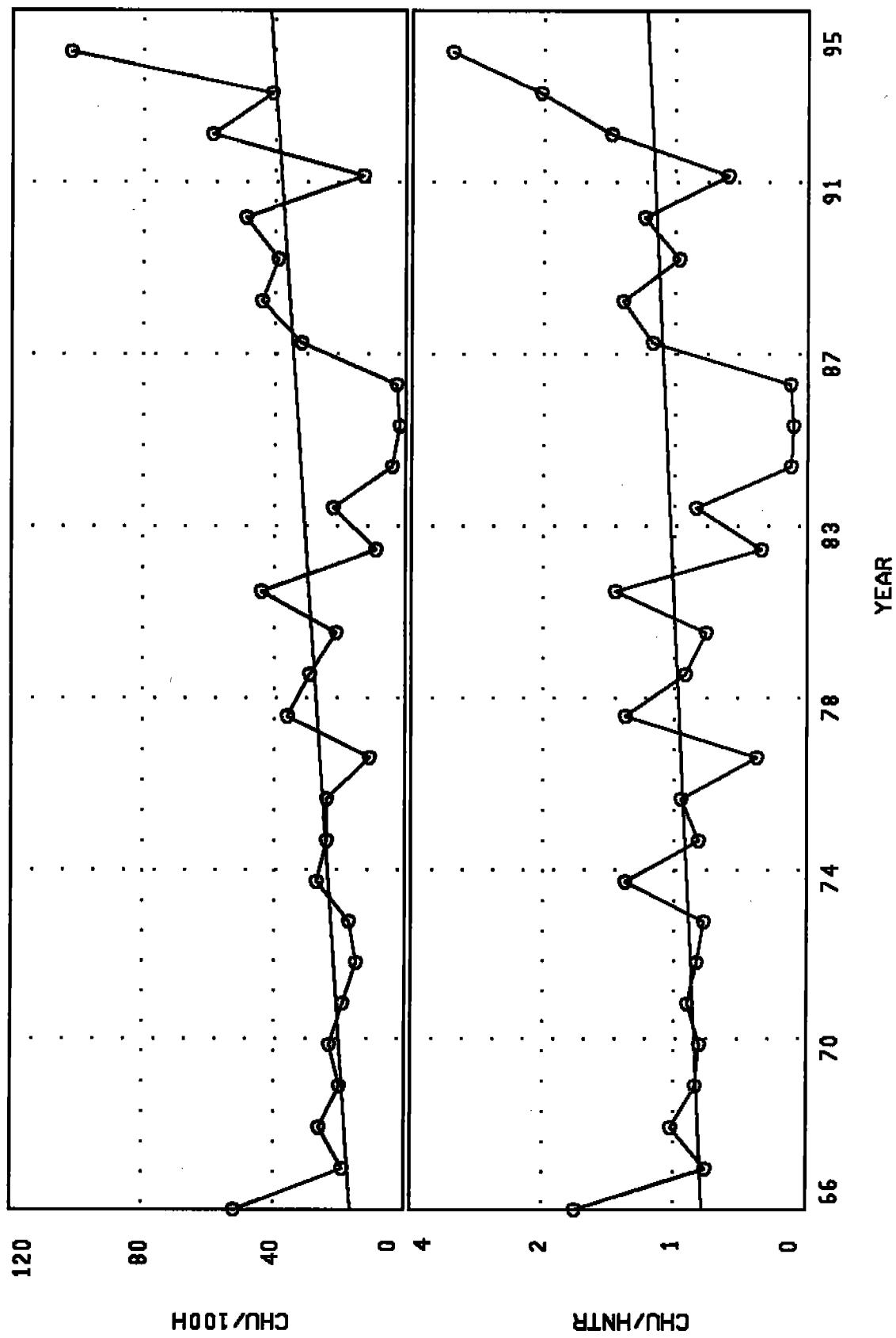


Figure 4. Relationship between late winter and early spring (Jan.-April) precipitation and chukar production, 1968-94.

FIGURES. CHUKAR FIELD BAG CHECK INDICES, 1966-94.



Chukar hunters and hunter effort decreased from 1993. Chukars per hunter-day increased from 1993, but remains 26 percent below the long-term average. Total harvest remained the same in 1994. The Central Region again had the highest percentage of the harvest (49%) in 1994, and also had the highest percentage of hunter pressure (45%).

Field Bag Checks

A summary of field bag check data for 1994 is shown in Table 10. The hunter success trend determined by field bag checks since 1989 is shown in Table 11 and Figure 5. Data for the 1994 season compared to 1993 and the 10-year (1984-93) average follow:

		<u>Percent change from</u>	
	<u>1994</u>	<u>1993</u>	<u>Average</u>
Total hunters checked	7	-36	-96
Total hours hunted	22	-65	-97
Chukars per hunter (complete hunts)	3.14	+33	+191
Chukars bagged per 100 hours (complete hunts)	102	+149	+254
Average hours per hunter-day (complete hunts)	3.14	-45	-28
Hours hunted per chukar bagged (complete hunts)	0.85	-65	-94

Field bag check data was collected only in the Southeastern Region. Sample sizes are too small to draw any meaningful conclusions.

Table 1. Chukar summer inventory, 1994.

Region and County	Distinct Broods		Mean Brood		Mixed Young & Adults		Adults w/o Young		Total		Young/ 100 Adults		Vehicle Miles		Hours of Effort		Birds/ 100 Hr	
	#	Adults	Young	Adults	Young	Adults	Young	Young	Adults	Total	Chukars	100 Adults	Miles	Vehicle	Horse	Walk	Total	
Northern Region																		
Box Elder	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cache	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Davis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Morgan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rich	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Summit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weber	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Central Region																		
Juab	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salt Lake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sanpete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tooele	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Utah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wasatch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southern Region																		
Beaver	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Garfield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Millard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Piute	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Seymor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wayne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern Region																		
Daggett	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Duchesne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uintah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southeastern Region																		
Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Emery	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grand	3	3	32	10.67	28	135	5	36	167	203	464	70	6	-	-	-	6	3,691
San Juan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	3	3	32	10.67	28	135	5	36	167	203	464	70	6	-	-	-	6	3,691
STATE TOTALS	3	3	32	10.67	28	135	5	36	167	203	464	70	6	-	-	-	6	3,691

Table 2. Trend of chukar young per 100 adults, 1984-94.

Region and County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Average 1984-93
Northern Region												
Box Elder	-	4,200	700	283	136	-	-	-	-	-	-	-
Cache	-	-	850	300	-	848	-	-	-	-	-	-
Davis	-	-	-	24	-	400	-	300	-	-	-	-
Morgan	-	-	-	-	-	-	-	-	-	-	-	-
Rich	-	-	-	-	-	-	-	-	-	-	-	-
Summit	-	-	-	-	-	-	-	-	-	-	-	-
Weber	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	4,200	560	125	117	-	675	-	46	-	-	1,165
Central Region												
Juab	800	-	739	600	462	120	587	367	1,000	-	-	-
Salt Lake	-	-	-	-	-	-	-	-	-	-	-	-
Sanpete	-	-	-	-	-	-	-	1,000	767	-	-	-
Tooele	436	550	566	535	484	263	157	443	300	-	-	-
Utah	-	300	-	875	-	472	-	1,200	-	-	-	-
Wasatch	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	481	457	642	591	468	240	266	533	650	-	-	481
Southern Region												
Beaver	-	-	-	-	-	-	-	-	-	-	-	-
Garfield	-	-	125	-	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-	-	-	-	-
Kane	-	-	-	-	-	-	-	-	-	-	-	-
Millard	-	-	-	-	550	927	-	-	-	-	-	-
Piute	-	-	-	370	-	-	-	-	-	-	-	-
Sevier	-	-	-	-	-	-	-	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-	-	-
Wayne	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	125	370	550	927	-	-	-	-	-	493
Northeastern Region												
Daggett	-	-	-	0	-	-	-	-	-	-	-	-
Duchesne	-	-	-	0	-	-	-	-	-	-	-	-
Uintah	-	-	-	267	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	267	-	-	-	-	-	-	-	267
Southeastern Region												
Carbon	359	-	1,300	1,014	600	-	-	-	-	-	-	-
Emery	-	-	-	500	-	-	243	-	156	533	-	-
Grand	775	730	730	573	621	64	0	-	200	368	464	-
San Juan	337	-	-	-	-	200	-	-	900	-	-	-
REGIONAL TOTALS	392	408	287	631	620	93	131	-	195	373	464	284
STATE TOTALS	426	670	631	411	496	327	285	533	215	373	464	437

Table 3. Trend of average brood size for chukars, 1984-94.

Region and County		Year									Average	
Year	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1984-93
Northern Region												
Box Elder	--	9.00	--	8.50	7.50	--	--	--	--	--	--	--
Cache	--	--	--	--	6.00	--	13.50	--	--	--	--	--
Davis	--	--	--	--	--	14.00	12.00	--	--	3.00	--	--
Morgan	--	--	--	--	--	7.00	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	9.00	--	8.50	7.00	10.50	13.00	--	3.00	--	--	7.29
Central Region												
Juab	8.00	--	7.45	8.00	6.75	5.50	4.30	--	10.00	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	10.00	--	--	--
Tooele	6.00	8.43	7.86	8.00	7.43	6.40	3.40	5.50	--	--	--	--
Utah	--	10.00	--	10.50	--	3.00	--	12.00	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	6.80	8.63	7.69	8.23	7.07	5.00	3.60	7.33	10.00	--	--	7.15
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	2.00	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	7.75	7.50	--	--	--	--	--	--
Putne	--	--	--	--	5.00	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	5.00	7.75	7.50	--	--	--	--	--	--	6.75
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	10.00	--	--	--	--	--	--	--
Uintah	--	--	--	10.00	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	10.00	--	--	--	--	--	--	--	10.00
Southeastern Region												
Carbon	5.50	--	12.50	9.67	6.00	--	--	--	--	--	--	--
Emery	--	5.00	--	5.00	--	8.50	--	18.00	3.33	--	--	--
Grand	7.75	9.00	--	8.57	9.11	1.00	--	--	4.00	8.00	10.67	--
San Juan	--	--	--	--	--	4.00	--	9.00	--	--	--	--
REGIONAL TOTALS	7.00	7.67	10.40	8.25	8.95	2.50	8.50	10.33	5.67	10.67	7.70	--
STATE TOTALS	6.91	8.46	8.13	7.93	8.00	5.66	5.50	7.33	7.83	5.67	10.67	7.14

Table 4. Trend of chukars observed per 100 hours, 1984-94.

Region and County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Year		Average 1984-93												
												1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994				
Northern Region																										
Box Elder	-	239	168	40	236	-	-	-	-	-	-	30	-	-	-	-	-	-	-	-	-	-	-	-		
Cache	-	-	-	83	35	-	-	-	-	-	-	67	-	-	-	-	-	-	-	-	-	-	-	-		
Davis	-	-	22	313	500	250	333	-	-	-	-	160	-	-	-	-	-	-	-	-	-	-	-	-		
Morgan	-	-	-	-	-	500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Rich	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Summit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Weber	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
REGIONAL TOTALS	-	155	102	91	111	135	295	-	-	-	-	70	-	-	-	-	-	-	-	-	-	-	137	-		
Central Region																										
Juab	200	-	2,611	850	913	500	229	200	122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Salt Lake	-	-	-	-	-	-	-	-	-	-	-	733	2,600	-	-	-	-	-	-	-	-	-	-	-	-	
Sanpete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tooele	441	681	1,046	1,123	653	314	365	475	400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Utah	-	578	-	1,950	-	2,100	-	1,300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Wasatch	491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	291	542	1,424	844	822	623	281	434	375	-	-	-	-	-	-	-	-	-	-	-	-	-	626	-		
Southern Region																										
Beaver	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Garfield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Iron	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Kane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Millard	-	-	-	-	-	-	-	-	-	-	-	1,486	1,596	-	-	-	-	-	-	-	-	-	-	-	-	
Piute	-	-	-	-	-	-	-	-	-	-	-	1,567	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sevier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Washington	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Wayne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	1,567	1,486	1,596	-	-	-	-	-	-	-	-	-	1,550	-	
Northeastern Region																										
Daggett	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Duchesne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Uintah	-	-	0	856	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	-	-	0	241	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	121	-
Southeastern Region																										
Carbon	426	-	-	7,800	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Emery	-	833	-	771	-	-	-	-	-	-	-	480	-	-	-	-	-	-	-	-	-	-	-	-	-	
Grand	291	424	2,075	1,167	3,983	240	67	-	-	-	-	100	4,350	3,691	-	-	-	-	-	-	-	-	-	-	-	
San Juan	1,750	-	-	-	-	-	225	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	858	530	2,075	1,335	3,293	225	150	-	-	-	-	258	2,064	3,691	1,199	-	-	-	-	-	-	-	-	-	-	-
STATE TOTALS	176	286	633	496	959	522	244	267	200	2,064	3,691	585	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 5. Summary of chukar hunter success and distribution of harvest and hunting pressure by region and county, 1994.

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD	BIRDS BAGGED	BIRDS PER HUNTER-DAY	% OF PRESSURE	% OF HARVEST
NORTHERN REGION						
BOX ELDER	85	4,025	2,918	0.72	14.18	15.59
CACHE	15	509	17	0.03	1.80	0.09
DAVIS	9	421	87	0.21	1.49	0.47
MORGAN	8	369	439	1.19	1.30	2.35
RICH	7	210	0	0.00	0.74	0.00
SUMMIT	2	52	35	0.67	0.19	0.19
WEBER	7	246	35	0.14	0.87	0.19
REGIONAL TOTALS	133	5,836	3,533	0.61	20.56	18.87
CENTRAL REGION						
JUAB	21	878	826	0.94	3.10	4.41
SALT LAKE	10	421	246	0.58	1.49	1.31
SANPETE	29	1,828	1,054	0.58	6.44	5.63
TOOELE	101	4,974	3,234	0.65	17.52	17.28
UTAH	78	4,465	3,761	0.84	15.73	20.09
WASATCH	3	123	52	0.43	0.43	0.28
REGIONAL TOTALS	242	12,691	9,176	0.72	44.71	49.02
SOUTHERN REGION						
BEAVER	9	404	17	0.04	1.42	0.09
GARFIELD	5	158	281	1.78	0.56	1.50
IRON	2	87	70	0.80	0.31	0.38
KANE	1	17	0	0.00	0.06	0.00
MILLARD	23	1,177	650	0.55	4.15	3.47
PIUTE	11	703	140	0.20	2.48	0.75
SEVIER	41	3,463	1,300	0.38	12.20	6.95
WASHINGTON	0	0	0	0.00	0.00	0.00
WAYNE	2	52	123	2.33	0.19	0.66
REGIONAL TOTALS	94	6,064	2,584	0.43	21.36	13.80
NORTHEASTERN REGION						
DAGGETT	0	0	0	0.00	0.00	0.00
DUCHESNE	9	333	246	0.74	1.18	1.31
UINTAH	5	175	0	0.00	0.62	0.00
REGIONAL TOTALS	14	509	246	0.48	1.80	1.31
SOUTHEASTERN REGION						
CARBON	17	791	632	0.80	2.79	3.38
EMERY	29	1,564	984	0.63	5.51	5.26
GRAND	18	843	1,546	1.83	2.97	8.26
SAN JUAN	2	87	17	0.20	0.31	0.09
REGIONAL TOTALS	66	3,287	3,181	0.97	11.58	17.00
UNKNOWN	15	0	0	0.00	0.00	0.00
STATE TOTALS	564	28,389	18,721	0.66	100.00	100.00

*Total hunter trips from questionnaire returns.

Table 6. Summary of chukars bagged per hunter-day by region and county, 1987-94.

Region and County	Year							
	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	0.62	0.63	0.54	0.89	0.78	0.86	0.37	0.72
Cache	0.85	0.58	0.73	0.51	0.37	0.89	0.28	0.03
Davis	0.20	1.65	0.42	0.79	0.76	0.38	0.25	0.21
Morgan	1.33	1.08	0.56	0.71	0.54	0.41	0.20	1.19
Rich	1.00	1.43	0.70	1.67	0.32	0.33	0.17	0.00
Summit	1.25	0.68	0.20	2.14	0.14	0.33	0.36	0.67
Weber	0.44	0.45	1.07	0.73	0.84	0.66	0.62	0.14
<u>REGIONAL TOTALS</u>	0.64	0.69	0.58	0.82	0.69	0.76	0.36	0.61
<u>Central Region</u>								
Juab	1.10	0.90	0.66	0.73	0.87	0.77	0.50	0.94
Salt Lake	1.16	0.69	1.05	1.16	1.68	1.08	1.30	0.58
Sanpete	0.58	1.26	1.06	1.35	0.83	0.77	0.76	0.58
Tooele	0.84	0.82	0.69	0.77	0.70	0.76	0.41	0.65
Utah	0.71	0.64	0.78	0.67	0.79	0.65	0.53	0.84
Wasatch	0.83	1.00	0.60	0.67	0.50	0.32	1.64	0.43
<u>REGIONAL TOTALS</u>	0.86	0.83	0.78	0.81	0.79	0.73	0.54	0.72
<u>Southern Region</u>								
Beaver	0.63	0.35	0.50	0.42	0.67	0.28	0.48	0.04
Garfield	0.40	1.13	0.63	0.00	2.50	0.00	1.33	1.78
Iron	0.00	0.00	0.00	0.25	0.18	0.44	0.00	0.80
Kane	0.00	0.00	0.00	0.00	1.50	0.00	0.29	0.00
Millard	1.09	0.95	0.57	0.62	0.55	1.35	0.51	0.55
Piute	0.81	0.30	0.54	0.29	1.00	0.18	0.39	0.20
Sevier	0.57	0.67	0.47	0.51	0.72	0.67	0.48	0.38
Washington	0.00	0.00	0.00	0.00	0.00	0.00	1.82	0.00
Wayne	2.00	1.83	0.27	0.00	1.80	0.20	0.27	2.33
<u>REGIONAL TOTALS</u>	0.82	0.72	0.50	0.45	0.68	0.73	0.53	0.43
<u>Northeastern Region</u>								
Daggett	3.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
Duchesne	0.20	2.12	0.73	0.27	0.19	1.86	0.51	0.74
Uintah	1.68	0.69	2.14	0.09	0.79	0.75	0.38	0.00
<u>REGIONAL TOTALS</u>	1.44	1.42	1.81	0.17	0.38	0.95	0.52	0.43
<u>Southeastern Region</u>								
Carbon	0.87	1.29	0.42	0.16	0.46	1.25	0.56	0.80
Emery	0.90	0.95	0.29	0.50	0.43	0.88	0.41	0.63
Grand	1.19	1.26	0.92	0.56	0.38	3.40	1.61	1.83
San Juan	1.67	0.50	0.00	0.00	0.50	0.00	0.00	0.20
<u>REGIONAL TOTALS</u>	1.07	1.03	0.50	0.39	0.44	1.24	1.14	0.97
Unknown Counties	0.00	0.00	1.00	0.00	0.00	0.20	1.06	0.00
<u>STATE TOTALS</u>	0.84	0.80	0.68	0.69	0.72	0.76	0.55	0.66

Table 7. Percentage distribution of chukar harvest by region and county, 1987-94.

Region and County	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	10.59	10.15	13.21	18.42	23.43	17.49	8.00	15.59
Cache	1.64	2.29	4.05	4.43	1.93	4.73	2.23	0.09
Davis	0.07	1.71	0.83	0.85	1.57	1.56	0.20	0.47
Morgan	0.29	0.67	1.43	0.93	1.36	0.93	0.61	2.35
Rich	0.07	0.52	0.53	1.17	0.64	0.19	0.10	0.00
Summit	0.37	0.88	0.08	1.17	0.14	0.06	0.91	0.19
Weber	0.59	0.26	1.13	1.48	1.93	1.31	2.63	0.19
<u>REGIONAL TOTALS</u>	<u>13.65</u>	<u>16.51</u>	<u>21.25</u>	<u>28.44</u>	<u>31.00</u>	<u>26.26</u>	<u>14.68</u>	<u>18.87</u>
<u>Central Region</u>								
Juab	12.68	7.18	5.33	5.13	8.57	6.97	5.57	4.41
Salt Lake	4.32	1.87	3.15	2.87	3.00	5.10	3.04	1.31
Sanpete	2.83	7.96	9.83	8.08	6.07	4.73	7.19	5.63
Tooele	20.44	24.63	19.67	28.21	15.29	17.67	14.17	17.28
Utah	9.77	9.06	15.09	10.26	16.86	15.99	10.93	20.09
Wasatch	0.37	0.20	0.23	0.16	0.93	0.37	2.33	0.28
<u>REGIONAL TOTALS</u>	<u>50.44</u>	<u>50.93</u>	<u>53.30</u>	<u>54.70</u>	<u>50.71</u>	<u>50.84</u>	<u>43.22</u>	<u>49.02</u>
<u>Southern Region</u>								
Beaver	1.41	1.09	1.05	2.18	3.00	0.44	1.11	0.09
Garfield	0.14	0.46	0.75	0.00	0.36	0.00	1.62	1.50
Iron	0.00	0.00	0.00	0.31	0.14	0.25	0.00	0.38
Kane	0.00	0.00	0.00	0.00	0.21	0.00	0.40	0.00
Millard	13.13	8.22	4.65	3.11	3.21	5.48	4.96	3.47
Piute	1.26	0.52	1.13	0.85	1.00	0.19	0.91	0.75
Sevier	5.67	8.80	5.26	4.74	5.79	7.47	9.31	6.95
Washington	0.00	0.00	0.00	0.00	0.00	0.00	2.02	0.00
Wayne	0.14	0.57	0.30	0.00	0.64	0.06	0.30	0.66
<u>REGIONAL TOTALS</u>	<u>21.79</u>	<u>19.68</u>	<u>13.14</u>	<u>11.19</u>	<u>14.36</u>	<u>13.88</u>	<u>20.65</u>	<u>13.80</u>
<u>Northeastern Region</u>								
Daggett	0.22	0.00	0.00	0.00	0.00	0.00	0.30	0.00
Duchesne	0.07	1.87	0.60	0.78	0.43	0.81	2.23	1.30
Uintah	2.38	0.57	5.78	0.16	0.79	1.49	0.30	0.00
<u>REGIONAL TOTALS</u>	<u>2.68</u>	<u>2.44</u>	<u>6.38</u>	<u>0.93</u>	<u>1.21</u>	<u>2.30</u>	<u>2.83</u>	<u>1.31</u>
<u>Southeastern Region</u>								
Carbon	0.97	0.93	1.13	0.62	0.86	1.87	0.91	3.38
Emery	3.20	7.18	1.35	3.73	1.14	2.68	1.52	5.26
Grand	6.86	2.23	2.70	0.39	0.36	2.12	12.55	8.26
San Juan	0.37	0.05	0.00	0.00	0.36	0.00	0.00	0.09
<u>REGIONAL TOTALS</u>	<u>11.41</u>	<u>10.41</u>	<u>5.18</u>	<u>4.74</u>	<u>2.7</u>	<u>6.66</u>	<u>14.98</u>	<u>17.00</u>
Unknown Counties	0.00	0.00	0.75	0.00	0.00	0.06	3.64	0.00
<u>STATE TOTALS</u>	<u>100.00</u>							

Table 8. Percentage distribution of chukar hunting pressure by region and county, 1987-94.

Region and County	Year							
	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	14.35	12.95	16.59	14.18	21.53	15.42	12.02	14.18
Cache	1.63	3.16	3.80	5.94	3.73	4.03	4.40	1.80
Davis	0.31	0.83	1.34	0.75	1.48	3.13	0.45	1.49
Morgan	0.18	0.49	1.75	0.91	1.79	1.76	1.67	1.30
Rich	0.06	0.29	0.51	0.48	1.43	0.43	0.33	0.74
Summit	0.25	1.04	0.26	0.37	0.72	0.14	1.39	0.19
Weber	1.12	0.45	0.72	1.39	1.64	1.52	2.34	0.87
<u>REGIONAL TOTALS</u>	<u>17.93</u>	<u>19.24</u>	<u>24.96</u>	<u>24.02</u>	<u>32.33</u>	<u>26.42</u>	<u>22.59</u>	<u>20.56</u>
<u>Central Region</u>								
Juab	9.65	6.41	5.55	4.87	7.06	6.93	6.18	3.10
Salt Lake	3.13	2.16	2.05	1.71	1.28	3.61	1.28	1.49
Sanpete	4.13	5.03	6.37	4.12	5.27	4.70	5.18	6.44
Tooele	20.50	24.07	19.62	25.25	15.70	17.84	19.20	17.52
Utah	11.53	11.32	13.20	10.59	15.24	18.88	11.41	15.73
Wasatch	0.37	0.16	0.26	0.16	1.33	0.90	0.78	0.43
<u>REGIONAL TOTALS</u>	<u>49.34</u>	<u>49.18</u>	<u>47.05</u>	<u>46.71</u>	<u>45.88</u>	<u>52.85</u>	<u>44.02</u>	<u>44.71</u>
<u>Southern Region</u>								
Beaver	1.88	2.49	1.44	3.53	3.22	1.19	1.28	4.12
Garfield	0.31	0.33	0.82	0.59	0.10	0.28	0.67	0.56
Iron	0.00	0.00	0.36	0.86	0.56	0.43	0.11	0.31
Kane	0.06	0.00	0.00	0.05	0.10	0.00	0.78	0.06
Millard	10.09	6.95	5.60	3.48	4.19	3.08	5.34	4.15
Piute	1.31	1.37	1.44	2.03	0.72	0.81	1.28	2.48
Sevier	8.33	10.53	7.60	6.37	5.73	8.49	10.57	12.20
Washington	0.12	0.00	0.00	0.27	0.20	0.05	0.61	0.00
Wayne	0.06	0.24	0.77	0.05	0.26	0.24	0.61	0.19
<u>REGIONAL TOTALS</u>	<u>22.19</u>	<u>21.94</u>	<u>18.03</u>	<u>17.23</u>	<u>15.09</u>	<u>14.56</u>	<u>21.26</u>	<u>21.36</u>
<u>Northeastern Region</u>								
Daggett	0.06	0.00	0.00	0.59	0.00	0.00	0.17	0.00
Duchesne	0.31	0.70	0.56	1.98	1.59	0.33	2.39	1.18
Uintah	1.19	0.66	1.85	1.18	0.72	1.52	0.45	0.62
<u>REGIONAL TOTALS</u>	<u>1.56</u>	<u>1.37</u>	<u>2.41</u>	<u>3.75</u>	<u>2.30</u>	<u>1.85</u>	<u>3.01</u>	<u>1.80</u>
<u>Southeastern Region</u>								
Carbon	0.94	0.58	1.85	2.68	1.33	1.14	0.89	2.79
Emery	3.00	6.03	3.18	5.14	1.89	2.32	2.06	5.51
Grand	4.82	1.41	2.00	0.48	0.66	0.47	4.29	2.97
San Juan	0.18	0.08	0.00	0.00	0.51	0.14	0.00	0.31
<u>REGIONAL TOTALS</u>	<u>8.96</u>	<u>8.11</u>	<u>7.04</u>	<u>8.29</u>	<u>4.40</u>	<u>4.08</u>	<u>7.23</u>	<u>11.58</u>
Unknown Counties	0.00	0.12	0.51	0.00	0.00	0.24	1.89	0.00
STATE TOTALS	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table 9. Statewide summary of chukar partridge harvest statistics, 1958-94.

Year	Total Hunters	Total Harvest	Hunter-Days Afield	Chukars Per Hunter-Day	Chukars Per Hunter
1958	11,124	19,578	25,100	0.78	1.76
1959	11,154	8,700	26,364	0.33	0.78
1960	13,252	21,733	30,610	0.71	1.64
1961	14,046	20,821	35,675	0.58	1.48
1962	11,638	33,500	35,010	0.95	2.88
1963	14,532	42,806	40,824	1.05	2.95
1964	16,090	42,974	39,971	1.08	2.67
1965	16,431	35,335	45,067	0.78	2.15
1966	17,133	61,370	54,448	1.13	3.58
1967	17,485	48,906	50,671	0.97	2.80
1968	20,744	73,218	61,402	1.19	3.53
1969	22,529	80,917	71,674	1.13	3.59
1970	18,013	56,053	49,911	1.12	3.11
1971	17,917	61,151	55,378	1.10	3.41
1972	16,685	36,925	46,502	0.79	2.21
1973	13,888	48,135	50,677	0.95	3.47
1974	16,412	44,658	48,856	0.91	2.72
1975	16,156	41,151	51,083	0.81	2.57
1976	14,171	43,726	47,143	0.93	3.09
1977	12,691	34,155	38,873	0.88	2.69
1978	16,291	65,747	54,239	1.21	4.04
1979	15,210	51,918	42,254	1.23	3.41
1980	15,100	51,511	47,778	1.08	3.41
1981	12,907	44,983	36,662	1.23	3.49
1982	11,326	24,460	32,691	0.75	2.16
1983	10,418	29,649	31,904	0.93	2.85
1984	9,846	20,179	30,715	0.66	2.05
1985	7,930	20,938	24,346	0.86	2.64
1986	9,397	25,346	31,672	0.80	2.70
1987	11,276	32,848	39,099	0.84	2.91
1988	11,237	32,057	40,088	0.80	2.85
1989	10,910	27,628	40,384	0.68	2.53
1990	11,195	26,486	38,463	0.69	2.37
1991	10,577	24,355	34,010	0.72	2.30
1992	11,125	28,599	37,463	0.76	2.57
1993	10,128	18,774	34,147	0.55	1.85
1994	8,455	18,721	28,389	0.66	2.21
Totals				--	--
(1958-94)	505,419	1,400,011	1,529,543	--	--
Averages					
(1958-93)	13,805	38,369	41,699	0.89	2.70

Table 10. Chukar field bag check summary, 1994.

Region and County	All Hunts				Complete Hunts			
	Total Parties	Total Hunters	Total Hours	Birds/ 100 Hr	Total Hunts	Total Hunters	Birds/ 100 Hr	Birds/ Hunter
Northern Region								
Box Elder	-	-	-	-	-	-	-	-
Cache	-	-	-	-	-	-	-	-
Davis	-	-	-	-	-	-	-	-
Morgan	-	-	-	-	-	-	-	-
Rich	-	-	-	-	-	-	-	-
Summit	-	-	-	-	-	-	-	-
Weber	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-
Central Region								
Inab	-	-	-	-	-	-	-	-
Salt Lake	-	-	-	-	-	-	-	-
Sanpete	-	-	-	-	-	-	-	-
Tooele	-	-	-	-	-	-	-	-
Utah	-	-	-	-	-	-	-	-
Wasatch	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-
Southern Region								
Beaver	-	-	-	-	-	-	-	-
Garfield	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-
Kane	-	-	-	-	-	-	-	-
Millard	-	-	-	-	-	-	-	-
Piute	-	-	-	-	-	-	-	-
Sear	-	-	-	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-
Wayne	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-
Northeastern Region								
Daggett	-	-	-	-	-	-	-	-
Duchesne	-	-	-	-	-	-	-	-
Uintah	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-
Southeastern Region								
Carbon	-	-	-	-	-	-	-	-
Emery	-	-	-	-	-	-	-	-
Grand	8	22	58	46	79	4	7	22
San Juan	-	-	-	-	-	-	-	-
REGIONAL TOTALS	8	22	58	46	79	4	7	22
STATE TOTALS	8	22	58	46	79	4	7	22

Table 11. Chukar hunter success trend as determined by field bag check, 1989-943.

Region and County	1989			1990			1991			1992			1993			1994		
	Birds/ 100 Hr	Birds/ Hunter																
Northern Region																		
Box Elder	50	2.50	133	4.00	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cache	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Davis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Morgan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Rich	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Summit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Weber	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	50	2.50	133	4.00	-	-	-	-	-	-	-	-	-	-	-	-	-	
Central Region																		
Juab	95	1.90	116	7.00	67	2.00	-	-	-	-	-	-	-	-	-	-	-	
Salt Lake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sanpete	-	-	-	-	-	-	53	1.25	-	-	-	-	-	-	-	-	-	
Tooele	2	0.09	-	-	-	-	1	0.07	-	-	-	-	-	-	-	-	-	
Utah	50	1.00	10	2.00	67	2.00	-	-	-	-	-	-	-	-	-	-	-	
Wasatch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	31	1.00	48	1.36	13	0.70	-	-	-	-	-	-	-	-	-	-	-	
Southern Region																		
Beaver	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Garfield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Iron	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Kane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Millard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Piute	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Searcy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Washington	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Wayne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	-	-																
Northeastern Region																		
Daggett	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Duchesne	-	-	38	1.50	-	-	-	-	-	-	-	-	-	-	-	-	-	
Uintah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	-	-	38	1.50	-	-												
Southeastern Region																		
Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Emery	133	4.00	33	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	
Grand	75	1.50	-	-	-	-	-	-	-	-	-	41	2.36	102	3.14	-	-	
San Juan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	100	2.30	33	1.00	-	59	1.74	41	2.36	102	3.14							
STATE TOTALS	39	1.13	49	1.44	13	0.70	59	1.74	41	2.36	102	3.14						

Strutting ground count surveys indicated an 8 percent decrease in the average male grouse attendance from 1993.

Brood surveys showed increased production per 100 adults throughout the state. Birds observed per 100 hours increased 369 percent from 1993, and was 108 percent above average. Reproductive efforts in 1994 were good. Summer brood survival was poor however. Above average temperatures from March through September combined with below average precipitation from May through September may have contributed.

Harvest was 36 percent below the long-term average.

Age ratios derived from wings indicated a 1 percent decrease in young per 100 adults and a 15 percent decrease in young per 100 adult hens. Hunter numbers decreased 22 percent in 1994 and remain 31 percent below the long-term average.

Since 1959, numerous new strutting grounds have been discovered throughout Utah. However, average number of male grouse per ground has declined drastically. A decline in the average number of grouse per ground seems to be representative of Utah sage grouse populations.

Recent DNA and physiological studies indicate that two distinct races of sage grouse exist in Utah. The smaller race is located south and east of the Colorado River.

Declines in sage grouse populations are attributed to loss and changes in sage brush habitats throughout the West. Spraying, urban and industrial development, burning and overgrazing by domestic livestock have altered critical sage grouse habitat.

Based on studies conducted in Utah in the early 1970s, estimated harvest of the sage grouse population was 20 percent (within the harvestable surplus). The amount of pressure on sage grouse populations was more than double what it is currently. Hunting pressure at current levels is not affecting populations.

There is much discussion about the status and future of sage grouse at the "Western States" level. Utah should place high priority on collecting as much annual biological data as possible on sage grouse populations in order to make the best management decisions possible.

Strutting Ground Counts

The status of the sage grouse breeding population for 1994, as indicated by strutting ground counts, is shown in Table 1 and Figure 1 of this section. Results of this survey for 1994 compared to 1993 and the 1967-93 average follow:

		<u>Percent change from</u>	
	<u>1994</u>	<u>1993</u>	<u>Average</u>
Number of grounds counted	121	+34	+12
Total male grouse counted	1,339	+19	-34
Average male grouse per ground	11	-8	-39
Percent change from previous year (comparable grounds)	+39		

Access for spring 1994 strutting ground counts was generally good in most regions of the state. The numbers of male grouse observed decreased 19 percent statewide, however, average number of males per ground decreased 8 percent from 1993 and remains 39 percent below average.

Brood Counts

Results of the summer inventory survey for 1994 are found in Table 2. Long-term trends of young per adult ratios, mean brood size and sage grouse observed per 100 hours are shown in Tables 3-5 and Figure 2. Indices for 1994 are compared to 1993 and the previous 10-year (1984-93) average as follows:

		<u>Percent change from</u>	
	<u>1994</u>	<u>1993</u>	<u>Average</u>
Total sage grouse counted	289	+70	-69
Young per 100 adults	244	+17	+69
Mean brood size	4.86	+32	+14
Sage grouse observed per 100 hours	572	+369	+108
Total hours effort	51	-64	-84

The effort devoted to sage grouse brood counts was 84 percent below average, and the total number of grouse counted was 69 percent below average.

Total sage grouse counted increased 70 percent in 1994, while production of young per 100 adults increased 17 percent. The average brood size was 14 percent above the 10-year average.

Above average precipitation in April and temperatures during the nesting season were conducive to good sage grouse reproductive efforts in 1994.

FIGURE 1. SAGE GROUSE STRUTTING
GROUND COUNTS, 1959-94.

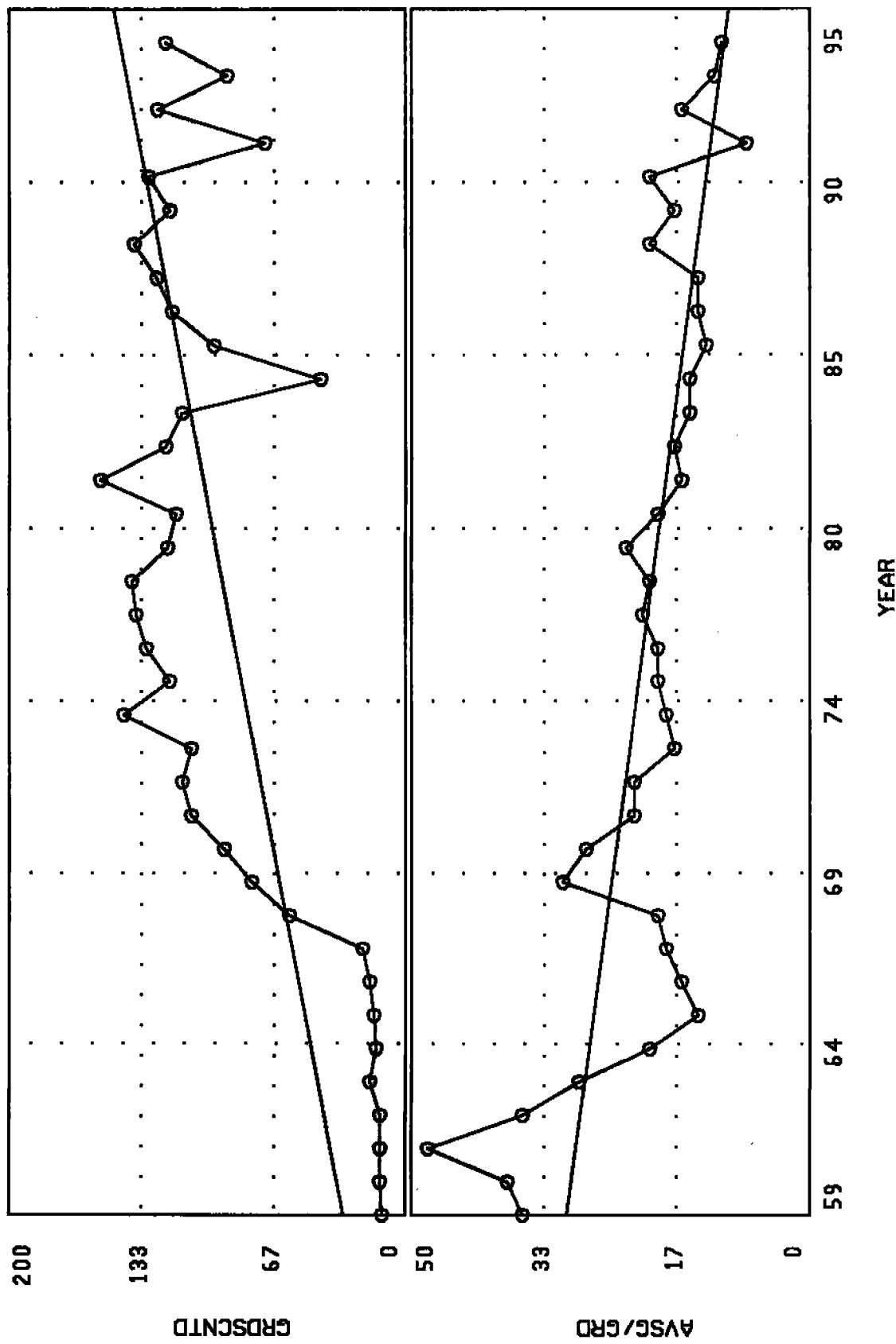
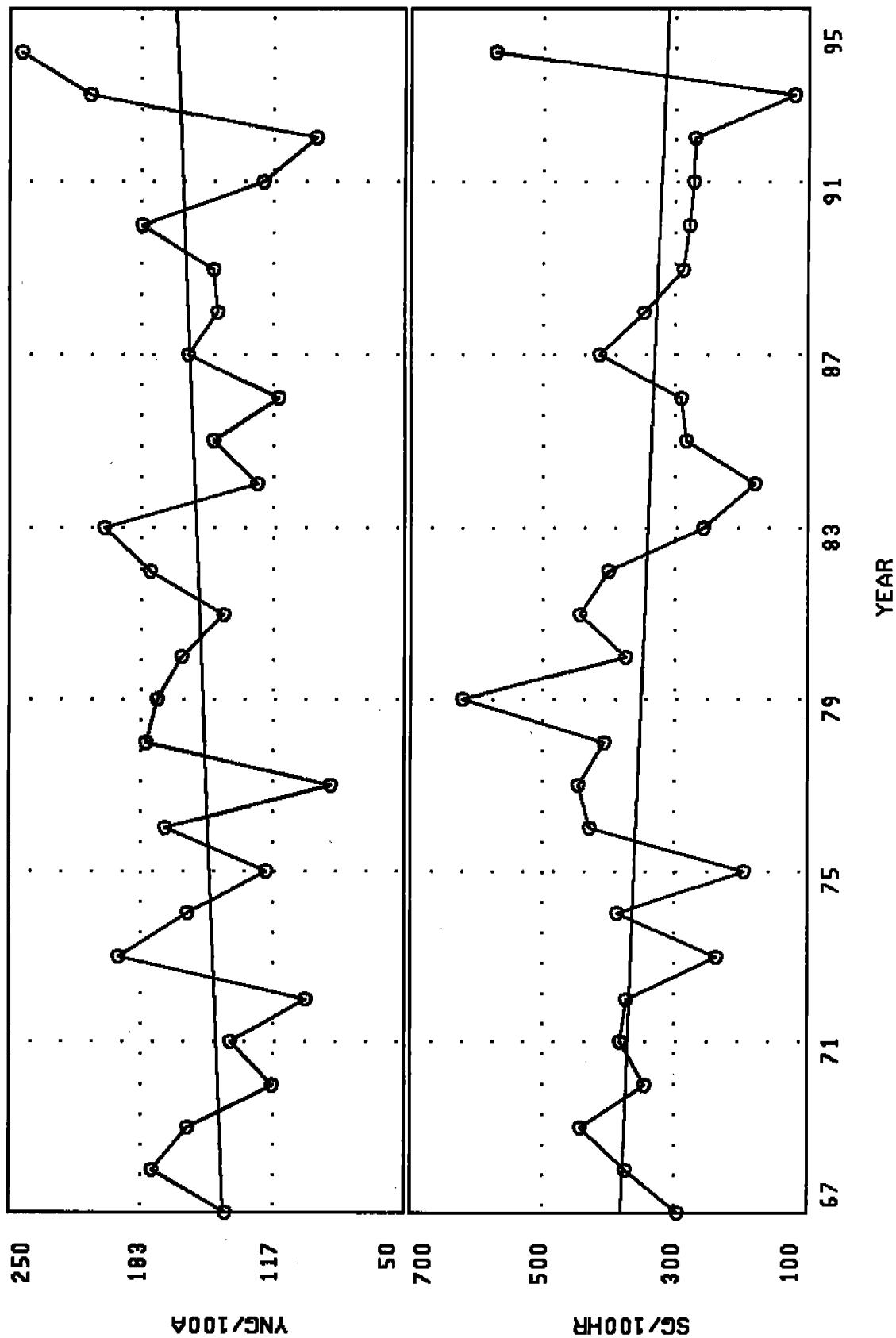


FIGURE 2. SAGE GROUSE PRODUCTION INDICES, 1967-94.



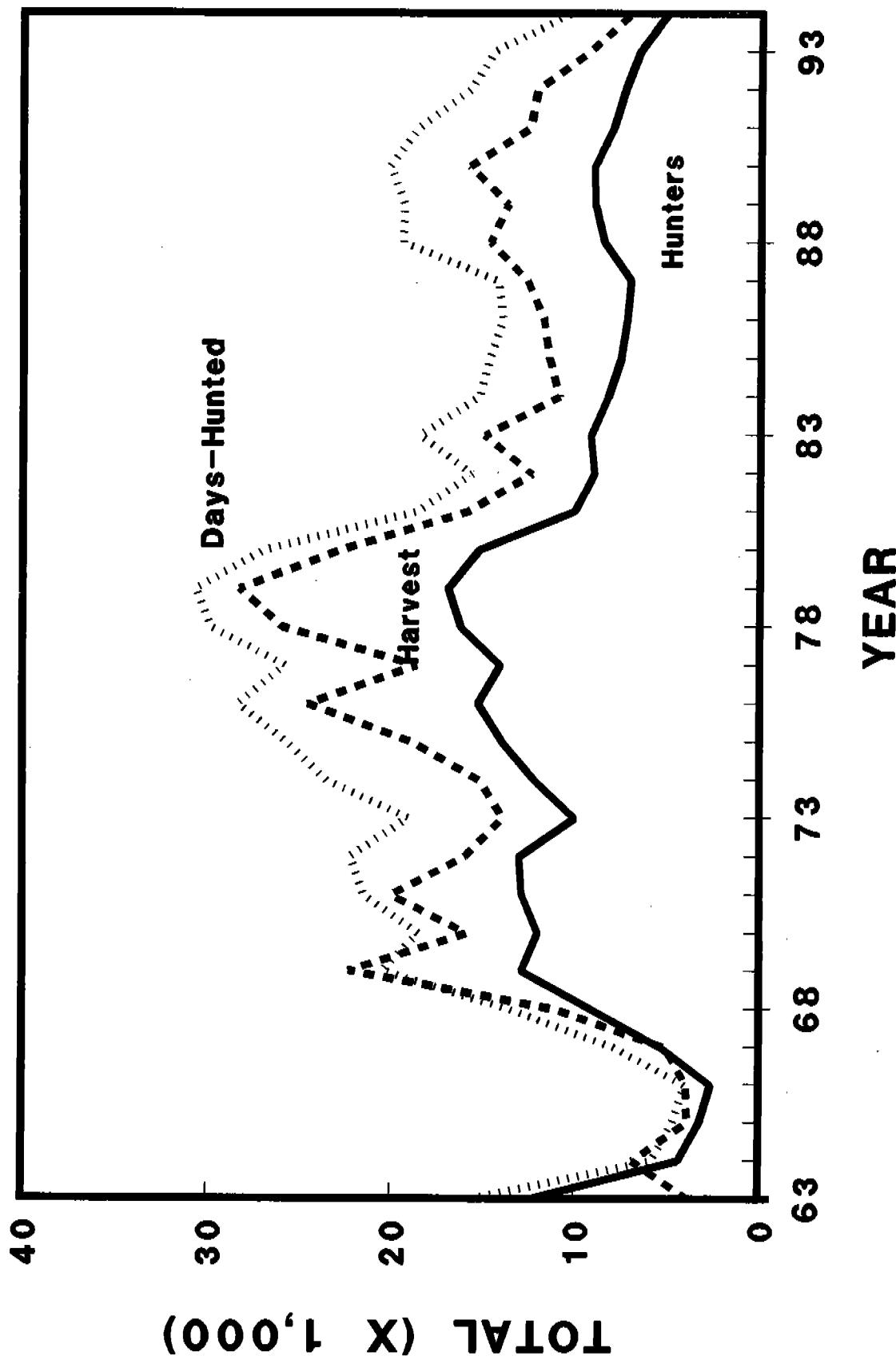


Figure 3. Statewide trends of sage grouse harvest statistics, 1963-94.

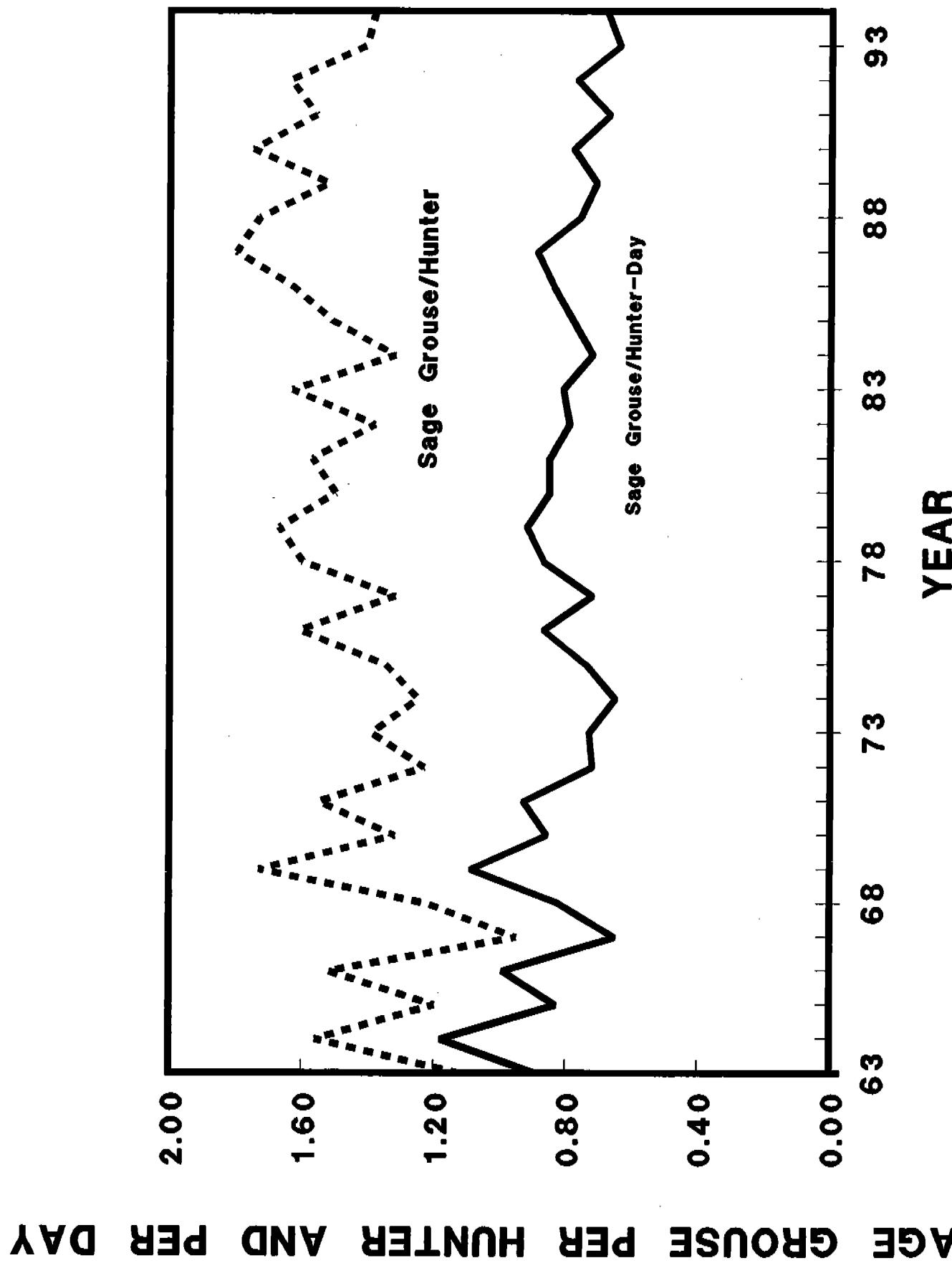
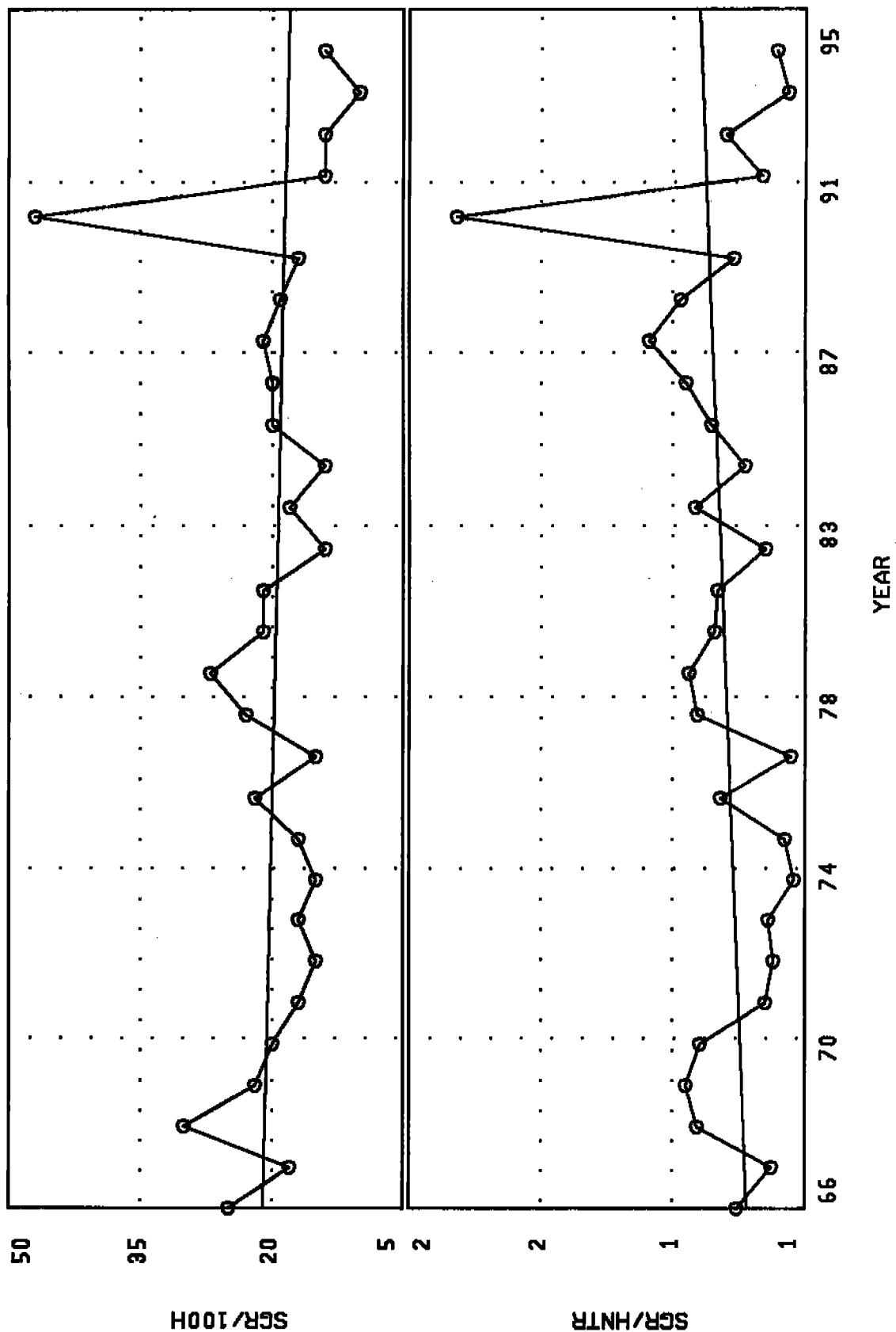


Figure 4. Statewide trends of sage grouse hunter success rates, 1963-94.

FIGURES. SAGE GROUSE FIELD BAG
CHECK INDICES, 1966-94.



Harvest

Hunter Questionnaire

Results of the 1994 hunter questionnaire are shown in Table 6. Long-term trends of sage grouse bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 7-9 and total statewide harvest statistics in Table 10. The results of the 1994 hunting season compared to 1993 and the previous 44-year average follow:

		<u>Percent change from</u>	
	<u>1994</u>	<u>1993</u>	<u>Average</u>
Sage grouse hunters	5,133	-22	-31
Sage grouse harvested	7,084	-24	-36
Hunter-days afield	10,406	-28	-21
Sage grouse per hunter-day	0.68	+6	+11
Sage grouse per hunter	1.38	-2	-25

Sage grouse per hunter-day success rate increased 6 percent in 1994. Total statewide harvest decreased 23 percent, and there was an 22 percent decrease in total sage grouse hunters. Forty percent of the harvest and 50 percent of the hunting pressure still occurred in the Northern Region.

From total sage grouse harvested data, it appears that summer brood survival was poor. Above average temperatures from March through September combined with below average precipitation from May through September may have contributed.

Long-term sage grouse harvest trends are shown in Figures 3 and 4.

Field Bag Checks

A summary of field bag check data for 1994 is shown in Table 11. Hunter success trends determined via this method are shown in Table 12 and Figure 5. Results of the 1994 survey compared to 1993 and the 10-year (1984-93) average follow:

	<u>1994</u>	<u>Percent change from</u>	
		<u>1993</u>	<u>Average</u>
Total hunters checked	602	+45	-34
Total hours hunted	2,986	+8	-34
Sage grouse per hunter (complete hunts)	0.70	+6	-29
Sage grouse bagged per 100 hours	14	+40	-26
Average hours per hunter-day (complete hunts)	4.96	-26	
Hours hunted per grouse bagged (complete hunts)	10.98	+8	+81

Hunter success rates from field bag checks showed increased success on the opening weekend of 1994. Sage grouse bagged per 100 hours increase 40 percent. Average hours per hunter day decreased 26 percent from 1993. Average hours per grouse bagged increased 8 percent.

Sex and Age Composition of the Harvest

A summary of the sex and age composition of harvested sage grouse in 1994 is found in Table 13 and the trend from 1991-94 in Table 14.

Following are data derived from wing surveys in 1994 compared to 1993 and the 1984-93 average:

		<u>Percent change from</u>	
	<u>1994</u>	<u>1993</u>	<u>Average</u>
Sample size	831	+34	-1
Percent males	39	+11	-3
Percent females	61	-6	+2
Young per 100 adults	154	-1	+5
Young per 100 hens (adult)	101	-13	-52

Analysis of wings collected at checking stations during the 1994 season indicates that statewide production was down 13 percent compared to 1993, and was 52 percent below the long-term average.

This data substantiates that brood survival over the summer of 1994 was poor when compared to brood count data collected earlier in the year.

Table 1. Summary of sage grouse strutting ground counts by region and county, 1984-94.

		Region and County						Year													
		1984		1985		1986		1987		1988		1989		1990		1991		1992		1993	
Northern Region																					
Box Elder	No. Strutting Grounds Counted	8	32	10	18	15	11	20	16	13	8	14									
	Total Male Grouse Counted	216	309	288	314	419	343	327	-	307	250	220									
	County Average (all strutting grounds)	27	10	29	18	28	31	23	21	24	17	16,00									
	% Change From Previous Year - Comparable Grounds	-8	7	17	-12	33	-3	-17	-11	8	-7	-23									
Cache	No. Strutting Grounds Counted	1	0	2	1	1	2	-	-	3	-	2									
	Total Male Grouse Counted	5	-	8	0	9	15	-	-	27	-	9									
	County Average (all strutting grounds)	5	-	4	0	9	8	-	-	9	-	5,00									
	% Change From Previous Year - Comparable Grounds	-	-	-	-	100	40	-	-	-	-	-									
Morgan	No. Strutting Grounds Counted	1	3	3	2	1	-	-	-	1	-	-									
	Total Male Grouse Counted	2	33	22	26	19	-	-	-	39	-	-									
	County Average (all strutting grounds)	2	11	7	13	19	-	-	-	39	-	-									
	% Change From Previous Year - Comparable Grounds	-91	1,000	-33	18	-21	-	-	-	-	-	-									
Rich	No. Strutting Grounds Counted	6	18	11	12	3	6	19	22	14	14	29									
	Total Male Grouse Counted	103	399	296	431	319	281	863	710	372	314	325									
	County Average (all strutting grounds)	17	22	27	36	53	47	41	32	27	19	11,00									
	% Change From Previous Year - Comparable Grounds	-2	49	-28	53	-10	5	-7	-18	-38	-51	-46									
Summit	No. Strutting Grounds Counted	1	0	7	7	10	-	-	-	3	-	1									
	Total Male Grouse Counted	16	-	23	25	17	-	-	-	0	-	15									
	County Average (all strutting grounds)	16	-	3	4	2	-	-	-	-	-	15,00									
	% Change From Previous Year - Comparable Grounds	78	-	-	-65	-32	-	-	-	-	-	-29									
REGIONAL TOTALS																					
	No. Strutting Grounds Counted	17	53	33	40	33	19	39	38	34	22	46									
	Total Male Grouse Counted	342	741	637	806	783	639	1,190	710	745	564	569									
	Average Grouse Per Ground (all strutting grounds)	20	14	19	20	24	34	31	27	26	18	13,50									
	% Change From Previous Year - Comparable Grounds	-9	27	-8	16	11	5	-	-15	-15	-29	-33									

Table 1 (continued)

	Region and County	Year									
		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Central Region											
Juab											
No. Strutting Grounds Counted	-	--	--	1	1	1	1	1	3	3	1
Total Male Grouse Counted	-	--	--	9	14	11	4	15	5	0	1
County Average (all strutting grounds)	-	--	--	9	14	11	4	15	2	0	1.00
% Change From Previous Year - Comparable Grounds	-	--	0	56	-21	-63	--	-100	-100	100	
Sanpete											
No. Strutting Grounds Counted	2	2	2	2	2	2	2	2	--	2	--
Total Male Grouse Counted	0	0	0	0	0	0	0	0	--	0	--
County Average (all strutting grounds)	--	--	--	0	0	0	0	0	--	0	--
% Change From Previous Year - Comparable Grounds	-100	0	0	0	0	0	0	0	--	0	--
Tooele											
No. Strutting Grounds Counted	6	6	6	5	5	5	5	5	4	4	4
Total Male Grouse Counted	23	55	82	96	89	77	91	82	100	11	12
County Average (all strutting grounds)	4	9	16	19	18	15	18	16	25	5	3.00
% Change From Previous Year - Comparable Grounds	-18	139	149	17	-5	-17	20	-15	32	-87	-40
Wasatch											
No. Strutting Grounds Counted	2	2	2	2	2	2	2	2	2	2	2
Total Male Grouse Counted	57	63	117	54	52	44	51	11	49	45	24
County Average (all strutting grounds)	29	32	59	27	26	22	26	6	24	37	12.00
% Change From Previous Year - Comparable Grounds	6	11	205	-54	-4	-19	18	-75	300	-9	-12
REGIONAL TOTALS											
No. Strutting Grounds Counted	10	10	10	7	10	10	10	10	9	11	7
Total Male Grouse Counted	80	118	199	150	155	132	146	108	154	56	37
Average Grouse Per Ground (all strutting grounds)	8	12	18	17	16	13	15	12	17	14	5.33
% Change From Previous Year - Comparable Grounds	-11	48	170	-25	-3	-16	11	-45	77	-65	16

Table 1 (continued)

		Region and County		Year								
Southern Region		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Beaver												
No. Strutting Grounds Counted		4	3	4	4	3	5	2	--	3	1	4
Total Male Grouse Counted		48	45	55	52	46	71	33	--	68	49	57
County Average (all strutting grounds)		12	15	14	13	15	14	16	41	19	49	14.00
% Change From Previous Year - Comparable Grounds		78	--	22	-5	--	-7	--	--	-54	47	--
Garfield												
No. Strutting Grounds Counted		7	--	8	9	8	8	10	--	9	6	11
Total Male Grouse Counted		133	--	152	175	251	126	244	--	211	77	145
County Average (all strutting grounds)		19	--	19	19	31	16	24	35	23	11	13.00
% Change From Previous Year - Comparable Grounds		-46	--	13	0	24	-50	--	--	-23	-50	78
Iron												
No. Strutting Grounds Counted		5	6	4	6	6	3	--	--	2	1	3
Total Male Grouse Counted		81	131	64	111	127	50	--	--	43	41	39
County Average (all strutting grounds)		16	22	16	19	21	20	52	--	21	41	13.00
% Change From Previous Year - Comparable Grounds		--	49	-11	-13	14	--	--	--	-36	24	0
Kane												
No. Strutting Grounds Counted		--	--	--	--	--	2	--	--	3	2	2
Total Male Grouse Counted		--	--	--	--	--	41	--	--	30	11	1
County Average (all strutting grounds)		--	--	--	--	--	21	--	14	10	5.5	1.00
% Change From Previous Year - Comparable Grounds		--	--	--	--	--	--	--	--	-28	-61	0
Millard												
No. Strutting Grounds Counted		1	1	1	--	--	--	--	--	--	--	--
Total Male Grouse Counted		4	2	3	--	--	--	--	--	--	--	--
County Average (all strutting grounds)		4	2	3	--	--	--	--	--	--	--	--
% Change From Previous Year - Comparable Grounds		--	--	33	--	--	--	--	--	--	--	--
Sevier												
No. Strutting Grounds Counted		--	--	2	--	2	--	--	1	3	--	1
Total Male Grouse Counted		--	--	0	--	0	--	--	20	22	--	11
County Average (all strutting grounds)		--	--	--	--	--	--	--	20	7	--	11.00
% Change From Previous Year - Comparable Grounds		--	--	--	--	--	--	--	--	--	--	1,100
Wayne												
No. Strutting Grounds Counted		(12)*	--	13	13	13	10	16	12	--	8	
Total Male Grouse Counted		(89)	--	120	182	326	268	259	367	289	--	163
County Average (all strutting grounds)		(7)	--	9	14	25	21	26	23	22	--	20.00
% Change From Previous Year - Comparable Grounds		--	--	-15	79	-18	--	--	--	--	--	-8
REGIONAL TOTALS												
No. Strutting Grounds Counted		12	21	34	30	32	34	25	17	32	10	29
Total Male Grouse Counted		185	391	461	473	734	633	596	387	663	178	416
Average Grouse Per Ground (all strutting grounds)		15	19	14	16	23	19	24	31	17	18	12.00
% Change From Previous Year - Comparable Grounds		-33	--	12	13	48	-18	--	--	-35	-10	234

* No counts because of snow. Aerial count made in Wayne County only (not added to regional total).

Table 1 (continued)

				Year										
				1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Northeastern Region														
Daggett														
No. Strutting Grounds Counted	-	5	6	6	7	6	7	6	-	6	3	3	3	
Total Male Grouse Counted	-	25	22	26	46	25	42	-	-	17	14	11		
County Average (all strutting grounds)	-	5	3	4	8	4	7	-	-	3	4.7	3.70		
% Change From Previous Year - Comparable Grounds	-	-43	--	16	77	-24	24	--	--	-7	-7	-21		
Duchesne														
No. Strutting Grounds Counted	-	13	14	14	7	11	15	-	-	16	15	9		
Total Male Grouse Counted	-	121	117	104	9	76	173	--	-	129	87	37		
County Average (all strutting grounds)	-	9	8	7	1	7	12	-	-	8	5.8	4.10		
% Change From Previous Year - Comparable Grounds	-	-29	--	-12	-83	167	22	--	--	-10	-51			
Grand														
No. Strutting Grounds Counted	-	-	-	-	2	-	-	-	-	-	-	-	1	
Total Male Grouse Counted	-	-	-	-	5	-	-	-	-	-	-	-	0	
County Average (all strutting grounds)	-	-	-	-	3	-	-	-	-	-	-	-	-	
% Change From Previous Year - Comparable Grounds	-	-	-	-	0	-	-	-	-	-	-	-	-	
Uintah														
No. Strutting Grounds Counted	-	12	14	14	22	20	20	-	-	22	22	18		
Total Male Grouse Counted	-	190	216	159	468	266	321	-	-	287	173	208		
County Average (all strutting grounds)	-	16	15	11	21	13	16	-	-	13	7.9	11.60		
% Change From Previous Year - Comparable Grounds	-	-21	--	-26	66	-45	0	-	-	-	-34	-4		
Wasatch														
No. Strutting Grounds Counted	-	-	-	-	2	2	-	-	-	-	-	-	2	
Total Male Grouse Counted	-	-	-	-	22	22	-	-	-	-	-	-	8	
County Average (all strutting grounds)	-	-	-	-	11	11	-	-	-	-	-	-	4.00	
% Change From Previous Year - Comparable Grounds	-	-	-	-	120	0	-	-	-	-	-	-	-11	
REGIONAL TOTALS														
No. Strutting Grounds Counted	-	30	34	34	37	40	41	-	-	44	40	33		
Total Male Grouse Counted	-	336	339	289	550	389	536	-	-	433	274	264		
Average Grouse Per Ground (all strutting grounds)	-	11	10	9	15	10	13	-	-	5	6.1	5.85		
% Change From Previous Year - Comparable Grounds	-	-26	--	-18	37	-37	9	-	-	-27	-18			

Table 1 (continued)

	Region and County	Year								
		1984	1985	1986	1987	1988	1989	1990	1991	1992
Southeastern Region										
Carbon										
No. Strutting Grounds Counted	-	--	2	7	10	9	8	8	3	7
Total Male Grouse Counted	-	--	32	55	196	181	146	103	40	14
County Average (all strutting grounds)	-	--	16	8	20	18	16	13	5	3
% Change From Previous Year - Comparable Grounds	-	--	-27	142	-8	-38	-11	-61	-46	-79
Emery										
No. Strutting Grounds Counted	-	1	1	2	2	2	2	2	2	2
Total Male Grouse Counted	-	12	11	10	12	28	5	7	7	3
County Average (all strutting grounds)	-	12	11	5	6	14	3	4	4	1
% Change From Previous Year - Comparable Grounds	-	-8	-18	20	167	-82	40	0	-57	67
San Juan										
No. Strutting Grounds Counted	4	4	4	4	4	4	4	4	4	4
Total Male Grouse Counted	57	39	29	35	32	39	41	32	40	44
County Average (all strutting grounds)	14	10	7	9	8	10	10	8	10	11
% Change From Previous Year - Comparable Grounds	-14	-29	-26	28	-9	22	5	-22	25	10
REGIONAL TOTALS										
No. Strutting Grounds Counted	4	4	7	13	16	16	15	6	6	7
Total Male Grouse Counted	57	39	72	100	240	248	192	47	55	50
Average Grouse Per Ground (all strutting grounds)	14	10	10	8	15	16	13	8	9	8.83
% Change From Previous Year - Comparable Grounds	-14	-29	-26	0	74	3	-35	2	-12	-31
STATE TOTALS										
No. Strutting Grounds Counted	43	97	118	126	137	119	130	71	125	90
Total Male Grouse Counted	664	1,234	1,708	1,818	2,734	2,041	2,660	1,252	2,050	1,122
Average Grouse Per Ground (all strutting grounds)	15	13	14	14	20	17	20	18	16	12
% Change From Previous Year - Comparable Grounds	-18	-1	5	2	51	14	-2	-11	3	-32

Table 2. Sage grouse summer inventory, 1994.

Region and County	Distinct Broods		Mean Brood		Mixed Young & Adults		Adults w/o Young		Total		Young/ 100 Adults		Vehicle Miles		Hours of Effort		Birds/ 100 Hr
	#	Adults	Young	Brood	Mean	Young	Adults	Young	Total	Young	100 Adults	Miles	Vehicle	Horse	Walk	Total	
Northern Region																	
Box Elder	2	2	10	5.00	3	22	29	34	32	94	58	8	8	1	16	413	
Cache	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Davis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Morgan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Rich	6	6	26	4.33	0	0	6	26	433	-	-	-	-	-	-	-	
Summit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Weber	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	8	8	36	4.50	3	22	29	40	58	145	58	8	8	1	16	613	
Central Region																	
Juab	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Salt Lake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sanpete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tooele	5	5	20	4.00	5	8	8	18	28	156	155	14	3	1	18	263	
Utah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Wasatch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	5	5	20	4.00	5	8	8	18	28	156	155	14	3	1	18	263	
Southern Region																	
Beaver	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Garfield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Iron	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Kane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Millard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Piute	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sevier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Washington	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Wayne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Northeastern Region																	
Daggett	2	2	12	6.00	0	0	0	2	12	600	-	-	-	-	1	1,400	
Duchesne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Uintah	20	20	105	5.25	0	0	20	40	105	263	135	10	10	4	23	636	
REGIONAL TOTALS	22	22	117	5.32	0	0	-	22	117	532	135	10	-	-	10	1,463	
Southeastern Region																	
Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Emery	-	-	-	-	-	-	-	-	-	-	35	3	-	2	5	-	
Grand	1	1	2	2.00	0	0	3	4	2	50	30	2	-	1	3	240	
San Juan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	1	1	2	2.00	0	0	3	4	2	50	65	5	-	3	8	80	
STATE TOTALS	36	36	175	4.86	8	30	40	84	205	244	413	36	11	4	51	572	

Table 3. Trend of sage grouse young per 100 adults, 1984-94.

Region and County	Year									Average 1984-93
	1984	1985	1986	1987	1988	1989	1990	1991	1992	
Northern Region										
Box Elder	75	265	178	94	108	167	267	161	143	92
Cache	-	-	-	-	-	-	500	-	-	-
Davis	-	-	-	-	-	-	-	-	-	-
Morgan	-	300	-	500	-	117	-	-	-	-
Rich	164	96	91	116	153	-	100	67	125	217
Summit	-	400	167	50	-	-	-	-	-	-
Weber	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	126	130	103	115	135	156	235	93	132	133
Central Region										
Juab	-	-	-	-	-	380	250	196	-	450
Salt Lake	-	-	-	-	-	-	-	-	-	-
Sanpete	-	-	-	-	-	-	-	-	-	-
Tooele	100	125	106	207	100	194	110	287	300	300
Utah	-	-	-	-	-	150	-	1,200	-	-
Wasatch	175	43	200	209	300	-	667	-	129	350
REGIONAL TOTALS	155	64	120	249	135	177	166	344	148	357
Southern Region										
Beaver	400	43	-	35	-	-	-	-	-	-
Garfield	140	229	125	144	144	40	91	129	-	-
Iron	63	-	250	198	146	155	264	100	-	-
Kane	-	-	-	400	-	-	-	-	-	-
Millard	-	-	-	-	-	-	-	-	-	-
Piute	-	-	-	38	-	-	-	-	-	-
Sherman	-	-	-	-	-	525	-	500	-	-
Washington	-	-	-	-	-	-	-	-	-	-
Wayne	411	152	44	455	86	-	168	478	43	-
REGIONAL TOTALS	92	137	105	216	127	135	154	128	40	-
Northeastern Region										
Daggett	250	170	100	124	181	433	533	650	190	-
Duchesne	145	297	180	137	288	217	600	160	-	260
Uintah	67	261	127	192	164	148	352	114	278	500
REGIONAL TOTALS	126	255	131	159	172	155	374	161	246	380
Southeastern Region										
Carbon	238	400	133	150	-	56	33	200	33	200
Emery	-	-	-	-	-	-	-	-	-	-
Grand	-	-	-	-	-	-	-	-	31	50
San Juan	500	88	60	-	200	50	50	200	50	-
REGIONAL TOTALS	267	122	81	150	200	55	88	160	34	200
STATE TOTALS	125	147	114	160	145	147	183	122	95	209
									332	136
										145

Table 4. Trend of average brood size for sage grouse, 1984-94.

Region and County	Year								Average 1983-92		
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region											
Box Elder	5.75	5.31	3.57	3.88	33.80	3.80	4.25	3.71	4.17	3.67	5.00
Cache	-	-	-	-	-	-	5.00	-	-	-	-
Davis	-	-	-	-	-	-	-	-	-	-	-
Morgan	-	3.00	-	5.00	-	7.00	-	-	-	-	-
Rich	3.92	3.96	5.08	5.00	4.27	-	2.00	3.00	4.54	2.40	4.33
Summit	-	-	4.00	5.00	4.00	-	-	-	-	-	-
Weber	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	4.36	4.39	4.74	4.82	4.17	4.30	3.67	3.36	4.36	3.09	4.50
Central Region											
Juab	-	-	-	-	-	6.33	4.00	4.75	-	-	-
Salt Lake	-	-	-	-	-	-	-	-	-	-	-
Sanpete	-	-	-	-	-	-	-	-	-	-	-
Tooele	3.33	3.29	3.25	3.60	3.50	3.00	3.13	3.83	3.00	3.00	4.00
Utah	-	-	-	-	-	-	-	12.00	-	-	-
Wasatch	4.90	2.00	5.00	6.94	6.00	-	6.67	-	5.50	7.00	-
REGIONAL TOTALS	4.54	2.56	3.60	5.42	4.29	3.40	4.27	5.00	4.67	4.00	4.17
Southern Region											
Beaver	4.00	5.00	-	5.00	-	-	-	-	-	-	-
Garfield	4.00	4.50	2.00	4.00	4.60	-	4.00	6.00	-	-	-
Iron	3.50	-	4.00	4.64	3.67	4.66	6.00	5.00	-	-	-
Kane	-	-	-	4.00	-	-	-	-	-	-	-
Millard	-	-	-	-	-	-	-	-	-	-	-
Piute	-	-	-	-	-	-	-	-	-	-	-
Searcy	-	-	-	-	-	7.00	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-	-
Wayne	5.00	3.57	6.00	6.14	6.29	-	4.30	5.00	3.82	-	-
REGIONAL TOTALS	4.27	4.00	4.29	4.89	4.89	4.66	4.82	5.60	3.82	-	4.58
Northeastern Region											
Daggett	4.63	3.00	1.00	4.00	4.45	4.30	6.00	2.00	6.00	-	6.00
Duchesne	3.77	4.73	4.29	3.54	3.60	2.17	6.00	4.00	-	2.00	-
Uintah	3.00	5.00	5.44	5.55	4.05	5.15	5.60	2.00	4.75	5.00	5.25
REGIONAL TOTALS	3.96	4.43	4.94	4.59	4.09	4.58	5.63	2.57	4.89	4.50	5.32
Southeastern Region											
Carbon	4.33	4.00	4.00	1.50	-	4.50	-	6.00	2.67	4.00	-
Emery	-	-	-	-	-	-	-	-	-	-	-
Grand	-	-	-	-	-	-	-	-	4.00	-	2.00
San Juan	5.00	3.50	3.00	-	-	2.00	-	2.00	2.00	-	-
REGIONAL TOTALS	4.50	3.67	3.40	1.50	-	3.67	-	4.00	2.80	4.00	4.18
STATE TOTALS	4.27	4.04	4.53	4.86	4.29	4.37	4.71	3.70	4.21	3.68	4.86
Average	4.13	4.00	4.00	4.27							

Table 5. Trend of sage grouse observed per 100 hours, 1984-94.

Region and		Year									Average	
County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1984-93
Northern Region												
Box Elder	195	380	304	475	694	431	303	102	146	118	413	
Cache	11	--	--	0	3	--	--	--	--	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	--	19	--	19	--	100	--	--	--	--	--	
Rich	198	288	282	364	287	--	41	304	261	89	--	
Summit	--	--	21	480	300	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	110	186	198	251	271	64	78	155	197	103	613	161
Central Region												
Juab	--	0	--	--	150	311	323	--	367	367	--	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	--	--	--	--	--	--	--	--	--	--	--	
Tooele	105	242	746	742	150	252	150	414	100	133	263	
Utah	--	--	--	--	125	--	--	1,300	--	--	--	
Wasatch	122	267	92	792	27	19	249	--	254	45	--	
REGIONAL TOTALS	118	244	310	776	118	154	200	338	248	100	263	261
Southern Region												
Beaver	167	429	--	575	--	--	--	--	--	--	--	
Garfield	257	295	225	275	452	207	661	320	--	--	--	
Iron	260	--	466	1,331	1,517	1,000	589	400	--	--	--	
Kane	--	--	--	500	--	--	--	--	--	--	--	
Millard	--	--	--	--	--	--	--	--	--	--	--	
Piute	--	--	316	--	--	--	--	--	--	--	--	
Sherman	--	--	--	--	417	--	--	--	150	829	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	381	358	344	793	542	--	900	511	411	--	--	
REGIONAL TOTALS	304	342	300	732	574	705	781	314	402	--	--	168
Northeastern Region												
Daggett	308	284	114	492	474	168	585	1,000	580	--	1,480	
Duchesne	454	325	165	382	141	123	350	81	--	900	--	
Uintah	314	888	813	642	830	1,191	566	1,500	523	3,000	636	
REGIONAL TOTALS	364	490	474	509	589	741	533	356	539	1,600	1,463	619
Southwestern Region												
Carbon	415	--	200	28	--	125	685	90	377	377	--	
Emery	--	--	--	--	--	--	--	--	--	--	--	
Grand	--	--	--	--	--	--	--	--	567	--	240	
San Juan	57	231	400	--	--	150	120	100	300	--	--	
REGIONAL TOTALS	194	235	271	28	--	129	386	100	239	26	80	158
STATE TOTALS	180	274	291	415	347	288	273	272	122	572	274	

Table 6. Summary of sage grouse hunter success and distribution of harvest and hunter pressure by region and county, 1994.

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD	BIRDS BAGGED	BIRDS PER HUNTER-DAY	% OF PRESSURE	% OF HARVEST
NORTHERN REGION						
BOX ELDER	54	1,810	1,423	0.79	17.40	20.10
CACHE**	19	457	228	0.50	4.39	3.23
DAVIS**	2	105	0	0.00	1.01	0.00
MORGAN**	4	281	52	0.19	2.70	0.74
RICH	63	1,757	931	0.53	16.89	13.15
SUMMIT**	6	316	140	0.44	3.04	1.99
WEBER**	10	457	35	0.08	4.39	0.50
REGIONAL TOTALS	158	5,185	2,812	0.54	49.83	39.70
CENTRAL REGION						
JUAB**	2	123	333	2.71	1.18	4.71
SALT LAKE**	0	0	0	0.00	0.00	0.00
SANPETE**	5	193	87	0.45	1.86	1.24
TOOELE**	7	210	386	1.83	2.03	5.46
UTAH**	7	281	158	0.56	2.70	2.23
WASATCH**	4	87	70	0.80	0.84	0.99
REGIONAL TOTALS	25	896	1,037	1.16	8.62	14.64
SOUTHERN REGION						
BEAVER	8	333	158	0.47	3.21	2.23
GARFIELD	13	333	369	1.11	3.21	5.21
IRON	9	298	386	1.29	2.87	5.46
KANE	1	70	87	1.25	0.68	1.24
MILLARD**	4	210	140	0.67	2.03	1.99
PIUTE	11	316	246	0.78	3.04	3.47
SEVIER	12	421	228	0.54	4.05	3.23
WASHINGTON**	0	0	0	0.00	0.00	0.00
WAYNE	13	421	333	0.79	4.05	4.71
REGIONAL TOTALS	71	2,408	1,951	0.81	23.14	27.54
NORTHEASTERN REGION						
DAGGETT	4	140	35	0.25	1.35	0.50
DUCHESNE	3	105	0	0.00	1.01	0.00
UINTAH	30	1,248	1,037	0.83	11.99	14.64
REGIONAL TOTALS	37	1,494	1,072	0.72	14.36	15.14
SOUTHEASTERN REGION						
CARBON**	5	175	0	0.00	1.69	0.00
EMERY**	4	175	140	0.80	1.69	1.99
GRAND**	2	70	70	1.00	0.68	0.99
SAN JUAN**	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	11	421	210	0.50	4.05	2.98
UNKNOWN	8	0	0	0.00	0.00	0.00
STATE TOTALS	310	10,406	7,084	0.68	100.00	100.00

* Total hunter-trips from questionnaire returns.

**Closed to sage grouse hunting in 1994.

Table 7. Summary of sage grouse bagged per hunter-day by region and county, 1987-94.

Region and County	Year							
	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	1.05	0.78	0.94	0.92	0.55	0.96	0.79	0.79
Cache	0.38*	0.47*	0.45*	0.58	0.32*	0.55*	0.21*	0.50*
Davis	0.00*	0.00*	0.72*	0.25*	0.18*	0.60*	0.08*	0.00*
Morgan	1.25*	0.36*	0.50*	0.33*	0.93*	0.71*	0.00*	0.19*
Rich	0.88	0.81	0.63	0.85	1.01	0.82	0.79	0.53
Summit	0.55*	0.57*	0.71*	0.77*	0.67*	1.38*	0.56*	0.44*
Weber	0.56*	0.64*	0.27*	0.43*	0.34*	0.55*	0.50*	0.08*
REGIONAL TOTALS	0.76	0.66	0.69	0.75	0.66	0.80	0.59	0.54
<u>Central Region</u>								
Juab	0.60*	0.88*	0.22*	0.20*	0.54*	0.17*	0.22*	2.71*
Salt Lake	0.00*	0.50*	0.30*	0.00*	0.70*	0.00*	0.20*	0.00*
Sanpete	0.62*	0.23*	0.61*	1.00*	0.44*	0.22*	0.33*	0.45*
Tooele	1.10*	0.27	0.41*	1.15*	0.35*	0.65*	1.07*	1.83*
Utah	0.62	0.42	0.33	0.39	0.86*	0.96*	0.27*	0.56*
Wasatch	0.58	0.48*	1.50*	0.55*	0.47*	0.70*	0.46*	0.80*
REGIONAL TOTALS	0.70	0.36	0.42	0.52	0.53	0.68	0.59	1.16
<u>Southern Region</u>								
Beaver	1.08	0.76	0.42	0.38	0.29	0.83	1.00	0.47
Garfield	1.50	1.17	1.14	0.74	0.52	0.96	0.90	1.11
Iron	1.29	0.61	0.62	0.58	0.93	0.64	0.53	1.29
Kane	0.00	1.00	0.75	0.54	0.67	0.71	0.00	1.25
Millard	1.00*	0.00*	0.09*	3.14*	1.27*	0.80*	4.00*	0.67*
Piute	0.58	0.95	1.87	0.50	1.00	1.71	1.13	0.78
Sevier	1.00	0.67	0.39	1.08	0.39	0.49	0.36	0.54
Washington	0.00*	0.00*	0.00*	1.63*	2.00*	1.00*	0.00*	0.00*
Wayne	0.60	1.30	1.05	1.04	1.03	0.92	0.66	0.79
REGIONAL TOTALS	0.99	0.91	0.86	0.92	0.78	0.79	0.70	0.81
<u>Northeastern Region</u>								
Daggett	1.00	1.20	0.33*	0.73	0.48	0.60	0.67	0.25
Duchesne	0.91	1.00	1.14	1.19	0.67	0.36	1.29	0.00
Uintah	1.25	1.12	0.98	0.87	0.71	0.87	0.73	0.83
REGIONAL TOTALS	1.17	1.11	0.93	0.89	0.68	0.76	0.79	0.72
<u>Southeastern Region</u>								
Carbon	1.09	1.04	0.44	0.29	0.50	0.64	0.36	0.00*
Emery	1.00	0.77	0.95	0.20*	0.88*	0.60*	1.00*	0.80*
Grand	2.00	0.00	1.50	1.11	0.00	1.33	4.00	1.00*
San Juan	0.00	10.00	0.00*	0.00*	0.57*	0.00*	0.00*	0.00*
REGIONAL TOTALS	1.13	1.40	0.63	0.47	0.59	0.77	0.71	0.50
Unknown counties	0.00	1.63	0.00	0.00	0.00	0.00	0.47	0.00
STATE TOTALS	0.89	0.76	0.71	0.78	0.67	0.77	0.64	

*Closed season.

() Percent of bag per hunter-day in closed areas.

Table 8. Percentage distribution of sage grouse harvest by region and county, 1987-94.

Region and County	Year							
	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	16.63	16.47	22.39	17.21	12.34	15.50	11.22	20.10
Cache	5.02*	4.77*	2.72*	5.22	2.64*	5.12*	2.45*	3.23*
Davis	0.00*	0.00*	2.72*	0.26*	0.28*	1.75*	0.20*	0.00*
Morgan	0.96*	1.36*	1.06*	0.78*	1.80*	1.75*	0.00*	0.74*
Rich	8.12	12.04	11.65*	14.99	24.55	15.79	18.57	13.15
Summit	1.16*	1.81*	0.76*	1.30*	2.22*	1.61*	4.08*	1.99*
Weber	0.96*	2.61*	2.12*	2.48*	2.91*	1.75*	2.24*	0.50*
REGIONAL TOTALS	32.88	39.09	43.42	42.24	46.74	43.27	38.78	39.70
<u>Central Region</u>								
Juab	0.58*	0.79*	0.30*	0.39*	0.97*	0.15*	0.41*	4.71*
Salt Lake	0.00*	0.11*	0.45*	0.00*	0.97*	0.00*	0.20*	0.00*
Sanpete	3.48*	1.25*	2.57*	1.17*	0.97*	0.73*	0.61*	1.24*
Tooele	4.25*	1.81	2.27	1.96*	0.97*	1.90*	5.92*	5.46*
Utah	4.64	2.15	3.18	2.09	1.66*	7.75*	0.61*	2.23*
Wasatch	1.35	1.81*	0.91	0.78*	1.25*	1.02*	1.22*	0.99*
REGIONAL TOTALS	4.31	7.95	9.68*	6.39	6.80	11.55	8.98	14.64
<u>Southern Region</u>								
Beaver	5.41	1.81	0.76	0.65	0.28	2.19	2.24	2.23
Garfield	4.64	3.86	8.62	7.17	2.36	3.51	3.88	5.21
Iron	3.48	1.59	2.42	1.43	1.94	3.65	4.29	5.46
Kane	0.00	0.11	0.45	0.91	0.28	0.73	0.00	1.24
Millard	0.38*	0.00*	0.15*	2.87*	2.64*	0.58*	4.08*	1.99*
Piute	1.35	2.04	4.24	0.65	2.77	1.75	1.84	3.47
Sevier	2.32	5.00	1.97	6.78	3.05	2.92	4.08	3.23
Washington	0.00*	0.00*	0.00*	1.69*	0.55*	0.29*	0.00*	0.00*
Wayne	2.32	8.40	6.51	6.39	10.13	7.02	6.33	4.71
REGIONAL TOTALS	19.92	22.84	25.11	28.55	24.00	22.66	26.74	27.54
<u>Northeastern Region</u>								
Daggett	2.32	2.04	0.76*	3.78	1.39	1.32	1.63	0.50
Duchesne	4.06	2.61	3.63	4.82	2.77	1.46	3.67	0.00
Uintah	23.21	17.61	12.41	11.8	14.98	16.37	13.67	14.64
REGIONAL TOTALS	29.59	22.27	16.79	20.47	19.14	19.15	18.98	15.14
<u>Southeastern Region</u>								
Carbon	2.32	2.95	1.66	0.91	1.80	1.32	0.82	0.00*
Emery	0.19	1.13	2.87	0.13*	0.97*	0.88*	0.41*	1.99*
Grand	0.77	0.00	0.45	1.30	0.00	1.17	0.82	0.99*
San Juan	0.00	2.27	0.00*	0.00*	0.55*	0.00*	0.00*	0.00*
REGIONAL TOTALS	3.28	6.36	4.99	2.35	3.33	3.36	2.04	2.98
Unknown counties	0.00	1.47	0.00	0.00	0.00	0.00	4.49	0.00
Closed areas	(16.79)	(14.51)	(14.52)	(13.81)	(21.36)	(25.28)	(22.43)	(26.07)
STATE TOTALS	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

*Closed season

()Percent of total harvest in closed areas.

Table 9. Percentage distribution of sage grouse hunting pressure by region and county, 1987-94.

Region and County	Year							
	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	14.11	15.99	16.81	14.71	15.16	12.39	9.19	17.40
Cache	11.87*	7.65*	4.28*	7.05	5.61*	7.21*	7.35*	4.39*
Davis	0.34*	1.63*	2.68*	0.82*	1.03*	2.25*	1.71*	1.01*
Morgan	0.68*	2.83*	1.50*	1.84*	1.31*	1.91*	1.18*	2.70*
Rich	8.26	11.26	13.17	13.89	16.46	14.75	15.09	16.89
Summit	1.89*	2.40*	0.75*	1.33*	2.25*	0.90*	4.72*	3.04*
Weber	1.54*	3.09*	5.57	4.49*	5.80*	2.48*	2.89*	4.39*
REGIONAL TOTALS	38.72	44.88	44.75	44.13	47.62	41.89	42.13	49.83
<u>Central Region</u>								
Juab	0.86*	0.68*	0.96*	1.53*	1.22*	0.68*	1.18*	1.18*
Salt Lake	0.17*	0.17*	1.07*	0.51*	0.94*	0.34*	0.66*	0.00*
Sanpete	4.99*	4.12*	3.00*	0.92*	1.50*	2.59*	1.18*	1.86*
Tooele	3.44*	5.07	3.96	1.33*	1.87*	2.25*	3.54*	2.03*
Utah	6.71	3.86	6.85	4.19	1.31*	6.19*	1.44*	2.70*
Wasatch	2.06	2.83*	0.43*	1.12*	1.78*	1.13*	1.71*	0.84*
REGIONAL TOTALS	18.24	16.76	16.27	9.60	8.61	13.18	9.71	8.62
<u>Southern Region</u>								
Beaver	4.47	1.80	1.28	1.33	0.65	2.03	1.44	3.21
Garfield	2.75	2.49	5.35	7.56	3.09	2.82	2.76	3.21
Iron	2.40	1.97	2.78	1.94	1.40	4.39	5.25	2.87
Kane	0.00	0.08	0.43	1.33	0.28	0.79	0.00	0.68
Millard	0.34*	0.00*	1.18*	0.72*	1.40*	0.56*	0.66*	2.03*
Piute	2.06	1.63	1.61	1.02	1.87	0.79	1.05	3.04
Sevier	2.06	5.67	3.53	4.90	5.33	4.62	7.35	4.05
Washington	0.34*	0.42*	0.00*	0.82*	0.19*	0.23*	0.00*	0.00*
Wayne	3.44	4.90	4.39	4.80	6.64	5.86	6.17	4.05
REGIONAL TOTALS	17.89	18.99	20.56	24.41	20.86	22.07	24.67	23.14
<u>Northeastern Region</u>								
Daggett	2.06	1.28	1.61*	4.09	1.96	1.69	1.57	1.35
Duchesne	3.95	1.97	2.25	3.17	2.81	3.15	1.84	1.01
Uintah	16.52	11.95	8.99	10.73	14.31	14.53	12.07	11.99
REGIONAL TOTALS	22.54	15.21	12.85	17.98	19.08	19.37	15.49	14.36
<u>Southeastern Region</u>								
Carbon	1.89	2.14	2.68	2.45	2.43	1.58	1.44	1.69
Emery	0.17	1.11	2.14	0.51*	0.75*	1.13*	0.26*	1.69*
Grand	0.34	0.00	0.21	0.92	0.00	0.68	0.13	0.68
San Juan	0.17	0.17	0.54*	0.00*	0.65*	0.00*	0.00*	0.00*
REGIONAL TOTALS	2.57	3.43	5.57	3.88	3.84	3.38	1.84	4.05
Unknown counties	0.00	0.68	0.00	0.00	0.00	0.11	6.17	0.00
Closed areas	(26.46)	(25.82)	(23.57)	(15.94)	(26.29)	(29.85)	(28.48)	(25.16)
STATE TOTALS	100.00							

*Closed season

()Percent of total pressure in closed areas.

Table 10. Statewide summary of sage grouse harvest statistics, 1951-94.

Year	Total Hunters*	Total Harvest*	Hunter-Days Afield	Sage Grouse Per Hunter-Day	Sage Grouse Per Hunter
1951	840	2,458	--	--	2.93
1952	678	2,230	--	--	3.29
1953	895	2,581	--	--	2.88
1954	802	2,510	--	--	3.13
1955	579	1,742	--	--	3.01
1956	495	1,375	--	--	2.97
1957	470	1,303	--	--	2.77
1958	567	1,797	--	--	3.17
1959	699	1,875	--	--	2.68
1960	861	2,246	--	--	2.61
1961**	1,078	1,918	--	--	1.78
1962***	2,382	5,352	5,097	1.05	1.89
1963	12,366	3,793	15,564	0.89	1.12
1964	4,362	6,827	5,807	1.18	1.56
1965	3,243	3,881	4,673	0.83	1.20
1966	2,612	3,962	4,006	0.99	1.52
1967	5,336	5,089	7,860	0.65	0.95
1968	9,115	11,109	13,601	0.82	1.22
1969	12,894	22,282	20,466	1.09	1.73
1970	12,036	15,877	18,506	0.86	1.32
1971	12,893	20,013	21,509	0.93	1.55
1972	13,040	15,983	22,232	0.72	1.23
1973	10,017	13,926	19,049	0.73	1.39
1974	12,214	15,215	23,516	0.65	1.25
1975	13,996	18,916	25,720	0.74	1.35
1976	15,283	24,541	28,342	0.87	1.61
1977	14,078	18,615	25,759	0.72	1.32
1978	16,231	25,938	29,861	0.87	1.60
1979	16,927	28,280	30,682	0.92	1.67
1980	15,219	22,770	26,893	0.85	1.50
1981	10,083	15,857	18,617	0.85	1.57
1982	8,997	12,383	15,663	0.79	1.38
1983	9,201	14,949	18,467	0.81	1.63
1984	8,283	10,921	15,266	0.72	1.32
1985	7,586	11,466	14,702	0.78	1.51
1986	7,233	11,766	13,992	0.84	1.63
1987	7,060	12,673	14,242	0.89	1.80
1988	8,499	14,692	19,418	0.76	1.73
1989	9,002	13,710	19,373	0.71	1.52
1990	9,014	15,784	20,147	0.78	1.75
1991	8,018	12,542	18,596	0.67	1.56
1992	7,393	12,156	15,781	0.77	1.64
1993	6,594	9,311	14,480	0.64	1.41
1994	5,133	7,084	10,406	0.68	1.38
Totals					
(1951-94)	324,304	479,698	578,293	--	--
Average					
(1951-93)	7,423	10,991	13,207	0.61	1.83

* The number of sage grouse hunters and consequently harvest was limited

by permits available from 1951 through 1962.

** Estimated.

*** Totals and indices based on indiscrete data.

Table 11. Sage grouse field bag check summary, 1994.

Region and County	All Hunts				Complete Hunts				Complete Hunts			
	Total Parties	Total Hunters	Total Hours	Total Birds	Birds/100 Hr	Complete Hunts	Total Hunters	Total Hours	Total Birds	Birds/100 Hr	Birds/Hunter	
Northern Region												
Box Elder	94	263	1,240	259	21	94	263	1,240	259	21	0.98	
Cache	-	-	-	-	-	-	-	-	-	-	-	
Davis	-	-	-	-	-	-	-	-	-	-	-	
Morgan	-	-	-	-	-	-	-	-	-	-	-	
Rich	139	162	1,048	83	8	139	162	1,048	83	8	0.51	
Summit	-	-	-	-	-	-	-	-	-	-	-	
Weber	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	233	425	2,288	342	15	233	425	2,288	342	15	0.80	
Central Region												
Juab	-	-	-	-	-	-	-	-	-	-	-	
Salt Lake	-	-	-	-	-	-	-	-	-	-	-	
Sanpete	-	-	-	-	-	-	-	-	-	-	-	
Tooele	-	-	-	-	-	-	-	-	-	-	-	
Utah	-	-	-	-	-	-	-	-	-	-	-	
Wasatch	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	
Southern Region												
Beaver	-	-	-	-	-	-	-	-	-	-	-	
Garfield	-	-	-	-	-	-	-	-	-	-	-	
Iron	-	-	-	-	-	-	-	-	-	-	-	
Kane	-	-	-	-	-	-	-	-	-	-	-	
Millard	-	-	-	-	-	-	-	-	-	-	-	
Pine	-	-	-	-	-	-	-	-	-	-	-	
Seyler	-	-	-	-	-	-	-	-	-	-	-	
Washington	-	-	-	-	-	-	-	-	-	-	-	
Wayne	-	122	510	37	7	-	122	510	37	7	0.30	
REGIONAL TOTALS	-	122	510	37	7	-	122	510	37	7	0.30	
Northeastern Region												
Daggett	-	-	-	-	-	-	-	-	-	-	-	
Duchesne	-	-	-	-	-	-	-	-	-	-	-	
Uintah	28	69	244	46	19	22	55	188	43	23	0.78	
REGIONAL TOTALS	28	69	244	46	19	22	55	188	43	23	0.78	
Southeastern Region												
Carbon	-	-	-	-	-	-	-	-	-	-	-	
Emery	-	-	-	-	-	-	-	-	-	-	-	
Grand	-	-	-	-	-	-	-	-	-	-	-	
San Juan	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	
STATE TOTALS	261	616	3,042	425	14	255	602	2,986	422	14	0.70	

Table 12. Sage grouse hunter success trend as determined by field bag check, 1989-94.

Region and County	1989			1990			1991			1992			1993			1994		
	Birds/ 100 Hr	Birds/ Hunter																
Northern Region																		
Box Elder	21	1.28	25	1.77	11	0.83	19	1.43	18	0.99	21	0.98						
Cache	--	--	--	--	100	2.00	--	--	--	--	--	--						
Davis	--	--	--	--	--	0.00	--	--	--	--	--	--						
Morgan	--	--	--	--	--	--	--	--	--	--	--	--						
Rich	8	0.38	13	0.67	9	0.37	9	0.52	3	0.28	8	0.51						
Summit	--	--	--	--	--	--	--	--	--	--	--	--						
Weber	--	--	--	--	--	--	--	--	--	--	--	--						
REGIONAL TOTALS	16	0.87	20	1.24	10	0.62	15	0.99	10	0.73	15	0.80						
Central Region																		
Inab	--	--	--	--	--	--	--	--	--	--	--	--						
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--						
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--						
Tooele	41	0.87	--	--	--	--	--	--	--	--	--	--						
Utah	--	--	--	--	--	--	--	--	--	--	--	--						
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--						
REGIONAL TOTALS	41	0.87	--															
Southern Region																		
Beaver	--	--	--	--	--	--	--	--	--	--	--	--						
Garfield	64	0.33	--	--	--	--	--	--	--	--	--	--						
Iron	--	0.64	--	--	--	--	--	--	--	--	--	--						
Kane	--	--	--	--	--	--	--	--	--	--	--	--						
Millard	--	--	--	--	--	--	--	--	--	--	--	--						
Piute	--	--	--	--	--	--	--	--	--	--	--	--						
Sevier	--	--	--	--	--	--	--	--	--	--	--	--						
Washington	--	--	--	--	--	--	--	--	--	--	--	--						
Wayne	--	--	23	0.81	21	1.92	7	0.44	7	0.43	7	0.30						
REGIONAL TOTALS	227	0.51	23	0.81	21	1.02	7	0.44	7	0.43	7	0.30						
Northeastern Region																		
Daggett	6	0.33	17	0.67	35	1.04	--	--	--	--	--	--						
Duchesne	--	50	1.00	13	0.50	--	--	--	--	--	--	--						
Uintah	20	0.87	27	0.86	40	1.11	26	0.81	50	0.50	23	0.78						
REGIONAL TOTALS	18	0.84	26	0.83	34	1.01	26	0.81	50	0.50	23	0.78						
Southeastern Region																		
Carbon	22	0.77	13	0.67	--	--	36	1.43	--	--	--	--						
Emery	--	--	--	--	--	--	--	--	--	--	--	--						
Grand	--	--	--	--	--	--	30	2.40	17	0.43	--	--						
San Juan	--	--	--	--	--	--	--	--	--	--	--	--						
REGIONAL TOTALS	22	0.77	13	0.67	--	--	32	1.83	17	0.43	--	--						
STATE TOTALS	17	0.85	47	1.83	14	0.75	14	0.88	10	0.66	14	0.70						

Table 13. Sex and age composition of harvested sage grouse, 1994.

Region and County	Adults			Yearlings			Immatures			Sample Size	Young/ 100 Adults	Young/ 100 Hens
	M	F	Total	M	F	Total	M	F	Total			
Northern Region												
Box Elder	35	23	58	7	13	20	41	64	105	183	135	292
Cache	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	22	58	80	10	28	38	85	107	192	310	163	235
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	57	81	138	17	41	58	126	171	297	493	152	243
Central Region												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	2	24	26	18	31	49	31	55	86	161	115	156
REGIONAL TOTALS	2	24	26	18	31	49	31	55	86	161	115	156
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--
Southeastern Region												
Carbon	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--
STATE TOTALS	59	105	164	35	72	107	157	226	383	654	141	216

Table 14. Sex and age composition of harvested sage grouse from 1991-94.

Region and County	1991						1992						1993						1994						Average 1991-93								
	Sex Ratio %			Young/ 100A			Sex Ratio %			Young/ 100A			Sex Ratio %			Young/ 100A			Sex Ratio %			Young/ 100A			Sex Ratio %			Young/ 100A					
	n	M	F	n	M	F	n	M	F	n	M	F	n	M	F	n	M	F	n	M	F	n	M	F	n	M	F	n	M	F			
Northern Region																																	
Box Elder	171	39	61	92	54	237	47	53	167	87	174	39	61	150	106	183	45	55	292	135													
Cache	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Davis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Morgan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Riti	499	59	50	122	69	236	34	66	220	129	195	-	-	-	-	-	245	178	310	59	62	245	163	-	-	-	-	-	-	-	-	-	
Summit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Weber	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
REGIONAL TOTALS	616	42	58	113	64	475	46	60	192	106	369	39	61	150	100	393	41	59	245	152	485	40	50	152	90								
Central Region																																	
Hub	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Salt Lake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Sevier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Tooele	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Utah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Wasatch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Southern Region																																	
Bever	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Garfield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Iron	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59	29	71	189	157	-	-	-	-	-	-	-	-	-	-		
Kane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Millard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Piute	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Sanpete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Washington	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Wayne	333	42	58	187	125	292	35	65	138	103	238	32	68	163	131	164	32	60	156	115	288	36	64	163	120								
REGIONAL TOTALS	333	42	58	187	125	292	35	65	138	103	238	32	68	163	131	164	32	60	156	115	288	36	64	163	120								
Northeastern Region																																	
Daggett	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Duchesne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Uintah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	121	56	44	226	138	2	0	159	100	460	-	-	-	-	-	-	
Southwestern Region																	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42	36	64	76	62	11	27	73	100	83	-	-	-	-	-	-	
Eccles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Grand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
San Juan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42	36	64	76	62	11	27	73	100	83	-	-	-	-	-	-	
STATE TOTALS	948	42	58	136	81	90	41	59	169	117	620	35	65	155	116	155	38	62	216	141	831	39	61	154	101								

Brood count data for forest grouse provided small sample sizes. Efforts to collect brood count data have dwindled over the past few years. No meaningful information could be derived for ruffed grouse. Total blue grouse and blue grouse observed per 100 hours increased from 1993. This increase is consistent with production data derived from wing surveys. Brood production was better than expected in 1994.

Total harvest increased from 18,147 in 1993 to 18,862 in 1994, a 4 percent increase. Total hunters and days afield also decreased. Ruffed grouse comprised 37 percent of the harvest while blue grouse comprised 63 percent.

Forest grouse populations continue to rebound from the devastating winter of 1992-93.

Brood Counts

Ruffed Grouse

Results of the annual random brood survey for 1994 are shown in Table 1 of this section. Long-term trends of young per adult ratios, mean brood size and ruffed grouse observed per 100 hours are found in Tables 2-4. A summary of effort expended on ruffed and blue grouse brood counts combined is shown in Table 9. Survey results for 1994 compared to 1993 and the previous 10-year average (1984-1993) follow:

		<u>Percent change from Average</u>	
	<u>1994</u>	<u>1993</u>	<u>Average</u>
Total ruffed grouse observed	5	+150	-92
Young per 100 adults	400	+300	+47
Mean brood size	4.00	+1,450	+9
Ruffed grouse observed per 100 hours	31	-85	+3
Total hours effort	16	-85	-92

Effort on brood surveys decreased by 85 percent and was 92 percent below average. Only the Northeastern Region collected data in 1994. Sample sizes represent localized areas.

Blue Grouse

Results of the annual random brood survey for 1994 are shown in Table 5 of this section. Long-term trends of young per adult ratios, mean brood size and blue grouse observed per 100 hours are found in Tables 6-8. Survey results for 1994 compared to 1993 and the previous 10-year average (1984-93) follow:

		<u>Percent change from Average</u>	
	<u>1994</u>	<u>1993</u>	<u>Average</u>
Total blue grouse observed	96	+81	-69
Young per 100 adults	167	-46	-31
Mean brood size	3.69	+20	+1
Blue grouse observed per 100 hours	384	+700	+251
Total hours effort (forest grouse)	25	-77	-91

The 1994 summer surveys on blue grouse indicated that production decreased 46 percent from 1993 and was 31 percent below average. Efforts to collect blue grouse brood information decreased 77 percent in 1994.

Harvest

Hunter Questionnaire

Results of the 1994 blue grouse, ruffed grouse and combined hunter questionnaire are shown in Table 10, 11 and 12 respectively. Long-term trends of forest grouse bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 13-15 and total statewide harvest statistics in Table 16 and Figures 1 and 2. Forest grouse season length, bag limits and harvest statistics, 1963-1994 are listed in Table 17. Harvest statistics for 1994 compared to 1993 and the previous 10-year average follow:

		<u>Percent change from</u>	
	<u>1994</u>	<u>1993</u>	<u>Average</u>
Forest grouse hunters	9,827	-18	-33
Forest grouse harvested	18,862	+4	-47
Hunter-days afield	27,510	-24	-26
Forest grouse per hunter-day	0.68	+36	-29
Forest grouse per hunter	1.91	+26	-17
Percent ruffed grouse	36.62	0	-5
Percent blue grouse	62.90	+3	+13
Percent unidentified	0.47	-81	-92

Total harvest increased 4 percent from 1993 and was 47 percent below average. Overall, hunter success (grouse per hunter-day) increased 36 percent in 1994, but remains 29 percent below average. The number of grouse harvested per hunter was 17 percent below average. Hunter pressure decreased and remains 33 percent below the long-term average.

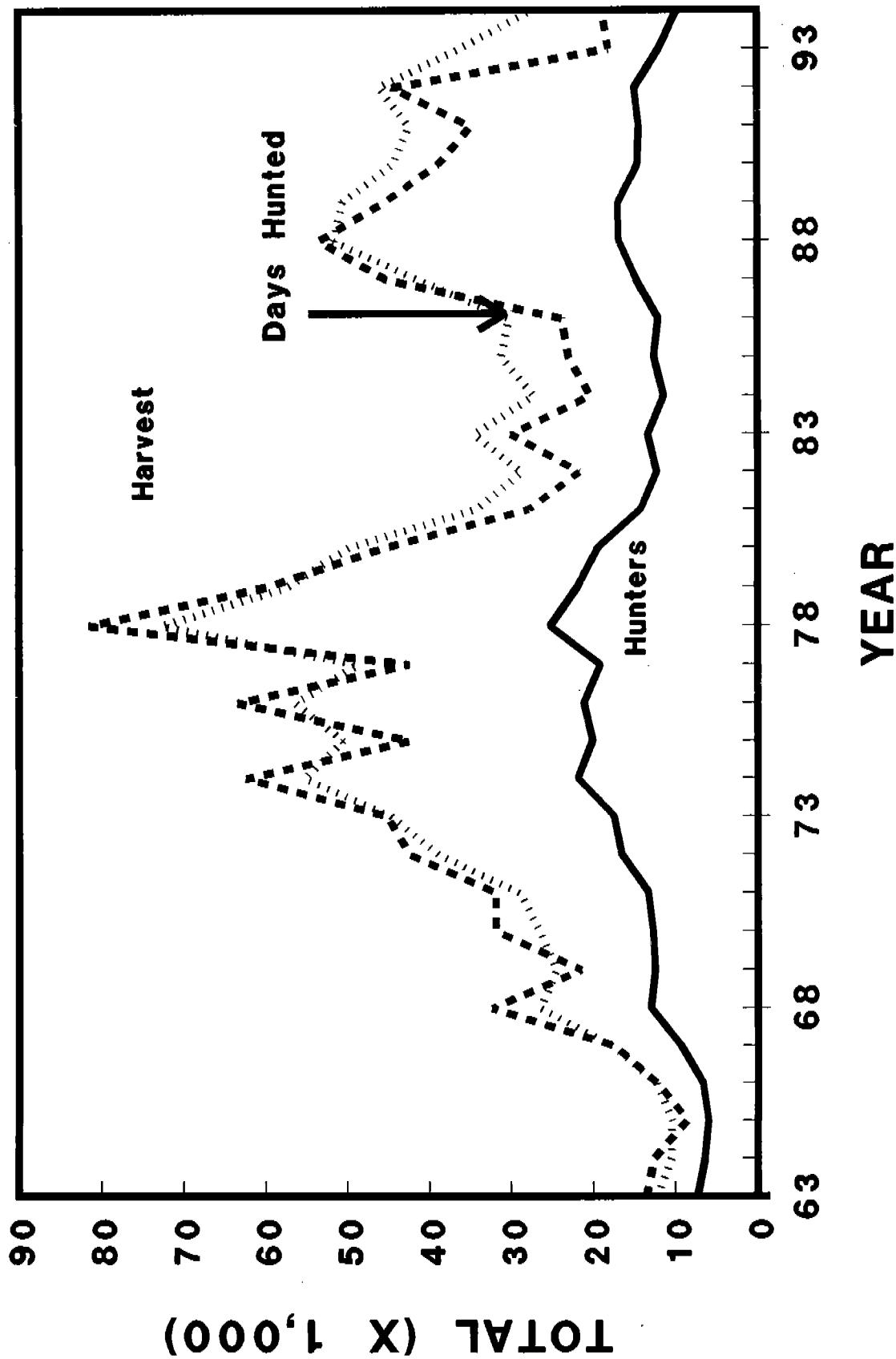


Figure 1. Statewide trends of forest grouse harvest statistics, 1963-94.

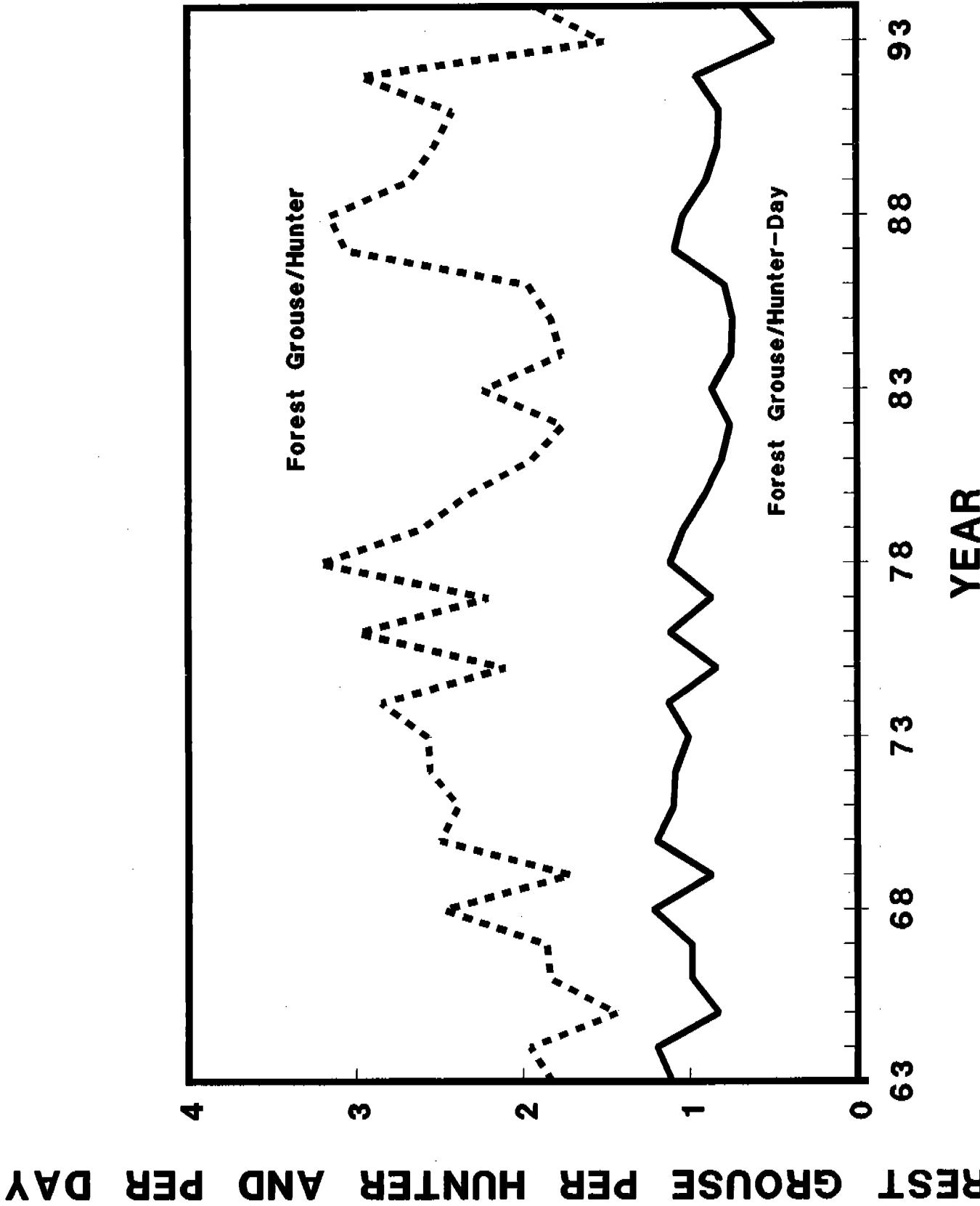


Figure 2. Statewide trends of forest grouse hunter success rates, 1963-94.

Field Bag Checks

A summary of field bag check data for 1994 is shown in Table 18. Hunter success trends determined via this method are shown in Table 19.

Results of the 1994 survey compared to 1993 and the 10-year (1984-93) average follow:

		<u>Percent change from 1993</u>	<u>Average</u>
	<u>1994</u>		
Total hunters checked	316	--	-48
Total hours hunted	1,257	--	-42
Forest grouse per hunter (complete hunts)	0.53	--	-23
Forest grouse bagged per 100 hours	13	--	-50
Average hours per hunter-day (complete hunts)	3.98	--	+18
Hours hunted per grouse bagged (complete hunts)	4.87	--	-6

No field bag check data was collected in 1993 so comparisons from the previous year can not be made.

Sex and Age Composition of the Harvest

Sex and age composition of the harvest as determined from wings is shown in Table 20 and 21.

Following are data derived from blue grouse wing surveys in 1994:

		<u>Percent change from 1993</u>	<u>Average</u>
	<u>1994</u>		
Sample Size	149	--	--
Percent Males	45	--	--
Percent Females	55	--	--
Young per 100 adults	226	--	--
Young per 100 hens (adult)	594	--	--

Following are data derived from ruffed grouse wing surveys in 1994:

		<u>Percent change from 1993</u>	<u>Average</u>
	<u>1994</u>		
Sample Size	47	--	--
Percent Males	--	--	--
Percent Females	--	--	--
Young per 100 adults	--	--	--
Young per 100 hens (adult)	213	--	--

Forest grouse wing data suggests that production was better than expected based on brood count data.

Table 1. Ruffed grouse summer inventory, 1994.

Region and County	Distinct		Mixed Young		Young & Adults		Total		Young/ 100 Adults		Vehicle Miles		Hours of Effort		Birds/ 100 Hr
	#	Broods	Adults	Young	Brood	Adults	Young	Adults	Young	100 Miles	Vehicle	Horse	Walk	Total	
Northern Region															
Box Elder	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cache	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Davis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Morgan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rich	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Summit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weber	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Central Region															
Juab	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salt Lake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sanpete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tooele	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Utah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wasatch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Southern Region															
Beaver	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Garfield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Millard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Piute	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sevier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wayne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern Region															
Daggett	1	1	4	4.00	0	0	0	1	4	400	-	-	10	-	50
Duchesne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uintah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS		1	1	4	4.00	0	0	0	1	4	400	-	-	10	50
Southeastern Region															
Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Emery	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grand	-	-	-	-	-	-	-	-	-	-	35	6	-	-	6
San Juan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS		-	-	-	-	-	-	-	-	-	-	35	6	-	-
STATE TOTALS		1	1	4	4.00	0	0	0	1	4	400	35	6	10	0
														16	31

Table 2. Trend of ruffed grouse young per 100 adults, 1984-94.

Region and County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Average
Northern Region												
Box Elder	-	-	433	150	50	-	300	250	400	-	-	-
Cache	-	350	100	300	267	300	150	225	167	-	-	-
Davis	-	-	-	-	136	-	-	-	217	-	-	-
Morgan	-	-	-	-	-	-	-	-	-	-	-	-
Rich	-	667	200	-	267	-	-	-	-	-	-	-
Summit	-	200	400	500	-	300	450	460	-	-	-	-
Weber	-	150	-	380	220	-	-	700	467	-	-	-
REGIONAL TOTALS	-	308	300	337	141	300	300	355	277	-	-	285
Central Region												
Juab	-	-	-	-	-	-	-	-	-	-	-	-
Salt Lake	-	-	150	0	-	-	-	-	-	-	-	-
Sanpete	-	8,700	-	-	-	-	-	300	400	-	-	-
Tooele	-	-	-	-	-	-	-	-	-	-	-	-
Utah	-	-	460	320	300	300	-	-	100	100	-	-
Wasatch	-	-	-	-	-	-	280	-	-	-	-	-
REGIONAL TOTALS	-	700	322	320	300	300	280	300	250	100	-	319
Southern Region												
Beaver	-	-	-	-	-	-	-	-	-	-	-	-
Garfield	-	-	-	-	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-	-	-	-	-
Kane	-	-	-	-	-	-	-	-	-	-	-	-
Millard	-	-	-	-	-	-	-	-	-	-	-	-
Piute	-	-	-	-	-	-	-	-	-	-	-	-
Sevier	-	-	-	-	-	450	-	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-	-	-
Wayne	-	-	-	-	-	-	-	333	-	-	-	-
REGIONAL TOTALS	-	-	-	-	450	-	333	-	-	-	-	392
Northeastern Region												
Daggett	-	-	-	-	-	-	150	-	-	-	-	400
Duchesne	-	-	-	-	-	-	400	600	-	-	-	-
Uintah	-	-	-	400	-	267	600	-	-	-	-	-
REGIONAL TOTALS	-	-	-	400	-	250	600	-	-	-	-	417
Southeastern Region												
Carbon	-	-	-	-	-	-	-	-	-	-	-	-
Emery	-	-	-	300	-	-	-	-	-	-	-	-
Grand	-	-	-	-	-	-	-	-	-	-	-	-
San Juan	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	300	-	356	350	273	100	400	-	300
STATE TOTALS	-	336	312	306	160	277	-	-	-	-	-	274

Table 3. Trend of average brood size for ruffed grouse, 1984-94.

Region and County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Average
Northern Region												
Box Elder	--	--	2.00	3.00	3.00	--	3.00	5.00	4.00	--	--	--
Cache	--	3.50	1.00	3.14	4.00	3.00	3.00	3.00	5.00	5.00	--	--
Davis	--	--	--	--	4.00	--	--	--	4.33	--	--	--
Morgan	--	--	--	--	--	--	--	--	3.33	--	--	--
Rich	--	6.67	3.00	--	--	3.00	--	--	--	--	--	--
Summit	--	3.33	4.00	5.00	--	3.00	4.50	4.00	--	--	--	--
Weber	--	3.00	--	4.75	3.67	--	--	7.00	4.67	--	--	--
REGIONAL TOTALS	--	4.44	2.60	3.93	3.64	3.00	3.75	4.13	4.50	--	--	3.75
Central Region												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	7.00	--	--	--	--	--	--	3.00	4.00	--	--
Tooele	--	--	--	4.60	3.20	3.00	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	1.00	1.00	--
Wasatch	--	--	--	--	--	--	4.70	--	--	--	--	--
REGIONAL TOTALS	--	7.00	4.60	3.20	3.00	3.00	4.70	3.00	2.50	1.00	--	3.56
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	4.50	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	5.00	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	4.50	--	5.00	--	--	--	4.75
Northeastern Region												
Daggett	--	--	--	--	--	3.00	--	--	--	--	4.00	--
Duchesne	--	--	--	--	--	4.00	6.00	--	--	--	--	--
Uintah	--	--	--	4.00	--	4.00	6.00	--	--	--	--	--
REGIONAL TOTALS	--	--	--	4.00	--	3.75	6.00	--	--	--	4.00	4.58
Southeastern Region												
Carbon	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	3.00	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	3.00	--	--	--	--	--	--	--	--	--
STATE TOTALS	--	4.70	3.60	3.75	3.71	3.30	4.75	4.00	4.10	1.00	4.00	3.60

Table 4. Trend of ruffed grouse observed per 100 hours, 1984-94.

Region and County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Average 1984-93
Northern Region												
Box Elder	-	-	80	31	100	-	64	29	45	-	-	-
Cache	-	17	20	58	17	46	5	76	40	-	-	-
Davis	-	-	-	-	114	-	-	-	76	-	-	-
Morgan	-	2	-	-	-	-	-	50	-	-	-	-
Rich	-	1,150	53	-	50	-	-	-	-	-	-	-
Summit	-	52	36	900	-	9	40	20	-	-	-	-
Weber	-	21	-	267	178	-	-	26	170	-	-	-
REGIONAL TOTALS	-	26	30	56	62	22	13	32	47	-	-	36
Central Region												
Juab	-	-	-	-	-	-	-	-	-	-	-	-
Salt Lake	-	-	167	-	-	-	-	-	-	-	-	-
Sanpete	-	160	-	-	-	-	-	12	38	-	-	-
Tooele	-	-	-	-	-	-	-	-	-	-	-	-
Utah	-	-	400	50	133	133	-	-	13	14	-	-
Wasatch	86	-	-	25	-	-	46	-	-	-	-	-
REGIONAL TOTALS	86	14	88	30	133	133	28	6	13	7	-	54
Southern Region												
Beaver	-	-	-	-	-	-	-	-	-	-	-	-
Garfield	-	-	-	-	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-	-	-	-	-
Kane	-	-	-	-	-	-	-	-	-	-	-	-
Millard	-	-	-	-	-	-	-	-	-	-	-	-
Piute	-	-	-	-	-	-	-	-	-	-	-	-
Sevier	-	-	-	-	-	138	-	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-	-	-
Wayne	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	138	-	433	-	-	-	-	286
Northeastern Region												
Daggett	-	-	-	-	-	109	-	-	-	-	-	50
Duchesne	-	-	-	4	-	33	175	-	-	-	-	-
Uintah	-	-	-	68	-	28	180	-	-	-	-	-
REGIONAL TOTALS	-	-	-	28	-	28	105	-	-	-	-	54
Southeastern Region												
Carbon	-	-	-	-	-	-	-	-	-	-	-	-
Emery	-	-	-	-	400	-	-	-	-	-	-	-
Grand	-	-	-	-	-	-	-	-	-	-	-	-
San Juan	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	400	-	-	-	-	-	-	-	400
STATE TOTALS	86	22	47	45	46	26	30	23	31	2	31	36

Table 5. Blue grouse summer inventory, 1994.

Region and County	Distinct			Mixed Young			Young/ Vehicle			Hours of Effort			Birds/ 100 Hr
	#	Adults	Young	Mean Brood	& Adults Young	Adults w/o Young	Total Young	100 Adults	Miles	Vehicle	Horse	Walk	Total
Northern Region													
Box Elder	5	5	19	3.80	0	0	1	11	19	173	30	4	-
Cache	-	-	-	-	-	-	-	-	-	-	-	-	4
Davis	-	-	-	-	-	-	-	-	-	-	-	-	-
Morgan	-	-	-	-	-	-	-	-	-	-	-	-	-
Rich	-	-	-	-	-	-	-	-	-	-	-	-	-
Summit	-	-	-	-	-	-	-	-	-	-	-	-	-
Weber	-	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	5	5	19	3.80	0	0	1	11	19	173	30	4	-
Central Region													
Juab	2	2	7	3.50	0	0	3	5	7	140	-	-	-
Salt Lake	-	-	-	-	-	-	-	-	-	-	-	-	600
Sanpete	-	-	-	-	-	-	2	2	-	-	-	-	-
Tooele	1	1	2	2.00	0	0	4	5	2	40	-	-	-
Utah	1	1	3	3.00	0	0	3	4	3	75	-	-	350
Wasatch	-	-	-	-	-	-	-	-	-	-	-	-	350
REGIONAL TOTALS	4	4	12	3.00	0	0	12	16	12	75	-	-	-
Southern Region													
Beaver	-	-	-	-	-	-	-	-	-	-	-	-	-
Garfield	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-	-	-	-	-	-
Kane	-	-	-	-	-	-	-	-	-	-	-	-	-
Millard	-	-	-	-	-	-	-	-	-	-	-	-	-
Pine	-	-	-	-	-	-	-	-	-	-	-	-	-
Sevier	-	-	-	-	-	-	-	-	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-	-	-	-
Wayne	-	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern Region													
Daggett	0	0	0	0	0	0	0	0	0	-	-	10	-
Duchesne	-	-	-	-	-	-	-	-	-	-	-	-	-
Uintah	0	0	0	0	0	1	0	0	1	-	-	2	50
REGIONAL TOTALS	0	0	0	0	0	1	0	0	1	-	-	12	8
Southeastern Region													
Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-
Emery	-	-	-	-	-	-	-	-	-	-	-	-	-
Grand	7	7	28	4.00	0	0	7	14	28	200	72	9	-
San Juan	-	-	-	-	-	-	-	-	-	-	-	-	9
REGIONAL TOTALS	7	7	28	4.00	0	0	7	14	28	200	72	9	-
STATE TOTALS	16	16	59	3.69	0	1	20	36	60	167	102	13	25

Table 6. Trend of blue grouse young per 100 adults, 1984-94.

Region and County	Year								Average 1984-93
	1984	1985	1986	1987	1988	1989	1990	1991	
Northern Region									
Box Elder	350	--	100	--	--	700	144	400	200
Cache	--	167	--	300	363	257	300	600	80
Davis	250	183	150	222	248	200	480	260	180
Morgan	300	900	--	433	--	--	--	--	--
Rich	--	--	350	--	--	--	--	600	400
Summit	500	450	--	500	--	200	178	155	--
Weber	--	400	--	380	400	--	--	186	100
REGIONAL TOTALS	300	269	222	300	279	244	292	277	207
Central Region									
Juab	400	0	180	--	--	--	700	--	--
Salt Lake	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	600	--	80	--	--	--
Tooele	--	168	167	218	650	650	276	231	--
Utah	--	175	--	256	267	267	286	170	--
Wasatch	--	--	--	--	--	--	--	100	100
REGIONAL TOTALS	400	157	169	273	486	317	286	194	80
Southern Region									
Beaver	250	200	267	133	109	--	--	--	--
Garfield	241	200	245	160	--	23	--	--	--
Iron	--	--	--	300	--	--	--	--	--
Kane	--	255	500	475	250	--	--	--	--
Millard	100	300	200	425	60	--	--	--	--
Platte	200	300	300	--	--	--	--	--	--
Sevier	80	417	--	150	90	--	--	--	--
Washington	--	--	233	533	--	--	--	--	--
Wayne	--	600	--	350	375	--	--	246	--
REGIONAL TOTALS	164	282	279	230	118	23	246	--	--
Northeastern Region									
Daggett	--	--	282	331	318	364	233	--	600
Duchesne	--	--	228	129	190	--	600	--	800
Uintah	--	--	140	500	233	138	60	--	600
REGIONAL TOTALS	--	235	305	254	268	223	--	400	--
Southeastern Region									
Carbon	300	150	500	--	--	--	--	500	--
Emery	--	--	400	100	--	--	--	--	--
Grant	25	200	260	--	227	300	--	200	286
San Juan	175	300	--	300	213	360	--	500	233
REGIONAL TOTALS	140	206	300	140	200	75	--	350	284
STATE TOTALS	190	229	225	268	207	225	274	238	243
								291	167
									239

Table 7. Trend of average brood size for blue grouse, 1984-94.

Region and County	Year							Average 1984-93
	1984	1985	1986	1987	1988	1989	1990	
Northern Region								
Box Elder	7.00	--	2.00	--	--	7.00	3.20	4.00
Cache	--	3.33	--	3.67	3.63	3.60	3.70	4.50
Davis	5.50	3.67	3.00	2.83	4.00	4.50	6.50	4.33
Morgan	3.00	9.00	--	4.33	--	--	--	3.00
Rich	--	--	--	--	--	--	--	--
Summit	5.00	4.50	--	5.00	--	3.00	4.00	--
Weber	--	5.33	4.00	4.75	4.00	--	--	--
REGIONAL TOTALS	4.83	4.73	3.25	3.88	3.84	3.86	4.30	4.05
Central Region								
Juab	4.00	0.00	--	--	--	--	7.00	--
Salt Lake	--	--	--	--	--	--	--	--
Suapete	--	--	--	6.00	--	2.00	--	--
Tooele	--	3.38	3.20	3.43	6.00	6.00	3.13	--
Utah	--	3.50	--	3.45	5.00	5.00	5.00	--
Wasatch	--	--	--	--	--	--	--	--
REGIONAL TOTALS	4.00	3.43	3.20	3.62	4.67	4.20	4.00	3.36
Southern Region								
Beaver	3.33	2.00	2.67	4.00	4.00	--	--	--
Garfield	3.22	--	4.50	3.29	--	--	--	--
Iron	--	--	--	3.50	--	--	--	--
Kane	--	--	1.00	4.75	4.00	--	--	--
Millard	2.67	4.00	4.00	4.25	1.50	--	3.00	--
Piute	4.00	3.00	3.00	--	--	--	--	--
Sevier	2.00	4.16	--	4.57	2.33	--	--	--
Washington	--	--	3.50	5.33	--	--	--	--
Wayne	--	6.00	--	3.50	3.75	--	4.57	--
REGIONAL TOTALS	2.95	3.21	3.53	4.12	2.71	--	3.00	4.57
Northeastern Region								
Daggett	--	--	3.75	4.71	3.20	3.89	3.50	--
Duchesne	--	--	3.25	2.50	2.50	--	6.00	--
Uintah	--	--	4.00	5.00	3.50	2.20	6.00	2.00
REGIONAL TOTALS	--	3.56	4.52	3.00	3.29	4.33	--	6.67
Southeastern Region								
Carbon	3.00	3.00	5.00	--	--	--	--	5.00
Emery	--	--	4.00	4.00	--	--	--	--
Grand	--	3.00	3.25	--	2.78	3.00	2.00	4.38
San Juan	1.75	3.00	--	3.00	3.00	--	5.00	2.50
REGIONAL TOTALS	2.17	3.00	3.60	3.50	2.93	3.00	3.50	4.13
STATE TOTALS	3.18	3.56	3.44	4.00	3.22	3.61	4.19	3.88
							4.29	2.91
								3.69
								3.63

Table 8. Trend of blue grouse observed per 100 hours, 1984-94.

Region and County	Year									Average 1984-93
	1984	1985	1986	1987	1988	1989	1990	1991	1992	
Northern Region										
Box Elder	38	-	20	0	-	-	200	21	136	-
Cache	-	77	-	71	56	114	108	165	45	-
Davis	110	94	50	232	300	120	426	86	112	-
Morgan	200	23	4	59	-	17	-	-	-	-
Rich	-	-	53	0	0	-	-	175	79	-
Summit	12	38	-	900	-	21	100	55	-	-
Weber	-	167	100	267	56	-	-	65	40	-
REGIONAL TOTALS	28	58	27	109	90	79	133	63	83	-
Central Region										
Juab	125	30	156	0	-	-	800	-	-	-
Salt Lake	-	-	-	400	-	-	-	-	-	600
Sanpete	-	-	-	1,400	-	14	4	-	23	-
Tooele	-	536	444	206	1,000	-	233	-	25	-
Utah	-	165	-	229	367	367	113	318	-	350
Wasatch	-	-	-	0	-	-	-	9	150	-
REGIONAL TOTALS	17	183	254	194	683	72	75	180	24	171
Southern Region										
Beaver	233	33	137	175	164	-	-	-	-	-
Garfield	-	122	141	195	-	-	100	-	-	-
Iron	-	-	-	1,200	-	-	-	-	-	-
Kane	-	213	257	383	127	-	-	-	-	-
Millard	107	133	200	525	100	-	-	-	-	-
Piute	200	67	266	-	-	-	-	-	-	-
Sherman	72	155	-	275	738	-	-	-	-	-
Washington	-	-	333	950	-	-	-	-	-	-
Wayne	-	700	-	450	475	-	-	2,250	-	-
REGIONAL TOTALS	122	140	178	309	247	-	200	2,250	-	492
Northeastern Region										
Daggett	-	-	300	1,255	230	265	286	-	1,400	-
Duchesne	-	-	51	64	121	-	175	-	225	120
Uintah	-	-	600	55	37	48	320	-	3,500	50
REGIONAL TOTALS	-	-	126	286	120	95	46	-	500	370
Southeastern Region										
Carbon	53	33	60	-	-	-	-	-	240	-
Emery	-	-	-	500	-	-	-	-	-	-
Grand	50	360	120	300	-	89	-	-	540	875
San Juan	73	53	-	400	-	400	-	600	600	467
REGIONAL TOTALS	60	123	96	490	-	85	-	450	480	113
STATE TOTALS	55	101	110	197	166	81	93	112	130	384
										109

Table 9. Summary of effort expended on forest grouse brood counts, 1994.

Region and County	Vehicle Miles	Hours of Effort				Total
		Vehicle	Horse	Walk		
Northern Region						
Box Elder	30	4	--	--	--	4
Cache	--	--	--	--	--	--
Davis	--	--	--	--	--	--
Morgan	--	--	--	--	--	--
Rich	--	--	--	--	--	--
Summit	--	--	--	--	--	--
Weber	--	--	--	--	--	--
REGIONAL TOTALS	30	4	--	--	--	4
Central Region						
Juab	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--
Tooele	--	--	--	--	--	--
Utah	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--
Southern Region						
Beaver	--	--	--	--	--	--
Garfield	--	--	--	--	--	--
Iron	--	--	--	--	--	--
Kane	--	--	--	--	--	--
Millard	--	--	--	--	--	--
Piute	--	--	--	--	--	--
Sevier	--	--	--	--	--	--
Washington	--	--	--	--	--	--
Wayne	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--
Northeastern Region						
Daggett	--	--	10	--	--	10
Duchesne	--	--	--	--	--	--
Uintah	--	--	2	--	--	2
REGIONAL TOTALS	--	--	12	--	--	12
Southeastern Region						
Carbon	--	--	--	--	--	--
Emery	--	--	--	--	--	--
Grand	72	9	--	--	--	9
San Juan	--	--	--	--	--	--
REGIONAL TOTALS	72	9	--	--	--	9
STATE TOTALS	102	13	12	--	--	25

Table 10. Summary of blue grouse hunter success and distribution of harvest and hunting pressure by region and county, 1994.

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD	BIRDS BAGGED	BIRDS PER HUNTER-DAY	% OF PRESSURE	% OF HARVEST
NORTHERN REGION						
BOX ELDER	14	878	738	0.84	6.31	6.22
CACHE	33	2,214	2,109	0.95	15.91	17.78
DAVIS	5	298	263	0.88	2.15	2.22
MORGAN	5	175	105	0.60	1.26	0.89
RICH	5	351	281	0.80	2.53	2.37
SUMMIT	16	773	474	0.61	5.56	4.00
WEBER	19	1,423	1,037	0.73	10.23	8.74
REGIONAL TOTALS	97	6,117	5,009	0.82	43.94	42.22
CENTRAL REGION						
JUAB	4	193	87	0.45	1.39	0.74
SALT LAKE	4	369	87	0.24	2.65	0.74
SANPETE	15	861	650	0.76	6.19	5.48
TOOELE	18	562	896	1.59	4.04	7.56
UTAH	23	1,072	808	0.75	7.70	6.82
WASATCH	10	492	351	0.71	3.54	2.96
REGIONAL TOTALS	74	3,550	2,882	0.81	25.51	24.30
SOUTHERN REGION						
BEAVER	5	281	140	0.50	2.02	1.19
GARFIELD	2	70	35	0.50	0.51	0.30
IRON	6	228	281	1.23	1.64	2.37
KANE	1	70	70	1.00	0.51	0.59
MILLARD	6	210	246	1.17	1.52	2.07
PIUTE	0	0	0	0.00	0.00	0.00
SEVIER	21	1,634	1,353	0.83	11.74	11.41
WASHINGTON	0	0	0	0.00	0.00	0.00
WAYNE	2	87	87	1.00	0.63	0.74
REGIONAL TOTALS	43	2,584	2,214	0.86	18.56	18.67
NORTHEASTERN REGION						
DAGGETT	5	369	421	1.14	2.65	3.56
DUCHESNE	2	105	87	0.83	0.76	0.74
UINTAH	9	439	580	1.32	3.16	4.89
REGIONAL TOTALS	16	914	1,089	1.19	6.57	9.19
SOUTHEASTERN REGION						
CARBON	6	333	316	0.95	2.40	2.67
EMERY	3	281	140	0.50	2.02	1.19
GRAND	0	0	0	0.00	0.00	0.00
SAN JUAN	4	140	210	1.50	1.01	1.78
REGIONAL TOTALS	13	755	667	0.88	5.43	5.63
UNKNOWN	0	0	0	0.00	0.00	0.00
STATE TOTALS	243	13,922	11,865	0.85	100.00	100.00

*Total hunter trips from questionnaire returns.

Table 11. Summary of ruffed grouse hunter success and distribution of harvest and hunting pressure by region and county, 1994

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD	BIRDS BAGGED	BIRDS PER HUNTER-DAY	% OF PRESSURE	% OF HARVEST
NORTHERN REGION						
BOX ELDER	10	826	474	0.57	8.55	6.87
CACHE	38	2,390	1,423	0.60	24.73	20.61
DAVIS	2	210	52	0.25	2.18	0.76
MORGAN	8	333	386	1.16	3.45	5.60
RICH	6	175	228	1.30	1.82	3.31
SUMMIT	18	914	720	0.79	9.45	10.43
WEBER	15	808	527	0.65	8.36	7.63
REGIONAL TOTALS	97	5,660	3,814	0.67	58.55	55.22
CENTRAL REGION						
JUAB	1	70	17	0.25	0.73	0.25
SALT LAKE	7	439	246	0.56	4.55	3.56
SANPETE	9	808	650	0.80	8.36	9.42
TOOELE	3	158	70	0.44	1.64	1.02
UTAH	12	439	509	1.16	4.55	7.38
WASATCH	15	861	421	0.49	8.91	6.11
REGIONAL TOTALS	47	2,777	1,916	0.69	28.73	27.74
SOUTHERN REGION						
BEAVER	2	193	175	0.91	2.00	2.54
GARFIELD	1	87	35	0.40	0.91	0.51
IRON	1	35	35	1.00	0.36	0.51
KANE	0	0	0	0.00	0.00	0.00
MILLARD	3	158	158	1.00	1.64	2.29
PIUTE	0	0	0	0.00	0.00	0.00
SEVIER	4	140	193	1.38	1.45	2.80
WASHINGTON	1	87	35	0.40	0.91	0.51
WAYNE	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	12	703	632	0.90	7.27	9.16
NORTHEASTERN REGION						
DAGGETT	3	140	87	0.63	1.45	1.27
DUCHESNE	4	158	210	1.33	1.64	3.05
UINTAH	4	123	158	1.29	1.27	2.29
REGIONAL TOTALS	11	421	457	1.08	4.36	6.62
SOUTHEASTERN REGION						
CARBON	0	0	0	0.00	0.00	0.00
EMERY	2	105	87	0.83	1.09	1.27
GRAND	0	0	0	0.00	0.00	0.00
SAN JUAN	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	2	105	87	0.83	1.09	1.27
UNKNOWN	0	0	0	0.00	0.00	0.00
STATE TOTALS	169	9,668	6,908	0.71	100.00	100.00

*total hunter trips from questionnaire returns.

Table 12. Summary of blue and ruffed grouse hunter success and distribution of harvest and hunting pressure by region and county, 1994.

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD	BIRDS BAGGED	BIRDS PER HUNTER-DAY	% OF PRESSURE	% OF HARVEST
NORTHERN REGION						
BOX ELDER	27	1,459	1,160	0.80	5.30	6.15
CACHE	81	4,060	3,586	0.88	14.76	19.01
DAVIS	16	703	316	0.45	2.56	1.68
MORGAN	16	720	474	0.66	2.62	2.52
RICH	23	861	509	0.59	3.13	2.70
SUMMIT	43	2,003	1,634	0.82	7.28	8.67
WEBER	49	2,671	1,353	0.51	9.71	7.18
REGIONAL TOTALS	255	12,480	9,035	0.72	45.37	47.90
CENTRAL REGION						
JUAB	4	158	87	0.56	0.58	0.47
SALT LAKE	11	404	351	0.87	1.47	1.86
SANPETE	29	1,248	1,072	0.86	4.54	5.69
TOOELE	29	914	931	1.02	3.32	4.94
UTAH	50	2,214	1,300	0.59	8.05	6.90
WASATCH	32	1,511	791	0.52	5.50	4.19
REGIONAL TOTALS	155	6,451	4,535	0.70	23.45	24.04
SOUTHERN REGION						
BEAVER	7	492	316	0.64	1.79	1.68
GARFIELD	4	246	70	0.29	0.89	0.37
IRON	11	404	316	0.78	1.47	1.68
KANE	2	87	70	0.80	0.32	0.37
MILLARD	13	527	404	0.77	1.92	2.14
PIUTE	5	351	70	0.20	1.28	0.37
SEVIER	37	2,179	1,546	0.71	7.92	8.20
WASHINGTON	1	175	105	0.60	0.64	0.56
WAYNE	4	193	87	0.45	0.70	0.47
REGIONAL TOTALS	84	4,658	2,988	0.64	16.93	15.84
NORTHEASTERN REGION						
DAGGETT	13	878	509	0.58	3.19	2.70
DUCHESNE	14	527	298	0.57	1.92	1.58
UINTAH	24	1,388	738	0.53	5.05	3.91
REGIONAL TOTALS	51	2,795	1,546	0.55	10.16	8.20
SOUTHEASTERN REGION						
CARBON	10	404	316	0.78	1.47	1.68
EMERY	8	474	228	0.48	1.73	1.21
GRAND	3	70	0	0.00	0.26	0.00
SAN JUAN	5	175	210	1.20	0.64	1.12
REGIONAL TOTALS	26	1,125	755	0.67	4.09	4.01
UNKNOWN	55	0	0	0.00	0.00	0.00
STATE TOTALS	626	27,510	18,862	0.69	100.00	100.00

*Total hunter trips from questionnaire returns.

Table 13. Summary of forest grouse bagged per hunter-day by region and county, 1987-94.

Region and County	Year							
	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	0.68	1.03	0.99	0.97	0.69	1.15	0.18	0.80
Cache	1.07	1.24	0.84	0.75	0.92	0.94	0.41	0.88
Davis	0.71	0.98	0.78	1.02	0.84	0.59	0.18	0.45
Morgan	1.00	0.99	1.23	0.94	0.94	1.06	0.16	0.66
Rich	1.56	0.92	0.42	0.52	0.62	0.76	0.34	0.59
Summit	1.25	0.86	0.89	0.49	0.72	0.77	0.40	0.82
Weber	1.41	0.99	1.00	0.73	0.51	1.01	0.51	0.51
REGIONAL TOTALS	1.12	1.07	0.88	0.74	0.76	0.92	0.37	0.72
<u>Central Region</u>								
Juab	1.14	0.86	0.71	0.88	0.65	0.79	0.84	0.56
Salt Lake	1.05	0.87	0.77	0.81	0.55	1.00	0.41	0.87
Sanpete	1.12	0.84	0.65	0.82	0.98	0.78	0.65	0.86
Tooele	1.24	1.33	1.75	1.03	1.03	1.19	0.37	1.02
Utah	1.04	1.08	0.99	0.91	0.97	0.84	0.77	0.59
Wasatch	0.94	0.74	0.78	0.83	0.76	1.25	0.26	0.52
REGIONAL TOTALS	1.07	0.97	0.90	0.90	0.89	0.92	0.52	0.70
<u>Southern Region</u>								
Beaver	0.91	1.31	0.86	0.85	0.95	1.44	1.17	0.64
Garfield	0.57	1.00	1.27	0.74	0.83	0.48	0.27	0.29
Iron	0.74	1.08	0.79	0.69	0.57	0.78	0.93	0.78
Kane	2.33	1.50	1.25	0.81	0.61	1.45	1.25	0.80
Millard	0.75	1.36	1.26	1.49	0.98	1.59	0.86	0.77
Piute	1.19	1.34	1.00	1.25	1.00	0.75	1.32	0.20
Sevier	1.00	1.18	1.23	1.02	0.94	1.30	0.49	0.71
Washington	0.17	0.10	0.00	0.00	1.83	2.00	0.00	0.60
Wayne	0.90	0.25	0.76	0.86	0.59	1.29	0.71	0.45
REGIONAL TOTALS	0.93	1.16	1.13	0.99	0.87	1.19	0.71	0.64
<u>Northeastern Region</u>								
Daggett	1.10	0.65	0.42	0.81	0.97	1.03	0.85	0.58
Duchesne	1.29	0.98	0.92	0.69	0.78	0.68	0.31	0.57
Uintah	1.63	0.91	0.67	1.09	1.00	1.01	0.66	0.53
REGIONAL TOTALS	1.43	0.88	0.69	0.93	0.93	0.94	0.59	0.55
<u>Southeastern Region</u>								
Carbon	0.92	0.48	0.37	0.47	0.64	0.83	0.73	0.78
Emery	0.96	1.06	0.60	0.81	0.78	0.88	0.18	0.48
Grand	1.91	0.81	1.14	1.12	2.14	0.52	1.12	0.00
San Juan	1.00	0.67	1.00	0.83	0.45	1.57	1.50	1.20
REGIONAL TOTALS	1.14	0.79	0.57	0.69	0.77	0.79	0.54	0.67
Unknown Counties	0.55	0.70	0.76	0.00	0.00	0.00	0.44	0.00
STATE TOTALS	1.09	1.04	0.90	0.83	0.82	0.96	0.50	0.69

Table 14. Percentage distribution of forest grouse harvest by region and county, 1987-94.

Region and County	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	1.62	3.83	5.02	6.51	5.53	4.83	1.99	6.15
Cache	14.98	21.10	15.18	15.47	17.45	17.65	12.36	19.01
Davis	1.83	3.14	1.96	3.28	2.89	2.48	0.63	1.68
Morgan	1.13	2.64	6.93	3.28	3.29	2.75	0.84	2.52
Rich	4.05	4.55	2.60	2.89	3.74	3.19	2.72	2.70
Summit	4.65	3.55	4.61	3.45	6.83	3.83	3.77	8.67
Weber	6.65	9.53	10.35	8.07	5.03	9.82	9.11	7.18
REGIONAL TOTALS	34.93	48.37	46.65	42.96	44.77	44.55	31.41	47.90
<u>Central Region</u>								
Juab	1.29	1.12	1.32	0.78	0.75	1.48	1.68	0.47
Salt Lake	1.18	1.40	1.50	0.72	0.80	2.12	0.94	1.86
Sanpete	6.43	4.70	4.56	5.40	4.34	3.31	4.19	5.69
Tooele	3.94	4.17	5.02	6.68	4.04	2.52	3.98	4.94
Utah	10.22	9.47	7.62	8.74	7.48	10.38	10.47	6.90
Wasatch	3.94	3.05	5.47	2.89	4.44	4.59	3.14	4.19
REGIONAL TOTALS	27.04	23.94	25.49	25.21	21.83	24.39	24.40	24.04
<u>Southern Region</u>								
Beaver	1.56	0.65	0.82	1.61	2.59	2.08	2.20	1.68
Garfield	0.64	0.74	1.73	1.45	1.00	0.84	1.36	0.37
Iron	1.40	1.77	1.41	1.39	1.94	1.56	7.96	1.68
Kane	0.37	0.18	0.23	0.72	0.95	1.28	1.57	0.37
Millard	1.13	1.77	3.51	2.89	2.24	3.23	3.35	2.14
Piute	2.05	2.80	0.96	3.34	2.04	0.84	3.46	0.37
Sevier	11.35	10.84	9.90	7.90	10.27	10.70	6.39	8.20
Washington	0.05	0.03	0.00	0.00	0.55	0.48	0.00	0.56
Wayne	0.48	0.09	0.73	1.00	0.65	0.72	1.78	0.47
REGIONAL TOTALS	19.09	18.92	19.92	20.31	22.23	21.72	28.06	15.84
<u>Northeastern Region</u>								
Daggett	1.73	0.93	0.46	1.39	1.65	1.28	1.78	2.70
Duchesne	4.75	1.55	1.60	1.39	2.24	1.20	1.36	1.58
Uintah	8.27	3.64	4.33	4.90	4.99	4.67	7.12	3.91
REGIONAL TOTALS	14.76	6.14	6.38	7.68	8.87	7.15	10.26	8.20
<u>Southeastern Region</u>								
Carbon	0.64	0.43	0.50	1.34	0.70	0.20	1.15	1.68
Emery	1.29	1.15	0.41	1.17	0.35	0.92	0.73	1.21
Grand	1.13	0.68	0.36	1.06	0.75	0.64	1.99	0.00
San Juan	0.43	0.12	0.18	0.28	0.50	0.44	0.31	1.12
REGIONAL TOTALS	3.51	2.40	1.46	3.84	2.29	2.20	4.19	4.01
Unknown Counties	0.64	0.21	0.73	0.00	0.00	0.00	1.68	0.00
STATE TOTALS	100.00							

Table 15. Percentage distribution of forest grouse hunting pressure by region and county, 1987-94.

Region and County	Year							
	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	2.60	3.84	4.55	5.60	6.59	4.04	5.48	5.30
Cache	15.26	17.65	16.22	17.22	15.55	18.07	14.88	14.76
Davis	2.84	3.32	2.25	2.69	2.82	4.04	1.78	2.56
Morgan	1.24	2.77	5.08	2.92	2.86	2.50	2.66	2.62
Rich	2.84	5.13	5.53	4.63	4.95	4.04	3.97	3.13
Summit	4.08	4.26	4.63	5.83	7.73	4.78	4.75	7.28
Weber	5.14	9.94	9.34	9.21	8.10	9.36	8.93	9.71
<u>REGIONAL TOTALS</u>	<u>34.02</u>	<u>46.93</u>	<u>47.60</u>	<u>48.10</u>	<u>48.61</u>	<u>46.84</u>	<u>42.45</u>	<u>45.37</u>
<u>Central Region</u>								
Juab	1.24	1.35	1.68	0.74	0.94	1.81	0.99	0.58
Salt Lake	1.24	1.67	1.76	0.74	1.19	2.04	1.15	1.47
Sanpete	6.27	5.77	6.31	5.51	3.64	4.08	3.24	4.54
Tooele	3.49	3.26	2.58	5.42	3.23	2.04	5.33	3.32
Utah	10.76	9.10	6.88	8.01	6.34	11.98	6.79	8.05
Wasatch	4.61	4.29	6.31	2.92	4.79	3.54	6.11	5.50
<u>REGIONAL TOTALS</u>	<u>27.63</u>	<u>25.46</u>	<u>25.52</u>	<u>23.33</u>	<u>20.13</u>	<u>25.50</u>	<u>23.60</u>	<u>23.45</u>
<u>Southern Region</u>								
Beaver	1.89	0.51	0.86	1.57	2.25	1.39	0.94	1.79
Garfield	1.24	0.77	1.23	1.62	0.98	1.69	2.56	0.89
Iron	2.07	1.71	1.60	1.67	2.82	1.93	4.28	1.47
Kane	0.17	0.12	0.16	0.74	1.27	0.85	0.63	0.32
Millard	1.65	1.35	2.50	1.62	1.88	1.96	1.93	1.92
Piute	1.89	2.16	0.86	2.22	1.68	1.08	1.31	1.28
Sevier	12.48	9.52	7.21	6.44	8.92	7.94	6.53	7.92
Washington	0.35	0.32	0.08	0.23	0.25	0.23	0.16	0.64
Wayne	0.59	0.38	0.86	0.97	0.90	0.54	1.25	0.70
<u>REGIONAL TOTALS</u>	<u>22.36</u>	<u>16.88</u>	<u>15.36</u>	<u>17.08</u>	<u>20.95</u>	<u>17.60</u>	<u>19.58</u>	<u>16.93</u>
<u>Northeastern Region</u>								
Daggett	1.71	1.48	0.98	1.44	1.39	1.19	1.04	3.19
Duchesne	4.02	1.64	1.56	1.67	2.37	1.69	2.19	1.92
Uintah	5.56	4.13	5.82	3.75	4.09	4.47	5.38	5.05
<u>REGIONAL TOTALS</u>	<u>11.30</u>	<u>7.26</u>	<u>8.36</u>	<u>6.85</u>	<u>7.86</u>	<u>7.36</u>	<u>8.62</u>	<u>10.16</u>
<u>Southeastern Region</u>								
Carbon	0.76	0.93	1.23	2.36	0.90	0.23	0.78	1.47
Emery	1.47	1.12	0.61	1.20	0.37	1.00	2.09	1.73
Grand	0.65	0.87	0.29	0.79	0.29	1.19	0.89	0.26
San Juan	0.47	0.19	0.16	0.28	0.90	0.27	0.10	0.64
<u>REGIONAL TOTALS</u>	<u>3.37</u>	<u>3.12</u>	<u>2.29</u>	<u>4.63</u>	<u>2.45</u>	<u>2.70</u>	<u>3.86</u>	<u>4.09</u>
Unknown Counties	1.30	0.32	0.86	0.00	0.00	0.00	1.88	0.00
<u>STATE TOTALS</u>	<u>100.00</u>							

Table 16. Statewide summary of forest grouse harvest statistics, 1963-94.

Year	Total Harvest					Hunter-Days			Grouse/Hunter-Day			Grouse/Hunter		
	Total	Hunters	Ruffed	Percent	Blue	Percent	Unknown	Percent	Total	Afield	Ruffed	Blue	Total	
1963	7,425	5,470	40.20	7,372	54.17	766	5.63	13,608	12,313	0.44	0.66	1.11	0.74	0.99
1964	6,487	5,354	42.19	6,685	52.68	652	5.14	12,691	10,566	0.51	0.63	1.20	0.82	1.03
1965	6,005	3,225	37.20	4,924	56.80	520	6.00	8,669	10,504	0.31	0.47	0.83	0.54	0.82
1966	6,683	6,966	56.54	4,659	37.81	696	5.65	12,321	12,387	0.56	0.38	0.99	1.04	0.68
1967	9,420	8,476	48.36	6,773	38.65	2,277	12.99	17,526	17,773	0.48	0.38	0.99	0.87	0.69
1968	13,061	17,048	52.59	12,604	38.88	2,762	8.52	32,414	26,537	0.64	0.47	1.22	1.30	0.96
1969	12,523	9,490	44.14	10,419	48.46	1,589	7.39	21,498	24,572	0.38	0.42	0.87	0.76	0.83
1970	12,775	15,590	48.87	13,515	42.37	2,793	8.76	31,898	26,619	0.59	0.51	1.20	1.22	1.06
1971	13,363	15,759	49.40	13,749	43.10	2,393	7.50	31,901	29,100	0.54	0.47	1.10	1.18	1.03
1972	16,640	20,648	48.56	19,221	45.21	2,649	6.23	42,518	38,940	0.53	0.49	1.09	1.24	1.16
1973	17,588	7,153	15.81	36,846	81.46	1,233	2.73	45,232	44,738	0.16	0.82	1.01	0.41	2.09
1974	21,920	24,561	39.34	32,236	51.63	5,642	9.04	62,439	55,258	0.44	0.58	1.13	1.12	1.47
1975	20,102	15,750	37.09	23,138	54.49	3,573	8.41	42,461	50,579	0.31	0.45	0.84	0.78	1.15
1976	21,186	23,551	37.13	35,660	56.21	4,225	6.66	63,436	56,422	0.42	0.63	1.12	1.11	1.68
1977	19,188	15,766	37.12	23,455	55.22	3,256	7.67	42,477	48,746	0.37	0.48	0.87	0.82	1.22
1978	25,318	30,340	37.20	46,651	57.20	4,567	5.60	81,558	72,732	0.42	0.64	1.12	1.20	1.84
1979	21,993	23,156	38.69	33,070	55.25	3,625	6.06	59,851	57,404	0.40	0.58	1.04	1.05	1.50
1980	19,511	15,457	33.96	27,588	60.60	2,477	5.44	45,522	49,899	0.31	0.55	0.91	0.79	1.41
1981	14,329	8,557	30.68	17,852	64.00	1,485	5.32	27,894	34,305	0.25	0.52	0.81	0.60	1.25
1982	12,384	7,509	34.48	12,138	55.74	2,131	9.79	21,778	28,767	0.26	0.42	0.76	0.60	0.98
1983	13,414	11,366	37.78	16,555	56.35	1,767	5.87	30,088	34,530	0.33	0.49	0.87	0.84	1.26
1984	11,511	6,780	33.24	12,647	62.01	969	4.75	20,396	27,244	0.25	0.46	0.75	0.59	1.10
1985	12,646	8,701	37.67	13,416	58.09	980	4.24	23,097	31,290	0.28	0.43	0.74	0.69	1.06
1986	12,117	8,819	36.95	14,156	59.31	894	3.75	23,869	30,312	0.29	0.47	0.79	0.73	1.17
1987	14,831	15,811	34.88	28,068	61.92	1,447	3.19	45,326	41,428	0.38	0.68	1.09	1.07	1.89
1988	16,947	19,100	35.66	31,556	58.91	2,906	5.43	53,562	51,726	0.37	0.61	1.04	1.13	1.86
1989	16,987	16,323	35.88	27,794	61.10	1,370	3.01	45,487	50,631	0.32	0.55	0.90	0.96	1.64
1990	14,591	11,010	28.29	26,115	67.10	1,797	4.62	38,922	44,452	0.25	0.59	0.83	0.75	1.79
1991	14,421	12,073	34.60	21,310	61.07	1,514	4.34	34,897	42,517	0.35	0.50	0.82	0.84	1.48
1992	15,000	15,017	33.73	29,146	65.47	355	0.80	44,518	46,136	0.33	0.63	0.96	1.00	1.94
1993	12,029	6,650	36.65	11,040	60.84	457	2.52	18,147	36,390	0.18	0.30	0.50	0.55	0.92
1994	9,827	6,908	36.62	11,865	62.90	89	0.47	18,862	27,510	0.25	0.43	0.88	0.70	1.21
Totals	(1963-94)	462,222	418,384	--	632,623	--	63,856	--	1,114,863	1,172,327	--	--	--	--
Averages	(1963-93)	14,593	13,273	38.54	20,024	55.55	2,057	5.90	35,355	36,930	0.38	0.52	0.95	0.88
														2.30

Table 17. Blue and ruffed grouse harvest statistics and hunt regulations, 1963-1994.

Year	Total		Total		Total		Hunter Days		Season Length		Aggregate Bag Limits	
	Ruffed Grouse	Blue Grouse	Harvest	Grouse Harvest	Hunters Afield	Afield	Open	Close	Days	?	Daily	Possession
1963	5,470	7,372	13,608	7,425	12,313	?	?	?	?	4	4	8
1964	5,354	6,685	12,691	6,487	10,566	9/26	10/16	21	4	4	4	8
1965	3,225	4,924	8,669	6,005	105,074	9/25	10/22	28	4	4	4	8
1966	6,966	4,659	12,321	6,683	12,387	9/24	10/21	28	4	4	4	8
1967	8,476	6,773	17,526	9,420	17,773	9/23	10/31	39	4	4	4	8
1968	17,048	12,604	32,414	13,061	26,537	9/28	10/29	32	4	4	4	8
1969	9,490	10,419	21,498	12,523	24,572	9/27	11/02	37	4	4	4	8
1970	15,590	13,515	31,898	12,775	26,619	9/26	11/06	42	4	4	4	8
1971	15,759	13,749	31,901	13,363	29,100	9/25	11/30	67	4	4	4	8
1972	20,648	19,221	42,518	16,640	38,940	9/23	11/30	69	4	4	4	8
1973	7,153	36,846	45,232	17,588	44,738	9/22	11/30	70	4	4	4	8
1974	24,561	32,236	62,439	21,920	55,258	9/28	11/30	64	4	4	4	8
1975	15,750	23,138	42,461	20,102	50,579	9/20	11/30	72	4	4	4	8
1976	23,551	35,660	63,436	21,186	56,422	9/18	11/30	74	4	4	4	8
1977	15,766	23,455	42,477	19,188	48,746	9/17	11/30	75	4	4	4	8
1978	30,340	46,651	81,558	25,318	72,732	9/16	11/30	76	4	4	4	8
1979	23,156	33,070	59,851	21,993	57,404	9/15	11/30	77	4	4	4	8
1980	15,457	27,588	45,522	19,511	49,899	9/20	11/30	72	4	4	4	8
1981	8,557	17,832	27,894	14,329	34,305	9/19	11/30	73	4	4	4	8
1982	7,509	12,138	21,778	12,384	28,767	9/18	11/30	74	4	4	4	8
1983	11,366	16,955	30,088	13,414	34,530	9/17	11/30	75	4	4	4	8
1984	6,780	12,647	20,396	11,511	27,244	9/15	11/30	77	4	4	4	8
1985	8,701	13,416	23,097	12,646	31,290	9/14*	11/30	78	4	4	4	8
1986	8,819	14,156	23,869	12,117	30,312	9/13	11/30	79	4	4	4	8
1987	15,811	28,068	45,326	14,831	41,428	9/12	11/30	80	4	4	4	8
1988	19,100	31,556	53,562	16,947	51,726	9/11	11/30	82	4	4	4	8
1989	16,323	27,794	45,487	16,987	50,631	9/09	11/30	82	4	4	4	8
1990	11,010	26,115	38,922	14,591	44,452	9/08	11/30	82	4	4	4	8
1991	12,073	21,310	34,897	14,421	42,517	9/14	11/30	77	4	4	4	8
1992	15,017	29,146	44,518	15,000	46,136	9/12	11/30	79	4	4	4	8
1993	6,650	11,040	18,147	12,029	36,390	9/11	11/30	82	4	4	4	8
1994	6,908	11,865	18,862	9,827	27,510	9/10	11/30	81	4	4	4	8

* Season opener changed to the second Saturday in September from the third Saturday in September.

** From 1950 to 1963 a grouse stamp was required to hunt any grouse. In 1964, the entire state was opened to hunting without a stamp.

Table 18. Forest grouse field bag check summary, 1994.

Region and County	ALL HUNTS					COMPLETE HUNTS				
	Total Parties	Total Hunters	Total Hours	Birds/ 100 Hr	Complete Hunts	Total Hunters	Total Hours	Birds/ Hunter	Total Birds/ 100 Hr	
Northern Region										
Box Elder	-	-	-	-	-	-	-	-	-	-
Cache	84	133	572	79	14	84	133	572	79	0.59
Davis	-	-	-	-	-	-	-	-	-	-
Morgan	-	-	-	-	-	-	-	-	-	-
Rich	139	128	497	76	15	139	128	497	76	0.59
Summit	-	-	-	-	-	-	-	-	-	-
Weber	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	223	261	1,069	155	14	223	261	1,069	155	0.59
Central Region										
Juab	-	-	-	-	-	-	-	-	-	-
Salt Lake	-	-	-	-	-	-	-	-	-	-
Sanpete	-	-	-	-	-	-	-	-	-	-
Tooele	-	-	-	-	-	-	-	-	-	-
Utah	-	-	-	-	-	-	-	-	-	-
Wasatch	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-
Southern Region										
Beaver	-	-	-	-	-	-	-	-	-	-
Garfield	-	-	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-	-	-
Kane	-	-	-	-	-	-	-	-	-	-
Millard	-	-	-	-	-	-	-	-	-	-
Piute	-	-	-	-	-	-	-	-	-	-
Sherman	-	-	-	-	-	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-
Wayne	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-
Northeastern Region										
Daggett	-	-	-	-	-	-	-	-	-	-
Duchesne	-	-	-	-	-	-	-	-	-	-
Uintah	28	69	244	14	6	22	55	188	14	0.25
REGIONAL TOTALS	28	69	244	14	6	22	55	188	14	0.25
Southeastern Region										
Carbon	-	-	-	-	-	-	-	-	-	-
Emery	-	-	-	-	-	-	-	-	-	-
Grand	-	-	-	-	-	-	-	-	-	-
San Juan	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-
STATE TOTALS	251	330	1,313	169	13	245	316	1,257	169	0.53
										13

Table 19. Forest grouse hunter success trends as determined by field bag checks, 1988-94.

Region and County	1989		1990		1991		1992		1993		1994	
	Birds/ Hunter	Birds/ 100 Hr										
Northern Region												
Box Elder	2.60	42	2.00	300	1.43	30	-	-	-	-	-	-
Cache	0.63	8	--	--	0.23	-	0.58	-	-	-	0.59	14
Davis	0.50	40	--	--	--	-	-	-	-	-	-	-
Morgan	--	--	--	--	--	-	-	-	-	-	-	-
Rich	0.32	7	--	--	--	-	0.77	-	-	-	0.59	15
Summit	--	--	--	--	--	-	-	-	-	-	-	-
Weber	0.53	19	1.33	33	0.32	-	-	-	-	-	-	-
REGIONAL TOTALS	0.62	14	1.60	57	0.47	55	0.70	-	-	-	0.59	14
Central Region												
Juab	2.30	56	--	--	--	-	-	-	-	-	-	-
Salt Lake	--	--	--	--	--	-	-	-	-	-	-	-
Sanpete	0.86	33	--	--	--	-	-	-	-	-	-	-
Tooele	2.00	29	1.60	47	0.22	8	-	-	-	-	-	-
Utah	1.90	39	0.97	31	0.41	11	0.82	18	-	-	-	-
Wasatch	--	--	--	--	--	-	-	-	-	-	-	-
REGIONAL TOTALS	1.41	33	1.04	33	0.36	11	0.82	18	-	-	-	-
Southern Region												
Beaver	--	--	--	--	--	-	-	-	-	-	-	-
Garfield	2.75	550	--	--	--	-	-	-	-	-	-	-
Iron	2.25	--	--	--	--	-	-	-	-	-	-	-
Kane	--	--	--	--	--	-	-	-	-	-	-	-
Millard	--	--	--	--	--	-	-	-	-	-	-	-
Piute	--	--	--	--	--	-	-	-	-	-	-	-
Sevier	--	--	--	--	--	-	-	-	-	-	-	-
Washington	--	--	--	--	--	-	-	-	-	-	-	-
Wayne	--	--	--	--	--	-	-	-	-	-	-	-
REGIONAL TOTALS	2.50	1000	--	--	--	-						
Northeastern Region												
Daggett	0.85	32	0.60	9	2.22	43	1.17	50	-	-	-	-
Duchesne	--	--	--	--	--	-	-	-	-	-	-	-
Uintah	0.32	7	1.95	60	3.33	111	1.50	100	-	-	0.25	7
REGIONAL TOTALS	0.40	9	1.34	30	2.50	55	1.25	59	-	-	0.25	7
Southeastern Region												
Carbon	1.20	32	--	--	--	-	-	-	-	-	-	-
Emery	--	--	--	--	--	-	-	-	-	-	-	-
Grand	--	--	--	--	--	-	-	-	-	-	-	-
San Juan	--	--	--	--	--	-	-	-	-	-	-	-
REGIONAL TOTALS	1.20	32	--	--	--	-						
STATE TOTALS	0.68	16	1.14	33	0.50	32	0.74	87	-	-	0.53	13

Table 20. Sex and age composition of harvested blue grouse, 1994.

Region and County	Sample Size	Adults			Young			Young/ 100 Adults	Young/ 100 Hens
		M	F	Total	M	F	Total		
Northern Region									
Box Elder	14	3	3	6	3	5	8	133	267
Cache	102	18	11	29	25	36	61	210	555
Davis	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	116	21	14	35	28	41	69	197	493
Central Region									
Juab	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--
Utah	33	5	2	7	7	19	26	371	1,300
Wasatch	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	33	5	2	7	7	19	26	371	1,300
Southern Region									
Beaver	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--
Northeastern Region									
Daggett	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--
Southeastern Region									
Carbon	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--
STATE TOTALS	149	26	16	42	35	60	95	226	594

Table 21. Sex and age composition of harvested ruffed grouse, 1994.

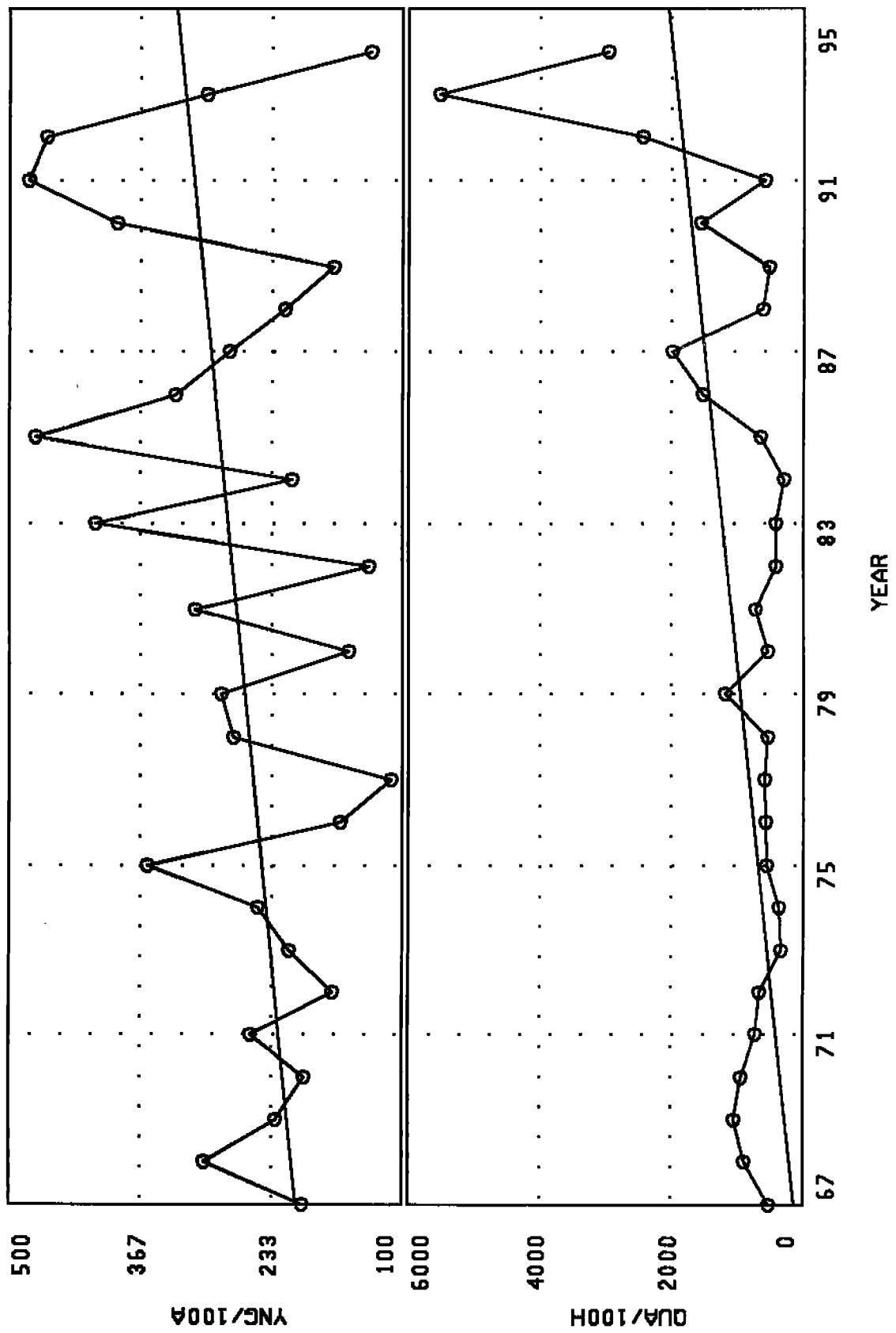
Region and County	Sample Size	Adults			Young			Young/ 100 Adults	Young/ 100 Hens
		M	F	Total	M	F	Total		
Northern Region									
Box Elder	--	--	--	--	--	--	--	--	--
Cache	47	--	--	15	--	--	32	213	--
Davis	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	47	--	--	15	--	--	32	213	--
Central Region									
Juab	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--
Southern Region									
Beaver	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--
Northeastern Region									
Daggett	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--
Southeastern Region									
Carbon	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--
STATE TOTALS	47	--	--	15	--	--	32	213	--

Production of California and Gambel's quail decreased 56 percent from 1993. Below normal precipitation and above normal temperatures during the brood-rearing season may have contributed to decreased production.

Statewide harvest statistics, when compared to 1993, showed a decrease in total hunters and in total harvest. Hunter success (birds per hunter-day) decreased 15 percent and remained below average statewide. Hunter-days afield decreased 19 percent from 1993. The Southern Region accounted for 50 percent of the statewide quail harvest and 44 percent of quail hunter pressure.

California quail are found primarily in urban areas of Utah. Hunter access to these birds is limited.

FIGURE 1. QUAIL PRODUCTION
INDICES, 1967-94.



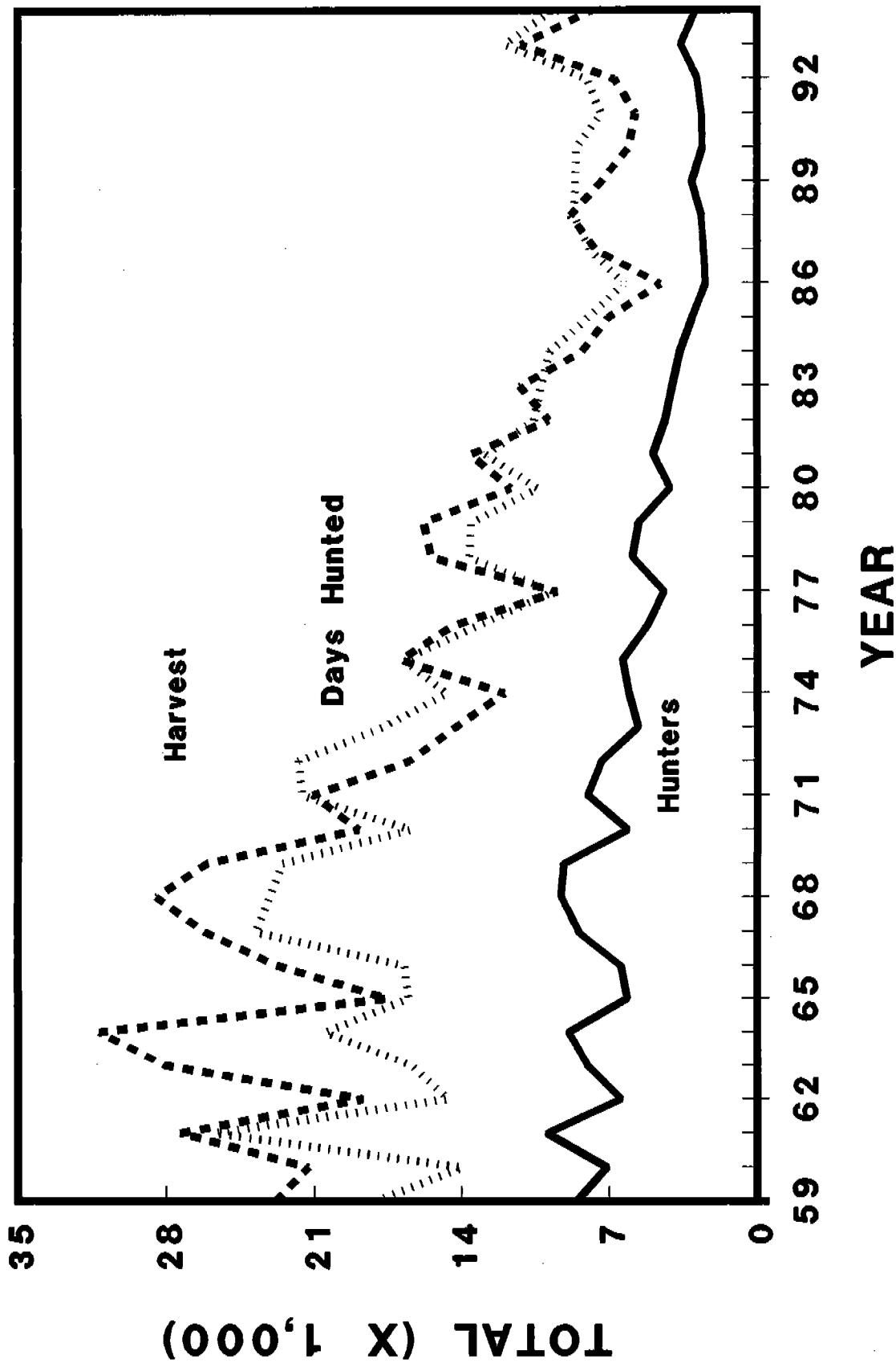


Figure 2. Statewide trends of quail harvest statistics, 1959-94.

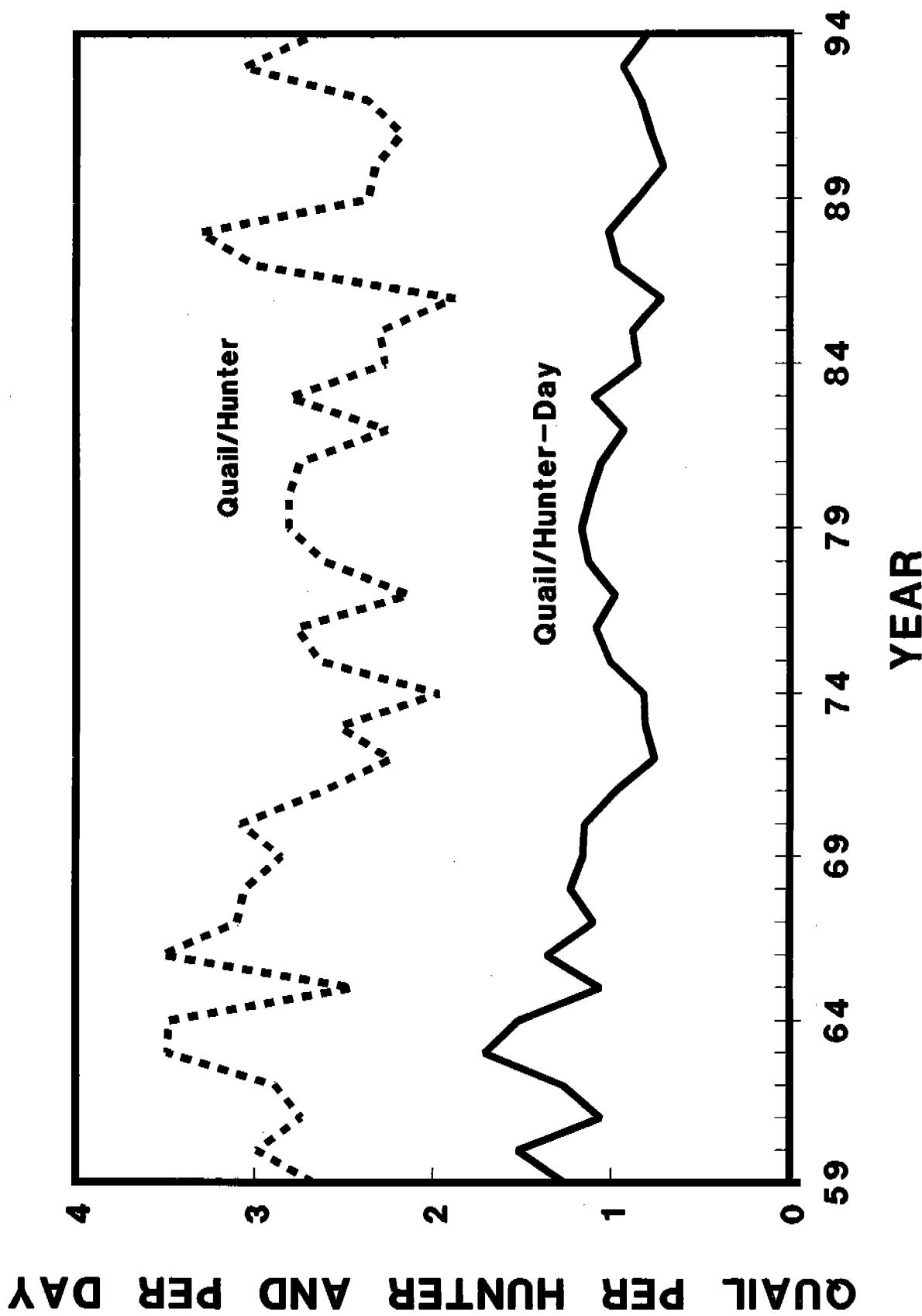


Figure 3. Statewide trends of quail hunter success rates, 1959-94.

Brood Counts

Results of the annual random brood counts for quail for 1994 are shown in Table 1 of this section. Long-term trends of young per adult ratios, mean brood size and quail observed per 100 hours are shown in Tables 2-4 and Figure 1. Gambel's quail long period waterhole count trends are shown in Table 10. Survey results for 1994 compared to 1993 and the previous 10-year (1984-93) average follow:

		<u>Percent change from 1993</u>	<u>Average</u>
	<u>1994</u>		
Total quail observed	237	-67	-21
Young per 100 adults	132	-56	-60
Mean brood size	6.00	-1	-16
Quail observed per 100 hours	2,963	-46	+89
Total hours effort	8	-56	-69

Brood count effort decreased 56 percent in 1994. Seven hundred and thirty seven quail were observed in 1994 which was 21 percent below average. Total hours of effort on California quail brood counts was 8 which is 69 percent below average for the last 10 years. The production index of young per 100 adults for Gambel's quail was 55 percent lower than what it was the previous year. Production statewide decreased to 60 percent below the long-term average.

Harvest

Results of the annual hunter questionnaire for 1994 are shown in Table 5. Long-term trends of quail bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 6-8, and total statewide harvest statistics in Table 9.

Comparison of the 1994 season to 1993 and the previous 35-year average follow:

		<u>Percent change from 1993</u>	<u>Average</u>
	<u>1994</u>		
Quail hunters	2,936	-20	-45
Quail harvested	7,822	-30	-47
Hunter-days afield	9,721	-19	-28
Quail per hunter-day	0.80	-15	-24
Quail per hunter	2.66	-13	+1

Quail hunters decreased 20 percent from 1993, and remain 45 percent below the long-term average. Quail harvest decreased 30 percent from 1993.

Long-term quail harvest statistics are shown in Figures 2 and 3.

Field Bag Checks

A summary of field bag check data for 1994 is shown in Table 11. The Southeastern Region was the only region to collect data in 1994.

Table 1. Quail summer inventory, 1994.

Region and County	Distinct Broods			Mixed Young & Adults			Total			Young/ 100 Adults			Vehicle Miles			Hours of Effort		
	#	Adults	Young	Mean Brood	Adults	Young	Total	Young	Adults	Young	100 Adults	Miles	Vehicle	Horse	Walk	Total	Birds/ 100 Hr	
Northern Region																		
Box Elder	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cache	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Davis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Morgan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Rich	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Summit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Weber	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Central Region																		
Juab	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Salt Lake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sanpete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tooele	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Utah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Wasatch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Southern Region																		
Beaver	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Garfield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Iron	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Kane*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Millard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Pine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sherman	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Washington*	19	48	114	6.00	19	21	35	102	135	132	-	-	-	-	-	-	8	
Wayne*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	19	48	114	6.00	19	21	35	102	135	132	-	-	-	-	-	-	8	
Northeastern Region																		
Daggett	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Duchesne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Uintah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Southeastern Region																		
Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Emery	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Grand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
San Juan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
STATE TOTALS	19	48	114	6.00	19	21	35	102	135	132	-	-	-	-	-	-	8	
*Washington, Kane and Wayne Counties, Gambel's quail; all others, California quail.																		

Table 2. Trend of quail young per 100 adults, 1984-94.

Region and County	Year									Average 1984-1993
	1984	1985	1986	1987	1988	1989	1990	1991	1992	
Northern Region										
Box Elder	-	-	-	-	-	-	-	-	-	-
Cache	-	-	-	-	-	-	-	-	-	-
Davis	-	-	-	-	-	-	-	-	-	-
Morgan	-	1,050	-	-	-	-	-	-	-	-
Rich	-	-	-	-	-	-	-	-	-	-
Summit	-	-	-	-	-	-	-	-	-	-
Weber	125	-	-	1,400	-	-	-	-	-	-
REGIONAL TOTALS	125	1,050	-	1,400	224	-	656	-	-	691
Central Region										
Juab	-	-	-	-	-	-	-	-	-	-
Salt Lake	-	-	-	-	-	-	-	-	-	-
Sanpete	-	-	-	-	-	-	-	-	-	-
Tooele	-	-	-	-	-	-	-	-	-	-
Utah	-	700	700	220	-	-	-	900	-	-
Wasatch	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	700	700	220	-	-	900	-	-	630
Southern Region										
Beaver	-	-	-	-	-	-	-	-	-	-
Garfield	-	-	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-	-	-
Kane*	-	-	-	-	-	-	-	-	-	-
Millard	133	138	44	545	790	-	179	-	-	-
Pine	-	-	-	-	-	-	-	-	-	-
Sevier	-	-	-	-	-	-	-	-	-	-
Washington*	224	571	412	250	126	194	367	-	-	294
Wayne*	-	-	-	-	-	-	-	-	-	132
REGIONAL TOTALS	213	434	456	272	242	194	252	-	-	294
Northeastern Region										
Daggett	-	-	-	-	-	-	-	-	-	-
Duchesne	-	-	-	-	300	-	-	375	-	400
Uintah	-	-	-	-	126	420	667	-	370	333
REGIONAL TOTALS	-	-	-	-	177	420	667	375	370	336
Southeastern Region										
Carbon	-	-	-	-	-	-	-	-	767	-
Emery	-	-	-	-	-	-	-	-	-	-
Grand	-	-	-	-	-	-	-	-	-	-
San Juan	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	767	-
STATE TOTALS	412	213	473	331	276	220	391	480	462	299
*Washington, Kane and Wayne Counties, Gambel's quail; all others, California quail.										

Table 3. Trend of average brood size for quail, 1984-94.

Region and County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Average
Northern Region												
Box Elder	--	--	--	--	--	--	--	--	--	--	--	--
Cache	--	--	--	--	--	6.33	--	--	--	--	--	--
Davis	--	--	10.50	--	--	--	--	11.80	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	3.75	--	--	--	--	14.00	--	--	--	--	--	--
REGIONAL TOTALS	--	10.50	--	14.00	5.33	--	11.80	--	--	--	--	10.41
Central Region												
Juab	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	--	7.00	7.50	11.00	--	--	--	9.00	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	7.00	7.50	11.00	--	--	--	9.00	--	--	--	8.63
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane*	--	--	--	--	--	--	--	--	--	--	--	--
Millard	4.00	9.00	1.80	12.00	11.28	--	12.50	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington*	5.09	8.43	7.85	5.59	4.64	--	11.00	--	--	6.05	6.00	--
Wayne*	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	5.06	8.56	6.64	6.16	7.22	--	11.00	--	--	6.05	6.00	7.24
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	9.00	--	--	--	4.00	--	--
Uintah	--	--	--	--	8.50	4.50	6.70	--	7.40	7.00	--	--
REGIONAL TOTALS	--	--	--	8.15	4.50	6.70	--	7.40	6.25	--	6.60	--
Southeastern Region												
Carbon	--	--	--	--	--	--	--	--	7.67	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	7.67	--	--	7.67
STATE TOTALS	5.06	8.62	6.70	6.62	7.25	4.50	10.45	9.00	7.50	6.07	6.00	7.18

*Washington, Kane and Wayne Counties, Gambel's quail; all others, California quail.

Table 4. Trend of quail observed per 100 hours, 1984-94.

Region and County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Average
Northern Region												
Box Elder	-	-	-	-	-	-	-	-	-	-	-	-
Cache	-	-	-	-	-	-	-	-	-	-	-	-
Davis	-	-	-	-	-	-	-	-	-	-	-	-
Morgan	-	-	-	-	-	-	-	-	-	-	-	-
Rich	-	-	-	-	-	-	-	-	-	-	-	-
Summit	-	-	-	-	-	-	-	-	-	-	-	-
Weber	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	867
Central Region												
Juab	-	-	-	-	-	-	-	-	-	-	-	-
Salt Lake	-	-	-	-	-	-	-	-	-	-	-	-
Sanpete	-	-	-	-	-	-	-	-	-	-	-	-
Tooele	-	-	-	-	-	-	-	-	-	-	-	-
Utah	-	-	320	2,000	1,600	-	-	-	-	1,000	-	-
Wasatch	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	320	2,000	1,600	-	-	-	-	1,000	-	1,230
Southern Region												
Beaver	-	-	-	-	-	-	-	-	-	-	-	-
Garfield	-	-	-	-	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-	-	-	-	-
Kane*	-	-	-	-	-	-	-	-	-	-	-	-
Millard	177	344	867	1,303	1,271	-	-	-	975	-	-	-
Piute	-	-	-	-	-	-	-	-	-	-	-	-
Sevier	-	-	-	-	-	-	-	-	-	-	-	-
Washington*	380	783	1,604	2,029	530	53	-	1,050	-	-	7,788	2,963
Wayne*	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	357	663	1,484	1,958	527	53	1,013	-	-	7,788	2,963	1,730
Northeastern Region												
Daggett	-	-	-	-	-	-	-	-	-	-	-	-
Duchesne	-	-	-	-	-	356	-	-	475	-	250	-
Uintah	-	-	-	-	-	1,800	371	767	-	4,700	3,033	-
REGIONAL TOTALS	-	-	-	-	-	717	371	767	475	4,700	1,920	850
Southeastern Region												
Carbon	-	-	-	-	-	-	-	-	-	1,300	-	-
Emery	-	-	-	-	-	-	-	-	-	-	-	-
Grand	-	-	-	-	-	-	-	-	-	-	-	-
San Juan	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	1,300	-	1,300
STATE TOTALS	297	645	1,519	1,984	672	524	1,564	580	2,433	5,531	2,963	1,570

*Washington, Kane and Wayne Counties, Gambel's quail; all others, California quail.

Table 5. Summary of quail hunter success and distribution of harvest and hunting pressure by region and county, 1994.

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD	BIRDS BAGGED	BIRDS PER HUNTER-DAY	% OF PRESSURE	% OF HARVEST
NORTHERN REGION						
BOX ELDER	4	140	105	0.75	1.45	1.35
CACHE**	2	123	228	1.86	1.27	2.92
DAVIS	6	193	123	0.64	1.99	1.57
MORGAN**	2	70	0	0.00	0.72	0.00
RICH**	1	17	70	4.00	0.18	0.90
SUMMIT**	0	0	0	0.00	0.00	0.00
WEBER	11	632	140	0.22	6.51	1.80
REGIONAL TOTALS	26	1,177	667	0.57	12.12	8.54
CENTRAL REGION						
JUAB	2	52	87	1.67	0.54	1.12
SALT LAKE	4	175	246	1.40	1.81	3.15
SANPETE**	1	17	17	1.00	0.18	0.22
TOOELE	3	123	175	1.43	1.27	2.25
UTAH	25	1,318	826	0.63	13.56	10.56
WASATCH**	3	70	140	2.00	0.72	1.80
REGIONAL TOTALS	38	1,757	1,494	0.85	18.08	19.10
SOUTHERN REGION						
BEAVER**	3	175	70	0.40	1.81	0.90
GARFIELD**	0	0	0	0.00	0.00	0.00
IRON**	3	210	210	1.00	2.17	2.70
KANE	0	0	0	0.00	0.00	0.00
MILLARD	12	527	386	0.73	5.43	4.94
PIUTE	0	0	0	0.00	0.00	0.00
SEVIER	2	35	17	0.50	0.36	0.22
WASHINGTON	39	3,322	3,076	0.93	34.18	39.33
WAYNE**	1	17	87	5.00	0.18	1.12
REGIONAL TOTALS	60	4,289	3,849	0.90	44.12	49.22
NORTHEASTERN REGION						
DAGGETT	0	0	0	0.00	0.00	0.00
DUCHESNE	11	544	597	1.10	5.61	7.64
UINTAH	18	966	738	0.76	9.95	9.44
REGIONAL TOTALS	29	1,511	1,335	0.88	15.55	17.08
SOUTHEASTERN REGION						
CARBON	2	52	0	0.00	0.54	0.00
EMERY	13	826	474	0.57	8.50	6.07
GRAND	1	87	0	0.00	0.90	0.00
SAN JUAN	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	16	966	474	0.49	9.95	6.07
UNKNOWN	7	17	0	0.00	0.18	0.00
STATE TOTALS	176	9,721	7,822	0.80	100.00	100.00

*Total hunter-trips from questionnaire returns.

**Closed to quail hunting in 1994.

Table 6. Summary of quail bagged per hunter-day by region and county, 1987-94.

Region and County		1987	1988	1989	1990	1991	1992	1993	1994	Year
<u>Northern Region</u>										
Box Elder	0.23	0.80	0.90	0.71	0.38	1.21	0.36	0.75		
Cache	0.43	0.22*	0.20*	0.10*	0.00*	1.00*	0.00*	1.86*		
Davis	0.43	0.74	0.67	0.15	0.83	0.60	1.25	0.64		
Morgan	2.00	1.00*	0.00*	2.00*	0.00*	0.00*	0.14*	0.00*		
Rich	0.00	1.00*	0.00*	0.00*	0.00*	0.00*	0.00*	4.00*		
Summit	0.00	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*		
Weber	0.11	0.35	0.21	0.50*	0.54	0.56	0.73	0.22		
REGIONAL TOTALS	0.35	0.60	0.38	0.39	0.41	0.63	0.55	0.57		
<u>Central Region</u>										
Juab	0.00	1.38	0.00	0.19	7.25	0.00	1.50	1.67		
Salt Lake	0.83	1.18	0.50	0.42	2.17	1.89	0.00	1.40		
Sanpete	0.86	0.80*	0.25*	0.00*	0.00*	0.00*	1.00*	1.00*		
Tooele	1.00	1.24*	3.25*	0.60*	0.29*	0.00*	0.00*	1.43*		
Utah	0.59	0.46	0.84	0.75	0.61	0.54	0.48	0.63		
Wasatch	0.50	1.13*	0.00	0.00*	0.00*	0.00*	0.00*	2.00*		
REGIONAL TOTALS	0.63	0.80	0.87	0.55	0.88	0.61	0.47	0.85		
<u>Southern Region</u>										
Beaver	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.40*		
Garfield	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00*		
Iron	0.00	0.00	1.67	0.00	0.00	0.00	1.63	1.00*		
Kane	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Millard	0.96	0.00	0.90	1.06	0.08	1.50	0.58	0.73		
Piute	2.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Sevier	0.00	1.50	0.00	0.00	1.80	0.47	0.43	0.50		
Washington	2.33	2.30	1.26	0.60	0.84	1.04	1.57	0.93		
Wayne	0.00	2.00	0.80	0.00	0.00	0.00	0.00	5.00*		
REGIONAL TOTALS	1.93	2.08	1.19	0.66	0.71	1.01	1.25	0.90		
<u>Northeastern Region</u>										
Daggett	0.50	0.00	0.00	0.00	1.00	0.00	0.00	0.00		
Duchesne	1.86	0.89	0.62	0.91	1.16	1.01	1.04	1.10		
Uintah	0.52	0.87	0.73	0.98	0.47	0.90	0.63	0.76		
REGIONAL TOTALS	0.81	0.88	0.68	0.95	0.65	0.95	0.82	0.88		
<u>Southeastern Region</u>										
Carbon	1.00	0.38	5.00	1.11	4.50	1.12	1.33	0.00		
Emery	1.06	1.11	0.50	1.86	2.11	0.97	0.92	0.57		
Grand	0.50	0.80	0.00	2.00	0.00	0.00	0.00	0.00		
San Juan	0.00	0.00	8.00	0.00	0.00	0.00	0.00	0.00		
REGIONAL TOTALS	0.85	0.77	2.00	1.68	2.85	1.02	0.91	0.49		
Unknown counties	0.00	2.00	0.00	0.00	0.00	0.00	1.50	0.00		
STATE TOTALS	0.97	1.02	0.86	0.71	0.78	0.84	0.94	0.80		

*Closed Season

Table 7. Percentage distribution of quail harvest by region and county, 1987-94.

Region and County	1987	1988	1989	1990	1991	1992	1993	1994	Year
<u>Northern Region</u>									
Box Elder	0.96	1.50	2.53	4.05	1.51	4.45	0.68	1.35	
Cache	1.92	0.37*	0.28*	0.34*	0.00*	1.31*	0.00*	2.92*	
Davis	1.92	6.98	1.69	1.35	1.51	2.36	1.70	1.57	
Morgan	0.64	0.18*	0.00*	0.68*	0.00*	0.00*	0.17*	0.00*	
Rich	0.00	0.18*	0.00*	0.00*	0.00*	0.00*	0.00*	0.90*	
Summit	0.00	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	
Weber	0.32	1.32	1.97	5.41	2.11	3.67	3.74	1.80	
REGIONAL TOTALS	5.76	10.56	6.46	11.83	5.12	11.78	6.28	8.54	
<u>Central Region</u>									
Juab	0.00	4.15	0.00	1.69	8.74	0.00	0.51	1.12	
Salt Lake	1.60	3.77	0.84	2.70	3.92	4.45	0.00	3.15	
Sanpete	3.84	0.75*	0.56*	0.00*	0.00*	0.00*	0.17*	0.22*	
Tooele	0.64	6.79*	3.65*	1.01*	0.60*	0.00*	0.00*	2.25	
Utah	18.58	9.43	21.35	16.89	17.17	12.31	8.49	10.56	
Wasatch	0.64	5.09*	0.00*	0.00*	0.00	0.00*	0.00*	1.80*	
REGIONAL TOTALS	25.32	30.00	26.41	22.30	30.43	16.76	9.17	19.10	
<u>Southern Region</u>									
Beaver	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90*	
Garfield	0.00	2.83	0.00	0.00	0.00	0.00	0.00	0.00*	
Iron	0.00	1.88	1.40	0.00	0.00	0.00	2.21	2.70*	
Kane	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Millard	7.69	0.00	5.34	5.74	0.90	6.28	4.41	4.94	
Piute	2.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Sevier	0.00	0.56	0.00	0.00	2.71	1.83	2.55	0.22	
Washington	42.62	27.73	32.30	17.57	34.64	13.88	48.05	39.33	
Wayne	0.00	0.75	1.12	0.00	0.00	0.00	0.00	1.12*	
REGIONAL TOTALS	53.20	33.77	40.17	23.31	38.26	21.99	57.22	49.22	
<u>Northeastern Region</u>									
Daggett	0.32	0.00	0.00	0.00	0.30	0.00	0.00	0.00	
Duchesne	4.16	6.41	9.55	7.10	6.63	18.33	9.00	7.64	
Uintah	3.84	11.32	2.92	13.85	8.13	18.85	6.11	9.44	
REGIONAL TOTALS	8.33	17.73	22.47	20.95	15.06	37.18	15.11	17.08	
<u>Southeastern Region</u>									
Carbon	0.32	0.56	1.40	3.38	5.42	4.97	0.68	0.00	
Emery	5.44	1.88	0.84	17.57	5.72	7.33	7.98	6.07	
Grand	1.60	0.75	0.00	0.68	0.00	0.00	0.00	0.00	
San Juan	0.00	0.00	2.25	0.00	0.00	0.00	0.00	0.00	
REGIONAL TOTALS	7.37	3.20	4.49	21.62	11.15	12.31	8.66	6.07	
Unknown counties	0.00	4.71	0.00	0.00	0.00	0.00	3.57	0.00	
STATE TOTALS	100.00								

*Closed Season

Table 8. Percentage distribution of quail hunting pressure by region and county, 1987-94.

Region and County	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	4.02	1.92	2.41	4.09	3.06	3.08	1.75	1.45
Cache	4.33	1.73*	1.20*	2.40*	1.41*	1.10*	1.75*	1.27*
Davis	4.33	9.61	2.17	6.25	1.41	3.30	1.27	1.99
Morgan	0.30	0.19*	0.96*	.24*	0.00*	2.64*	1.11*	0.72*
Rich	0.00	0.19*	0.00*	0.00*	0.00*	0.00*	0.00*	0.18*
Summit	0.30	0.57*	0.00*	0.72*	0.71*	0.00*	0.00*	0.00*
Weber	2.78	3.84	7.95	7.69	3.06	5.51	4.77	6.51
<u>REGIONAL TOTALS</u>	<u>16.08</u>	<u>8.07</u>	<u>14.70</u>	<u>21.39</u>	<u>9.65</u>	<u>15.64</u>	<u>10.65</u>	<u>12.12</u>
<u>Central Region</u>								
Juab	0.30	3.07	0.00	6.49	0.94	0.22	0.32	0.54
Salt Lake	1.85	3.26	1.45	4.57	1.41	1.98	0.64	1.81
Sanpete	4.33	0.96*	1.93*	0.24*	0.94*	0.00*	0.16*	0.18*
Tooele	0.61	5.57*	0.96*	1.20	1.65*	1.54*	0.48*	1.27*
Utah	30.65	20.76	21.69	16.11	22.12	19.16	16.54	13.56
Wasatch	1.23	4.61*	0.00*	0.24*	0.00*	0.22*	0.00*	0.72*
<u>REGIONAL TOTALS</u>	<u>38.99</u>	<u>38.26</u>	<u>26.03</u>	<u>28.85</u>	<u>27.06</u>	<u>23.13</u>	<u>18.13</u>	<u>18.08</u>
<u>Southern Region</u>								
Beaver	0.00	0.00	0.00	0.00	0.00	0.00	0.16	1.81
Garfield	0.00	0.57	0.00	0.00	0.00	0.00	0.00	0.00
Iron	0.00	0.38	0.72	0.00	0.00	0.22	1.27	2.17
Kane	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Millard	7.73	2.50	5.06	3.85	8.47	3.52	7.15	5.43
Piute	1.23	0.00	0.00	0.24	0.00	0.00	0.00	0.00
Sevier	0.00	0.38	0.00	0.00	1.18	3.30	5.56	0.36
Washington	17.64	12.30	21.93	20.91	34.24	11.23	28.62	34.18
Wayne	0.00	0.38	1.20	0.00	0.00	0.00	0.16	0.18
<u>REGIONAL TOTALS</u>	<u>26.62</u>	<u>16.52</u>	<u>28.92</u>	<u>25.00</u>	<u>41.89</u>	<u>18.28</u>	<u>42.93</u>	<u>44.12</u>
<u>Northeastern Region</u>								
Daggett	0.61	0.00	0.00	0.00	0.24	0.00	0.00	0.00
Duchesne	2.16	7.30	13.25	5.53	4.47	15.20	8.11	5.61
Uintah	7.12	13.26	15.18	10.10	13.41	17.62	9.06	9.95
<u>REGIONAL TOTALS</u>	<u>9.90</u>	<u>20.57</u>	<u>28.44</u>	<u>15.63</u>	<u>18.12</u>	<u>32.82</u>	<u>17.17</u>	<u>15.55</u>
<u>Southeastern Region</u>								
Carbon	0.30	1.53	0.24	2.16	0.94	3.74	0.48	0.54
Emery	4.95	1.73	1.45	6.73	2.12	6.39	8.11	8.50
Grand	3.09	0.96	0.00	0.24	0.00	0.00	0.32	0.90
San Juan	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00
<u>REGIONAL TOTALS</u>	<u>8.34</u>	<u>4.22</u>	<u>1.93</u>	<u>9.13</u>	<u>3.06</u>	<u>10.13</u>	<u>8.90</u>	<u>9.95</u>
Unknown counties	0.00	2.30	0.00	0.00	0.24	0.00	2.23	0.18
<u>STATE TOTALS</u>	<u>100.00</u>							

*Closed Season

Table 9. Statewide summary of quail harvest statistics, 1951-94.

Year	Total Hunters	Total Harvest	Hunter-Days Afield	Quail Per Hunter-Day	Quail Per Hunter
1951	3,856	6,362	7,069	0.90	1.65
1952	2,694	6,105	5,500	1.11	2.27
1953	2,676	5,753	4,494	1.28	2.15
1954	3,855	7,479	8,696	0.86	1.94
1955	--	--	--	0.17	2.10
1956	--	--	--	--	2.26
1957	--	--	--	--	1.85
1958	--	--	--	--	3.73
1959	8,554	22,854	18,174	1.26	2.67
1960	7,117	21,272	13,971	1.52	2.99
1961	9,980	27,362	25,746	1.06	2.74
1962	6,462	18,710	14,660	1.27	2.89
1963	8,059	28,088	16,383	1.71	3.49
1964	8,951	31,189	20,510	1.52	3.48
1965	6,163	17,532	16,528	1.06	2.45
1966	6,465	22,771	16,720	1.36	3.52
1967	8,455	26,187	23,806	1.10	3.10
1968	9,302	28,469	23,132	1.23	3.06
1969	9,160	26,119	22,529	1.16	2.85
1970	6,141	18,896	16,452	1.15	3.08
1971	8,039	21,082	21,595	0.98	2.62
1972	7,380	16,504	21,779	0.76	2.24
1973	5,654	14,324	17,777	0.81	2.53
1974	6,097	12,005	14,702	0.82	1.97
1975	6,397	16,903	16,805	1.01	2.64
1976	5,215	14,454	13,261	1.09	2.77
1977	4,446	9,496	9,646	0.98	2.14
1978	5,924	15,491	13,649	1.13	2.61
1979	5,632	15,821	13,550	1.17	2.81
1980	4,156	11,690	10,400	1.12	2.81
1981	4,946	13,586	12,843	1.06	2.75
1982	4,368	9,870	10,575	0.93	2.26
1983	4,012	11,248	10,232	1.10	2.81
1984	3,654	8,303	9,805	0.85	2.27
1985	3,065	7,051	7,994	0.88	2.30
1986	2,432	4,574	6,326	0.72	1.88
1987	2,549	7,648	7,918	0.97	3.00
1988	2,671	8,849	8,682	1.02	3.31
1989	3,111	7,384	8,607	0.86	2.37
1990	2,614	6,091	8,561	0.71	2.33
1991	2,644	5,775	7,393	0.78	2.18
1992	2,861	6,788	8,068	0.84	2.37
1993	3,649	11,192	11,952	0.94	3.07
1994	2,936	7,822	9,721	0.80	2.66
Totals					
(1951-94)	212,342	579,099	536,211	--	--
Averages					
(1951-93)	5,369	14,648	13,500	1.05	2.62

Table 10. Gambel's quail long period waterhole count trend on the west slope of the Beaver Dam Mountains, Washington County, 1976-94. These counts have been conducted since 1962.

Index	Year													Average 1976-93						
	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988							
Total Young	61	--	67	253	72	37	85	114	166	47	163	348	59	35	33	208	415	465	135	
Total Adults	53	--	29	77	52	25	33	14	86	11	48	139	47	18	9	35	128	158	102	53
Total Quail	114	17	86	330	124	62	118	128	252	58	211	487	106	53	42	243	543	623	237	178
Young per 100 Adults	115	--	353	329	138	148	258	814	193	427	340	250	126	194	367	594	324	294	132	300

Table 11. Quail field bag check summary, 1994.

Region and County	ALL HUNTS				COMPLETE HUNTS			
	Total Parties	Total Hunters	Total Hours	Birds/ 100 Hr	Complete Hunts	Total Hunters	Total Hours	Birds/ Hunter
Northern Region								
Box Elder	-	-	-	-	-	-	-	-
Cache	-	-	-	-	-	-	-	-
Davis	-	-	-	-	-	-	-	-
Morgan	-	-	-	-	-	-	-	-
Rich	-	-	-	-	-	-	-	-
Summit	-	-	-	-	-	-	-	-
Weber	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-
Central Region								
Juab	-	-	-	-	-	-	-	-
Salt Lake	-	-	-	-	-	-	-	-
Sanpete	-	-	-	-	-	-	-	-
Tooele	-	-	-	-	-	-	-	-
Utah	-	-	-	-	-	-	-	-
Wasatch	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-
Southern Region								
Beaver	-	-	-	-	-	-	-	-
Garfield	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-
Kane	-	-	-	-	-	-	-	-
Millard	-	-	-	-	-	-	-	-
Piute	-	-	-	-	-	-	-	-
Sevier	-	-	-	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-
Wayne	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-
Northeastern Region								
Daggett	-	-	-	-	-	-	-	-
Duchesne	-	-	-	-	-	-	-	-
Uintah	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-
Southeastern Region								
Carbon	-	-	-	-	-	-	-	-
Emery	33	92	271	18	7	11	25	98
Grand	-	-	-	-	-	-	-	-
San Juan	-	-	-	-	-	-	-	-
REGIONAL TOTALS	33	92	271	18	7	11	25	98
STATE TOTALS	33	92	271	18	7	11	25	98
								9
								0.36
								9

In 1994, an attempt to collect brood data was inducted in Box Elder County. No broods were observed.

The 1994 hunt data indicated decreased hunting pressure on Huns when compared to 1993. The number of Huns harvested decreased 16 percent in 1994. Hunters afield decreased 9 percent. Total hunters, days afield and harvest remain dramatically below the long-term average.

We expected continued improvement in Hungarian partridge populations in Box Elder County due to the large quantity of agricultural land set aside in the Conservation Reserve Program. We believe that increases in hunter success since 1985 reflect increased partridge populations as a direct result of CRP. Exceptions (declines) in 1988 and 1989 were probably due to drought. In 1993, the dramatic decrease in number of Huns harvested probably resulted because of poor over-winter survival during 1992-93.

Brood Counts

Results of the annual random brood counts for 1994 are shown in Table 1 of this section. Long-term trends of young per adult ratios, mean brood size and Huns observed per 100 hours are shown in Tables 2-4. Results of the survey for 1994 compared to 1993 and the previous 10-year (1984-93) average follow:

		<u>Percent change from 1993</u>	<u>Average</u>
	<u>1994</u>		
Total Huns observed	0	--	--
Young per 100 adults	--	--	--
Mean brood size	--	--	--
Huns observed per 100 hours	--	--	--
Total hours effort	8	-81	-82

Only the Northern Region attempted to collect brood count data. Hours of effort statewide decreased 81 percent from 1993, and no broods were observed.

Wildfires which occurred in Box Elder County in the "heart" of Hun habitat may account for no broods being observed.

Harvest

Hunter Questionnaire

Results of the annual hunter questionnaire for 1994 are shown in Table 5. Long-term trends of Huns bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 6-8 and total statewide harvest statistics in Table 9. The 1994 season compared to 1993 and the previous 35-year average follow:

		<u>Percent change from 1993</u>	<u>Average</u>
	<u>1994</u>		
Hungarian partridge hunters	1,899	-9	-46
Hungarian partridge harvest	1,916	-16	-74
Hunter-days afield	3,832	-38	-56
Huns per hunter-day	0.50	+35	-38
Huns per hunter	1.01	-7	-50

Hungarian partridge hunters and hunting pressure decreased in 1994. Success decreased 16 percent from 1993. Harvest was 74 percent below the long-term average.

Long-term Hun harvest statistics are shown in Figures 1 and 2.

Hun harvest trends increased in 1985 with the implementation of the federal Conservation Reserve Program (CRP) and continued until the severe winter of 1992-93.

Field Bag Checks

No Hungarian partridge field bag check data was collected in 1994 (Table 10). Hunter success trends determined via this method are shown in Table 11.

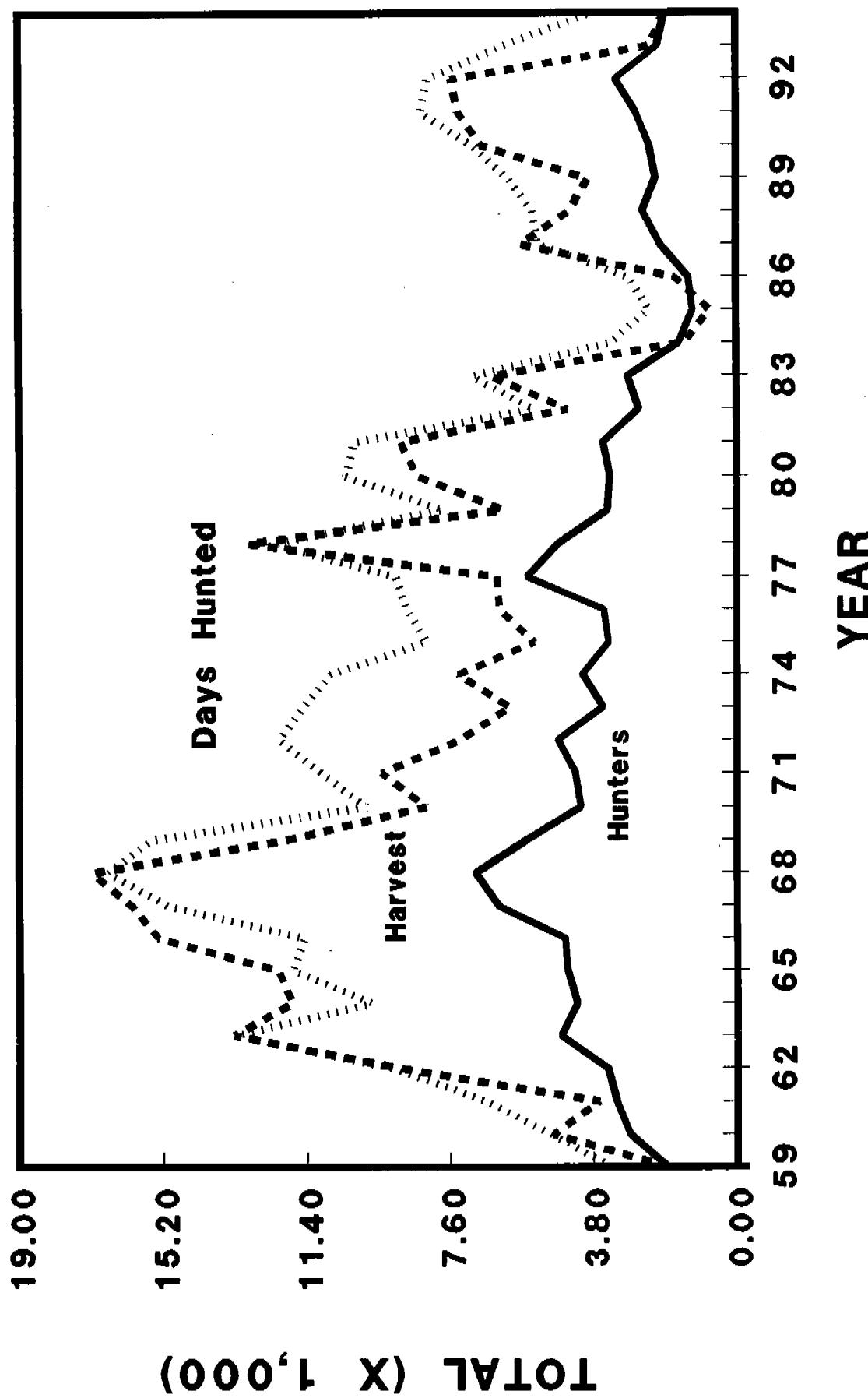


Figure 1. Statewide trends of Hungarian partridge harvest statistics, 1959-94.

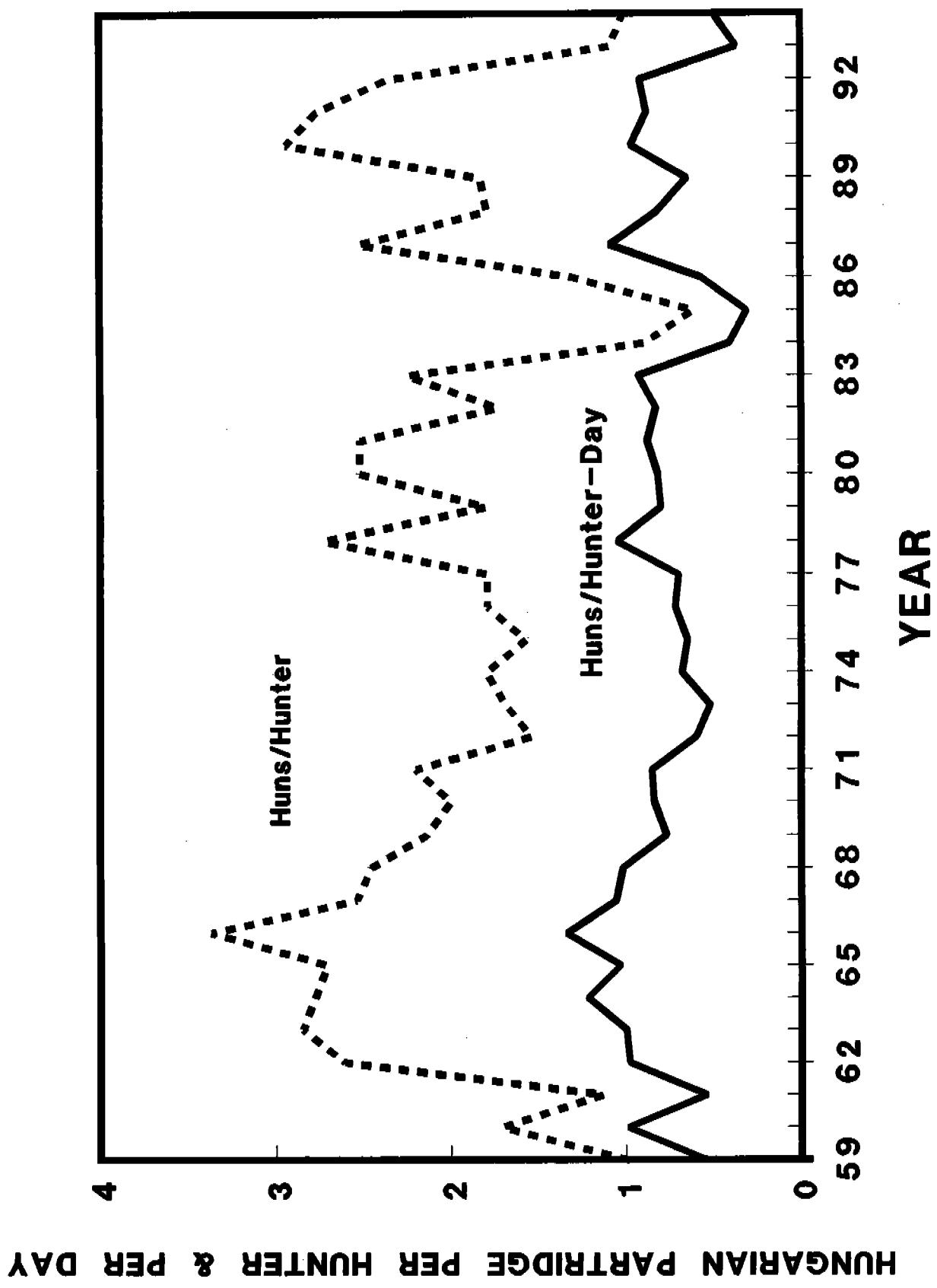


Figure 2. Statewide trends of Hungarian partridge hunter success rates, 1959-94.

Table 1. Hungarian partridge summer inventory, 1994.

Region and County	Distinct			Mixed Young			Total	Young/100 Adults	Vehicle Miles	Hours of Effort	Birds/100 Hr
	#	Broods	Young	Mean Brood	& Adults	Adults w/o Young					
Northern Region											
Box Elder	0	0	0	-	0	0	0	0	-	8	-
Cache	-	-	-	-	-	-	-	-	-	-	8
Davis	-	-	-	-	-	-	-	-	-	-	0
Morgan	-	-	-	-	-	-	-	-	-	-	-
Rich	-	-	-	-	-	-	-	-	-	-	-
Summit	-	-	-	-	-	-	-	-	-	-	-
Weber	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	0	0	0	-	0	0	0	0	-	8	-
Central Region											
Juab	-	-	-	-	-	-	-	-	-	-	-
Salt Lake	-	-	-	-	-	-	-	-	-	-	-
Sanpete	-	-	-	-	-	-	-	-	-	-	-
Tooele	-	-	-	-	-	-	-	-	-	-	-
Utah	-	-	-	-	-	-	-	-	-	-	-
Wasatch	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-
Southern Region											
Beaver	-	-	-	-	-	-	-	-	-	-	-
Garfield	-	-	-	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-	-	-	-
Kane	-	-	-	-	-	-	-	-	-	-	-
Millard	-	-	-	-	-	-	-	-	-	-	-
Piute	-	-	-	-	-	-	-	-	-	-	-
Sheridan	-	-	-	-	-	-	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-	-
Wayne	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-
Northeastern Region											
Daggett	-	-	-	-	-	-	-	-	-	-	-
Duchesne	-	-	-	-	-	-	-	-	-	-	-
Uintah	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-
Southeastern Region											
Carbon	-	-	-	-	-	-	-	-	-	-	-
Emery	-	-	-	-	-	-	-	-	-	-	-
Grand	-	-	-	-	-	-	-	-	-	-	-
San Juan	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	0	0	0	-	0	0	0	0	-	8	-
STATE TOTALS	0	0	0	-	0	0	0	0	-	8	-

Table 2. Trend of Hungarian partridge young per 100 adults, 1984-94.

Region and County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Average
Northern Region												
Box Elder	--	--	450	569	307	--	396	793	711	--	--	--
Cache	--	--	--	--	400	--	433	--	260	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	450	569	324	425	400	793	550	--	--	502
Central Region												
Juab	--	--	--	--	--	--	--	--	800	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	400	--	400	--	--	--	--	--	--
REGIONAL TOTALS	--	--	400	--	400	--	--	--	800	--	--	533
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--
Pine	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	750	--	--	750
REGIONAL TOTALS	--	--	--	--	--	--	--	--	750	--	--	750
Southeastern Region												
Carbon	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	440	569	328	425	400	793	567	750	--	534
STATE TOTALS	--	--	--	--	--	--	--	--	--	--	--	--

Table 3. Trend of average brood size for Hungarian partridge, 1984-94.

Region and County	Year							Average				
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1984-93
Northern Region												
Box Elder	--	--	18.00	11.88	8.60	8.50	8.25	12.50	9.00	--	--	
Cache	--	--	--	--	--	--	6.00	--	--	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	
Morgan	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	--	--	18.00	11.88	8.60	8.50	8.90	12.50	9.00	--	11.05	
Central Region												
Juab	--	--	--	--	--	--	--	--	8.00	--	--	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	--	--	--	--	--	--	--	--	--	--	--	
Tooele	--	--	--	--	--	--	--	--	--	--	--	
Utah	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	--	--	4.00	--	4.00	--	--	--	--	--	--	
REGIONAL TOTALS	--	--	4.00	--	4.00	--	--	--	8.00	--	5.33	
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	
Garfield	--	--	--	--	--	--	--	--	--	--	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	
Kane	--	--	--	--	--	--	--	--	--	--	--	
Millard	--	--	--	--	--	--	--	--	--	--	--	
Piute	--	--	--	--	--	--	--	--	--	--	--	
Sevier	--	--	--	--	--	--	--	--	--	--	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	
Wayne	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	--	--	--	--	--	--	--	--	--	--	--	
Uintah	--	--	--	--	--	--	--	--	15.00	--	--	
REGIONAL TOTALS	--	--	--	--	--	--	--	--	15.00	--	15.00	
Southeastern Region												
Carbon	--	--	--	--	--	--	--	--	--	--	--	
Emery	--	--	--	--	--	--	--	--	NOT APPLICABLE	--	--	
Grand	--	--	--	--	--	--	--	--	--	--	--	
San Juan	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	--	--	11.00	11.88	7.83	8.50	8.90	12.50	8.83	15.00	--	10.56
STATE TOTALS	--	--	--	--	--	--	--	--	--	--	--	

Table 4. Trend of Hungarian partridge observed per 100 hours, 1984-94.

Region and County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Average
Northern Region												
Box Elder	--	0	96	561	438	--	529	327	96	--	--	--
Cache	--	--	--	--	--	88	538	--	257	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	0	50	435	240	88	517	327	110	--	--	221
Central Region												
Juab	--	--	--	--	--	--	--	--	450	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	500	--	500	--	--	--	--	--	--
REGIONAL TOTALS	--	--	500	--	500	--	--	--	450	--	--	433
Southern Region												
Beaver	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--
Northeastern Region												
Daggett	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	8,500	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	8,500	--	--	8,500
Southeastern Region												
Carbon	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--
STATE TOTALS	--	0	60	435	248	88	517	327	118	40	--	218

Table 5. Summary of Hungarian partridge hunter success and distribution of harvest and hunting pressure by region and county, 1994.

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD	BIRDS BAGGED	BIRDS PER HUNTER-DAY	% OF PRESSURE	% OF HARVEST
NORTHERN REGION						
BOX ELDER	57	2,302	1,072	0.47	60.09	55.97
CACHE	21	808	650	0.80	21.10	33.95
DAVIS	2	70	0	0.00	1.83	0.00
MORGAN	2	70	0	0.00	1.83	0.00
RICH	7	175	140	0.80	4.59	7.34
SUMMIT	1	35	0	0.00	0.92	0.00
WEBER	2	87	0	0.00	2.29	0.00
REGIONAL TOTALS	92	3,550	1,863	0.52	92.67	97.25
CENTRAL REGION						
JUAB	1	17	0	0.00	0.46	0.00
SALT LAKE**	0	0	0	0.00	0.00	0.00
SANPETE**	1	35	0	0.00	0.92	0.00
TOOELE	1	35	52	1.50	0.92	2.75
UTAH**	1	17	0	0.00	0.46	0.00
WASATCH**	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	4	105	52	0.50	2.75	2.75
SOUTHERN REGION						
BEAVER**	1	17	0	0.00	0.46	0.00
GARFIELD**	0	0	0	0.00	0.00	0.00
IRON**	0	0	0	0.00	0.00	0.00
KANE**	0	0	0	0.00	0.00	0.00
MILLARD**	0	0	0	0.00	0.00	0.00
PIUTE**	0	0	0	0.00	0.00	0.00
SEVIER**	1	17	0	0.00	0.46	0.00
WASHINGTON**	0	0	0	0.00	0.00	0.00
WAYNE**	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	2	35	0	0.00	0.92	0.00
NORTHEASTERN REGION						
DAGGETT**	0	0	0	0.00	0.00	0.00
DUCHESNE**	1	52	0	0.00	1.38	0.00
UINTAH**	1	17	0	0.00	0.46	0.00
REGIONAL TOTALS	2	70	0	0.00	1.83	0.00
SOUTHEASTERN REGION						
CARBON**	0	0	0	0.00	0.00	0.00
EMERY**	1	70	0	0.00	1.83	0.00
GRAND**	0	0	0	0.00	0.00	0.00
SAN JUAN**	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	1	70	0	0.00	1.83	0.00
UNKNOWN	10	0	0	0.00	0.00	0.00
STATE TOTALS	111	3,832	1,916	0.50	100.00	100.00

* Total hunter-trips from questionnaire returns.

** Closed to Hungarian partridge hunting in 1994.

Table 6. Summary of Hungarian partridge bagged per hunter-day by region and county, 1987-94.

Region and County	1987	1988	1989	1990	1991	1992	1993	Year 1994
Northern Region								
Box Elder	1.28	0.95	0.62	1.11	1.02	1.00	0.24	0.47
Cache	1.05	0.50	0.94	0.86	0.86	1.07	0.56	0.80
Davis	0.00	0.00	2.67	0.00	0.00	0.00	0.00	0.00
Morgan	0.67	0.00	1.33	0.00	0.00	0.04	0.57	0.00
Rich	1.50	0.00	0.00	2.13	1.35	0.76	0.53	0.80
Summit	2.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00
Weber	1.25	1.17	1.00	1.00	0.40	0.00	0.00	0.00
REGIONAL TOTALS	1.23	0.89	0.67	1.02	0.97	0.95	0.35	0.52
Central Region								
Juab	0.30	0.00*	0.00*	0.00*	0.00*	2.00	0.00	0.00
Salt Lake	0.00	0.09*	0.67*	0.00*	0.00*	1.00*	0.00*	0.00*
Sanpete	0.00	0.00*	0.00*	0.00*	0.00*	0.00*	1.00*	0.00*
Tooele	0.00	0.33	0.47	0.46	0.02	0.25	0.50	1.50
Utah	0.33	0.31*	0.00*	0.00*	0.00*	0.67*	0.13*	0.00*
Wasatch	0.00	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
REGIONAL TOTALS	0.20	0.24	0.41	0.40	0.02	0.40	0.23	0.50
Southern Region								
Beaver	0.00	0.00	0.00*	0.00*	0.00*	2.00*	0.00*	0.00*
Garfield	0.00	0.00	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Iron	0.00	0.00	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Kane	0.00	0.00	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Millard	0.00	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Piute	0.00	0.00	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Sevier	2.00	0.00*	0.00*	3.00*	0.00*	1.67*	0.00*	0.00*
Washington	0.00	2.14*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Wasatch	0.00	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
REGIONAL TOTALS	1.33	2.14	0.00	0.60	0.00	1.40	0.50	0.00
Northeastern Region								
Daggett	0.00	0.00*	0.00*	0.00*	1.25*	0.00*	0.00*	0.00*
Duchesne	0.00	0.00	0.00*	0.00*	1.00*	0.00*	0.00*	0.00*
Uintah	0.00	0.00	1.00*	0.00*	0.00*	0.00*	0.00*	0.00*
REGIONAL TOTALS	0.00	0.00	0.00	0.00	1.20	0.00	0.00	0.00
Southeastern Region								
Carbon	0.00	0.00	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Emery	0.00	1.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Grand	0.00	0.00	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
San Juan	0.00	0.00*	1.50*	0.00*	0.00*	0.00*	0.00*	0.00*
REGIONAL TOTALS	0.00	1.00	1.50	0.00	0.00	0.00	2.00	0.00
Unknown Counties	0.30	0.00	0.00	0.00	0.00	0.00	10.00	0.00
STATE TOTALS	1.09	0.82	0.65	0.97	0.88	0.92	0.37	0.50

*Closed Season

Table 7. Percentage distribution of Hungarian partridge harvest by region and county, 1987-94.

Region and County	Year							
	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	80.25	78.86	76.20	60.80	73.82	61.41	33.34	55.97
Cache	9.87	6.03	8.47	31.01	16.75	30.59	37.51	33.95
Davis	0.00	0.00	4.23	0.00	0.00	0.00	0.00	0.00
Morgan	0.85	0.00	2.12	0.00	0.00	0.24	3.33	0.00
Rich	1.28	0.00	0.00	5.17	6.37	3.76	7.50	7.34
Summit	0.85	2.26	0.00	0.00	0.00	0.00	0.00	0.00
Weber	2.14	2.64	2.12	0.30	1.42	0.00	0.00	0.00
REGIONAL TOTALS	95.27	89.81	93.13	97.28	98.35	96.00	81.68	97.25
<u>Central Region</u>								
Juab	1.28	0.00*	0.00*	0.00*	0.00*	0.47	0.00	0.00
Salt Lake	0.00	0.37*	1.06*	0.00*	0.00*	0.24*	0.00	0.00*
Sanpete	0.00	0.00*	0.00*	0.00*	0.00*	0.00*	1.67	0.00*
Tooele	0.00	1.88	3.70	1.82	0.24	1.18	2.50	2.75
Utah	0.42	1.88*	0.00*	0.00*	0.00*	0.47*	3.33	0.00*
Wasatch	0.00	0.00*	0.00*	0.00*	0.00*	0.00*	0.00	0.00*
REGIONAL TOTALS	1.71	4.15	4.76	1.82	0.24	2.35	7.50	2.75
<u>Southern Region</u>								
Beaver	0.00	0.00	0.00*	0.00*	0.00*	0.47*	0.00	0.00*
Garfield	0.00	0.00	0.00*	0.00*	0.00*	0.00*	0.83	0.00*
Iron	0.00	0.00	0.00*	0.00*	0.00*	0.00*	0.00	0.00*
Kane	0.00	0.00	0.00*	0.00*	0.00*	0.00*	0.00	0.00*
Millard	0.00	0.00*	0.00*	0.00*	0.00*	0.00*	0.00	0.00*
Piute	0.00	0.00	0.00*	0.00*	0.00*	0.00*	0.00	0.00*
Sevier	1.71	0.00*	0.00*	0.91*	0.00*	1.18*	0.00	0.00*
Washington	0.00	5.66*	0.00*	0.00*	0.00*	0.00*	0.00	0.00*
Wayne	0.00	0.00*	0.00*	0.00*	0.00*	0.00	0.00	0.00*
REGIONAL TOTALS	1.71	5.66	0.00*	0.91	0.00*	1.65*	0.83	0.00
<u>Northeastern Region</u>								
Daggett	0.00	0.00*	0.00*	0.00*	1.18*	0.00*	0.00	0.00*
Duchesne	0.00	0.00*	0.00*	0.00*	0.24*	0.00*	0.00	0.00*
Uintah	0.00	0.00	0.53*	0.00*	0.00*	0.00*	0.00	0.00*
REGIONAL TOTALS	0.00	0.00	0.53	0.00	0.00*	0.00*	0.00	0.00
<u>Southeastern Region</u>								
Carbon	0.00	0.00	0.00*	0.00*	0.00*	0.00*	0.00	0.00*
Emery	0.00	0.37	0.00*	0.00*	0.00*	0.00*	1.67	0.00*
Grand	0.00	0.00	0.00*	0.00*	0.00*	0.00*	0.00	0.00*
San Juan	0.00	0.00	1.59*	0.00*	0.00*	0.00*	0.00	0.00*
REGIONAL TOTALS	0.00	0.37	1.59	0.00	0.00*	0.00	1.67	0.00
Unknown counties	1.28	0.00	0.00	0.00	0.00	0.00	8.33	0.00
STATE TOTALS	100.00							

*Closed Season

Table 8. Percentage distribution of Hungarian partridge hunting pressure by region and county, 1987-94.

Region and County	Year							
	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	68.22	68.42	80.42	53.10	64.04	56.41	51.23	60.09
Cache	10.28	9.90	5.84	34.81	17.26	26.25	24.85	21.10
Davis	1.40	1.23	1.03	0.00	0.42	0.87	0.00	1.83
Morgan	1.40	0.30	1.03	2.36	0.42	5.21	2.15	1.83
Rich	0.93	0.00	0.69	2.36	4.16	4.56	5.22	4.59
Summit	0.46	0.61	0.00	0.00	0.00	0.00	0.92	0.92
Weber	1.86	1.85	1.37	0.30	3.12	0.00	2.15	2.29
REGIONAL TOTALS	84.57	82.36	90.39	92.93	89.40	93.29	86.52	92.67
<u>Central Region</u>								
Juab	4.67	0.00*	0.00*	0.59*	0.00*	0.22	0.31	0.46
Salt Lake	0.00	3.40*	1.03*	0.00*	0.00*	0.22*	0.31*	0.00*
Sanpete	0.46	0.00*	0.00*	0.00*	0.00*	0.00*	0.61*	0.92*
Tooele	2.80	4.64	5.16	3.84	9.15*	4.34	1.84	0.92
Utah	1.40	4.95*	0.34*	0.00*	0.21*	0.65*	9.20*	0.46*
Wasatch	0.00	1.23*	1.03*	0.00*	0.00*	0.00*	0.00*	0.00*
REGIONAL TOTALS	9.34	14.24	7.56	4.43	9.36	5.42	12.27	2.75
<u>Southern Region</u>								
Beaver	0.00	0.00*	0.00*	1.18*	0.21*	0.22*	0.00*	0.46*
Garfield	0.00	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Iron	0.00	0.00*	0.00*	0.00*	0.00*	0.22*	0.00*	0.00*
Kane	0.00	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Millard	0.00	0.00*	0.00*	0.00*	0.00*	0.00*	0.61*	0.00*
Piute	0.00	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Sevier	0.93	0.00*	0.69*	0.30*	0.00*	0.65*	0.00*	0.46*
Washington	0.46	2.16*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
Wayne	0.00	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
REGIONAL TOTALS	1.39	2.15	0.69	1.48	0.21	1.08	0.61	0.92
<u>Northeastern Region</u>								
Daggett	0.00	0.00*	0.00*	0.00*	0.83*	0.00*	0.00*	0.00*
Duchesne	0.00	0.30*	0.00*	0.00*	0.21*	0.00*	0.00*	1.38*
Uintah	0.00	0.00*	0.34*	0.00*	0.00*	0.22*	0.00*	1.46*
REGIONAL TOTALS	0.00	0.29	0.34	0.00*	1.04	0.22	0.00	1.83
<u>Southeastern Region</u>								
Carbon	0.00	0.61*	0.34*	0.00*	0.00*	0.00*	0.00*	0.00*
Emery	0.00	0.30*	0.00*	1.18*	0.00*	0.00*	0.00*	1.83*
Grand	0.00	0.00*	0.00*	0.00*	0.00*	0.00*	0.31*	0.00*
San Juan	0.00	0.00*	0.69*	0.00	0.00*	0.00*	0.00*	0.00*
REGIONAL TOTALS	0.00	0.92	1.03	1.18	0.00	0.00	0.31	1.83
Unknown counties	4.67	0.00	0.00	0.00	0.00	0.00	0.31	0.00
STATE TOTALS	100.00							

*Closed Season

Table 9. Statewide summary of Hungarian partridge harvest statistics, 1955-94.

Year	Total Hunters	Total Harvest	Hunter-Days Afield	Huns Per Hunter-Day	Huns Per Hunter
1955	--	--	--	--	0.39
1956	--	--	--	--	0.89
1957	--	--	--	--	0.45
1958	--	--	--	--	1.34
1959	1,846	1,820	3,354	0.54	0.99
1960	2,847	4,877	4,929	0.99	1.71
1961	3,205	3,648	6,645	0.54	1.13
1962	3,440	8,970	9,153	0.98	2.61
1963	4,676	13,343	13,291	1.00	2.85
1964	4,249	11,812	9,688	1.22	2.78
1965	4,498	12,183	11,798	1.03	2.71
1966	4,549	15,348	11,473	1.34	3.37
1967	6,321	16,049	15,105	1.06	2.54
1968	6,935	17,089	16,674	1.02	2.46
1969	5,591	11,966	15,515	0.77	2.14
1970	4,128	8,236	9,818	0.84	2.00
1971	4,276	9,407	11,011	0.85	2.20
1972	4,754	7,335	12,135	0.60	1.54
1973	3,566	6,014	11,516	0.52	1.69
1974	4,103	7,389	10,789	0.68	1.80
1975	3,409	5,358	8,216	0.65	1.57
1976	3,517	6,287	8,753	0.72	1.79
1977	5,557	6,360	9,058	0.70	1.79
1978	4,743	12,969	12,328	1.05	2.73
1979	3,435	6,200	7,787	0.80	1.80
1980	3,359	8,466	10,366	0.82	2.52
1981	3,545	8,916	10,147	0.88	2.52
1982	2,590	4,475	5,379	0.83	1.73
1983	2,889	6,506	6,998	0.93	2.25
1984	1,523	1,360	3,309	0.41	0.89
1985	1,157	707	2,314	0.31	0.61
1986	1,257	1,627	2,843	0.57	1.30
1987	2,010	5,711	5,246	1.09	2.53
1988	2,471	4,424	5,392	0.82	1.79
1989	2,136	3,920	6,035	0.65	1.83
1990	2,305	6,770	6,976	0.97	2.94
1991	2,662	7,376	8,367	0.88	2.77
1992	3,198	7,553	8,192	0.92	2.36
1993	2,090	2,280	6,194	0.37	1.09
1994	1,899	1,916	3,832	0.50	1.01
Totals					
(1959-94)	124,736	264,667	310,626	--	--
Averages					
(1959-93)	3,510	7,507	8,766	0.81	2.04

Table 10. Hungarian partridge field bag check summary, 1994.

		All Hunts				Complete Hunts			
Region and County	Total Parties	Total Hunters	Total Hours	Birds/100 Hr	Complete Hunts	Total Hunters	Total Hours	Birds/Hunter	Birds/100 Hr
Northern Region									
Box Elder	-	-	-	-	-	-	-	-	-
Cache	-	-	-	-	-	-	-	-	-
Davis	-	-	-	-	-	-	-	-	-
Morgan	-	-	-	-	-	-	-	-	-
Rich	-	-	-	-	-	-	-	-	-
Summit	-	-	-	-	-	-	-	-	-
Weber	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-
Central Region									
Juab	-	-	-	-	-	-	-	-	-
Salt Lake	-	-	-	-	-	-	-	-	-
Sanpete	-	-	-	-	-	-	-	-	-
Tooele	-	-	-	-	-	-	-	-	-
Utah	-	-	-	-	-	-	-	-	-
Wasatch	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-
Southern Region									
Beaver	-	-	-	-	-	-	-	-	-
Garfield	-	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-	-
Kane	-	-	-	-	-	-	-	-	-
Millard	-	-	-	-	-	-	-	-	-
Piute	-	-	-	-	-	-	-	-	-
Sevier	-	-	-	-	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-
Wayne	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-
Northeastern Region									
Daggett	-	-	-	-	-	-	-	-	-
Duchesne	-	-	-	-	-	-	-	-	-
Uintah	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-
Southeastern Region									
Carbon	-	-	-	-	-	-	-	-	-
Emery	-	-	-	-	-	-	-	-	-
Grand	-	-	-	-	-	-	-	-	-
San Juan	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-
STATE TOTALS	-	-	-	-	-	-	-	-	-

Table II. Hungarian partridge hunter success trend as determined by field bag check, 1989-94.

Region and County	1989			1990			1991			1992			1993			1994		
	Birds/ Hunter	Birds/ 100 Hr																
Northern Region																		
Box Elder	181	9.50	--	--	--	--	55	0.55	1.50	50	--	--	--	--	--	--	--	
Cache	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Rich	--	--	--	--	--	--	--	--	0.55	86	--	--	--	--	--	--	--	
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	181	9.50	--	--	--	--	55	0.55	1.50	50	--	--	--	--	--	--	--	
Central Region																		
Juab	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Tooele	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Utah	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Southern Region																		
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Searcy	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Northeastern Region																		
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Duchesne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Uintah	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Southeastern Region																		
Carbon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
REGIONAL TOTALS	181	9.50	--	--	--	--	55	0.55	0.69	69	--	--	--	--	--	--	--	
STATE TOTALS	181	9.50	--	--	--	--	55	0.55	1.50	50	--	--	--	--	--	--	--	

In 1994, the entire state went to limited entry turkey hunting for both the Merriam's and Rio Grande sub-species. Drawing odds for each of the 1994 hunts is shown in Table 6.

Merriam's Turkeys

Merriam's turkey populations remain stable. Limited entry hunting was allowed on 3 units, during a total of 5 seasons. Two units were open for early and late seasons. A total of 335 permits were sold. A fall turkey hunting season was not held in Utah in 1994. A total of 57 Merriam's turkeys were harvested in 1994. Merriam's turkey hunters experienced a 20 percent success rate.

Rio Grande Turkeys

One hundred five permits were sold. A total of 79 Rio Grande turkeys were harvested in 1994 for a success rate of 75 percent.

Sealed-Bid and Auction Permits

In 1994 a limited entry Rio Grande wild turkey sealed-bid permit was available again. Minimum bid on the permit was \$350. The permit sold for \$735.00. In addition, 2 limited entry wild turkey auction permits were available.

Harvest

Spring Merriam's Gobbler Season

Results of the 1994 spring season are shown in Table 1 of this section. The trend of these data since 1968 is shown in Table 2 and Figures 1 and 2. Statewide summary of fall hunt statistics is in Table 3. The 1994 spring season survey compared to 1993 and the previous 25-year average follow:

		<u>Percent change from</u>	
	<u>1994</u>	<u>1993</u>	<u>Average</u>
Permits sold	335	-33	+26
Hunters afield	285	-39	+18
Turkeys harvested	57	-23	+95
Hunter-days afield	1,112	-26	+55
Percent hunter success	20	+25	+75
Turkeys bagged per hunter-day	0.05	0	+17
Percent of hunters who observed turkeys	--	--	--

Beginning in 1994, a limited entry turkey hunting program was implemented in Utah. Total harvest decreased from 74 in 1993 to 57 in 1994, which is 23 percent. Hunter success rates increased 25 percent from 1993 and were 75 percent above the long-term average. In 1994, the Boulder Unit accounted for 44% of the harvest and the Kolob Unit 9% of the harvest. East Zion Unit accounted for 47% of the harvest.

Spring Rio Grande Gobbler Season

Results of the 1994 spring season are shown in Table 4 of this section. The trend of these data since 1991 is shown in Table 5. The 1994 spring season survey follows:

		<u>Percent change from</u>	
	<u>1994</u>	<u>1993</u>	<u>Average</u>
Permits sold	105	--	--
Hunters afield	105	--	--
Turkeys harvested	79	--	--
Hunter-days afield	464	--	--
Percent hunter success	75	--	--
Turkeys bagged per hunter-day	0.17	--	--
Percent of hunters who observed turkeys	--	--	--

One Hundred five hunters averaged 4.42 days-afield each to harvest a total of 79 turkeys. Seventy five percent of the hunters afield harvested a bird.

As other Rio Grande populations continue to grow throughout the state, more limited entry opportunities will be provided.

Brood Counts

Limited brood count data for 1994 is shown in Table 7.

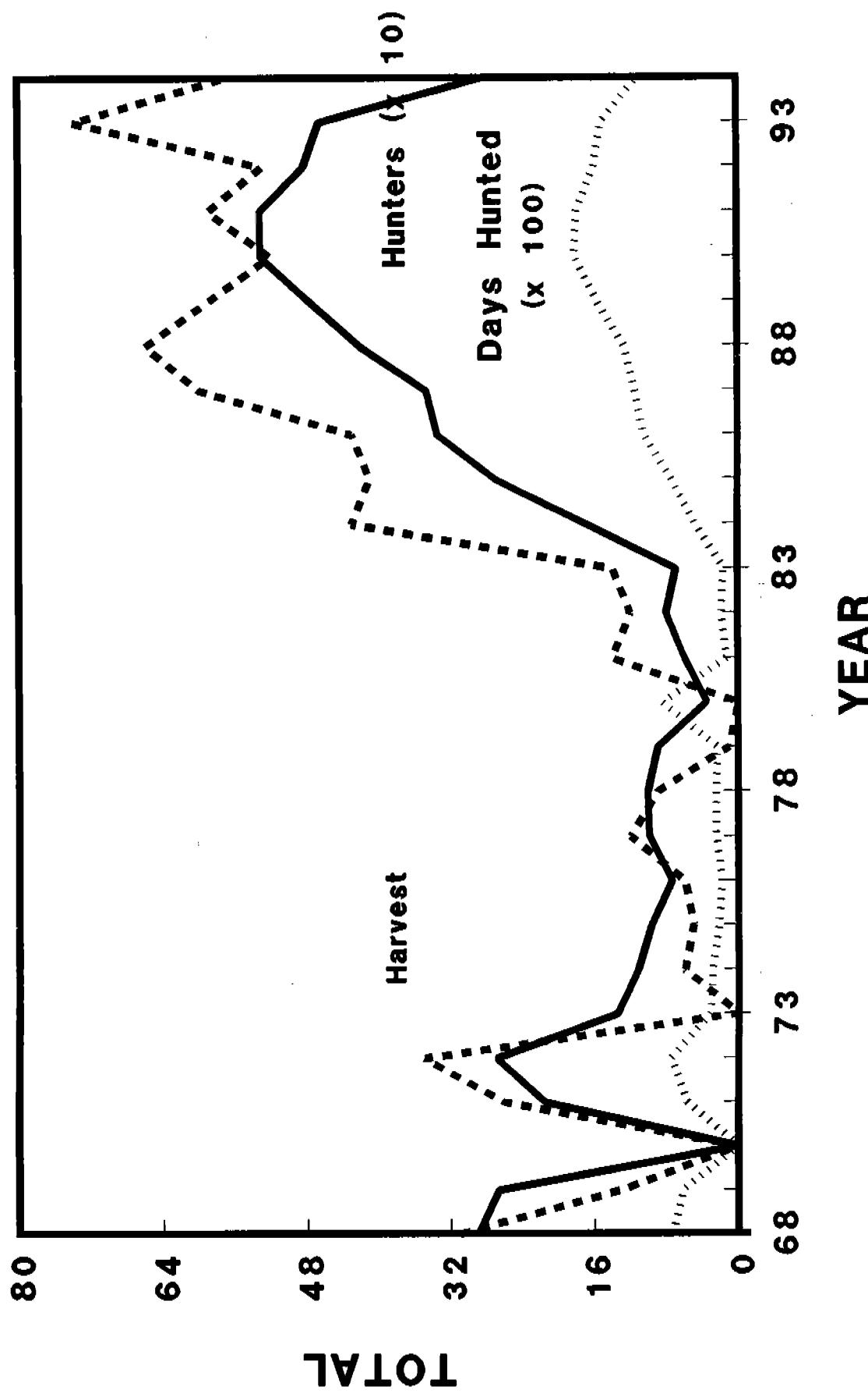


Figure 1. Spring Merriam's wild turkey hunters, harvest, and days hunted, 1968-94.

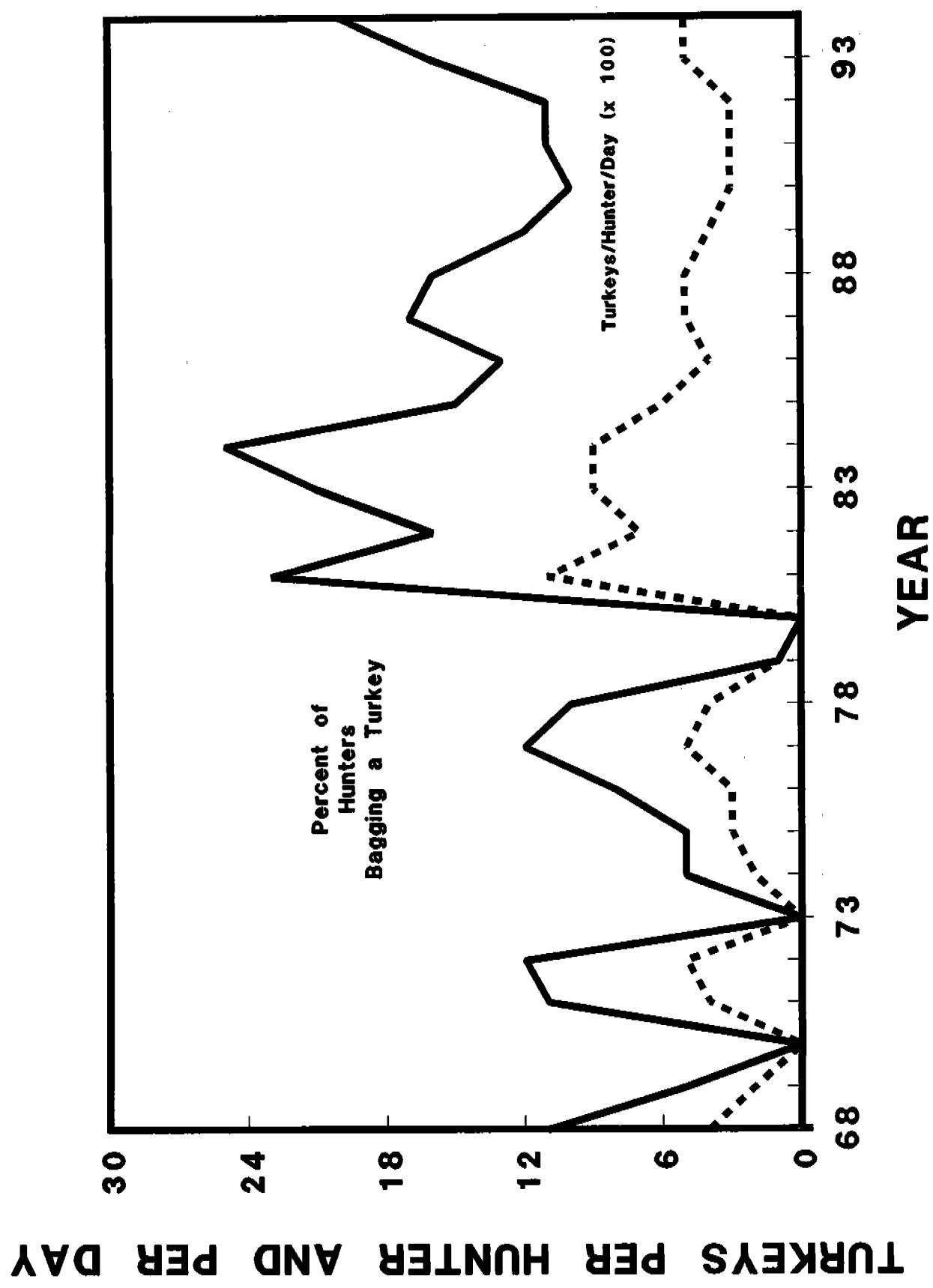


Figure 2. Spring Merriam's wild turkey hunting success, 1968-94.

Table 1. Summary of the 1994 spring Merriam's turkey season.

Data	Boulder (early)			Boulder (late)			Zion (early)			Zion (late)			Kolob			STATE TOTALS		
	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc
Permits Sold	75	75	75	75	75	75	75	75	75	75	35	35	35	35	35	335	335	
No Hunts	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Hunters Afield	48	64	41	60	47	68	41	67	18	29	195	285						
Hunter-Days	168	225	180	265	165	238	168	274	79	126	760	1,112						
Turkeys Bagged	14	19	4	6	10	14	8	13	3	5	39	57						
Percent Success	29	--	10	--	21	--	20	--	17	--	20	--						
Turkeys Bagged Per Hunter-Day	0.08	--	0.02	--	0.06	--	0.05	--	0.04	--	0.05	--	0.05	--	0.05	--	--	
Reported Crippling Loss (Loss/100 Bagged)	2	--	0	--	1	--	0	--	1	--	4	--			4	--	--	
Average Turkeys Observed Gobblers	1.4	--	0	--	10	--	0	--	33	--	10	--			10	--	--	
Hens	1.5	--	1.1	--	1.2	--	0.6	--	2.4	--	1.4	--			1.4	--	--	
Unidentified	1.6	--	1.9	--	1.8	--	1.0	--	2.2	--	1.7	--			1.7	--	--	
Number of Hunters Who Saw Turkeys	--	--	--	--	--	--	--	--	--	--	--	--			--	--	--	
Percent of Hunters Who Saw Turkeys	--	--	--	--	--	--	--	--	--	--	--	--			--	--	--	

Table 2. Summary of Merriam's turkey harvest statistics for spring gobblers seasons, 1968-94.

Hunting Unit	Year	Hunters	Total	Hunter-Days	Percent Success*	Turkeys Per Hunter-Day	Percent of Hunters Observing Turkeys	Total Permits**
STATE TOTALS	1968	290	31	738	11	0.04	41	310
	1969	267	13	612	5	0.02	22	276
	1970				NO SEASON			
	1971	215	26	576	11	0.04	38	223
	1972	269	35	751	12	0.05	39	285
	1973	135	0	311	0	0.00	10	150
	1974	112	6	289	5	0.02	22	121
	1975	97	5	219	5	0.03	29	103
	1976	74	6	185	8	0.03	32	81
	1977	99	12	248	12	0.05	39	108
	1978	101	9	246	10	0.04	42	116
	1979	90	1	237	1	0.01	8	113
	1980	35	0	84	0	0.00	17	40
	1981	60	14	129	23	0.11	53	83
	1982	80	12	184	16	0.07	62	91
	1983	69	14	161	21	0.09	55	92
	1984	169	43	482	25	0.09	72	190
	1985	270	41	747	15	0.06	52	314
	1986	335	43	1,054	13	0.04	57	362
	1987	347	60	1,150	17	0.05	57	384
	1988	421	66	1,267	16	0.05	50	490
	1989	477	59	1,568	12	0.04	55	527
	1990	531	52	1,812	10	0.03	51	579
	1991	532	59	1,792	11	0.03	49	587
	1992	484	53	1,599	11	0.03	45	538
	1993	466	74	1,508	16	0.05	54	500
	1994***	285	57	1,112	20	0.05	--	335
STATE TOTALS	(1968-94)	6,310	791	19,061	--	--	--	6,998
STATE AVERAGES	(1968-93)	241	29	718	11	0.04	42	267

*Based on the number of hunters bagging one or more turkeys.

**Total permits are sold on a statewide basis and not by unit, 1968-93. In 1994, permits were sold by unit.

***Beginning in 1994, a limited entry turkey hunting program was initiated.

Table 3. Statewide summary of fall Merriam's wild turkey harvest statistics, 1964-94.

Year	Pernits Sold	Hunters Afield	Hunter-Days At Field	Turkeys Bagged	Percent Success**	Turkeys per Hunter-Day	Crippling Loss/100 Bagged	Turkeys Observed	Percent of Hunters Observing Turkeys
1964	229	211	362	81	38	0.22	15	1,158	60
1965	214	207	406	50	24	0.12	8	730	29
1966*	192	187	471	43	23	0.99	7	756	36
1967	146	135	405	40	30	0.10	16	748	48
1968*	368	344	883	183	38	0.21	15	2,321	54
1969	223	210	549	36	11	0.06	19	466	17
1970	197	174	418	58	24	0.14	6	564	31
1971	184	174	444	60	21	0.14	8	451	28
1972	124	118	303	12	7	0.04	10	173	21
1973***	--	--	--	--	--	--	--	--	--
1974	29	26	79	3	12	0.94	33	83	38
1975	58	46	115	7	15	0.06	0	57	26
1976	68	56	136	15	27	0.11	7	182	32
1977	60	53	133	7	15	0.06	0	48	18
1978*	102	88	223	7	9	0.03	33	335	38
1979	46	36	71	3	9	0.05	0	61	19
1980	43	35	69	11	32	0.16	38	127	44
1981	63	55	114	12	22	0.11	56	141	32
1982	56	50	136	11	23	0.08	10	185	47
1983	61	49	112	15	28	0.13	0	303	49
1984	97	86	193	28	32	0.14	14	380	49
1985***	--	--	--	--	--	--	--	--	--
1986***	--	--	--	--	--	--	--	--	--
1987***	--	--	--	--	--	--	--	--	--
1988***	--	--	--	--	--	--	--	--	--
1989***	--	--	--	--	--	--	--	--	--
1990***	--	--	--	--	--	--	--	--	--
1991***	--	--	--	--	--	--	--	--	--
1992***	--	--	--	--	--	--	--	--	--
1993***	--	--	--	--	--	--	--	--	--
1994***	--	--	--	--	--	--	--	--	--
TOTALS	(1964-84)	2,560	2,340	5,622	682	--	--	9,269	--
AVERAGES	(1964-84)	122	111	268	32	21	0.10	14	441

*Some hunters hunted more than one area or failed to designate areas hunted. This accounts for the difference between totals given above and combined tables of separate units in Tables 5, 6 and 7.

**During 1968, the Boulder Mountain and East Zion units had two-bird season limits and the LaSal Mountains a one-bird limit; from 1969 through 1972, all areas had a two-bird limit. Hunter success was based on the number of successful hunters rather than total turkeys bagged.

*** No fall season.

Table 4. Summary of the 1994 spring limited entry Rio Grande turkey season.*

Data	Beaver		Duchenne-Utah Co.		Emery County		Grand County		Milford		Morgan-Summit		Pine Valley		Utah County		Weber County		STATE TOTALS	
	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc
Permits Sold	39	5	5	5	5	5	5	5	5	5	5	5	5	5	5	20	20	-	-	105
No Hunts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hunters Afield	16	28	1	5	3	5	3	5	3	5	2	5	20	25	18	20	3	5	69	105
Hunter-Days	72	127	6	30	19	32	13	22	19	32	4	10	65	94	104	13	22	305	464	
Turkeys Bagged	13	23	1	5	3	5	3	5	3	5	1	3	17	24	9	10	2	3	52	79
Percent Success	81	-	100	-	100	-	100	-	100	-	50	-	85	-	50	-	67	-	75	-
Turkeys Bagged Per Hunter-Day	0.18	-	0.17	-	0.16	-	0.23	-	0.16	-	0.25	-	0.26	-	0.10	-	0.15	-	0.17	-
Reported Crippling Loss	1	-	0	-	0	-	0	-	0	-	0	-	1	-	0	-	0	-	0	-
(Loss/100 Bagged)	8	-	0	-	0	-	0	-	0	-	0	-	6	-	0	-	0	-	4	-
Total Turkeys Observed																				
Gobblers	189	-	17	-	69	-	47	-	29	-	2	-	127	-	2	-	35	-	518	-
Hens	318	-	27	-	135	-	61	-	57	-	10	-	184	-	2	-	30	-	841	-
Unidentified	135	-	0	-	0	-	17	-	5	-	14	-	34	-	-	-	10	-	215	-
Number of Hunters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Who Saw Turkeys	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Percent of Hunters Who Saw Turkeys	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	84	-	-	-

*One sealed bid and two auction permits not accounted for here.

Table 5. Summary of Rio Grande turkey harvest statistics for spring gobbler seasons, 1991-94.

Hunting Unit	Year	Hunters	Total	Hunter-Days	Percent	Turkeys Per	Percent of Hunters	Total
		Afield	Harvest	Afield	Success*	Hunter-Day	Observing Turkeys	Permits**
STATE TOTALS	1991	18	11	71	61	0.15	--	20
	1992	20	15	64	75	0.23	--	21
	1993	41	26	200	63	0.13	--	42
	1994	105	79	464	52	0.17	--	105
STATE TOTALS (1991-94)		194	131	799	--	--	--	188
STATE AVERAGES (1991-93)		26	17	112	66	0.17	--	28

*Based on the number of hunters bagging one or more turkeys.

Table 6. Summary of wild turkey limited entry hunting unit drawing odds for 1994.

Hunting Unit Number	Hunting Unit Name	Permits Available	Applicants	Odds
Rio Grande	Beaver	30	212	7
	Duchesne-Uintah County	5	67	13
	Emery County	5	60	12
	Grand County	5	25	5
	Milford	5	53	11
	Morgan-Summit County	5	43	9
	Pine Valley	25	163	7
	Utah County	20	453	23
	Weber County	5	98	20
	Total	105	1,174	11
Merriam's	Boulder Mountain (early)	75	157	2
	Boulder Mountain (late)	75	59	Undersubscribed
	Kolob	35	16	Undersubscribed
	Zion (early)	75	53	Undersubscribed
	Zion (late)	75	18	Undersubscribed
	Total	335	303	--
	Grand Total	440	1,477	

Table 7. Wild turkey summer inventory summary, 1994.

Region and County	#	Distinct		Mixed		Adults w/o Brood		Observations		Young		Total		Young/ 100 Ad		Vehicle Miles		Hours of Effort		Birds/ 100 Hr		
		Adults	Young	Broods	Mean	Adult	Young	Total	Adults	Young	Total	Young	100 Ad	Miles	Vehicle	Horse	Walk	Total				
Northern Region																						
Box Elder	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cache	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Davis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Morgan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Rich	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Summit	2	2	11	5.50	5	9	-	7	20	286	-	-	-	-	-	-	-	-	-	-	-	
Weber	1	1	7	7.00	-	-	1	7	700	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	3	3	18	6.00	5	9	-	8	27	338	--	--	--	--	--	--	--	--	--	--	--	
Central Region																						
Juab	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Salt Lake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sanpete	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tooele	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Utah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Wasatch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Southern Region																						
Beaver	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Garfield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Iron	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Kane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Millard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Piute	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sevier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Washington	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Wayne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Northeastern Region																						
Daggett	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Duchesne	2	2	10	5.00	-	-	-	-	2	10	500	57	3	-	-	-	-	-	3	400	-	
Uintah	3	3	16	5.33	-	-	-	-	3	16	533	-	-	-	-	-	-	-	-	4	950	
REGIONAL TOTALS	5	5	26	5.20	-	-	-	-	5	26	520	57	3	-	-	-	-	-	3	1,033	-	
Southeastern Region																						
Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Emery	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Grand	1	1	10	10.00	-	-	-	-	12	13	10	77	-	-	-	-	-	-	-	4	950	
San Juan	-	-	-	-	-	-	-	-	6	28	4	10	28	280	38	4	-	-	-	4	1,525	
REGIONAL TOTALS	1	1	10	10.00	6	28	16	23	38	165	38	4	-	-	-	-	-	0	7	1,814	-	
STATE TOTALS	9	9	54	6.00	11	37	16	36	91	253	95	7	-	-	-	-	-	0	7	1,814	-	

The Columbian sharp-tailed grouse is one of four species of grouse native to Utah. Sharptails were formerly abundant in the valley and foothill areas of northern and central Utah. Sharp-tailed grouse habitats were the most attractive areas for agricultural development and grazing. As a result, sharptail habitat was directly converted to farmland or was seriously impacted by heavy grazing.

There was no legal harvest of sharp-tailed grouse from 1980 through 1994. From 1988 through 1992, the number of birds present on active dancing grounds was substantially greater than in the previous years (Table 1.). It appears sharp-tailed grouse have made a moderate recovery in "core areas." Numbers on the fringe of their range appear to be low. Concurrent with the upswing in sharp-tailed populations has been a succession of mild winters. Since the catastrophic winter of 1983-84, all winters have been normal or milder than normal except 1988-89 and 1992-93. The winter of 1992-93 devastated sharp-tailed grouse populations. In addition, wildland fires in the summer of 1994 destroyed countless acres of sharp-tailed grouse habitat in Box Elder County.

In Box Elder County, habitat associated with existing populations of sharp-tailed grouse has been relatively unchanged since 1983 except that about 100,000 acres in Box Elder County have been entered into the Conservation Reserve Program (CRP). This may be benefitting sharp-tailed grouse populations by providing undisturbed nesting and brood-rearing cover.

We have minimal recent data on sharp-tailed grouse populations in the Cache, Weber, and Morgan County areas. By 1984, populations in these areas were at or below minimum viable population levels. Efforts have increased over the past three years to locate "new" dancing grounds in these counties (Table 1.). New "core" sharp-tailed grouse habitat areas are being attributed to CRP lands in these counties.

Sharp-tailed grouse brood count information for Box Elder County in 1994 is shown in Table 2.

Table 1. Summary of sharp-tailed grouse dancing ground counts, 1978-943.

County	Name	Dancing Ground											Year					
		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Box Elder	West Hills Complex (Located 1977)	-	15	4	12	0	14	0	18	46	40	33	40**	75	53**	55**	5	6
	Hunsaker's Field (Located 1977)	16	3	0	0	0	0	0	18	0	3	0	-	3	32	4	2	2
	South White's Valley (Located 1977)	-	0	0	0	6	0	0	2	0	6	7	3	-	10	13	--	2
	North White's Valley (Located 1977)	15	0	0	0	0	0	0	-	18	11	9**	-	14	5	3	7	7
	Middle Canyon (Located 1978)	42	7	7	19	19	14	5	9	20	20	19	16**	11	4	NC	--	6
	Poatello Valley Complex (Located 1978)														6**	5**	0	A
	Blue Creek (Located 1991)														13**	6**	-	-
	Howell Valley #1 (Located 1991)														-	NA	--	--
	Microwave Tower (Located 1997)														8**	2**	--	--
	Sunset Pass (Located 1991)														11**	6**	A	--
	Nucor (Located 1991)														8**	8	3	2
	Wellsville-Cottonwood (Located 1991)														8**	A	0	NC
	Snowville-Radio Tower (Located 1991)																	6
	Johnson Canyon (Located 1994)																	
Cache	Bankhead Well (Relocated 1975)	7	2	2	0	0	-	-	-	-	-	-	-	-	NA	NC	--	--
	Baxter Ridge (Relocated 1975)	-	3	5	3	-	-	-	-	-	-	-	-	-	NA	NC	--	--
	Crow Mountain Complex (Located 1979)	0	13	4	11	3	-	-	-	-	0	-	-	-	27**	18**	9	8
	High Creek (Located 1981)					7	-	-	-	-	0	-	-	-	22**	NC	-	13
	Clarkston (Located 1991)														20**	5**	A	12
	Four Mile #1 (Located 1991)														5**	27**	--	--
	Four Mile #2 (Located 1991)														4**	3	--	--
	McKenzie Flat (Located 1992)																	
Morgan	Cottonwood (Located 1975)	22	28	-	-	-	-	-	-	-	-	-	-	-	NA	NC	--	--
	Deep Creek		4	-	-	-	-	-	-	-	-	-	-	-	NA	NC	--	--
	Bohman Hollow (Located 1991)														11**	NC	--	--
Weber	Monastery (Located 1969)	A	3	0	0	0	-	-	-	-	-	-	-	-	-	NC	--	--
	Total Grounds Counted	9	15	16	17	15	11	2	11	6	8	12	11	2	18	16	9	12
	Total Grouse Counted	102	71	24	57	31	28	5	29	84	90	80	77	86	236	210	26	66
	Average Number of Grouse/Ground	11.30	4.70	1.50	3.40	2.10	2.50	2.50	2.60	14.00	11.30	6.70	7.00	43.00	13.00	13.00	2.89	5.50

**High sagebrush precluded an accurate count--birds were counted when flushed.

Since visitation by females at any given time is low, an estimated 90% of the grouse seen on the ground are males.

Therefore, this figure is an estimate of the males on the ground.

A = ACTIVE

NA = NOT ACTIVE

NC = NOT COUNTED

Table 2. Sharp-tailed grouse summer inventory, 1994.

Region and County	Distinct			Mixed			Young & Adults	Adults w/o Young	Total	Young 100 Adults	Vehicle Miles	Hours of Effort	Birds/ 100 Hr			
	#	Broods	Adults	Young	Mean	Brood										
Northern Region																
Box Elder	2	2	6	3.00	0	0	9	11	6	55	-	-	8	-	8	227
Cache	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	2	2	6	3.00	0	0	9	11	6	55	-	-	8	-	8	227
Central Region																
Juab	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Southern Region																
Beaver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Northeastern Region																
Daggett	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Duchesne	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Uintah	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Southeastern Region																
Carbon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REGIONAL TOTALS	2	2	6	3.00	0	0	9	11	6	55	-	-	8	-	8	227
STATE TOTALS	2	2	6	3.00	0	0	9	11	6	55	-	-	8	-	8	227

The white-tailed ptarmigan (*Lagopus leucurus*) was introduced into the Uinta Mountains of northeastern Utah in 1976 with the release of birds captured in Colorado. The initial transplant consisted of 22 paired birds released in June 1976. A second release of 35 mixed young and adults was accomplished in September of that same year.

Since introduction in 1976, ptarmigan have dispersed into available habitat from the west, 100 miles to the east in the Uinta Mountains.

Breeding Territory and Brood Surveys

Surveys on the ptarmigan population continue, as time and manpower constraints allow. Two survey techniques are used. A breeding territory survey is conducted from mid- to late June. A brood survey is conducted from mid- to late August. Results of the last 10 years of survey data are found in Tables 1 and 2.

No spring survey of breeding territories and no summer brood survey was made in 1994.

Harvest

Fourteen hunters bought \$3.00 permits to hunt ptarmigan in Utah in 1994 (Table 3). An estimated 10 hunters actually pursued ptarmigan and no birds were killed. One hundred percent of the hunters afield reported observing ptarmigan.

Many permits are obtained by sportsmen who think they might hunt during a fishing or big game hunting trip, but don't seriously plan on the ptarmigan hunt.

Table 1. Summary of white-tailed ptarmigan breeding territories (pairs), 1984-94.

County	Location	1984 (6/18-19)	1985	1986	1987	1988	1989(2)	1990	1991	1992	1993	1994
Duchesne	Painter Basin											
Duchesne	Gilbert Basin	C(1)	C(1)	N	N	S	S	S	N	N	N	N
Duchesne	Atwood Basin	A	A	O	O	U	U	U	O	O	O	O
Duchesne	Yellowstone River	N	N	C	C	R	R	R	S	S	S	S
Summit	Henry's Fork	E	E	L	L	V	V	V	V	V	V	V
Summit	Flat Top Mountain	L	L	E	E	E	E	E	E	E	E	E
Summit	Lake Blanchard	1	D	D	3	Y	Y	Y	Y	Y	Y	Y
Summit	Beaver Creek											
Summit	Smith's Fork											

Uintah Leidy Peak

(1) Excessive snow cover precluded access to trail-heads during the June breeding period.

(2) Investigator was incapacitated.

Table 2. White-tailed ptarmigan brood inventory, 1984-94.

Area:	DATE						
	8/26-28/84	8/14-22/85	8/86	8/87	8/25-31/ 8/89	8/90	8/91
Painter Basin							
n	3	-	-	-	-	-	-
Mean Brood	-	-	-	-	-	-	-
Young/100 Adult Hens	-	-	-	-	-	-	-
Hens w/o Broods	-	-	-	-	-	-	-
Adult Males	-	-	-	-	-	-	-
Henry's Fork					(e)		
n	0	-	4	3	3	-	-
Mean Brood	-	-	3.75	4.00	2.33	-	-
Young/100 Adult Hens	-	-	375	217	233	-	-
Hens w/o Broods	-	-	0	3	6	-	-
Adult Males	-	-	-	-	-	-	-
Yellowstone							
n	-	-	-	2	1	-	-
Mean Brood	-	-	-	4.00	4.00	-	-
Young/100 Adult Hens	-	-	-	366	400	-	-
Hens w/o Broods	-	-	-	4	0	-	-
Adult Males	-	-	-	18	0	-	-
Smith's Fork							
n	-	-	1	-	-	-	-
Mean Brood	6.00	-	6.00	-	-	-	-
Young/100 Adult Hens	300	-	120	-	-	-	-
Hens w/o Broods	1	-	4	-	-	-	-
Adult Males	-	-	-	-	-	-	-
Atwood Basin							
n	-	-	-	-	1	-	-
Mean Brood	-	-	-	-	2.00	-	-
Young/100 Adult Hens	-	-	-	-	200	-	-
Hens w/o Broods	-	-	-	-	0	-	-
Adult Males	-	-	-	-	0	-	-

Table 2. (continued)

Area:	DATE			
Statistics	8/26-28/84	8/14-22/85	8/86	8/87
Flat Top Mountain				
n	1		1	(e)
Mean Brood	6.00		3	
Young/100 Adult Hens			6.00	4.33
Hens w/o Broods	1		900	433
Adult Males			0	0
Little E. Fork - Black's Fork				
n				
Mean Brood				
Young/100 Adult Hens				
Hens w/o Broods				
Adult Males				
Rainbow Basin				
n				
Mean Brood				
Young/100 Adult Hens				
Hens w/o Broods				
Adult Males				
Gilbert Basin				
n				
Mean Brood				
Young/100 Adult Hens				
Hens w/o Broods				
Adult Males				
Samuel's Draw				
n				
Mean Brood				
Young/100 Adult Hens				
Hens w/o Broods				
Adult Males				
Leidy Peak				
n				
Mean Brood			1	
Young/100 Adult Hens			2.00	
Hens w/o Broods			200	
Adult Males			0	

Table 2. (continued)

Area:		DATE									
Statistics	8/26-28-84	8/14-22/85	8/86	8/87	8/25-31/ ^f	8/89	8/90	8/91	8/92	8/93	8/94
East F. Black's Fork											
n											
Mean Brood											
Young/100 Adult Hens											
Hens w/o Broods											
Adult Males											
Jenilious Creek											
n											
Mean Brood											
Young/100 Adult Hens											
Hens w/o Broods											
Adult Males											
TOTALS											
n	1	3	5	6	6	2	1	1	--	--	--
Mean Brood	6.00	3.50	3.75	3.86	3.33	4.00	4.00	2.00	--	--	--
Young/100 Adult Hens	300	350	375	236	333	366	400	200	--	--	--
Hens w/o Broods	2	0	0	7	19	4	0	0	--	--	--
Adult Males	0	0	0	0	0	0	0	0	--	--	--
Total Birds Observed	--	18	19	47	45	18	5	3	--	--	--
e Mixed Adults											

^f Number of Broods

Table 3. Summary of white-tailed ptarmigan harvest statistics, 1982-94. Estimates are calculated based upon 100 percent samples or projection factors.

Year	Permits Sold	Hunters Afield	Hunter-Days Afield	Ptarmigan Bagged	Birds/Hunter	Ptarmigan Hunter-Day	% Hunters Observing Ptarmigan			Immature Ptarmigan 100 Adults
							Crippling Loss/100 Bagged	Ptarmigan Observed	Crippling Loss/100 Bagged	
1982	48	21	33	0	0.00	0.00	0	0	0	—
1983	31	13	21	14	1.08	0.67	0	25	30	—
1984	28	20	25	36	1.80	1.44	0	—	—	—
1985	55	10	13	7	0.70	0.54	14	9	14	—
1986	49	14	21	8	0.57	0.36	0	8	22	—
1987	45	9	9	8	0.89	0.89	—	—	—	—
1988**	28	15	15	22	1.47	1.47	—	59	—	4.50(11)
1989	20	3	18	13	4.33	0.72	—	35	—	—
1990	17	11	27	17	1.55	0.63	0	28	35	—
1991	15	13	16	26	2.00	1.63	0	95	50	—
1992	17	11	17	0	0.00	0.00	0	56	36	—
1993	10	10	13	13	1.30	1.00	0	140	38	—
1994	14	4	6	0	0.00	0.00	0	3	100	—

**For the first time a handling fee of \$2.00 per permit was charged.

Projection Factor = 2.00 (14 permits issued/7 questionnaires returned).

Cottontail populations remain below a short term high in 1988.

Summer roadside counts indicated a decreased population density statewide. Harvest statistics indicated decreased hunter success and is still 69 percent below average.

Hunter numbers decreased 43 percent from the previous year and remained below average. Although efforts have been made to educate hunters in the identification of the snowshoe hare and the white-tailed jackrabbit, it is still a potential problem which could bias the snowshoe data.

COTTONTAIL RABBIT

Roadside Counts

Results of the annual roadside counts for 1994 are shown in Table 1 and Figure 1. The long-term trend of cottontails observed per mile and young per 100 adults is shown in Figure 4 and Tables 2 and 3. Indices for 1994 compared to 1993 and the previous 10-year (1984-93) average follow:

	<u>1994</u>	<u>Percent change from</u>	
	<u>1993</u>	<u>Average</u>	
Total miles driven	148	-80	-87
Total cottontails counted	54	-36	-83
Cottontails observed per mile	0.36	+227	+31
Young observed per 100 adults	18	-49	-75

Production data from roadside counts indicated a decrease in the statewide cottontail population. The cottontail young per 100 adults index decreased 49 percent from 1993, and remained 75 percent below the long-term average. Only the Northeastern Region collected roadside count data.

Harvest

Hunter Questionnaire

Results of the 1994 hunter questionnaire are found in Table 4. Trends of cottontails bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 5-7. Trends of statewide harvest statistics are found in Table 8 and Figures 2 and 3. Results of the 1994 season compared to 1993 and the 27-year average follow:

	<u>1994</u>	<u>Percent change from</u>	
	<u>1993</u>	<u>Average</u>	
Cottontail hunters	12,709	-28	-48
Cottontail harvest	47,322	-27	-69
Hunter-days afield	53,175	-32	-47
Cottontails per hunter-day	0.89	+7	-40
Cottontails per hunter	3.72	+2	-38

Total hunters decreased 28 percent from 1993. Total harvest decreased 27 percent. Total harvest was 69 percent below average. Hunter success was 40 percent below average. Harvest data indicate a year of below average populations of cottontails. Seven years of drought and the severe winter of 1992-93 have negatively affected rabbit populations statewide.

Field Bag Checks

Results of field bag checks for 1994 are shown in Table 9. Trends of hunter success as determined by bag checks are shown in Table 10. Following is a comparison of the 1994 field bag check data to 1993 and the previous 10-year (1984-91) average.

	<u>1994</u>	<u>Percent change from 1993</u>	<u>Average</u>
Total hunters check	--	--	--
Total hours hunted	--	--	--
Cottontails per hunter (complete hunts)	--	--	--
Cottontails bagged per 100 hours	--	--	--
Hours per hunter day	--	--	--
Hours per cottontail bagged (complete hunts)	--	--	--

No cottontail field bag check data was collected in 1994.

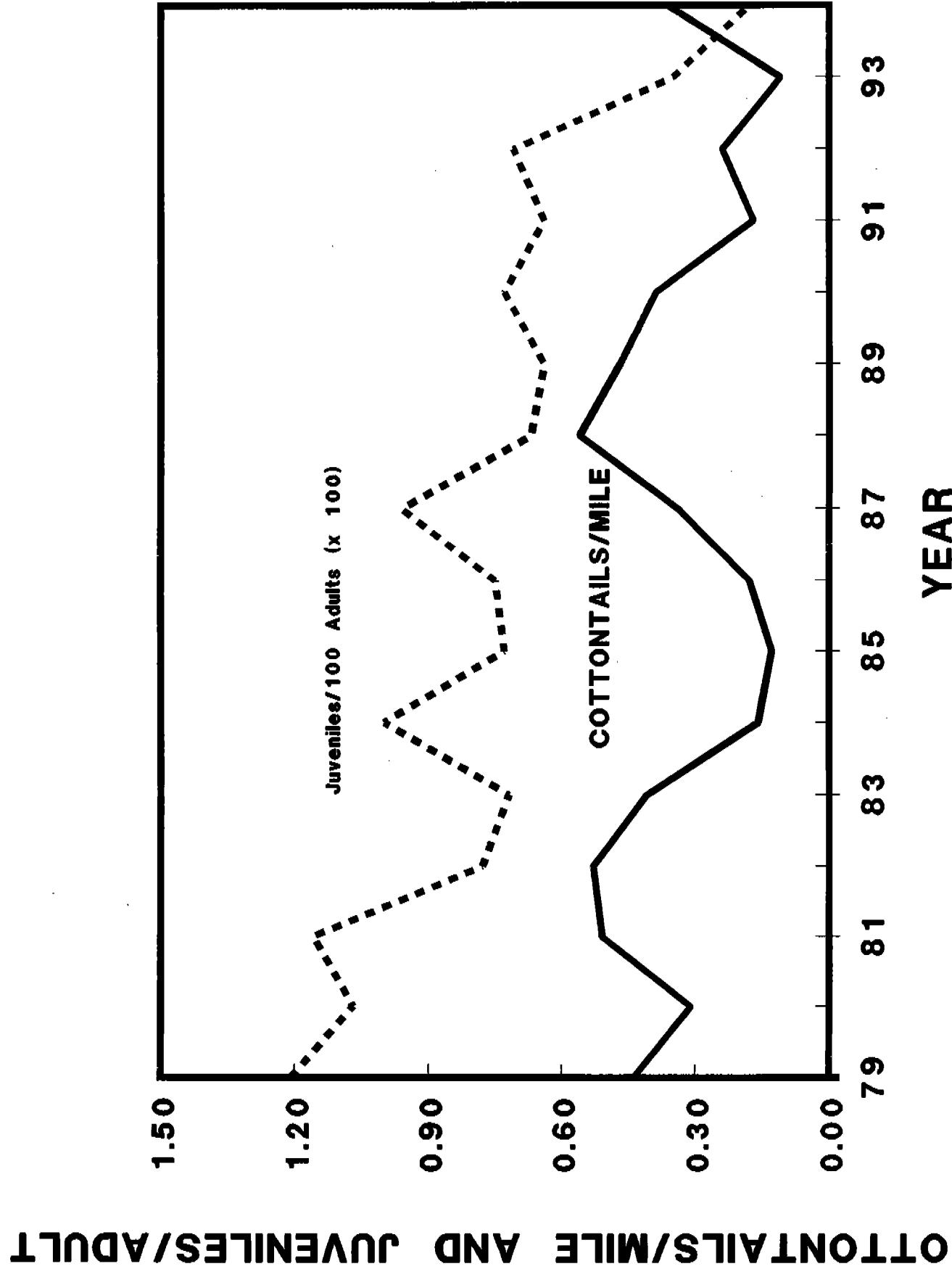


Figure 1. Cottontail rabbit population indices trends, 1979-94.

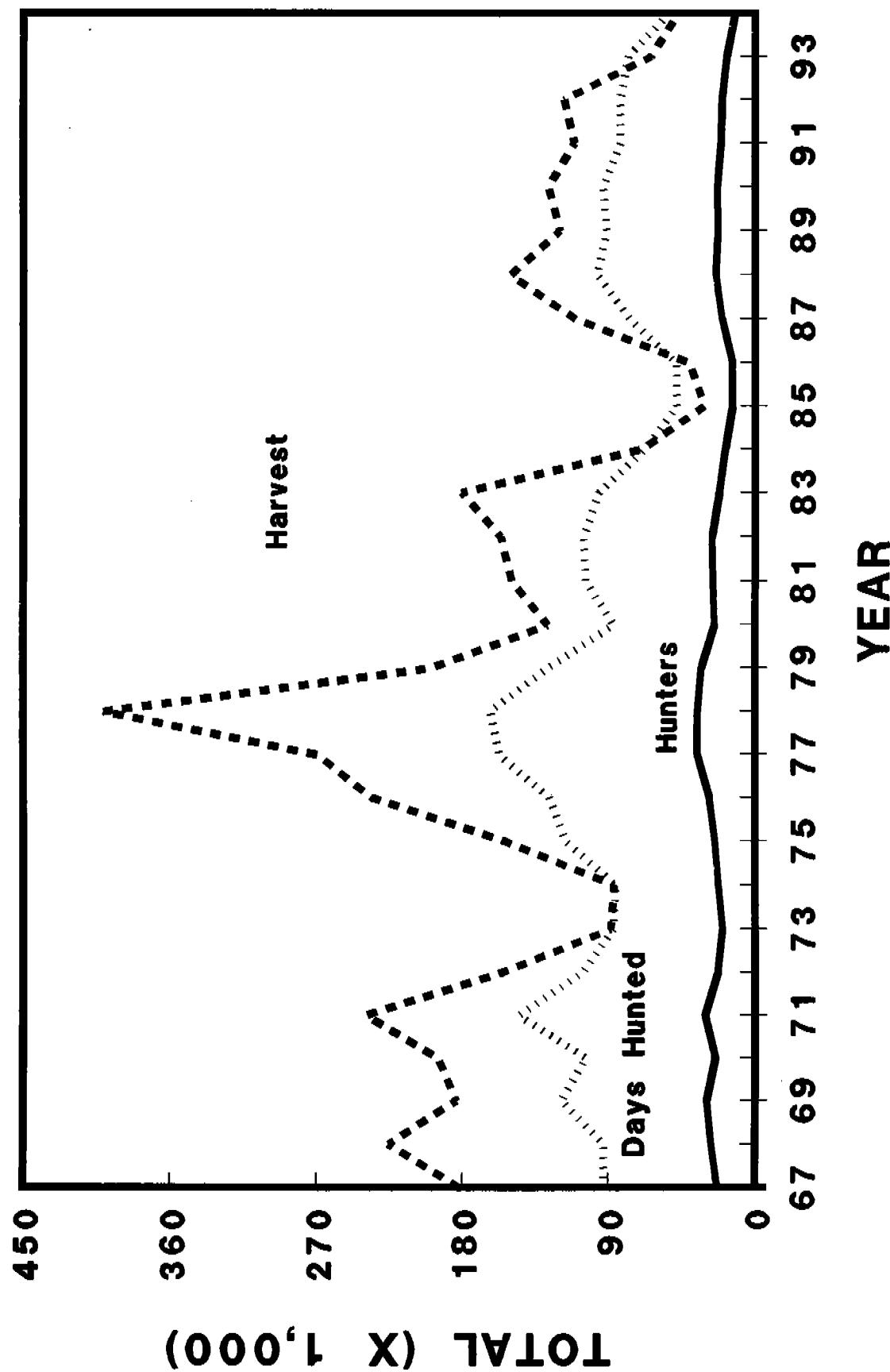


Figure 2. Statewide trends of cottontail rabbit harvest statistics, 1967-94.

COTTONTAILS PER HUNTER AND PER DAY

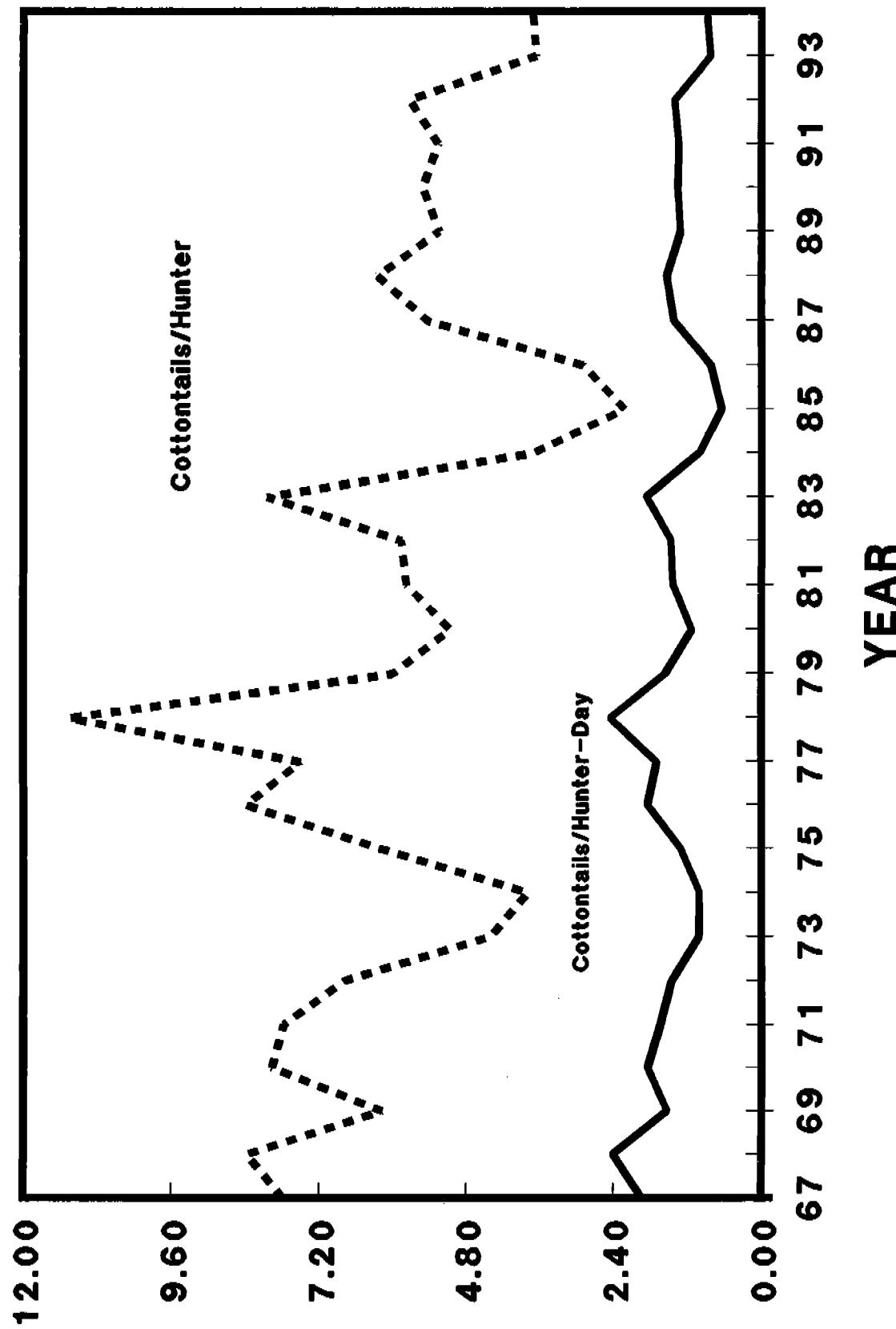


Figure 3. Statewide trends of cottontail rabbit hunter success rates, 1967-94.

FIGURE 4. COTTONTAIL RABBIT
PRODUCTION INDICES, 1967-94.

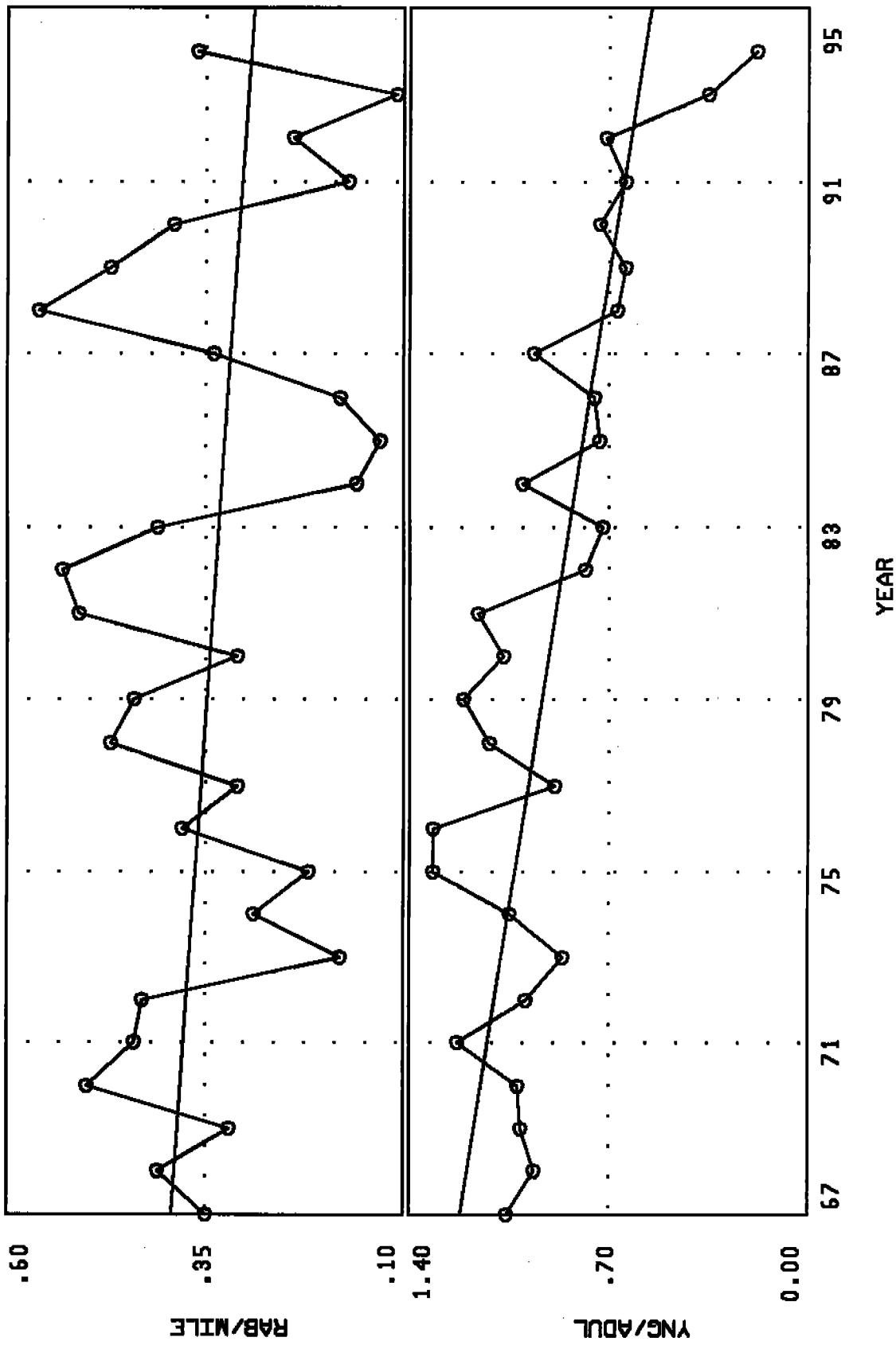


Table 1. Cottontail rabbit summer inventory summary, 1994.

Region and County	Miles Driven	Rabbits Observed			Total	Young/ 100 Adults	Rabbits/ Mile
Northern Region							
Box Elder	--	--	--	--	--	--	--
Cache	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--
Rich	--	--	--	--	--	--	--
Summit	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--
Central Region							
Juab	--	--	--	--	--	--	--
Salt Lake	--	--	--	--	--	--	--
Sanpete	--	--	--	--	--	--	--
Tooele	--	--	--	--	--	--	--
Utah	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--
Southern Region							
Beaver	--	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--
Iron	--	--	--	--	--	--	--
Kane	--	--	--	--	--	--	--
Millard	--	--	--	--	--	--	--
Piute	--	--	--	--	--	--	--
Sevier	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--
Wayne	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--
Northeastern Region							
Daggett	40	0	0	0	0	--	--
Duchesne	87	42	7	0	49	17	0.56
Uintah	21	2	1	2	5	50	0.24
REGIONAL TOTALS	148	44	8	2	54	18	0.36
Southeastern Region							
Carbon	--	--	--	--	--	--	--
Emery	--	--	--	--	--	--	--
Grand	--	--	--	--	--	--	--
San Juan	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	--	--	--	--	--
STATE TOTALS	148	44	8	2	54	18	0.36

Table 2. Summary of cottontail rabbits observed per mile during summer inventory, 1984-94.

Region and County	Year							Average 1984-93
	1984	1985	1986	1987	1988	1989	1990	
Northern Region								
Box Elder	--	--	0.02	0.03	--	0.03	0.39	0.10
Cache	--	--	--	--	--	--	--	--
Davis	--	--	--	--	--	--	--	--
Morgan	--	--	--	--	--	--	--	--
Rich	--	--	0.02	--	--	--	--	--
Summit	--	--	--	--	--	--	--	--
Weber	--	--	--	--	--	--	--	--
REGIONAL TOTALS	--	--	0.02	0.03	--	0.03	0.39	0.10
Central Region								
Juab	0.00	0.00	0.02	0.00	0.54	0.30	0.23	--
Salt Lake	--	--	--	--	--	--	--	--
Sanpete	--	--	--	--	0.47	0.22	0.65	0.09
Tooele	0.02	0.00	0.01	0.02	0.18	--	--	0.01
Utah	--	--	--	--	--	--	--	--
Wasatch	--	--	--	--	--	--	--	--
REGIONAL TOTALS	0.01	0.00	0.01	0.02	0.36	0.26	0.45	0.09
Southern Region								
Beaver	0.01	0.03	0.10	0.04	0.06	--	--	--
Garfield	--	0.06	0.13	--	--	--	--	--
Iron	0.27	0.33	0.53	0.26	--	--	--	--
Kane	--	0.52	0.47	0.97	1.09	--	--	--
Millard	0.04	0.02	0.08	0.09	0.09	--	0.08	--
Pine	--	--	0.06	0.05	--	--	--	--
Sevier	--	--	--	--	--	--	--	--
Washington	--	0.23	0.12	0.12	0.36	0.33	--	--
Wayne	0.80	--	0.20	0.24	0.34	--	0.83	0.21
REGIONAL TOTALS	0.18	0.19	0.24	0.27	0.33	0.33	0.08	0.21
Northeastern Region								
Daggett	0.22	0.12	0.22	0.66	0.85	0.50	0.55	--
Duchesne	0.28	0.13	0.44	0.86	1.49	1.04	0.23	0.33
Uintah	0.11	0.00	0.02	0.36	1.26	1.40	1.00	--
REGIONAL TOTALS	0.21	0.09	0.25	0.65	1.18	0.91	0.57	0.03
Southeastern Region								
Carbon	--	0.05	0.08	0.33	0.41	0.34	0.02	0.21
Emery	0.18	0.20	--	0.40	0.34	0.33	0.40	0.37
Grand	0.13	0.67	0.80	--	0.10	0.06	0.01	0.05
San Juan	--	0.14	0.37	0.29	0.59	0.55	0.80	0.28
REGIONAL TOTALS	0.17	0.13	0.17	0.38	0.36	0.32	0.24	0.26
STATE TOTALS	0.16	0.13	0.18	0.34	0.56	0.47	0.39	0.17
								0.25
								0.11
								0.36
								0.27

Table 3. Summary of cottontail rabbit young per 100 adults, 1984-94.

Region and County	Year										Average 1984-93
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	
Northern Region											
Box Elder	-	-	0	25	-	200	260	13	67	-	-
Cache	-	-	-	-	-	-	-	-	-	-	-
Davis	-	-	-	-	-	-	-	-	-	-	-
Morgan	-	-	-	-	-	-	-	-	-	-	-
Rich	-	-	50	-	-	-	-	-	-	-	-
Summit	-	-	-	-	-	-	-	-	-	-	-
Weber	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	20	25	-	200	200	13	67	-	87
Central Region											
Juab	0	0	0	0	20	13	-	-	-	-	-
Salt Lake	-	-	-	-	-	-	-	-	-	-	-
Sanpete	-	-	-	-	88	40	40	50	50	-	-
Tooele	-	-	-	100	120	-	-	-	100	-	-
Utah	-	-	-	-	-	-	-	-	-	-	-
Wasatch	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	0	0	0	100	57	23	27	50	57	-	31
Southern Region											
Beaver	-	-	22	-	-	-	-	-	-	-	-
Garfield	-	33	38	-	-	-	-	-	-	-	-
Iron	40	82	75	-	-	-	-	-	-	-	-
Kane	-	100	71	111	149	-	-	-	-	-	-
Millard	75	200	170	114	110	-	100	-	-	-	-
Platte	-	-	-	-	-	-	-	-	-	-	-
Sherman	-	-	-	-	-	-	-	-	-	-	-
Washington	-	73	133	175	100	131	-	-	-	-	-
Wayne	380	-	360	2100	244	-	-	369	138	-	-
REGIONAL TOTALS	215	85	100	137	136	131	100	369	138	-	157
Northeastern Region											
Daggett	33	46	136	116	30	59	55	-	89	33	-
Duchesne	22	15	26	24	39	29	-	50	138	36	17
Uintah	233	0	100	264	170	239	95	-	10	80	50
REGIONAL TOTALS	42	31	58	74	46	82	58	50	95	47	18
Southeastern Region											
Carbon	-	-	150	567	500	400	400	-	25	-	-
Emery	217	216	-	54	50	-	-	-	-	-	-
Grand	33	300	300	-	-	-	-	-	40	-	-
San Juan	-	43	61	47	49	80	60	54	37	18	-
REGIONAL TOTALS	156	88	69	100	64	110	67	100	33	18	81
STATE TOTALS	100	73	75	96	67	64	73	64	71	35	18
											72

Table 4. Summary of cottontail rabbit hunter success and distribution of harvest and hunting pressure by region and county, 1994.

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS	COTTONTAILS AFIELD	BAGGED	COTTONTAILS HUNTER-DAY	% OF PRESSURE	% OF HARVEST
NORTHERN REGION							
BOX ELDER	100	5,080	4,183	0.82	9.55	8.84	
CACHE	8	580	755	1.30	1.09	1.60	
DAVIS	4	175	0	0.00	0.33	0.00	
MORGAN	5	562	263	0.47	1.06	0.56	
RICH	9	333	404	1.21	0.63	0.85	
SUMMIT	10	492	193	0.39	0.93	0.41	
WEBER	7	562	158	0.28	1.06	0.33	
REGIONAL TOTALS	143	7,787	5,959	0.77	14.64	12.59	
CENTRAL REGION							
JUAB	48	3,041	1,933	0.64	5.72	4.09	
SALT LAKE	4	70	140	2.00	0.13	0.30	
SANPETE	32	1,898	1,933	1.02	3.57	4.09	
TOOELE	110	7,119	5,009	0.70	13.39	10.59	
UTAH	71	4,517	2,091	0.46	8.50	4.42	
WASATCH	3	123	193	1.57	0.23	0.41	
REGIONAL TOTALS	268	16,770	11,303	0.67	31.54	23.89	
SOUTHERN REGION							
BEAVER	17	1,230	1,845	1.50	2.31	3.90	
GARFIELD	4	457	474	1.04	0.86	1.00	
IRON	9	1,072	1,125	1.05	2.02	2.38	
KANE	4	773	703	0.91	1.45	1.49	
MILLARD	35	2,584	1,775	0.69	4.86	3.75	
PIUTE	2	158	52	0.33	0.30	0.11	
SEVIER	26	1,582	1,054	0.67	2.98	2.23	
WASHINGTON	25	2,918	2,953	1.01	5.49	6.24	
WAYNE	8	580	615	1.06	1.09	1.30	
REGIONAL TOTALS	130	11,355	10,600	0.93	21.36	22.40	
NORTHEASTERN REGION							
DAGGETT	11	369	562	1.52	0.69	1.19	
DUCHESNE	47	1,933	2,759	1.43	3.64	5.83	
UINTAH	49	3,533	5,467	1.55	6.64	11.55	
REGIONAL TOTALS	107	5,836	8,789	1.51	10.98	18.57	
SOUTHEASTERN REGION							
CARBON	49	5,467	4,851	0.89	10.28	10.25	
EMERY	26	2,197	1,986	0.90	4.13	4.20	
GRAND	13	1,019	1,230	1.21	1.92	2.60	
SAN JUAN	18	2,689	2,601	0.97	5.06	5.50	
REGIONAL TOTALS	106	11,373	10,670	0.94	21.39	22.55	
UNKNOWN	56	52	0	0.00	0.10	0.00	
STATE TOTALS	810	53,175	47,322	0.89	100.00	100.00	

*Total hunter trips from questionnaire returns.

Table 5. Summary of cottontail rabbits bagged per hunter-day by region and county, 1987-94.

Region and County	Year							
	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	2.25	1.78	1.29	1.49	1.31	1.46	0.71	0.82
Cache	0.78	0.37	0.66	0.87	1.41	1.50	0.76	1.30
Davis	0.67	0.50	1.00	0.25	1.50	0.00	0.08	0.00
Morgan	1.17	1.50	0.17	0.43	1.53	1.08	0.33	0.47
Rich	1.33	1.86	1.37	2.52	2.62	2.50	0.56	1.21
Summit	1.44	0.92	0.58	0.72	1.24	0.81	1.22	1.39
Weber	2.83	0.61	0.27	1.06	0.88	0.89	0.64	0.28
REGIONAL TOTALS	2.14	1.49	1.09	1.55	1.47	1.50	0.71	0.77
<u>Central Region</u>								
Juab	1.74	1.52	1.52	1.55	1.68	1.54	0.83	0.64
Salt Lake	1.26	0.53	1.35	0.79	0.72	0.97	0.57	2.00
Sanpete	1.25	1.62	1.10	0.85	1.26	0.86	0.40	1.02
Tooele	1.32	1.37	1.20	1.08	1.23	1.26	0.48	0.70
Utah	1.21	1.04	0.90	0.84	0.99	1.00	0.56	0.46
Wasatch	1.28	0.99	1.50	0.69	1.06	1.70	0.83	1.57
REGIONAL TOTALS	1.32	1.27	1.18	1.03	1.24	1.19	0.57	0.67
<u>Southern Region</u>								
Beaver	0.00	1.44	0.41	1.17	0.69	2.44	0.67	1.50
Garfield	0.71	1.41	1.97	1.03	0.46	0.52	1.53	1.04
Iron	0.44	1.58	0.85	1.21	1.06	0.94	0.80	1.05
Kane	0.58	1.41	1.00	0.90	0.93	0.97	1.62	0.91
Millard	0.82	1.09	1.27	1.84	1.15	1.35	1.56	0.69
Piute	1.00	1.25	0.28	1.36	0.57	0.00	0.63	0.33
Sevier	1.04	1.45	0.97	1.45	0.65	1.27	0.69	0.67
Washington	0.95	2.10	0.91	0.89	0.68	1.03	1.02	1.01
Wayne	1.22	1.49	1.05	1.34	1.20	2.26	0.73	1.06
REGIONAL TOTALS	0.85	1.41	1.05	1.30	0.89	1.32	1.11	0.93
<u>Northeastern Region</u>								
Daggett	3.16	3.02	1.65	1.79	1.83	2.00	1.47	1.52
Duchesne	1.63	2.38	1.49	1.83	2.15	1.97	1.16	1.43
Uintah	1.89	2.32	3.16	2.41	1.61	1.74	0.82	1.55
REGIONAL TOTALS	1.95	2.40	2.13	2.10	1.86	1.87	1.04	1.51
<u>Southeastern Region</u>								
Carbon	1.34	1.29	0.97	1.43	1.75	1.51	0.69	0.89
Emery	1.00	1.78	0.80	1.06	1.03	1.43	0.88	0.90
Grand	2.00	2.03	1.00	1.58	1.75	1.66	1.86	1.21
San Juan	2.57	1.67	1.28	1.37	1.87	2.34	0.81	0.97
REGIONAL TOTALS	1.37	1.55	0.93	1.28	1.50	1.63	0.88	0.94
Unknown counties	1.04	1.49	2.00	0.00	0.00	0.00	1.40	0.00
STATE TOTALS	0.83	1.43	1.55	1.32	1.36	1.35	1.41	0.83

Table 6. Percentage distribution of cottontail rabbit harvest by region and county, 1987-94.

Region and County	Year							
	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	12.83	12.11	7.20	9.84	9.06	13.30	7.38	8.84
Cache	0.91	0.27	0.47	1.07	1.61	1.50	2.04	1.60
Davis	0.04	0.12	0.07	0.02	0.14	0.00	0.03	0.00
Morgan	0.15	0.19	0.03	0.05	0.41	0.65	0.12	0.56
Rich	0.53	1.05	1.92	6.07	4.14	4.31	0.56	0.85
Summit	0.57	0.77	0.73	0.63	2.00	0.79	0.97	0.41
Weber	1.44	0.42	0.14	0.27	0.45	0.59	0.62	0.33
REGIONAL TOTALS	16.49	14.96	10.55	17.95	17.80	21.14	11.71	12.56
<u>Central Region</u>								
Juab	5.17	6.05	6.32	5.86	7.68	7.50	6.20	4.09
Salt Lake	1.19	0.49	0.40	0.68	0.36	1.09	0.97	0.30
Sanpete	5.61	3.74	3.70	3.34	2.80	3.39	0.97	4.09
Tooele	11.67	13.72	14.73	11.60	16.76	15.72	10.18	10.59
Utah	11.07	8.61	5.20	6.51	6.20	6.42	5.28	4.42
Wasatch	1.73	0.92	0.47	0.44	1.09	1.10	0.59	0.41
REGIONAL TOTALS	36.47	33.55	30.82	28.43	34.88	35.22	24.20	23.89
<u>Southern Region</u>								
Beaver	0.95	0.68	0.40	0.44	0.92	1.51	0.18	3.90
Garfield	0.26	0.42	2.66	1.16	0.09	0.17	0.86	1.00
Iron	0.26	1.54	0.92	2.02	1.03	1.03	1.86	2.38
Kane	0.33	0.84	1.23	0.90	1.33	0.50	2.15	1.49
Millard	3.48	2.99	2.80	5.02	4.18	4.99	8.29	3.75
Piute	0.08	0.22	0.09	0.61	0.06	0.00	0.15	0.11
Sevier	1.22	2.28	1.66	3.07	1.75	1.79	2.27	2.23
Washington	0.77	1.90	2.69	2.02	1.34	0.94	6.96	6.24
Wayne	0.48	0.77	1.02	1.08	1.12	0.92	0.71	1.30
REGIONAL TOTALS	7.88	11.69	13.46	16.33	11.84	11.85	23.43	22.40
<u>Northeastern Region</u>								
Daggett	4.41	2.82	3.21	2.37	3.28	1.63	3.13	1.19
Duchesne	7.68	9.43	12.37	8.55	10.98	8.67	12.95	5.83
Uintah	7.03	13.20	19.31	13.44	9.10	7.25	8.29	11.55
REGIONAL TOTALS	19.13	25.45	34.89	24.27	23.36	17.55	24.37	18.57
<u>Southeastern Region</u>								
Carbon	6.26	4.65	4.56	5.83	5.04	6.05	4.22	10.25
Emery	5.63	5.91	3.78	4.20	3.26	4.13	4.19	4.20
Grand	2.53	0.74	0.26	0.66	0.66	0.73	2.69	5.60
San Juan	2.90	0.77	1.43	2.33	3.15	3.33	2.39	5.50
REGIONAL TOTALS	17.34	12.09	10.04	13.02	12.12	14.24	13.48	22.55
Unknown counties	2.66	2.24	0.24	0.00	0.00	0.00	2.80	0.00
STATE TOTALS	100.00							

Table 7. Percentage distribution of cottontail rabbit hunting pressure by region and county, 1987-94.

Region and County	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	8.17	10.53	7.34	9.00	9.33	12.87	8.60	9.55
Cache	0.73	1.15	0.93	1.67	1.53	1.41	2.22	1.06
Davis	0.09	0.37	0.09	0.09	0.13	0.00	0.29	0.33
Morgan	0.19	0.20	0.27	0.15	0.36	0.85	0.29	1.06
Rich	0.57	0.87	1.84	3.28	2.12	2.44	0.83	0.63
Summit	0.57	1.30	1.64	1.19	2.16	1.37	0.66	0.93
Weber	0.73	1.06	0.68	0.35	0.69	0.94	0.80	1.06
REGIONAL TOTALS	11.07	15.51	2.80	15.74	16.33	19.88	13.70	14.64
<u>Central Region</u>								
Juab	4.26	6.15	5.48	5.15	6.16	6.88	6.19	5.72
Salt Lake	1.36	1.46	0.39	1.17	0.67	1.58	1.41	0.13
Sanpete	6.45	3.57	4.41	5.35	2.98	5.56	2.00	3.57
Tooele	12.63	15.44	16.16	14.61	18.35	17.65	17.38	13.39
Utah	13.07	12.83	7.61	10.50	8.43	9.06	7.73	8.50
Wasatch	1.94	1.44	0.41	0.86	1.39	0.92	0.58	0.23
REGIONAL TOTALS	39.73	40.90	34.45	37.63	37.98	41.65	35.29	31.54
<u>Southern Region</u>								
Beaver	1.36	0.73	1.27	0.51	1.79	0.88	0.22	2.31
Garfield	0.54	0.46	1.77	1.54	0.27	0.45	0.46	0.86
Iron	0.85	1.51	1.41	2.27	1.30	1.54	1.93	2.02
Kane	0.82	0.92	1.61	1.36	1.91	0.73	1.10	1.45
Millard	6.07	4.24	2.91	3.72	4.92	5.21	4.39	4.86
Piute	0.12	0.27	0.41	0.62	0.15	0.04	0.19	0.30
Sevier	1.68	2.43	2.25	2.88	3.61	1.99	2.71	2.98
Washington	1.17	1.40	3.91	3.10	2.67	1.28	5.63	5.49
Wayne	0.57	0.80	1.27	1.10	1.26	0.58	0.80	1.09
REGIONAL TOTALS	13.23	12.81	16.82	17.10	17.89	12.70	17.43	21.36
<u>Northeastern Region</u>								
Daggett	2.00	1.44	2.57	1.80	2.42	1.15	1.75	0.69
Duchesne	6.74	6.13	10.91	6.36	6.87	6.22	9.26	3.64
Uintah	5.34	8.81	8.05	7.55	7.61	5.88	8.31	6.64
REGIONAL TOTALS	14.09	16.38	21.52	15.71	16.90	13.25	19.33	10.98
<u>Southeastern Region</u>								
Carbon	6.68	5.60	6.20	5.55	3.89	5.66	5.02	10.28
Emery	8.08	5.15	6.23	5.39	4.25	4.08	3.95	4.13
Grand	1.81	0.56	0.34	0.57	0.50	0.62	1.19	1.92
San Juan	1.62	0.72	1.48	2.31	2.27	2.01	2.44	5.06
REGIONAL TOTALS	18.19	12.04	14.25	13.82	10.91	12.37	12.60	21.39
Unknown counties	3.65	2.33	0.16	0.00	0.00	0.15	1.66	0.10
STATE TOTALS	100.00							

Table 8. Statewide summary of cottontail rabbit harvest statistics, 1967-94.

Year	Total Hunters	Total Harvest	Hunter-Days Afield	Cottontails Per Hunter-Day	Cottontails Per Hunter
1967	23,249	181,812	92,681	1.95	7.79
1968	26,889	225,450	93,126	2.42	8.38
1969	29,760	184,034	119,596	1.54	6.18
1970	24,486	195,248	103,725	1.86	7.97
1971	30,824	239,511	145,287	1.65	7.78
1972	22,835	155,102	105,941	1.46	6.79
1973	20,109	88,603	87,036	1.02	4.41
1974	22,737	86,506	85,499	1.01	3.80
1975	24,803	154,182	116,707	1.32	6.22
1976	28,239	235,952	126,737	1.86	8.39
1977	35,831	269,263	157,257	1.71	7.51
1978	35,590	401,071	163,019	2.46	11.27
1979	33,385	200,223	127,497	1.57	6.00
1980	25,156	127,652	87,051	1.47	5.07
1981	25,906	149,765	104,183	1.44	5.78
1982	26,714	156,696	105,644	1.48	5.87
1983	22,467	180,767	96,151	1.88	8.05
1984	18,616	69,186	67,643	1.02	3.72
1985	14,059	31,397	48,371	0.65	2.23
1986	13,992	40,636	48,694	0.83	2.90
1987	20,322	110,411	77,047	1.43	5.43
1988	24,076	150,386	97,190	1.55	6.25
1989	22,878	120,075	91,264	1.32	5.25
1990	23,070	127,389	93,515	1.36	5.52
1991	21,137	111,407	82,772	1.35	5.27
1992	20,509	117,454	83,154	1.41	5.73
1993	17,578	64,400	77,968	0.83	3.66
1994	12,709	47,322	53,175	0.89	3.72
Totals					
(1967-94)	667,926	4,221,900	2,737,930	--	--
Averages					
(1967-93)	24,267	154,614	99,435	1.48	6.05

Table 9. Cottontail rabbit field bag check summary, 1994.

Region and County	All Hunts					Complete Hunts				
	Total Parties	Total Hunters	Total Hours	Rabbits/ 100 Hr	Complete Hunts	Total Hunters	Total Hours	Rabbits/ Hunter	Rabbits/ 100 Hr	
Northern Region										
Box Elder	-	-	-	-	-	-	-	-	-	-
Cache	-	-	-	-	-	-	-	-	-	-
Davis	-	-	-	-	-	-	-	-	-	-
Morgan	-	-	-	-	-	-	-	-	-	-
Rich	-	-	-	-	-	-	-	-	-	-
Summit	-	-	-	-	-	-	-	-	-	-
Weber	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-
Central Region										
Juab	-	-	-	-	-	-	-	-	-	-
Salt Lake	-	-	-	-	-	-	-	-	-	-
Sanpete	-	-	-	-	-	-	-	-	-	-
Tooele	-	-	-	-	-	-	-	-	-	-
Utah	-	-	-	-	-	-	-	-	-	-
Wasatch	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-
Southern Region										
Beaver	-	-	-	-	-	-	-	-	-	-
Garfield	-	-	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-	-	-
Kane	-	-	-	-	-	-	-	-	-	-
Millard	-	-	-	-	-	-	-	-	-	-
Piute	-	-	-	-	-	-	-	-	-	-
Sevier	-	-	-	-	-	-	-	-	-	-
Washington	-	-	-	-	-	-	-	-	-	-
Wayne	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-
Northeastern Region										
Daggett	-	-	-	-	-	-	-	-	-	-
Duchesne	-	-	-	-	-	-	-	-	-	-
Uintah	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-
Southeastern Region										
Carbon	-	-	-	-	-	-	-	-	-	-
Emery	-	-	-	-	-	-	-	-	-	-
Grand	-	-	-	-	-	-	-	-	-	-
San Juan	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-
STATE TOTALS	-	-	-	-	-	-	-	-	-	-

Table 10. Cottontail rabbit hunter success trend as determined by field bag check, 1989-94.

Region and County	1989		1990		1991		1992		1993		1994	
	Rabbit/ Hunter	Rabbit/ 100 Hr										
Northern Region												
Box Elder	314	3.14	25	1.50	313	3.57	-	-	-	-	-	-
Cache	-	-	-	-	-	-	-	-	-	-	-	-
Davis	100	1.25	-	-	-	-	-	-	-	-	-	-
Morgan	-	-	-	-	-	-	-	-	-	-	-	-
Rich	42	1.86	-	-	-	-	-	-	-	-	-	-
Summit	-	-	-	-	-	-	-	-	-	-	-	-
Weber	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	93	2.22	25	0.21	313	3.57	-	-	-	-	-	-
Central Region												
Juab	-	-	-	-	-	-	-	-	-	-	-	-
Salt Lake	-	-	-	-	-	-	-	-	-	-	-	-
Sanpete	-	-	-	-	-	-	-	-	-	-	-	-
Tooele	-	-	-	-	-	-	-	-	-	-	-	-
Utah	-	-	-	-	-	-	-	-	-	-	-	-
Wasatch	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-	-	-	-	-	-	-	-	-	-	-	-
Southern Region												
Beaver	-	-	-	-	-	-	-	-	-	-	-	-
Garfield	-	-	-	-	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-	-	-	-	-
Kane	-	-	-	-	-	-	-	-	-	-	-	-
Millard	-	-	-	-	-	-	-	-	-	-	-	-
Piute	-	-	-	-	-	-	-	-	-	-	-	-
Sevier	-	-	-	-	-	-	-	-	-	-	-	-
Washington	150	1.50	-	-	-	-	-	-	-	-	-	-
Wayne	-	-	-	-	-	-	21	1.02	-	-	-	-
REGIONAL TOTALS	150	0.17	-	-	21	1.02	-	-	-	-	-	-
Northeastern Region												
Daggett	-	-	-	-	-	-	-	-	-	-	-	-
Duchesne	-	-	450	9.00	48	1.38	-	-	-	-	-	-
Uintah	93	2.20	179	8.10	66	1.91	-	-	-	-	-	-
REGIONAL TOTALS	93	0.73	187	5.10	61	1.77	1.25	50	-	-	-	-
Southeastern Region												
Carbon	-	-	-	-	-	-	-	-	-	-	-	-
Emery	-	-	-	-	-	-	-	-	-	-	-	-
Grand	-	-	-	-	-	-	-	-	-	-	-	-
San Juan	-	-	-	-	-	-	-	-	-	-	-	-
REGIONAL TOTALS	-											
STATE TOTALS	95	2.15	143	5.19	29	1.26	1.25	50	-	-	-	-

SNOWSHOE HARE

Harvest

Results of the 1994 hunter questionnaire are found in Table 11. Trends of snowshoe hares bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) are found in Tables 12-14. Trend in statewide harvest statistics by year are shown in Table 15 and Figures 1 and 2. The 1994 season compared to 1993 and the 19-year average follow:

	<u>1994</u>	<u>Percent change from 1993</u>	<u>Average</u>
Snowshoe hare hunters	1,565	-43	-68
Snowshoe hares harvested	1,722	-59	-83
Hunter-days afield	4,922	-54	-66
Snowshoes per hunter-day	0.35	-10	-44
Snowshoes per hunter	1.10	-29	-42

Significant misidentification of white-tailed jackrabbits as snowshoe hares was anticipated prior to mailing the harvest questionnaire following the first season in 1975. This proved to be the case as a significant harvest of snowshoe hares was reported for counties outside the known range of the species. It was assumed that the problem was statewide, not just confined to those counties. Several attempts were made in the 1970s to reduce misidentification through pictures and descriptions in leaflets and questionnaires.

Beginning in 1988, harvest questionnaires, and in 1989 the Upland Game Proclamation had drawings and descriptions of the various rabbits and hares in an attempt to reduce misidentification. We believe this has been successful.

Results of the 1994 harvest questionnaire indicates a 59 percent decrease in hunter success compared to 1993. Success was well below the long-term average.

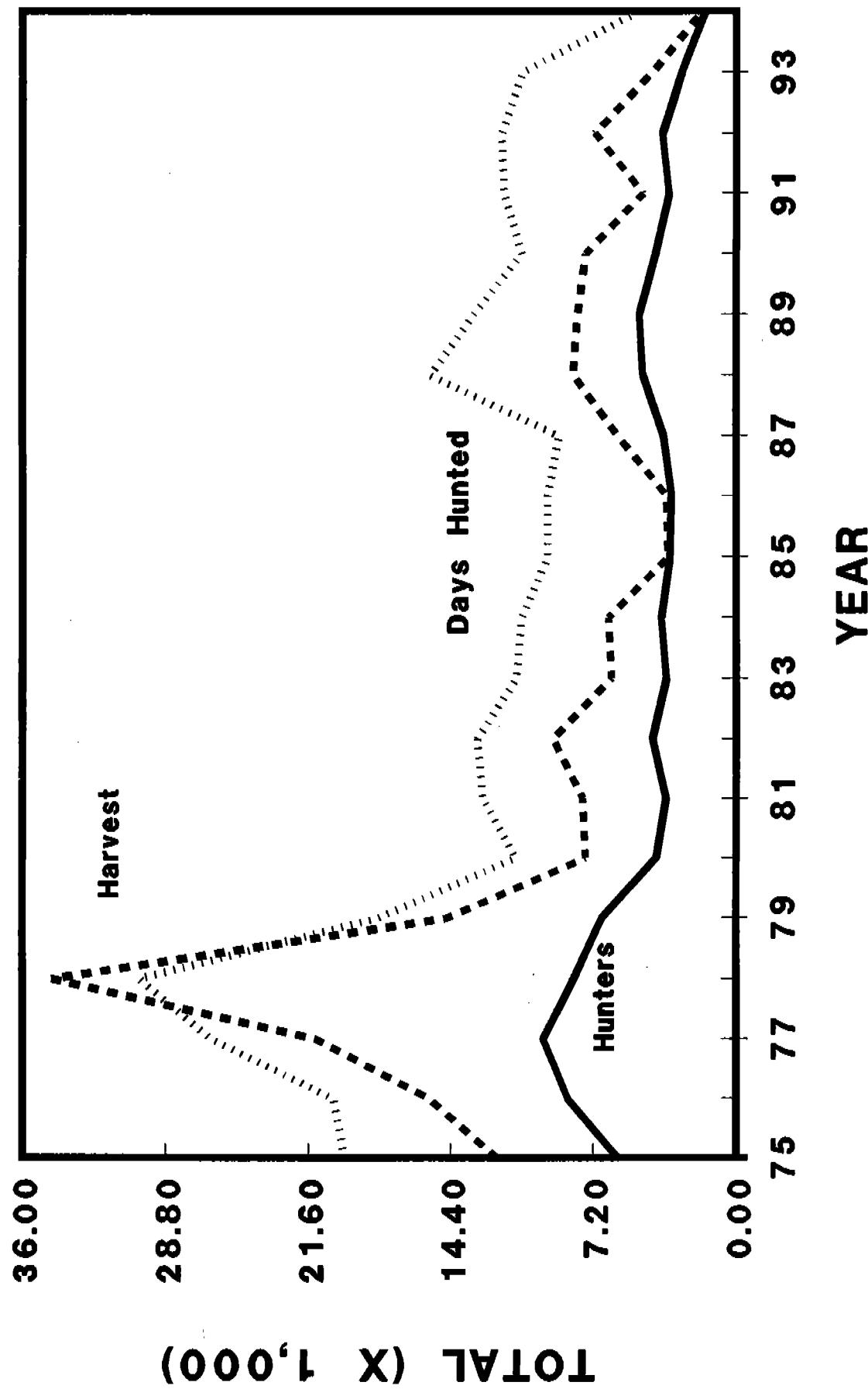


Figure 1. Statewide trends of snowshoe hare harvest statistics, 1975-94.

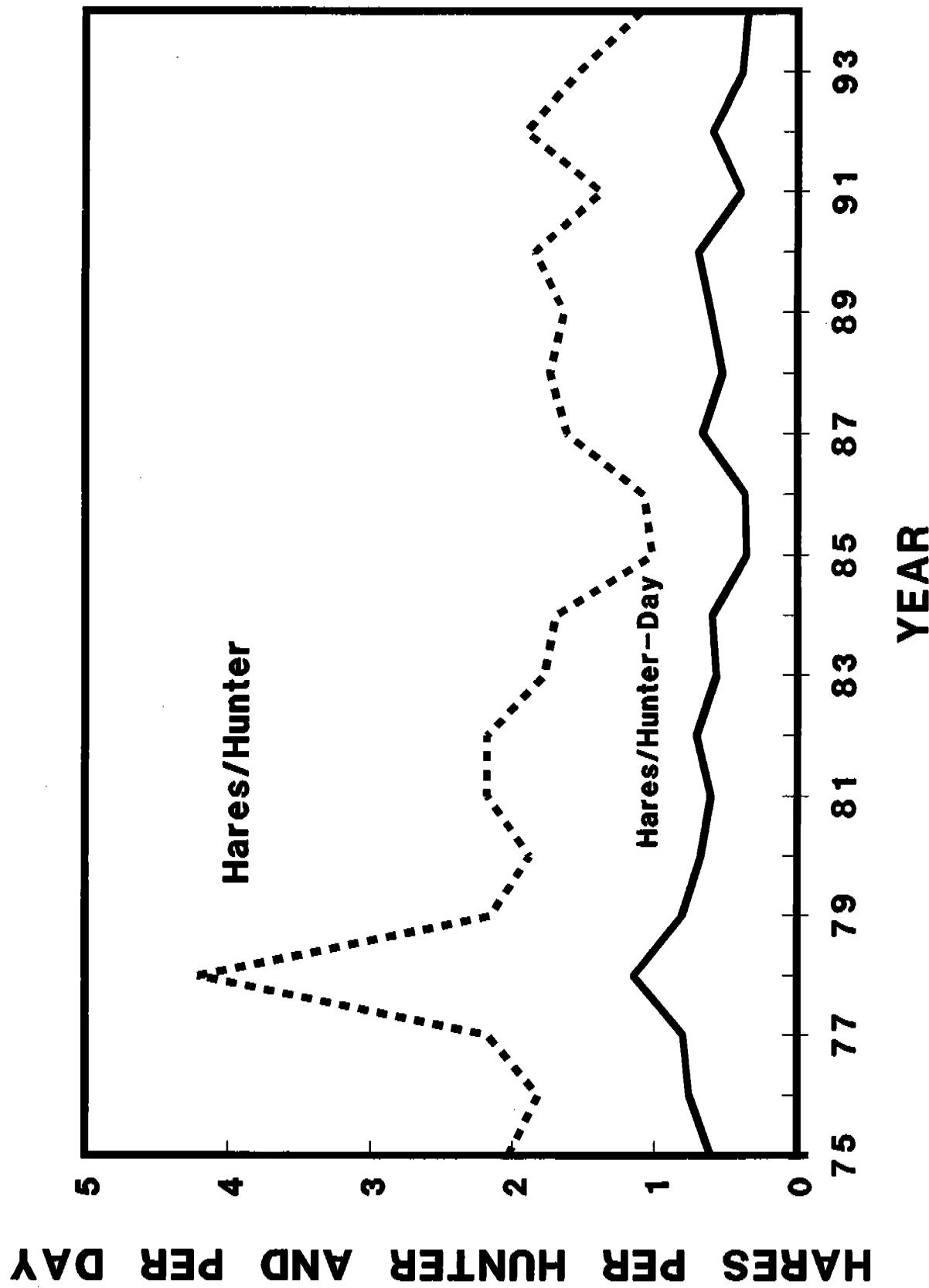


Figure 2. Statewide trends of snowshoe hare hunter success rates, 1975-94.

Table 11. Summary of snowshoe hare hunter success and distribution of harvest and hunting pressure by region and county, 1994.

REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD	SNOWSHOE BAGGED	SNOWSHOE HUNTER-DAY	% OF PRESSURE	% OF HARVEST
NORTHERN REGION						
BOX ELDER	17	1,529	615	0.40	31.07	35.73
CACHE	1	17	0	0.00	0.36	0.00
DAVIS	1	35	0	0.00	0.71	0.00
MORGAN	3	158	52	0.33	3.21	3.06
RICH	3	123	70	0.57	2.50	4.08
SUMMIT	4	105	0	0.00	2.14	0.00
WEBER	1	17	0	0.00	0.36	0.00
REGIONAL TOTALS	30	1,986	738	0.37	40.36	42.88
CENTRAL REGION						
JUAB	4	140	17	0.13	2.86	1.02
SALT LAKE	0	0	0	0.00	0.00	0.00
SANPETE	4	210	175	0.83	4.29	10.21
TOOELE	7	263	35	0.13	5.36	2.04
UTAH	12	474	158	0.33	9.64	9.19
WASATCH	5	158	70	0.44	3.21	4.08
REGIONAL TOTALS	32	1,248	457	0.37	25.36	26.54
SOUTHERN REGION						
BEAVER	0	0	0	0.00	0.00	0.00
GARFIELD	2	87	17	0.20	1.79	1.02
IRON	1	35	0	0.00	0.71	0.00
KANE	0	0	0	0.00	0.00	0.00
MILLARD	1	17	0	0.00	0.36	0.00
PIUTE	0	0	0	0.00	0.00	0.00
SEVIER	5	210	87	0.42	4.29	5.10
WASHINGTON	1	175	17	0.10	3.57	1.02
WAYNE	4	175	105	0.60	3.57	6.13
REGIONAL TOTALS	14	703	228	0.33	14.29	13.27
NORTHEASTERN REGION						
DAGGETT	0	0	0	0.00	0.00	0.00
DUCHESNE	6	210	35	0.17	4.29	2.04
UINTAH	3	123	70	0.57	2.50	4.08
REGIONAL TOTALS	9	333	105	0.32	6.79	6.13
SOUTHEASTERN REGION						
CARBON	6	580	193	0.33	11.79	11.23
EMERY	1	70	0	0.00	1.43	0.00
GRAND	0	0	0	0.00	0.00	0.00
SAN JUAN	0	0	0	0.00	0.00	0.00
REGIONAL TOTALS	7	650	193	0.30	13.21	11.23
UNKNOWN	9	0	0	0.00	0.00	0.00
STATE TOTALS	101	4,922	1,722	0.35	100.00	100.00

*Total hunter trips from questionnaire returns.

Table 12. Summary of snowshoe hare bagged per hunter-day by region and county, 1987-94.

Region and County	Year							
	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	0.35	0.78	0.33	0.54	0.38	0.52	0.45	0.82
Cache	1.67	0.21	1.10	0.56	0.30	0.26	0.42	1.30
Davis	0.25	0.40	1.50	0.00	0.03	0.00	0.00	0.00
Morgan	0.00	0.67	0.36	0.80	2.17	0.15	0.00	0.47
Rich	1.27	0.33	0.51	0.76	1.31	1.15	0.38	1.21
Summit	0.50	0.36	0.73	1.05	0.24	0.62	0.18	0.39
Weber	0.38	0.25	0.50	0.25	0.25	1.00	1.12	0.28
REGIONAL TOTALS	0.76	0.40	0.63	0.70	0.49	0.54	0.48	0.77
<u>Central Region</u>								
Juab	0.00	0.17	0.00	0.53	0.50	0.38	0.00	0.64
Salt Lake	0.00	0.48	0.38	0.00	0.22	0.08	0.00	2.00
Sanpete	0.57	0.68	0.64	1.08	0.78	0.43	0.67	1.02
Tooele	0.75	0.28	0.77	0.32	0.35	0.58	0.25	0.70
Utah	0.39	0.44	0.37	0.51	0.71	0.79	0.08	0.46
Wasatch	0.56	0.77	1.00	0.17	0.22	0.48	8.67	1.57
REGIONAL TOTALS	0.48	0.50	0.65	0.55	0.45	0.55	0.44	0.67
<u>Southern Region</u>								
Beaver	0.00	0.00	0.00	0.50	0.00	0.00	0.00	1.50
Garfield	0.00	0.00	0.35	0.67	1.00	0.00	0.00	1.04
Iron	0.00	0.00	0.00	0.00	0.00	0.67	0.00	1.05
Kane	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.91
Millard	2.80	1.20	1.00	0.00	0.00	0.15	0.32	0.69
Piute	0.00	3.00	0.64	0.43	0.00	1.50	0.00	0.33
Sevier	0.60	0.75	0.55	0.96	0.61	0.78	0.44	0.67
Washington	0.00	2.00	0.00	0.00	0.00	0.00	0.00	1.01
Wayne	1.14	0.00	0.50	0.39	0.44	1.25	0.25	1.06
REGIONAL TOTALS	0.88	0.47	0.50	0.62	0.56	0.70	0.30	0.93
<u>Northeastern Region</u>								
Daggett	1.00	1.96	1.00	0.50	0.14	1.00	0.43	1.52
Duchesne	0.65	0.63	0.54	1.33	0.18	0.23	0.22	1.43
Uintah	1.31	0.89	0.23	0.88	0.14	1.62	0.15	1.55
REGIONAL TOTALS	0.91	1.02	0.40	1.17	0.17	0.79	0.23	1.51
<u>Southeastern Region</u>								
Carbon	1.00	0.46	1.00	0.71	0.21	0.63	0.29	0.89
Emery	0.57	0.94	0.54	0.37	0.45	0.33	0.60	0.90
Grand	0.00	0.00	0.00	2.00	0.00	0.00	0.00	1.21
San Juan	5.00	1.00	1.67	0.00	0.00	1.00	0.00	0.97
REGIONAL TOTALS	0.81	0.83	0.77	0.56	0.30	0.46	0.37	0.94
Unknown counties	0.40	0.42	0.00	0.00	0.00	0.00	3.60	0.00
STATE TOTALS	0.67	0.53	0.61	0.70	0.40	0.60	0.39	0.35

Table 13. Percentage distribution of snowshoe hare harvest by region and county, 1987-94.

Region and County	Year							
	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	14.80	3.11	10.57	6.62	14.43	10.76	9.55	35.73
Cache	4.86	11.40	5.15	4.78	2.49	4.93	1.09	0.00
Davis	1.21	0.78	0.00	0.37	0.00	0.00	0.33	0.00
Morgan	0.40	1.04	1.08	4.78	0.50	0.00	1.06	3.06
Rich	3.24	7.77	14.09	20.22	5.72	1.35	0.63	4.08
Summit	6.08	4.15	11.11	4.41	6.47	1.35	0.93	0.00
Weber	1.82	1.30	0.27	1.84	0.50	8.52	1.06	0.00
REGIONAL TOTALS	32.45	29.54	42.28	43.02	30.10	26.91	14.64	42.88
<u>Central Region</u>								
Juab	0.81	0.00	2.71	1.47	3.23	0.00	5.72	1.02
Salt Lake	2.43	0.78	0.00	0.74	0.25	0.00	0.13	0.00
Sanpete	10.14	9.33	7.05	11.40	2.49	1.79	3.57	10.21
Tooele	3.24	8.55	3.25	8.83	7.21	8.07	13.39	2.04
Utah	6.89	3.89	4.88	5.52	11.44	2.24	8.50	9.19
Wasatch	8.31	6.22	0.27	3.68	2.99	23.32	0.23	4.08
REGIONAL TOTALS	31.84	28.76	18.16	31.62	27.61	35.43	31.54	26.54
<u>Southern Region</u>								
Beaver	0.00	0.00	0.27	0.00	0.00	0.00	2.31	0.00
Garfield	0.00	1.81	1.08	1.10	0.00	0.00	0.86	1.02
Iron	0.00	0.00	0.00	0.00	0.50	0.00	2.02	0.00
Kane	0.00	0.00	0.00	0.00	0.25	0.00	1.45	0.00
Millard	1.21	1.55	0.00	0.00	1.24	4.48	4.86	0.00
Piute	1.21	1.81	0.81	0.00	0.00	0.00	0.30	0.00
Sevier	1.82	2.85	7.05	10.30	5.22	3.14	2.98	5.10
Washington	0.40	0.00	0.00	0.00	0.00	0.00	5.49	1.02
Wayne	0.00	4.66	3.25	1.47	9.95	1.79	1.09	6.13
REGIONAL TOTALS	4.66	2.69	12.47	12.87	17.91	9.42	21.36	13.27
<u>Northeastern Region</u>								
Daggett	9.53	0.26	0.54	1.10	1.00	5.83	0.69	0.00
Duchesne	6.28	6.74	16.26	6.25	3.73	6.28	3.64	2.04
Uintah	5.07	2.33	3.79	1.84	16.92	4.93	6.64	4.08
REGIONAL TOTALS	20.89	9.33	20.60	9.19	21.64	17.04	10.98	6.13
<u>Southeastern Region</u>								
Carbon	1.21	10.88	2.71	1.47	1.24	1.79	10.28	11.23
Emery	6.49	7.51	2.71	1.84	1.24	1.35	4.13	0.00
Grand	0.00	0.00	1.08	0.00	0.00	0.00	1.92	0.00
San Juan	1.41	1.30	0.00	0.00	0.25	0.00	5.06	0.00
REGIONAL TOTALS	9.12	19.69	6.50	3.31	2.74	3.14	21.39	11.23
Unknown counties	1.01	0.00	0.00	0.00	0.00	8.07	0.10	0.00
STATE TOTALS	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table 14. Percentage distribution of snowshoe hare hunting pressure by region and county, 1987-94.

Region and County	Year							
	1987	1988	1989	1990	1991	1992	1993	1994
<u>Northern Region</u>								
Box Elder	6.30	10.16	5.64	13.69	7.11	16.67	9.35	31.07
Cache	4.10	12.64	6.27	6.46	6.37	5.71	4.59	0.36
Davis	1.09	1.62	0.31	0.19	4.59	0.00	0.35	0.71
Morgan	0.27	0.32	1.72	0.95	0.89	1.95	0.53	3.21
Rich	4.10	5.18	9.25	12.93	6.22	3.00	1.41	2.50
Summit	6.57	9.08	3.45	7.41	7.41	6.31	3.00	2.14
Weber	2.19	3.89	1.57	0.76	2.96	0.30	3.00	0.36
REGIONAL TOTALS	24.65	42.91	28.21	42.40	35.56	33.93	22.22	40.36
<u>Central Region</u>								
Juab	0.54	2.59	0.00	3.61	1.19	5.11	0.18	2.86
Salt Lake	2.19	2.70	1.25	0.00	1.33	1.95	5.47	0.00
Sanpete	8.21	8.00	8.78	4.56	5.93	3.45	1.06	4.29
Tooele	4.38	6.27	6.74	7.03	10.22	7.51	12.52	5.36
Utah	14.79	8.43	6.43	6.65	3.11	8.71	11.29	9.64
Wasatch	9.86	5.72	3.76	1.14	6.67	3.75	1.06	3.21
REGIONAL TOTALS	40.00	33.72	26.96	23.00	28.45	30.48	31.57	25.63
<u>Southern Region</u>								
Beaver	0.00	1.83	0.63	0.38	0.30	0.00	0.00	0.00
Garfield	0.27	0.10	3.13	1.14	0.44	0.00	1.23	1.79
Iron	2.19	0.00	0.00	0.00	0.00	0.45	0.00	0.71
Kane	0.00	0.00	0.00	0.00	0.15	0.75	0.00	0.00
Millard	1.36	0.54	0.94	0.19	0.00	5.11	5.47	0.36
Piute	0.27	0.21	1.72	1.33	0.30	0.30	0.00	0.00
Sevier	2.73	1.29	3.13	5.13	6.82	4.05	2.82	4.29
Washington	0.00	0.10	0.16	0.00	0.00	0.00	0.00	3.57
Wayne	1.91	1.18	5.64	5.89	1.33	4.80	2.82	3.57
REGIONAL TOTALS	8.76	5.29	15.36	14.07	9.33	15.47	12.35	14.29
<u>Northeastern Region</u>								
Daggett	0.54	2.59	0.16	0.76	3.26	0.60	5.29	0.00
Duchesne	7.12	5.29	7.52	8.56	13.78	9.61	11.29	4.29
Uintah	4.38	3.02	6.27	3.04	5.19	6.31	13.05	2.50
REGIONAL TOTALS	12.04	10.91	13.95	12.36	22.22	16.52	29.63	6.79
<u>Southeastern Region</u>								
Carbon	3.83	1.40	6.58	2.66	2.81	1.20	2.47	11.79
Emery	7.67	3.67	8.46	5.13	1.63	2.25	0.88	1.43
Grand	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.00
San Juan	0.27	0.75	0.47	0.00	0.00	0.15	0.00	0.00
REGIONAL TOTALS	11.78	5.83	5.52	8.17	4.44	3.60	3.35	13.21
Unknown counties	2.73	1.29	0.00	0.00	0.00	0.00	0.88	0.00
STATE TOTALS	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table 15. Statewide summary of snowshoe hare harvest statistics, 1975-94.

Year	Total Hunters	Total Harvest	Hunter-Days Afield	Hares Per Hunter-Day	Hares Per Hunter
1975	5,961	12,072	19,770	0.61	2.03
1976	8,502	15,500	20,367	0.76	1.82
1977	9,752	21,232	26,535	0.80	2.18
1978	8,205	34,535	30,155	1.15	4.21
1979	6,787	14,641	18,115	0.81	2.16
1980	4,048	7,603	11,140	0.68	1.88
1981	3,554	7,750	12,782	0.61	2.18
1982	4,245	9,257	13,073	0.71	2.18
1983	3,544	6,302	11,088	0.57	1.78
1984	3,796	6,455	10,840	0.60	1.70
1985	3,365	3,429	9,494	0.36	1.02
1986	3,277	3,544	9,541	0.37	1.08
1987	3,702	6,005	8,947	0.67	1.62
1988	4,725	8,231	15,444	0.53	1.74
1989	4,895	8,006	13,233	0.61	1.64
1990	4,095	7,593	10,825	0.70	1.85
1991	3,427	4,731	11,742	0.40	1.38
1992	3,732	7,144	11,836	0.60	1.91
1993	2,755	4,237	10,774	0.39	1.54
1994	1,565	1,722	4,922	0.35	1.10
Totals					
(1975-94)	93,932	189,989	280,623	--	--
Averages					
(1975-93)	4,861	9,909	14,511	0.63	1.89

A P P E N D I C E S

APPENDIX A

WEATHER CONDITIONS

Weather information used in this report (Tables 1 & 2 and Figures 1 & 2) is from the office of the Utah State Climatologist and N.O.A.A. Climatological Data Periodical.

The 1993-94 winter weather was normal in terms of precipitation and in terms of cold temperature. Above average precipitation fell in October 1993 and in February and April, 1994. In November 1993 and February 1994 temperatures were below average.

In the spring of 1994, April precipitation was above normal. May through September, 1994 precipitation was below normal. Temperatures were above normal March through September, 1994.

Table I. Comparison of 1994 monthly average temperatures (°F) to the normal for each weather division and statewide.

Weather Division	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No.1 Western												
Normal	26.0	32.5	39.6	47.3	56.5	66.0	74.3	72.1	62.0	50.1	37.6	27.4
1994	32.3	32.0	43.6	49.9	60.1	70.3	75.9	75.3	64.9	48.9	30.7	30.0
Departure (degrees)	6.3	-0.5	4.0	2.6	3.6	4.3	1.6	3.2	2.9	-1.2	-6.9	2.6
No.2 Dixie												
Normal	38.8	44.1	49.2	56.6	65.7	75.6	81.7	79.4	71.9	60.9	48.0	39.5
1994	42.7	41.5	55.1	58.8	67.6	81.0	84.3	83.5	75.1	59.3	42.7	41.8
Departure (degrees)	3.9	-2.6	5.9	2.2	1.9	5.4	2.6	4.1	3.2	-1.6	-5.3	2.3
No.3 North Central												
Normal	25.8	31.3	39.3	47.7	56.9	66.2	74.4	72.3	62.4	50.9	38.3	27.8
1994	34.3	32.3	44.0	50.7	61.6	70.7	77.0	76.3	67.0	49.8	31.8	31.2
Departure (degrees)	8.5	1.0	4.7	3.0	4.7	4.5	2.6	4.0	4.6	-1.1	-6.5	3.4
No.4 South Central												
Normal	26.5	31.6	37.6	45.1	54.0	63.4	70.4	68.2	59.9	49.3	37.3	28.1
1994	31.3	29.6	42.2	46.8	56.4	67.9	72.0	71.2	62.0	47.0	30.4	29.4
Departure (degrees)	4.8	-2.0	4.6	1.7	2.4	4.5	1.6	3.0	2.1	-2.3	-6.9	1.3
No.5 Northern Mountains												
Normal	20.9	24.7	31.7	40.6	49.6	58.2	65.6	63.6	54.9	44.7	32.5	22.8
1994	27.3	24.3	37.2	44.2	54.2	62.6	67.7	68.0	59.3	44.4	27.3	24.9
Departure (degrees)	6.4	-0.4	5.5	3.6	4.6	4.4	2.1	4.4	4.4	-0.3	-5.2	2.1
No.6 Uintah Basin												
Normal	16.7	24.0	36.3	46.8	56.2	65.3	72.2	69.8	60.2	48.3	34.0	20.5
1994	27.5	26.6	42.0	49.2	59.9	69.2	73.4	72.6	61.8	47.5	30.6	27.1
Departure (degrees)	10.8	2.6	5.7	2.4	3.7	3.9	1.2	2.8	1.6	-0.8	-3.4	6.6
No.7 Southeast												
Normal	26.9	34.2	41.9	50.5	60.0	70.1	76.7	74.2	65.2	53.4	40.2	29.5
1994	32.0	32.9	46.8	52.0	62.0	75.4	78.6	78.1	67.2	51.6	36.0	32.0
Departure (degrees)	5.1	-1.3	4.9	1.5	2.0	5.3	1.9	3.9	2.0	-1.8	-4.2	2.5
STATE AVERAGES												
Normal	25.9	31.8	39.4	47.8	57.0	66.4	73.6	71.4	62.4	51.1	38.3	27.9
1994	32.5	31.3	44.4	50.2	60.3	71.0	75.6	75.0	65.3	49.8	32.8	30.9
Departure (degrees)	6.5	-0.5	5.0	2.4	3.3	4.6	1.9	3.6	3.0	-1.3	-5.5	3.0

Table 2. Comparison of 1994 monthly average precipitation to the normal for each weather division and statewide.

Weather Division	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No.1 Western												
Normal	0.53	0.58	0.85	0.89	0.98	0.71	0.73	0.83	0.79	0.81	0.68	0.58
1994	0.24	0.63	0.84	1.50	0.77	0.13	0.32	1.01	0.84	1.46	1.28	0.38
Departure (inches)	-0.29	0.05	-0.01	0.61	-0.21	-0.58	-0.41	0.18	0.95	0.65	0.60	-0.20
No.2 Dixie												
Normal	1.32	1.29	1.67	0.90	0.63	0.31	0.90	1.19	0.86	0.78	1.19	1.01
1994	0.29	2.46	1.17	2.02	0.67	0.24	0.46	0.77	0.63	1.04	1.56	1.15
Departure (inches)	-1.03	1.17	-0.50	1.12	0.04	-0.07	-0.44	-0.42	-0.23	0.26	0.37	0.14
No.3 North Central												
Normal	1.34	1.39	1.77	1.94	1.84	1.21	0.85	0.99	1.43	1.64	1.53	1.49
1994	0.76	1.92	1.65	2.41	1.2	0.07	0.13	0.86	0.99	3	2.92	1.28
Departure (inches)	-0.58	0.53	-0.12	0.47	-0.64	-1.14	-0.72	-0.13	-0.44	1.36	1.39	-0.21
No.4 South Central												
Normal	0.98	1.01	1.37	1.07	0.98	0.60	1.07	1.38	1.18	1.05	1.07	1.02
1994	0.39	1.81	0.66	1.78	0.47	0.08	0.44	1.45	1.31	2.21	1.76	0.85
Departure (inches)	-0.59	0.80	-0.71	0.71	-0.51	-0.52	-0.63	0.07	0.13	1.16	0.69	-0.17
No.5 Northern Mountains												
Normal	1.83	1.78	1.93	1.95	1.68	1.19	1.04	1.19	1.52	1.69	1.83	1.92
1994	1.19	2.85	1.65	2.10	1.29	0.17	0.31	1.12	1.09	3.47	3.22	1.32
Departure (inches)	-0.64	1.07	-0.28	0.15	-0.39	-1.02	-0.73	-0.07	-0.43	1.78	1.39	-0.60
No.6 Uintah Basin												
Normal	0.48	0.46	0.63	0.73	0.86	0.71	0.71	0.73	0.88	0.96	0.56	0.60
1994	0.06	0.56	0.16	0.94	0.37	0.21	0.18	0.69	0.98	3.36	0.78	0.14
Departure (inches)	-0.42	0.10	-0.47	0.21	-0.49	-0.50	-0.53	-0.04	0.10	2.40	0.22	-0.46
No.7 Southeast												
Normal	0.68	0.59	0.81	0.66	0.67	0.46	0.97	1.05	0.98	1.13	0.80	0.73
1994	0.28	0.90	0.11	1.72	0.42	0.07	0.15	0.85	1.24	1.19	0.91	0.83
Departure (inches)	-0.40	0.31	-0.70	1.06	-0.25	-0.39	-0.82	-0.20	0.26	0.06	0.11	0.10
STATE AVERAGES												
Normal	1.02	1.01	1.29	1.16	1.09	0.74	0.90	1.05	1.09	1.15	1.09	1.05
1994	0.46	1.59	0.89	1.78	0.74	0.14	0.28	0.96	1.01	2.25	1.78	0.85
Departure (inches)	-0.56	0.58	-0.40	0.62	-0.35	-0.60	-0.61	-0.09	-0.08	1.10	0.68	-0.20

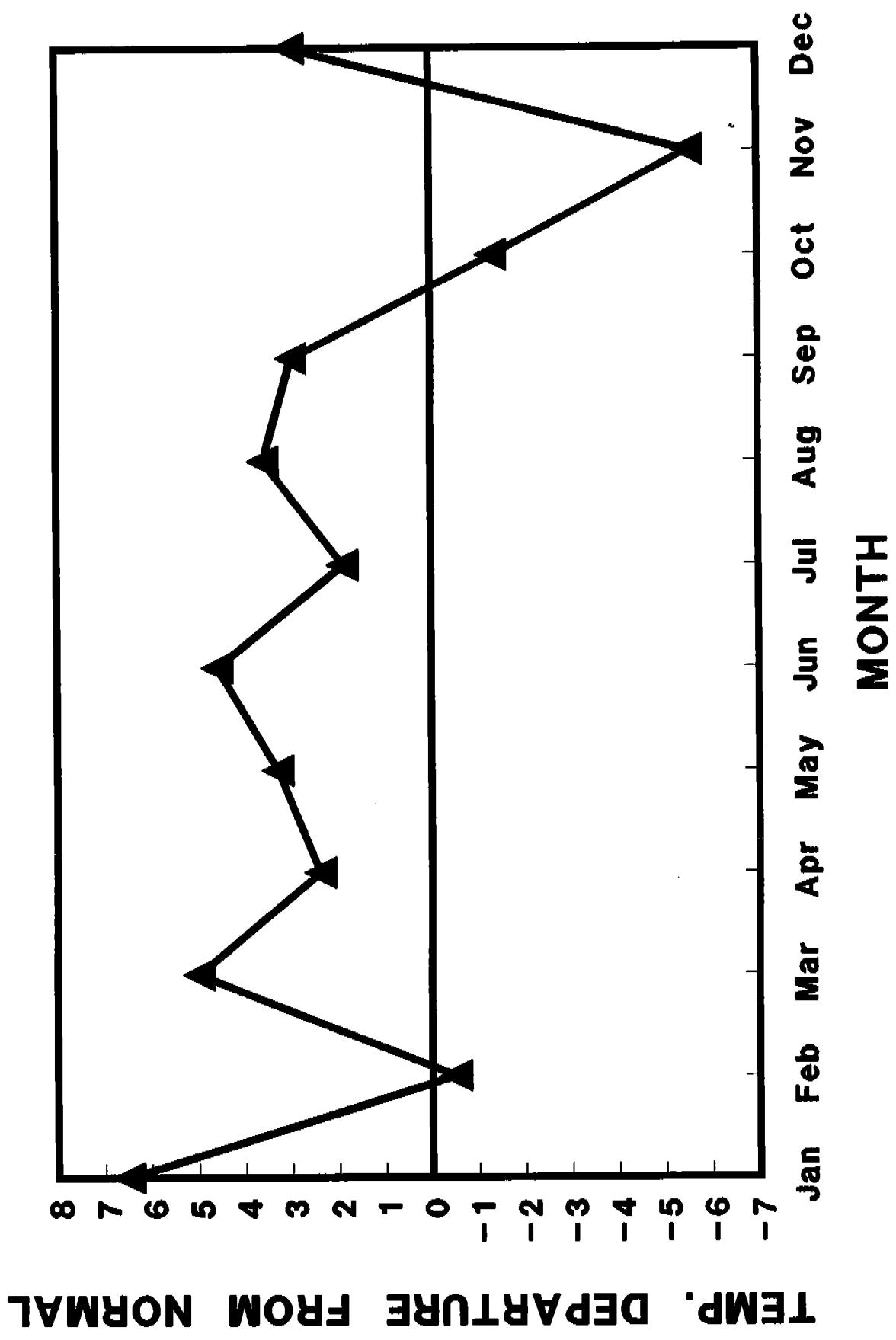


Figure 1. Monthly average temperature departure from normal (degrees F), 1994.

PRECIP. DEPARTURE FROM NORMAL

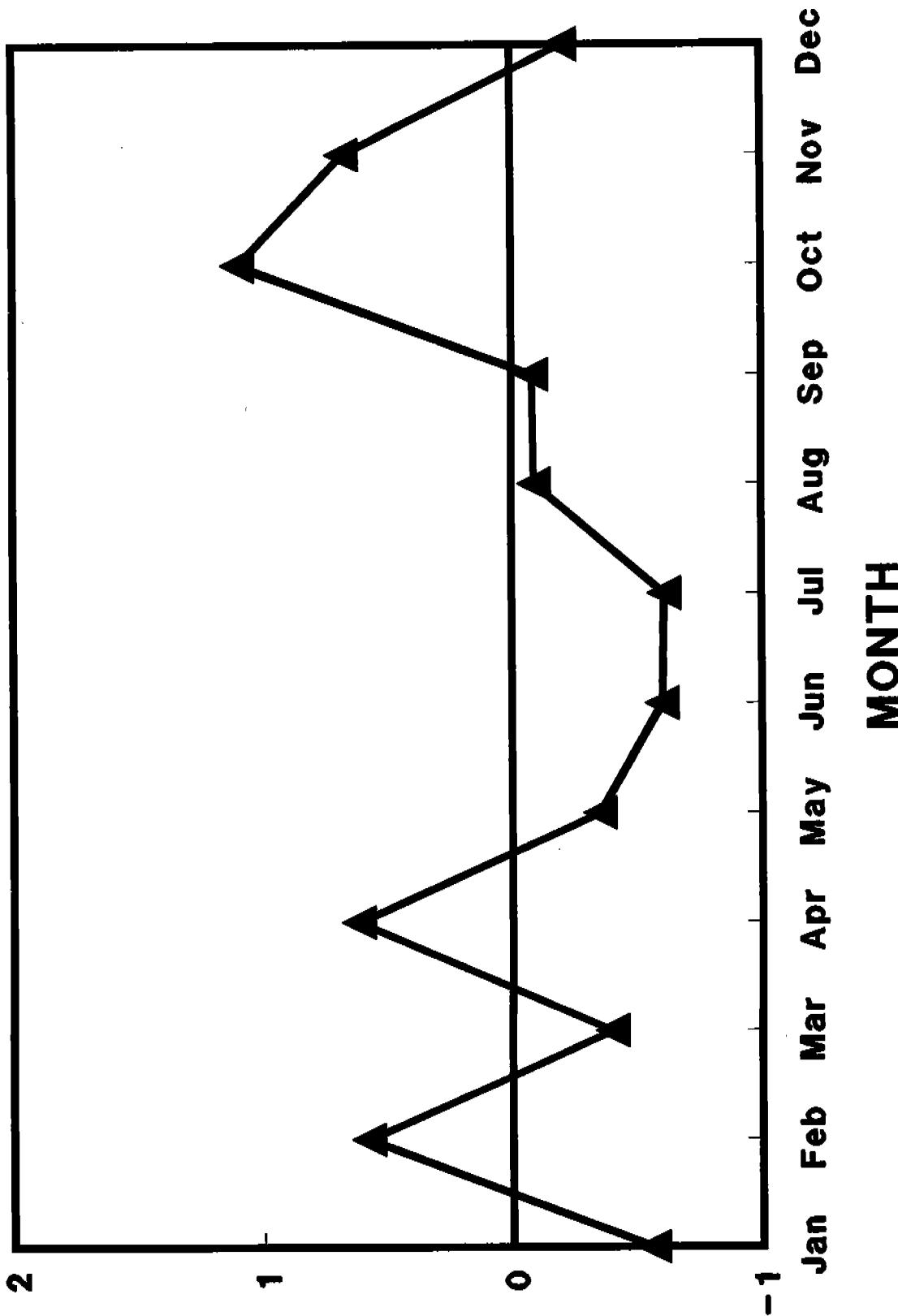


Figure 2. Monthly average precipitation departure from normal (inches), 1994.

APPENDIX B

LICENSE SALES

Small game license sales by type and cost are listed in Table 1. The number of licenses sold for all types, except adult resident small game, decreased slightly in 1994.

The proportion of Utah's population hunting small game is declining (Table 2). In the early 1970s about 10 percent of Utah's population was hunting small game. In 1994, only 3.9 percent of Utah's population hunted small game.

Table 3 identifies revenue generated to the Utah Division of Wildlife Resources from small game license sales. Small game program budgets run about half the revenue generated, with the other half going to support services such as law enforcement, administration, accounting, and field services.

Table 1. Statewide small game license sales information, 1954-94.

Year	Adult Res.		Juv. Res.		Non Res.		Combination Issued	License Cost
	Small	Game	Small	Game	Small	Game		
1954	12,990	\$3.50	5,170	\$2.00	561	\$15.00	79,574	\$6.00
1955	12,086	\$3.50	5,369	\$2.00	478	\$15.00	79,960	\$6.00
1956	12,102	\$3.50	5,735	\$2.00	524	\$15.00	80,968	\$6.00
1957	12,239	\$3.50	6,192	\$2.00	505	\$15.00	81,271	\$6.00
1958	14,290	\$3.50	6,563	\$2.00	696	\$15.00	85,198	\$6.00
1959	13,421	\$3.50	5,966	\$2.00	669	\$15.00	90,069	\$6.00
1960	12,020	\$3.50	5,022	\$2.00	576	\$15.00	90,085	\$6.00
1961	12,177	\$3.50	6,108	\$2.00	617	\$15.00	88,180	\$6.00
1962	12,953	\$3.50	6,536	\$2.00	607	\$15.00	91,412	\$6.00
1963	13,365	\$3.50	6,319	\$2.00	642	\$15.00	94,768	\$6.00
1964	13,073	\$3.50	6,453	\$2.00	681	\$15.00	98,556	\$6.00
1965	12,913	\$3.50	6,755	\$2.00	716	\$15.00	100,410	\$6.00
1966	13,854	\$3.50	7,477	\$2.00	725	\$15.00	103,849	\$6.00
1967	18,588	\$4.50	12,851	\$2.50	652	\$20.00	86,218	\$10.00
1968	20,647	\$4.50	15,205	\$2.50	703	\$20.00	91,020	\$10.00
1969	20,221	\$4.50	15,567	\$2.50	853	\$20.00	96,117	\$10.00
1970	19,564	\$4.50	15,827	\$2.50	1,009	\$20.00	100,467	\$10.00
1971	20,681	\$4.50	16,044	\$2.50	1,000	\$20.00	102,284	\$10.00
1972	19,796	\$4.50	16,523	\$2.50	1,075	\$20.00	107,414	\$10.00
1973	18,836	\$4.50	16,522	\$2.50	964	\$20.00	155,436	\$10.00
1974	17,434	\$4.50	16,334	\$2.50	974	\$20.00	117,770	\$10.00
1975	17,057	\$4.50	15,869	\$2.50	967	\$20.00	115,362	\$10.00
1976	33,078	\$6.00	16,261	\$3.00	1,141	\$20.00	76,587	\$18.00
1977	36,473	\$6.00	15,795	\$3.00	1,270	\$20.00	74,600	\$18.00
1978	37,082	\$6.00	15,419	\$3.00	1,449	\$20.00	81,227	\$18.00
1979	36,721	\$6.00	14,200	\$3.00	1,575	\$20.00	84,450	\$18.00
1980	30,189	\$8.00	14,042	\$4.00	1,330	\$30.00	100,177	\$23.00
1981	37,804	\$8.00	13,874	\$4.00	1,559	\$30.00	83,486	\$23.00
1982	36,850	\$8.00	14,040	\$4.00	1,637	\$30.00	82,970	\$23.00
1983	39,602	\$8.00	13,814	\$4.00	1,685	\$30.00	73,529	\$23.00
1984	36,070	\$8.00	13,170	\$4.00	1,633	\$30.00	73,081	\$23.00
1985	30,102	\$12.00	12,987	\$6.00	1,500	\$40.00	82,137	\$35.00
1986	29,202	\$12.00	11,921	\$6.00	1,274	\$40.00	67,187	\$35.00
1987	26,781	\$12.00	11,228	\$6.00	1,235	\$40.00	66,715	\$35.00
1988	25,733	\$12.00	9,498	\$6.00	1,428	\$40.00	72,846	\$35.00
1989	25,845	\$12.00	5,769	\$6.00	1,422	\$40.00	74,274	\$35.00
1990	24,527	\$12.00	5,682	\$6.00	1,279	\$40.00	76,292	\$35.00
1991	23,276	\$12.00	5,626	\$6.00	1,212	\$40.00	79,165	\$35.00
1992	21,852	\$12.00	5,431	\$6.00	1,195	\$40.00	78,940	\$35.00
1993	20,899	\$12.00	4,887	\$6.00	1,150	\$40.00	78,030	\$25.00
1994	25,792	\$12.00	4,551	\$6.00	1,223	\$40.00	59,854	\$25.00

Table 2. Actual (1971-1993) proportion of Utah population hunting small game.

Year	Utah Population	Resident Small Game	Proportion
		Licenses Sold 1	Hunting Small Game
1971	1,101,000	101,421	9.2
1972	1,135,000	110,691	9.8
1973	1,169,000	115,129	9.8
1974	1,197,000	112,963	9.4
1975	1,234,000	108,636	8.8
1976	1,272,000	85,268	6.7
1977	1,316,000	86,549	6.6
1978	1,364,000	95,637	7.0
1979	1,416,000	100,116	7.1
1980	1,461,037	110,039	7.5
1981	1,524,830	103,041	6.8
1982	1,588,622	99,744	6.3
1983	1,652,415	93,303	5.6
1984	1,716,207	88,084	5.1
1985	1,780,000	94,991	5.3
1986a	1,665,000	82,777	5.0
1987a	1,678,000	85,099	5.1
1988	1,695,000	92,677	5.5
1989a	1,715,000	92,031	5.4
1990a	1,722,850	90,532	5.3
1991a	1,774,241	89,297	5.0
1992a	1,820,453	91,422	5.0
1993a	1,866,000	88,593	4.7
1994a	1,916,000	74,658	3.9

1 Adjusted for waterfowl hunters subtracted from combination licenses,
 R.S.G. = Adjusted combination plus juvenile small game plus adult small game.

a Utah Population Estimate Committee Report for July 1
 (Office of State Planning Coordinator)

Table 3. Small game license sales and income, 1971-94 (JSG = juvenile small game, RSG = adult resident small game, CMB = combination license, NRSG = nonresident small game).

Year	License Fees				Number of Licenses Sold			Total Gross Revenues Attributed to Small Game (\$)					
	JSG	RSG	CMB	NRSG	JSG(4)	RSG	CMB	NRSG	JSG(4)	RSG	CMB(2)	NRSG	TOTAL(1)
1971	2.50	4.50	10.00	20.00	16,044	20,681	102,284	1,000	37,588	20,055	93,064	200,557	20,000
1972	2.50	4.50	10.00	20.00	16,523	19,796	107,414	4,075	33,042	20,653	89,082	230,553	21,500
1973	2.50	4.50	10.00	20.00	16,522	18,336	115,436	964	35,665	20,652	84,762	247,290	19,280
1974	2.50	4.50	10.00	20.00	16,334	17,434	117,770	974	38,575	20,417	78,453	245,504	19,480
1975	2.50	4.50	10.00	20.00	15,869	17,057	115,362	967	39,652	19,836	76,756	234,701	19,340
1976	3.00	6.00	18.00	20.00	16,261	33,078	76,587	1,141	40,658	24,391	198,468	184,675	22,820
1977	3.00	6.00	18.00	20.00	15,795	36,473	74,600	1,270	40,319	23,692	218,838	176,204	25,400
1978	3.00	6.00	18.00	20.00	15,419	37,982	81,227	1,449	38,091	23,128	222,492	221,719	28,980
1979	3.00	6.00	18.00	20.00	14,200	36,721	84,450	1,575	35,255	21,300	220,326	252,862	31,500
1980	4.00	8.00	23.90	30.00	14,042	30,189	100,177	1,330	34,369	28,084	241,512	425,120	39,900
1981	4.00	8.00	23.00	30.00	13,874	37,804	83,486	1,559	32,123	27,748	302,432	331,805	46,770
1982	4.00	8.00	23.00	30.00	14,040	36,850	82,970	1,637	34,116	28,080	294,800	315,597	49,110
1983	4.00	8.00	23.00	30.00	13,814	39,602	73,529	1,685	33,642	25,620	305,249	257,670	50,134
1984	4.00	8.00	23.00	30.00	13,170	36,070	73,081	1,633	34,237	26,340	288,560	250,544	565,444
1985	6.00	12.00	35.00	40.00	12,987	30,102	82,137	1,500	30,235	38,961	361,224	484,246	60,000
1986	6.00	12.00	35.00	40.00	11,946	39,567	67,435	1,274	25,533	35,838	354,804	395,973	50,960
1987	6.00	12.00	35.00	40.00	11,238	26,781	66,715	1,235	19,625	33,684	321,372	439,350	49,400
1988	6.00	12.00	35.00	40.00	9,498	25,733	72,846	1,428	15,490	28,494	308,796	535,971	57,120
1989	6.00	12.00	35.00	40.00	5,769	25,845	74,274	1,422	13,857	17,307	310,140	563,691	56,880
1990	6.00	12.00	35.00	40.00	5,682	24,527	76,392	1,279	15,969	17,046	294,324	543,986	51,160
1991	6.00	12.00	35.00	40.00	5,626	23,276	79,165	1,212	18,770	16,878	279,312	563,485	48,480
1992	6.00	12.00	35.00	40.00	5,431	21,382	78,940	1,195	14,801	16,293	262,224	598,417	47,800
1993	6.00	12.00	25.00	40.00	4,887	20,399	78,030	1,150	15,223	14,661	250,788	565,989	46,000
1994	6.00	12.00	25.00	40.00	4,551	25,792	59,854	1,223	15,539	13,653	309,504	413,459	48,920

¹ Value does not include cougar, bear, band-tailed pigeon and wild turkey permits, Upland Game Habitat Stamp fees or commercial hunting area licenses. It does not include NRSG revenue--this is assumed to be primarily non-resident bear and cougar hunters.

² Combination license values are based on the assumption that all waterfowl hunters purchased only combination licenses. They may fish and hunt big game but they do not hunt any other small game. Therefore, duck stamp sales are subtracted from combination license sales when projecting revenue generated. The proportion of the combination license fee attributed to small game equals the resident small game license fee divided by the resident fishing license, plus the resident big game license fee, plus the resident small game license fee or \$9.33 for 1994.

³ Total Federal duck stamps sold does not include those sold during the second quarter, April-June, because persons purchasing stamps during this quarter tend not to be hunters.

⁴ Half of the juvenile small game license sales were attributed to waterfowl hunters. Federal duck stamps are not required of juveniles less than 16 years of age.

APPENDIX C: Regional and statewide summary of effort expended on upland game summer surveys, 1971-94.

Generally hours spent and miles driven on upland game surveys in Utah have declined since 1971. This is the result of competing uses of time for biologists and conservation officers. In addition, the restriction to a 40 hour work week by the Federal Fair Labor and Standards Act has further eroded survey effort. When effort and results have reached a lower critical sample size, surveys have been eliminated.

Table 1. Regional and statewide summary of effort expended on upland game summer inventory, 1972-94.

Species	REGION						STATE TOTALS					
	Northern	Central	Southern	Northeastern		Miles	Hours	Miles	Hours	Miles	Hours	Miles
Pheasant												
1972	469	--	963	--	752	--	535	--	297	--	3,016	--
1973	322	--	691	--	740	--	488	--	230	--	2,471	--
1974	479	--	819	--	848	--	508	--	317	--	2,971	--
1975	490	--	846	--	993	--	515	--	393	--	3,237	--
1976	476	--	822	--	773	--	434	--	400	--	2,905	--
1977	484	--	731	--	790	--	554	--	343	--	2,902	--
1978	479	--	642	--	654	--	512	--	588	--	2,875	--
1979	438	--	642	--	721	--	562	--	209	--	2,572	--
1980	358	--	672	--	750	--	546	--	270	--	2,596	--
1981	459	--	525	--	801	--	535	--	330	--	2,630	--
1982	437	--	639	--	583	--	477	--	332	--	2,468	--
1983	260	--	442	--	780	--	426	--	330	--	2,238	--
1984	444	--	359	--	473	--	463	--	166	--	1,905	--
1985	383	--	303	--	650	--	492	--	180	--	2,008	--
1986	455	--	617	--	669	--	520	--	270	--	2,531	--
1987	432	--	518	--	574	--	546	--	90	--	2,160	--
1988	334	--	436	--	604	--	469	--	90	--	1,933	--
1989	499	--	427	--	45	--	403	--	90	--	1,464	--
1990	518	--	509	--	97	--	240	--	90	--	1,454	--
1991	485	--	496	--	120	--	375	--	90	--	1,566	--
1992	413	--	455	--	0	--	657	--	90	--	1,615	--
1993	249	--	547	--	80	--	340	--	90	--	1,306	--
1994	186	--	468	--	--	--	297	--	--	--	945	--
Chukar												
1972	712	91	1,423	131	950	37	1,012	69	984	58	5,081	386
1973	1,063	119	1,494	167	72	10	705	48	702	68	4,036	412
1974	125	31	1,591	107	564	43	440	30	1,115	67	3,835	278
1975	188	30	808	85	892	41	908	88	796	55	3,582	299
1976	875	75	964	110	465	32	727	67	687	66	3,718	350
1977	405	50	1,198	120	601	37	600	71	429	44	3,233	322
1978	359	28	459	42	135	14	315	23	536	52	1,804	159
1979	546	54	793	76	415	22	293	23	267	14	2,314	189
1980	283	68	1,668	124	235	12	0	0	53	10	2,239	214
1981	330	56	591	49	147	11	245	21	260	32	2	169
1982	473	34	571	56	475	35	260	37	101	9	1,880	171
1983	17	15	190	17	20	2	488	44	103	7	818	85
1984	654	81	303	32	--	--	--	--	118	16	1,075	129
1985	236	73	453	36	--	--	--	--	174	12	863	121
1986	394	65	432	37	--	--	135	14	--	--	961	116
1987	813	119	398	36	9	3	305	32	175	23	1,691	213
1988	379	35	457	49	60	7	--	--	180	14	1,076	105
1989	105	17	505	30	11	8	--	--	144	12	765	67
1990	--	21	1,190	77	--	--	85	8	235	20	1,510	126
1991	0	0	311	18	0	0	0	0	225	11	536	29
1992	178	27	270	12	0	0	0	0	216	24	664	63
1993	--	--	--	--	--	--	--	--	300	22	300	22
1994	--	--	--	--	--	--	--	--	70	6	70	6

Table I (continued)

Species	REGION						STATE TOTALS					
	Northern		Central		Southern		Northeastern		Southeastern		Miles Hours	
	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours
Sage Grouse												
1972	1,628	323	1,187	143	751	144	2,125	170	1,280	141	6,971	921
1973	3,146	353	927	147	1,171	116	1,952	238	496	41	7,692	895
1974	2,026	321	1,551	115	1,881	193	2,964	248	887	124	9,309	1,001
1975	1,254	249	963	123	714	226	1,868	236	1,098	131	5,897	965
1976	1,965	281	426	121	379	183	1,881	227	1,222	161	5,873	973
1977	1,966	305	1,370	133	465	157	1,995	215	928	116	6,724	926
1978	1,408	267	541	124	490	152	1,616	226	879	97	4,934	866
1979	1,051	150	700	132	563	143	1,719	203	279	20	4,312	648
1980	1,903	218	806	150	518	94	1,471	184	278	60	4,076	706
1981	619	194	691	99	285	57	771	163	377	39	2,743	552
1982	1,669	169	762	92	454	83	862	116	--	--	3,747	460
1983	610	158	720	164	284	51	992	125	108	10	2,714	508
1984	1,411	278	283	82	289	54	530	95	151	17	2,664	526
1985	2,164	169	481	74	410	45	666	84	106	9	3,827	381
1986	1,024	197	281	39	169	43	948	94	146	14	2,568	387
1987	1,939	205	172	37	286	50	1,114	124	195	18	3,706	434
1988	2,092	177	678	108	315	66	690	91	--	--	3,775	442
1989	465	108	360	56	46	19	557	61	167	24	1,595	268
1990	175	73	444	89	90	42	244	30	70	7	1,023	241
1991	554	210	270	21	30	21	60	21	86	13	1,000	286
1992	--	126	96	44	265	50	193	18	204	23	758	261
1993	--	82	36	32	--	--	65	3	130	23	231	140
1994	58	16	155	18	--	--	135	10	65	8	413	51
Forest Grouse												
1972	1,370	212	804	103	214	260	1,346	140	351	82	4,085	797
1973	627	127	917	105	296	429	949	147	761	72	3,550	880
1974	967	152	924	157	461	1,090	99	1,574	133	4,712	1,002	
1975	1,194	199	1,287	160	775	629	1,474	136	1,476	135	6,206	1,259
1976	1,516	351	1,503	216	427	271	1,108	140	1,127	134	5,681	1,112
1977	737	132	1,317	162	610	286	1,040	135	1,079	128	4,753	843
1978	1,300	297	1,171	129	432	219	1,083	147	626	114	4,612	906
1979	746	344	1,312	177	714	275	729	107	435	42	3,936	945
1980	577	201	1,260	158	160	230	502	74	266	39	2,765	702
1981	688	147	958	147	575	295	835	120	184	29	3,240	738
1982	506	74	1,488	157	--	354	742	111	--	--	2,736	696
1983	1,049	218	1,180	93	459	80	636	93	--	20	3,324	504
1984	615	157	364	30	230	78	--	--	--	40	1,209	305
1985	858	202	436	52	564	90	--	--	--	40	1,858	384
1986	997	127	380	41	254	51	412	61	--	--	2,043	280
1987	1,148	147	305	77	200	65	438	58	--	--	2,091	347
1988	1,118	144	55	6	160	53	558	71	--	--	1,891	274
1989	795	109	635	69	45	3	573	75	286	33	2,334	289
1990	171	150	701	113	36	3	185	91	--	--	1,087	357
1991	--	178	536	54	30	2	0	0	--	2	566	236
1992	362	104	167	52	0	0	10	5	105	20	644	181
1993	290	34	--	28	--	--	41	3	243	45	574	110
1994	--	--	--	--	--	--	10	--	--	--	35	16

Table I (continued)

Species	Northern			Central			Southern			Northeastern			Southeastern			STATE TOTALS		
	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours
Quail																		
1972	46	9	342	30	575	39	870	63	120	8	1,953	149						
1973	80	10	264	35	32	8	538	38	25	17	939	108						
1974	24	4	43	27	853	66	227	28	214	21	1,361	146						
1975	27	8	107	23	841	64	594	43	230	12	1,759	150						
1976	81	10	206	29	503	62	597	44	75	10	1,462	155						
1977	22	4	351	39	445	42	341	26	60	16	1,219	127						
1978	--	--	239	18	563	61	541	46	88	17	1,431	142						
1979	68	11	95	7	478	41	346	32	15	6	1,002	97						
1980	36	9	265	23	240	36	410	34	0	0	951	102						
1981	58	11	180	12	329	43	366	31	0	3	933	100						
1982	0	0	151	14	304	44	475	44	0	0	930	102						
1983	5	9	93	9	562	61	295	26	0	0	955	105						
1984	--	--	82	8	266	40	--	--	--	--	348	48						
1985	--	2	82	5	252	33	--	--	--	--	334	40						
1986	--	--	10	2	306	28	--	--	--	--	316	30						
1987	--	1	20	2	257	29	--	--	--	--	277	32						
1988	0	5	--	--	277	37	96	12	--	--	373	54						
1989	--	--	--	--	145	10	72	7	--	--	217	17						
1990	--	--	--	--	97	8	--	3	--	--	97	11						
1991	0	0	--	--	1	0	0	0	59	4	0	0	5					
1992	0	0	0	0	0	0	0	0	1	20	2	20	3					
1993	--	--	--	--	--	--	8	35	5	--	35	13						
1994	--	--	--	--	--	--	9	--	--	--	--	8						
Hungarian Partridge																		
1972	1,255	126	--	--	--	--	--	--	--	--	21	126						
1973	1,643	156	12	4	--	--	--	--	--	--	1,655	160						
1974	1,035	176	14	2	--	--	--	--	--	--	1,049	178						
1975	344	64	0	0	--	--	--	--	--	--	344	64						
1976	940	83	113	21	--	--	--	--	--	--	1,053	104						
1977	1,145	156	125	5	--	--	--	--	--	--	1,270	161						
1978	1,065	90	197	17	--	--	--	--	--	--	1,262	107						
1979	440	27	37	3	--	--	--	--	--	--	477	30						
1980	250	55	50	6	--	--	--	--	--	--	300	61						
1981	270	23	65	3	--	--	--	--	--	--	335	26						
1982	324	39	--	--	--	--	--	--	--	--	324	39						
1983	0	60	--	--	--	--	--	--	--	--	0	60						
1984	815	221	--	--	--	--	--	--	--	--	815	221						
1985	114	38	--	--	--	--	--	--	--	--	114	38						
1986	213	44	--	--	--	--	--	--	--	--	213	44						
1987	300	40	--	--	--	--	--	--	--	--	300	40						
1988	316	30	10	1	--	--	--	--	--	--	326	31						
1989	0	0	--	--	--	--	--	--	--	--	0	0						
1990	393	30	--	--	--	--	--	--	--	--	393	30						
1991	--	41	0	0	--	--	--	--	--	--	0	41						
1992	--	83	40	2	--	--	--	--	--	--	40	85						
1993	--	42	--	--	--	--	--	--	--	--	42	42						
1994	--	8	--	--	--	--	--	--	--	--	8	8						

Table 1 (continued)

Species	REGION				STATE TOTALS			
	Northern Miles	Central Hours	Southern Miles	Hours	Miles	Hours	Miles	Hours
Wild Turkey								
1972	-	-	73	62	-	-	290	54
1973	-	-	143	11	-	-	143	11
1974	-	-	0	0	-	-	64	64
1975	-	-	215	18	-	-	799	799
1976	-	-	125	16	-	-	792	1,007
1977	-	-	193	29	-	-	421	58
1978	-	-	-	-	-	-	204	55
1979	-	-	-	-	-	-	190	14
1980	-	-	-	-	-	-	190	-
1981	-	-	-	-	-	-	-	-
1982	-	-	-	-	-	-	-	-
1983	-	-	-	-	-	-	-	-
1984	-	-	-	-	-	-	-	-
1985	-	-	-	-	-	-	-	-
1986	-	-	-	-	-	-	-	-
1987	-	-	-	-	-	-	-	-
1988	-	-	-	-	-	-	-	-
1989	-	-	-	-	-	-	-	-
1990	-	-	-	-	-	-	-	-
1991	-	-	155	68	-	-	150	15
1992	-	-	160	16	-	-	35	6
1993	-	-	-	-	-	-	117	9
1994	-	-	-	-	-	-	-	-
Cottontail Rabbit								
1972	510	-	279	-	939	-	360	-
1973	337	-	242	-	879	-	270	-
1974	270	-	180	-	1,040	-	370	-
1975	330	-	231	-	1,237	-	340	-
1976	510	-	260	-	1,382	-	360	-
1977	360	-	262	-	1,329	-	400	-
1978	382	-	264	-	1,038	-	360	-
1979	270	-	270	-	903	-	490	-
1980	90	-	265	-	655	-	359	-
1981	270	-	270	-	903	-	480	-
1982	240	-	240	-	722	-	298	-
1983	90	-	90	-	822	-	340	-
1984	-	-	-	-	177	-	356	-
1985	-	-	-	-	175	-	631	-
1986	240	-	148	-	534	-	358	-
1987	150	-	120	-	669	-	373	-
1988	-	-	-	-	129	-	604	-
1989	90	-	66	-	90	-	266	-
1990	150	-	62	-	97	-	210	-
1991	90	-	33	-	-	-	105	-
1992	60	-	143	-	90	-	204	-
1993	-	-	183	-	-	-	287	-
1994	-	-	-	-	-	-	148	-

APPENDIX D: Season dates, bag limits and areas open by upland game species, 1994.

Species	Season Dates	Daily Bag Possession		Areas Open
		Limit	Limit	
Pheasant	Nov. 5-Nov. 20	2 cocks	4 cocks	Statewide.
	Nov. 5-Dec. 5	2 cocks	4 cocks	All state and federal land (including private land leased by the Division subject to restrictions and closures imposed by administering agencies) in Carbon, Duchesne, Emery, Grand, Juab, Millard, San Juan, Sanpete, Sevier, Tooele and Uintah counties. In Box Elder County, the Thatcher-Penrose Posted Hunting Unit as posted and marked; in Utah County, the south Fairfield Posted Hunting Unit as posted and marked and the Powell Slough and Warm Springs Wildlife Management Area.
Mourning Dove	Sept. 1-30	10	20	Statewide
Band-Tailed Pigeon	Sept. 1-30	5	10	Beaver, Garfield, Grand, Iron, Kane, Millard, Piute, San Juan, Sanpete, Sevier, Utah, Washington and Wayne counties.
Chukar	Sept. 10-Nov. 30	5	10	Cache, Daggett, Davis, Morgan, Rich, Sanpete Wasatch and Weber counties; those parts of Box Elder, Juab, Millard, Salt Lake and Utah counties east of I-80; that part of Sevier County north of I-70; all of Summit County except the Henefer-Echo Wildlife Management Areas posted and marked.
	Sept. 10, 1994- Jan. 31, 1995	5	10	Carbon, Duchesne, Emery, Garfield, Grand, Kane, Piute, San Juan, Tooele, Uintah, Washington and Wayne counties; those parts of Box Elder, Juab, Millard, Salt Lake and Utah counties lying west of I-15; that part of Sevier County south of I-70.
Sage Grouse	Sept. 10-18	2	4	Daggett, Grand, Rich, Uintah and Wayne counties; that part of Sevier County south and west of I-70 and U.S.-89; that part of Duchesne County north and east of the Duchesne River; that part of Box Elder County west of I-15.
	Sept. 11-13	2	4	Beaver, Garfield, Iron,

APPENDIX D (continued)

Species	Season Dates	Daily Bag Limit	Possession Limit	Areas Open
Forest Grouse	Sept. 10-Nov. 30 (aggregate)	4 (aggregate)	8 (aggregate)	Kane, Piute and Wayne counties. Statewide.
Quail	Nov. 5-Nov. 20 Nov. 5-Dec. 31	5 5	10 10	Box Elder, Carbon, Daggett, Davis, Duchesne, Emery, Grand, Juab, Kane, Millard, Piute, Salt Lake, San Juan, Sevier, Tooele, Uintah, Utah, Wayne and Weber counties. Washington County.
Hungarian Partridge	Sept. 10-Nov. 30 Sept. 10, 1994 Jan. 31, 1995	5 5	10 10	Cache, Davis, Morgan, Rich and Weber counties; those portions of Box Elder and Juab counties east of I-15; and all of Summit County except the Henefer-Echo Wildlife Management Area as posted and marked.
Wild Turkey Rio Grande	Hunt #101A April 8-20	Season Limit 1 Male Turkey 20 Permits	10	Tooele County; that part of Box Elder and Juab counties west of I-15.
	Hunt #101B April 22- May 21, 1995	Season Limit 1 Male Turkey 20 Permits		Boundary begins at the junction of I-70 and Highway SR-89; then southerly on SR-89 to the Garfield-Piute county line, then westerly along this county line to the Beaver-Iron county line, then westerly along this county line to I-15; northerly on I-15 to I-70; easterly on I-70 to SR-89.
*Hunt #102	April 8- May 21, 1995	Season Limit 1 Male Turkey 5 Permits		All of Duchesne County.
*Hunt #103	April 8- May 21, 1995	Season Limit 1 Male Turkey 5 Permits		All of Emery County.
*Hunt #104	April 8- May 21, 1995	Season Limit 1 Male Turkey 5 Permits		Boundary begins at the junction of I-70 and highway SR-128; then south on SR-128 to a point one mile south of the Dolores River; east on a line one mile south of the Dolores River to the Utah-Colorado

APPENDIX D (continued)

Species	Season Dates	Daily Bag Limit	Possession Limit	Areas Open
				state line; north on the state line to I-70; west on I-70 to SR-128.
Hunt #105	April 8- May 21, 1995	Season Limit 1 Male Turkey 5 Permits		Boundary begins at Milford, Utah; then northerly on SR-257 to Negro Mag Wash; then east on Negro Mag Wash to Cunningham Wash; then south on Cunningham Wash to Wildcat Creek; then south on Wildcat Creek to Indian Creek; then south on Indian Creek to SR-21; then west and north on SR-21 to Milford.
Hunt #106	April 8- May 21, 1995	Season Limit 1 Male Turkey 5 Permits		All of Morgan and Summit counties.
*Hunt #107A	April 8- May 20, 1995	Season Limit 1 Male Turkey 20 Permits		Boundary begins at the junction of I-15 and SR-56; then westerly on SR-56 to SR-18; then southerly on SR-18 to I-15; then northerly on I-15 to SR-56.
*Hunt #107B	April 22- May 21, 1995	Season Limit 1 Male Turkey 20 Permits		
*Hunt #108	April 15- May 21, 1995	Season Limit 1 Male Turkey 5 Permits		All of Uintah County.
Hunt #109A	April 8- May 20, 1995	Season Limit 1 Male Turkey 10 Permits		That part of Utah County east of I-15, north of US-6, and east of US-89 from Thistle Junction south to the Utah-Sanpete County line.
Hunt #109B	April 22- May 21, 1995	Season Limit 1 Male Turkey 10 Permits		
Hunt #110	April 8- May 21, 1995	Season Limit 1 Male Turkey 10 Permits		All of Weber County.
Merriam's Hunt #201A	April 29- May 9, 1995	Season Limit 1 Male Turkey 75 Permits		Boulder Mountain - Boundary begins at the junction of SR-62 and SR-89 near Kingston, Utah; then southerly on SR-89 to the Pink Cliffs road between Glendale and Cannonville; then easterly on the Pink Cliffs Road to SR-12; then easterly and northeasterly on SR-12 to the Burr Trail road; then easterly on the Burr Trail

APPENDIX D (continued)

Species	Season Dates	Daily Bag Limit	Possession Limit	Areas Open
				road to the Capitol Reef National Park boundary; then northerly along the park boundary to SR-24; then westerly on SR-24 to SR-62; then southerly on SR-62 to SR-89.
Hunt #201B	May 13-31, 1995	Season Limit 1 Male Turkey 75 Permits		
*Hunt #202	April 29- May 31, 1995	Season Limit 1 Male Turkey 35 Permits		Area includes everything within the following description except for Zion National Park land; boundary begins at the junction of I-15 and SR-17; then easterly on SR-17 to SR-9 to the Zion National Park's east boundary; then northerly along the east boundary to the park's north boundary; then westerly along the park's north boundary to Deep Creek; then northerly on Deep Creek to Crystal Creek to the cedar Mountain Road; then northerly on the Cedar Mountain Road to I-15; then southerly on I-15 to SR-17.
Hunt #203A	April 29- May 9, 1995	Season Limit 1 Male Turkey 75 Permits		Boundary begins at the junction of I-15 and SR-20; then southerly on I-15 to the Cedar Mountain Road; then southerly on the Cedar Mountain Road to Crystal Creek; then southerly on Crystal Creek to Deep Creek; then southerly on Deep Creek to the Zion National Park boundary; then easterly on the park boundary to the Washington-Kane County line; then southerly on the county line to SR-9; then easterly on SR-9 to SR-89; then northerly on SR-89 to SR-20; then westerly on SR-20 to I-15.
Hunt #203B	May 13-31, 1995	Season Limit 1 Male Turkey 75 Permits		
Hunt #204	April 29- May 31, 1995	Season Limit 1 Male Turkey 10 Permits		Boundary begins at the junction of Highway SR-128 and Highway US-191; then south on this highway

APPENDIX D (continued)

Species	Season Dates	Daily Bag Limit	Possession Limit	Areas Open
				to Highway SR-46; east on this highway to the Lisbon Valley Road; southeast on this road to the Island Mesa Road; east on this road to the Utah-Colorado state line; north on this state line to a point one mile south of the Dolores River; west on a line one mile south of the Dolores River to SR-128; southwest on SR-128 to US-191.

*Hunts comprised of all or largely private property. Hunters should obtain written permission to access property from the landowner before applying for the hunt.

White-Tailed Ptarmigan	Sept. 10-Oct. 11	4	8	Daggett, Duchesne, Summit and Uintah counties.
Cottontail Rabbit	Sept. 10, 1994- 10 Feb. 28, 1995		20	Statewide.
Snowshoe Hare	Sept. 10, 1994- 5 Feb. 28, 1995		10	Statewide.

APPENDIX E. Summary of upland game harvest questionnaire returns, 1962-94.

Year	Questionnaires		Total		Useable		Licensees Who Did Not Hunt
	Mailed	Returns	Percent	Returns	Percent		
1962	10,068	4,122	40.9	3,433	34.1	22.0	
1963	11,058	5,062	45.8	4,325	39.1	21.0	
1964	10,718	4,840	45.2	4,180	39.0	23.0	
1965	11,917	6,232	52.3	--	0.0	34.0	
1966	13,131	5,734	43.7	5,734	43.7	34.6	
1967	12,012	5,764	48.0	5,764	48.0	25.1	
1968	14,068	6,138	43.6	6,138	43.6	25.6	
1969	15,036	6,429	42.8	6,429	42.8	28.0	
1970	14,730	6,639	45.1	6,639	45.1	38.8	
1971	15,149	--	43.2	--	0.0	--	
1972	15,272	--	--	6,399	41.9	--	
1973	17,572	--	--	7,999	45.5	--	
1974	27,379	9,157	33.4	8,027	29.3	--	
1975	26,657	10,880	40.8	9,132	34.3	--	
1976	21,250	7,889	37.1	6,226	29.3	--	
1977	20,984	9,329	44.5	8,099	38.6	--	
1978	24,733	7,575	30.6	6,529	26.4	--	
1979	27,616	10,498	38.0	9,274	33.6	26.4	
1980	27,952	9,857	35.3	8,496	30.4	33.1	
1981	13,925	7,941	57.0	6,367	45.7	31.4	
1982	22,609	10,167	45.0	8,734	38.6	27.0	
1983	23,430	10,324	44.1	9,497	40.5	28.7	
1984	12,026	6,455	53.7	6,324	52.6	31.1	
1985	10,772	5,904	54.8	5,843	54.2	35.2	
1986	11,103	5,329	48.0	5,256	47.3	34.2	
1987	10,022	4,294	42.8	4,272	42.6	30.1	
1988	15,350	6,650	43.3	6,527	42.5	35.6	
1989	12,894	5,135	39.8	5,105	39.6	36.7	
1990	12,236	5,264	43.0	5,175	42.3	39.1	
1991	15,054	6,419	42.6	6,212	41.3	42.7	
1992	16,472	6,207	37.7	5,977	36.3	45.0	
1993	16,534	6,293	38.1	5,442	32.9	42.6	
1994	15,526	5,433	35.0	5,131	33.0	45.1	