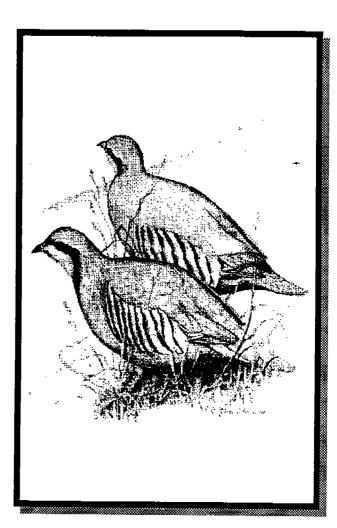
# UTAH UPLAND GAME ANNUAL REPORT 1994

UTAH
DIVISION OF
WILDLIFE
RESOURCES

DEPARTMENT OF NATURAL RESOURCES PUBLICATION NO. 95-10



UTAH

#### UPLAND GAME

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.: <u>A-4</u>

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.

 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 preestablished 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.

		0	•		
	Hunters	Total		Bag Per	Bag Per Hunter
Species	Afield	Harvest	Hunter-Days	Hunter-Day	For Season
Pheasant	36,705	869'89	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	99.0	2.21
Sage Grouse	5,133	7,084	10,406	89.0	1.38
Forest Grouse	9,827	18,862	27,510	69.0	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	42	464	0.17	0.75
Sharp-Tailed Grouse	I	I	i	i	I
White-Tailed Ptarmigan	4	0	9	1	ŀ
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	1	367,423	348,030	ł	l
Total hunters affeld for all species of upland game =	ies of upland ga	me =		49,518	
4					

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

				Number of Hanters	Hunters							Percent of Total	lotal			
Species	1987	1988	1989	1990	1991	1992	1993	1994	1987	1988	6861	1990	1661	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	22,7(0)	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*	;	Ξ	23	Q	15	<u>«</u>	<b>∞</b>	13	1	0.01	0.03	0.01	0.02	0.03	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	7,060	8,499	9,005	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*																
Merriam's	347	421	477	531	532	484	466	285	0.50	09.0	0.70	0.80	98.0	0.83	0.78	0.58
Rio Grande					81	20	41	165					0.03	0.03	0.07	0.21
Sharp-Tailed Grouse*	ł	1	i	;	:	1	ı	i	ı	ł	ŀ	ł	ł	i	;	ı
White-Tailed Ptarmigan*	6	15	3	11	113	11	6	4	0.01	0.02	0.01	0.02	0.02	0.03	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	59,590	49,518		i						
* Althornth soild territors observe toiled seasons housed toiled missions and soiled	fuilled measure	hond toil	el minon on	and ambitan has		Lance the second section of		-								

\*Atthough 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	g Dove	:10	Chukar			Sage Grouse	nse		Forest Grouse	ouse		Quail	-	Hungaria	Hungarian Partridge	ا و
	N <sub>0</sub>	Hunting		Š	Hunting		Š	Hunting		S.	Hunting		No 0	Hunting		Š	Hunting		N <sub>o</sub>	Hunting	
Year	Bag	Trips	26	Bag	Trips	%	Bag	Trips	%	Bag	Trips	%	Bag	Trips	%	Bag	Trips	82	Bag	Trips	%
1961	714	3,204	77	ič.	583	6	318	539	59	1	;	,	;	;	:	109	383	82	7.2	123	89
1962	200	2,685	19	39	456	9	147	362	7	1	:	1	;	1	;	62	201	31	36	108	33
1963	795	3,317	77	23	691	œ	248	550	±3	220	468	41	881	281	67	71	305	23	S)	177	33
1964	911	3,115	29	09	189	6	266	268	7	\$	154	29	1 <del>4</del> 1	229	83	95	316	30	79	150	41
1965	1,165	4,009	53	ł	;	;	486	821	21	83	168	49	225	311	72	128	37.1	¥	93	233	<del>0</del>
1966	1,242	4,297	29	136	1,067	13	523	881	<b>\$</b>	54	131	41	133	331	9	106	315	*	63	219	29
1961	1,353	4,833	78	153	1,319	12	477	915	25	138	266	25	194	475	4	161	424	38	116	315	37
8961	1,422	5,223	27	236	1,312	18	495	1,095	45	185	449	41	177	999	27	171	457	39	132	347	28
1969	1,897	5,335	36	214	1,568	14	647	1,250	62	241	648	37	273	959	42	182	465	39	148	292	51
1970	1,546	4,686	33	193	1,274	12	466	962	<del>\$</del>	257	603	<del>2</del>	209	999	31	126	314	3	101	210	84
11971	1,783	5,049	32	210	1,333	16	464	934	<u> </u>	234	625	37	223	673	33	162	385	42	83	210	#
1972	1,743	4,617	38	270	1,421	19	457	827	S	259	593	4	271	794	34	154	339	5	120	224	8
1973	1,659	4,699	35	506	1,596	13	414	824	50	226	553	41	329	1,019	32	128	311	41	76	196	49
1974	2,347	5,323	4	323	1,951	17	511	955	54	292	899	44	388	1,259	31	157	333	47	108	227	84
1975	2,472	5,604	4	329	2,554	13	209	1,105	SS	374	106	42	535	1,354	4	177	406	4	121	220	55
9261	1,739	4,294	\$	273	1,709	91	408	781	25	259	783	33	371	1,131	33	105	997	39	87	184	47
1977	1,874	5,175	36	295	1,967	15	511	943	54	394	972	4	528	1,388	38	125	299	42	106	247	43
1978	1,507	4,858	31	279	1,986	4	343	887	39	301	853	35	419	1,419	30	103	306	¥	88	246	35
1979	2,222	7,024	32	343	2,671	13	528	1,150	94	400	1,215	33	585	1,691	35	130	403	32	119	243	49
1980	1,684	5,867	53	258	2,145	17	458	1,008	\$	392	9 <del>4</del>	42	501	1,283	39	87	254	\$	75	206	36
1981	1,305	4,637	28	239	1,558	15	307	699	<del>\$</del>	184	493	37	297	741	<del>4</del>	7.6	241	<del>\$</del>	57	172	33
1982	1,768	6,725	97	363	2,338	16	406	824	<del>6</del> 9	569	620	43	325	919	35	128	292	4	68	176	ĸ
1983	1,645	7,153	23	348	2,381	15	362	988	41	294	729	40	300	1,118	27	105	310	<b>%</b>	28	225	36
1984	1,245	4,643	27	274	1,711	16	287	548	25	202	435	46	270	640	42	84	189	4	51	9/	67
1985	1,207	4,017	€	221	1,500	15	208	426	49	161	376	<del>1</del> 3	228	929	35	19	148	#	35	54	65
1986	1,211	3,615	33	224	1,476	15	237	537	4	139	368	38	221	<b>199</b>	33	28	125	46	36	61	59
1987	863	2,837	30	140	1,047	13	194	537	36	96	307	29	143	671	21	46	111	41	34	94	35
1988	1,372	3,953	32	244	1,525	16	308	11	<del>0</del>	187	557	34	224	1,184	19	63	171	37	73	154	42
1989	1,126	2,985	38	184	1,184	16	263	614	<del>43</del>	183	468	39	257	961	27	89	160	43	જ	108	6
1990	886	2,745	36	161	1,234	13	282	632	45	162	483	34	233	810	39	54	132	#	46	117	39
1661	1,062	2,461	43	205	1,301	16	309	809	51	198	461	43	297	829	32	69	152	\$	67	153	4
1992	905	2,760	33	156	1,150	7	298	701	43	169	432	39	208	696	21	89	168	<del>\$</del>	29	186	36
1993	1,035	2,086	<u>9</u>	194	1,038	19	354	533	95	191	347	55	346	633	55	82	192	4	75	110	89
1994	688	2,088	£3	230	1,180	19	278	481	88	148	292	51	243	529	43	64	167	38	78	108	72
AVERAGES	ES.																				
(1961-93)			32			14			6			38			35			39			5
																		2			:

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:

	Winter of 1993-94	<u>Percent</u> 1992-93	change from Average
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>Percent</u>	<u>change from</u>
	<u>1994</u>	<u>1993</u>	<u>Average</u>
Total pheasants observed	642	+23	<b>-</b> 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

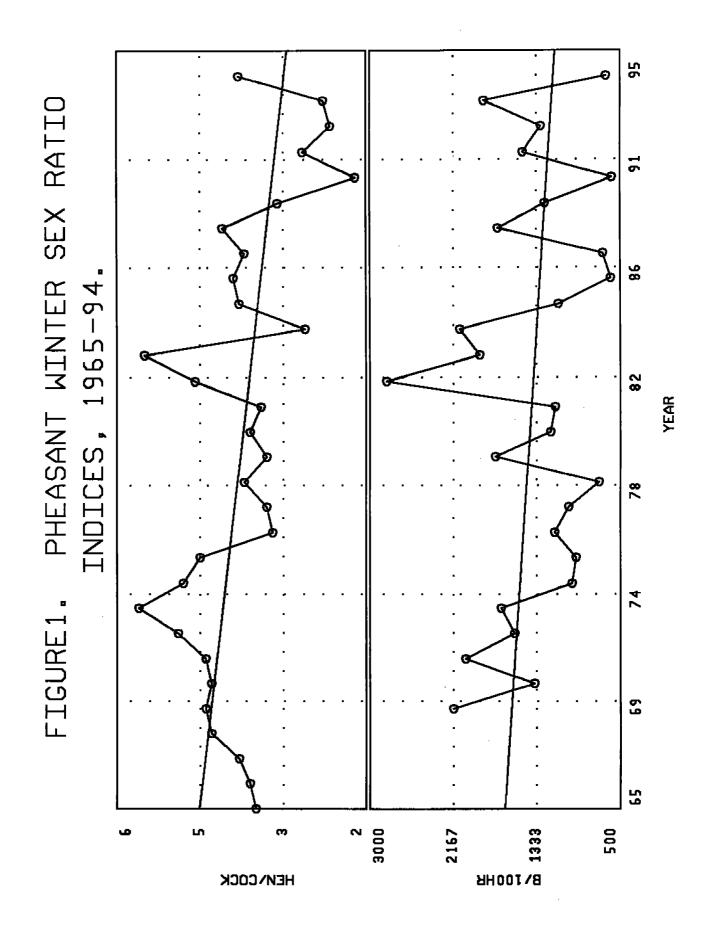
Results of the hunter questionnaire for 1994 are shown in Table 9. Long-term trends of pheasants bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 10-12, and total statewide harvest statistics in Table 13. A comparison of 1994 harvest statistics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

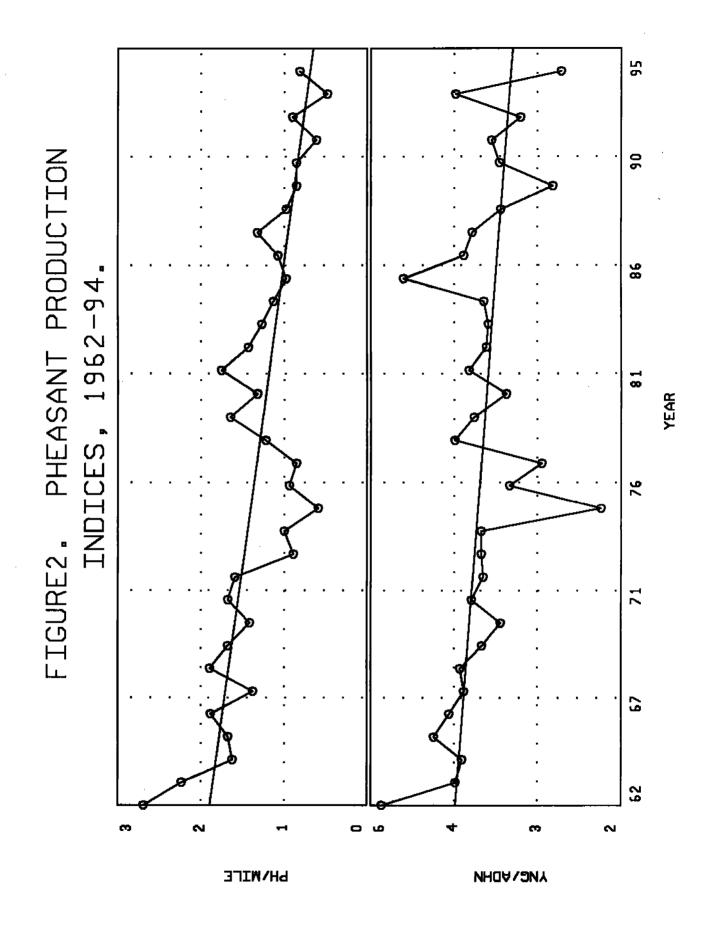
		Percent	change from
	<u>1994</u>	1993	Average
Pheasant hunters	39,705	-7	<b>-</b> 52
Pheasants harvested	68,698	+8	-67
Hunter-days afield	129,872	-8	-39
Pheasants per hunter-day	0.53	+18	-42
Pheasants per hunter	1.87	+17	-28

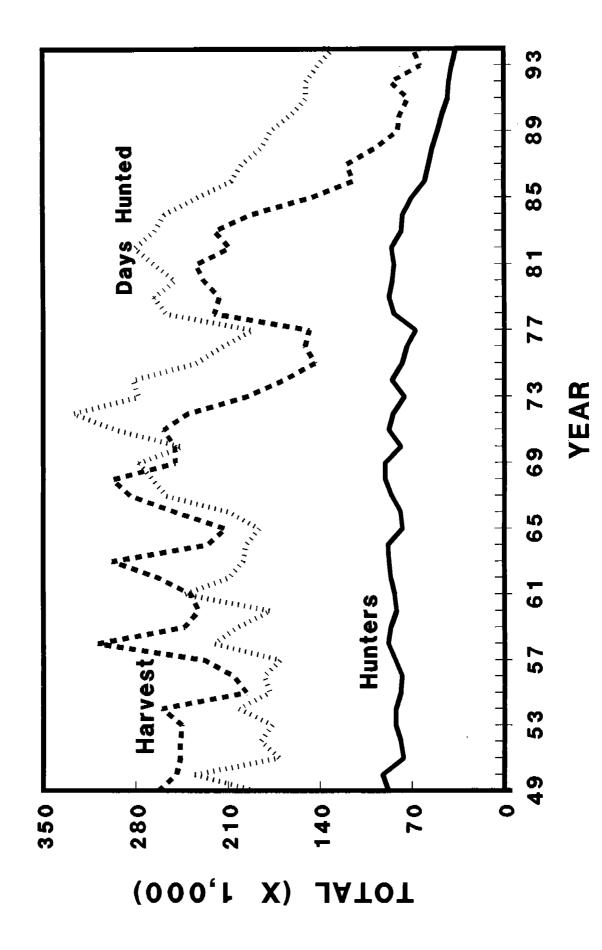
Total hunters decreased 7 percent from 1993 and remained 52 percent below the long-term average. Total harvest increased 8 percent from 1993. Hunter success (pheasants per hunter-day) increased 18 percent from 1993. Pheasants per hunter increased 17 percent and remains 28 percent below the long-term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

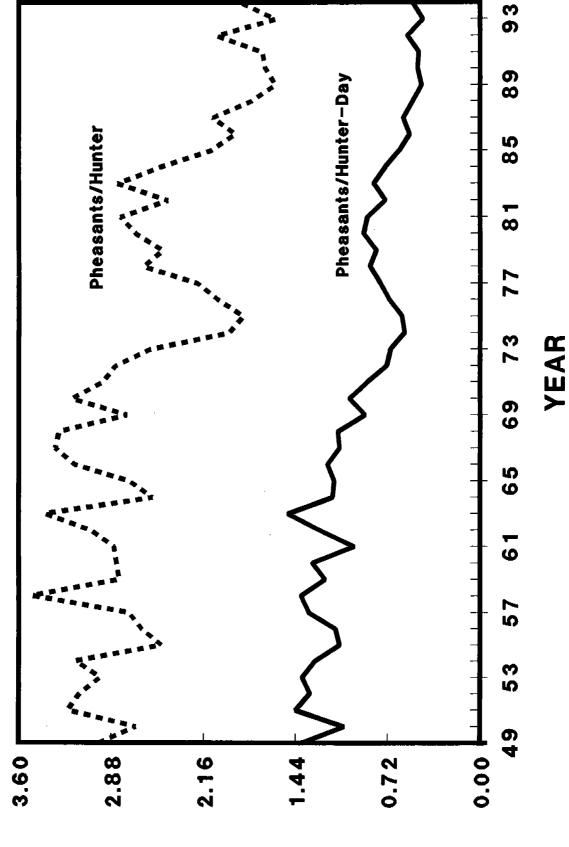




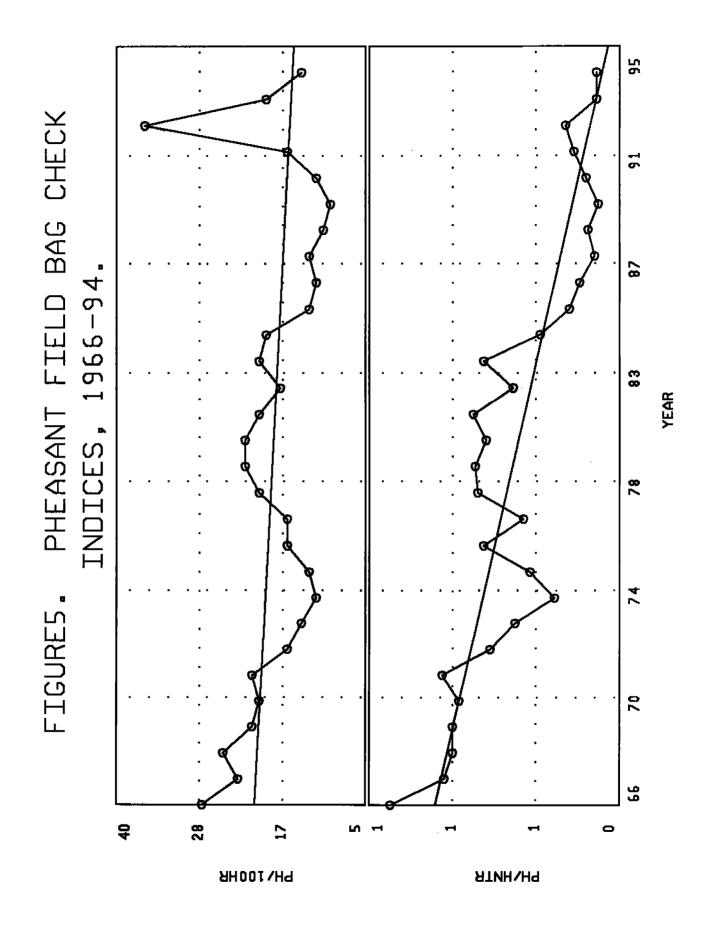


Statewide trends of pheasant harvest statistics, 1949-94. Figure 3.

## YAO RAY ONA RATNUH RAY STNASAAH9



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



#### 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>1994</u>	Percent of 1993	change from Average
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.

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	Koa	Koadside Observations	ervation			¥	Flusting Observations	Diserval	rons		표  -	ttort Exp			rneas. Obs./
Region and				Hens/	Cocks/				Hens/	Cocks/	Vehicle	Нош	Hours of Effort	fort	100 Hours of
County	Cocks	Hens	Total	Cock 1	Cock 100 Heas	Cocks	Hens	Total	Cock	100 Hens	Miles	Vehicle Walk	Walk	Total	Road. Obs.
Northern Region															
Box Elder	ł	ŀ	ı	ł	ŀ	1	1	1	ı	1	ŀ	ı	I	ŀ	1
Cache	ŀ	:	ı	;	!	1	1	ŀ	1	;	;	1	ŀ	;	ŀ
Davis	1	ı	ı	ł	;	;	;	!	ŀ	1	;	ı	i	1	1
Morgan	;	:	i	:	ŀ	1	ŀ	ŀ	1	:	;	1	i	;	ļ
Rich	1	1	ı	ł	1	ł	ł	}	ŀ	ŀ	ł	1	i	ŀ	ŀ
Summit	ı	ŀ	ı	1	1	!	ŀ	!	!	;	1	I	1	ł	;
Weber	i	1	1	;	:	;	1	;	1	:	:	:	ï	;	
REGIONAL TOTALS	1	ŀ	ı	1		;	ı	!	!	!	ŀ	ł	1	!	:
Central Region															
Juab	ı	ŀ	ı	i	ŀ	ŀ	ı	!	1	1	6	7	-	ဗ	ı
Salt Lake	ī	;	1	1	!	I	1	ŀ	1	1	:	1	1	i	ı
Sanpete	7	1	8	0.50	200	က	23	56	7.67	13	428	16	9	22	19
Tooele	ł	ŀ	ı	;	1	,	1	l	ı	ŀ	1	1	1	ŀ	ŀ
Utah	65	254	319	3.91	56	;	1	1	1	i	363	33	1	34	974
Wasatch	ı	ŀ	ı	ŀ	!	1	!	I	1	1	ı		1	;	;
REGIONAL TOTALS	67	255	322	3.81	26	3	23	26	79.7	13	840	20	8	58	641
Southern Region															
Веачег	ı	ı	ı	ł	1	1	ı	ı	ı	ł	1	ŀ	:	;	!
Iron	1	ŀ	i	ŀ	!	ı	ŀ	ı	i	ı	ï	ŀ	1	ŀ	ł
Kane	1	1	ı	ŀ	:	!	!	ı	ı	;	ł	ļ	1	;	1
Millard	:	ŀ	ł	ı	ŀ	ŀ	1	ı	ł	;	ì	ŀ	ŀ	:	!
Piute	:	:	1	ł	ŀ	ı	1	ì	ı	ŀ	ŀ	1	ŀ	!	ı
Sevier	ŀ	1	1	;	:	;	ı	ı	ŀ	ı	ı	1	i	!	i
Washington	ŀ	ì	ŀ	i	:	;	!	ŀ	i	;	1	ı	•	I	i
Wayne	:	i	!	i	:	:	!	;	•	1	:	1	:		
REGIONAL TOTALS	:	:	!	ł	ł	1	;	ı	١	;	ŧ	ı	!	1	1
Northeastern Region															
Daggett	ŀ	i	ł	i	:	1	l	ŀ	:	;	1	1	!	ŀ	1
Duchesne	ı	ŀ	ı	1	:	1	ı	ŀ	;	:	ŀ	ı	!	ı	I
Uintah	1	ì	i	1	!	l	!	1	ł	1	!	ì		:	
REGIONAL TOTALS	1	;	ı	ı	:	ŀ	ŀ	ı	:	1	1	1	1		:
Southeastern Region															
Carbon	ŀ	ŀ	1	;	;	ı	1	I	ŀ	ı	1	1	t	ł	1
Emery	ı	ŀ	ı	1	:	ı	I	!	!	ı	1	1	;	ł	i
Grand	1	ŀ	ı	ŀ	1	ı	ı	:	ŀ	ı	i	ŀ	1	1	i
San Juan	1	1	1	ŀ	1	1	1	;	!		:	1	1	:	;
REGIONAL TOTALS	1	;	,	ŀ	ŀ	;	;	1	!	+	:	ł	1	i	1
STATE TOTALS	4.9	255	322	3.81	26	3	23	26	7.67	13	840	20	œ	58	641
					Ì	:									

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

	1088-80		1989-00		100001		1001		1007-03		1003.04		1	
Region and	Hens/	Birds/	Hens/	Birds/	Hens/	Birds/	Hens/	Birds/	Hens/	Birds/	Hens/	Birds/	Average	
County	Cock	100 Hr	Cock	100 Hr	Cock	100 Hr	Cock	100 Hr	Cock	100 Hr	Cock	100 Hr	1988-1993	
Northern Region														
Box Elder	4.20	3,100	3.60	533	2.47	ı	i	ł	;	1	1	ı		
Cache	2.70	386	1.30	253	3.43	1	i	;	ł	1	ŀ	1		
Davis	7.30	2,014	1.50	143	06.9	1,317	1.38	317		1	;	:		
Morgan	;	;	ŀ	:	1	ı	ı	1	1	1	ı	ŀ		
Rich	ŀ	ŀ	1	ł	ı	1	1	ł	ı	1	ı	:		
Summit	1	ŀ	;	;	1	ι	ı	ı	ı	ŀ	;	:		
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														
Juap	2.40	1,100	2.10	1,100	3.56	2,050	ı	ı	1	1	ı	:		
Salt Lake	ı	ł	1.30	533	1.73	909	0.25	200	1.40	989	;	:		
Sanpete	;	i	ſ	ì	ı	1	4.82	640	ı	ı	0.50	19		
Tooele	i	:	0.80	2,600	ı	ı	2.50	2,100	3,30	ı	;	;		
Utah	16.00	2,200	2.60	1,016	4.96	1,787	1.99	2,329	1.82	ı	3,91	974		
Wasatch	:	;	:	;	ı	ı	1		:	:	ţ	1		
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	1	t	1	ı	;	ı	1	ı	ı	:	1	:		
Iron	1	t	1	1	1	ı	1	;	;	;	ī	ı		
Kane	1	1	1	1	ı	ı	ı	1	;	1	:	ı		
Millard	1.60	900	1	ł	2.21	2,033	1	ı	2.87	800	:	ı		
Piute	1	ı	1	1	;	ı	1	1	ŀ	ŀ	i	ŀ		
Sevier	12.60	ı	1	ŀ	i	ı	ı	1	ł	ŀ	1	:		
Washington	ı	;	t	;	;	ı	ı	1 .	:	1.	;	;		
Wayne	1	;	,	•	1	ï	1	-	:	:	1	:		
REGIONAL TOTALS	3.60	2,778	ı	;	2.21	2,033	1	1	2.87	008	1	•	1.74	1,122
Northeastern Region														
Daggett	1	1	:	;	1	ı	ı	ŧ	:	:		ŀ		
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	099	1.12	728	1.37	1,021	1.29	1,600		:	1.33	1,180
Southeastern Region														
Carbon	1	1	:	1	1	ı	ŀ	:	ì	:	;	•		
Emery	ı	ŀ	ı	i	;	ı	ı	ł	ľ	t	;	1		
Grand	ı	l	1	;	;	ı	;	;	;	ı	i	ı		
San Juan	:		;	;	;	1	:	1	:	ı	1	1	i	
REGIONAL TOTALS	:	1	1	1	:	-	ł	1	1	1	:	ı	l	:
STATE 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
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				Dist	Distinct	Mixed		Adults w/o	0/10									
Region and	No.	Total		Broods	ods	Obser	.•	Young		Total	Total	Total	Total	Pheas./	Young/	Mean	Young/	%Hens
County	Routes Miles	Miles	Total	Hens	Hens Young	Hens	Young	Cocks	Hens	Hens	Young	Cocks	Pheas.	Mile	Mile	Brood	Ad. Hen	w/Young
Northern Region																		
Box Elder	33	180	\$	6	61	10	32	<b>\$</b>	6	78	93	œ	129	0.72	0.52	6.78	3.32	89
Cache	ı	i	i	ı	;	•	4	ł	•	ı	ı	ı	i	ŀ	;	ı	i	i
Davis	1	ł	i	ı	:	ì	;	ı	:	ı	1	ŀ	;	1	ŀ	;	1	i
Morgan	ı	i	ı	1	ŀ	ı	ı	1	•	ı	ı	ı	;	ı	ŀ	!	ı	1
Rich	ŀ	ŀ	ı	1	:	ł	ł	ı	ł	ı	1	1	ł	ì	ı	ı	1	ŀ
Summit	1	ı	1	1	I	1	;	1	ı	1	ı	ı	;	ı	1	ı	1	;
Weber	ŀ	ŀ	ı	ŀ	ŀ	;	ł	1	1	ı	ı	ı	1	ŀ	ı	1	i	ł
REGIONAL TOTALS	3	180	6	6	19	10	32	œ	6	28	93	<b>s</b>	129	0.72	0.52	6.78	3.32	88
Central Region																		
Juah	=	36	1	1	Ю	0	0	0	1	7	က	0	ιν	0.14	80.0	3.00	1.50	20
Salt Lake	1	ı	1	1	ŀ	ı	ł	1	ı	ı	ı	ı	1	,	ı	i	;	1
Sanpete	7	170	11	11	9	ĸ	71	w	11	7.7	28	ĸ	<u>8</u>	0.53	0.34	4.18	2.15	59
Tooele	1	99	1	-	1	3	ĸ	0	9	10	9	0	16	0.27	0.10	1.00	09.0	<b>6</b>
Utah	က	202	<b>8</b> 8	38	157	70	70	15	19	11	227	15	319	1.58	1.12	4.13	2.95	55
Wasatch	1	;	1	1	ŀ	i	;	:		ı	;	1	;	1	ŧ	;	;	:
REGIONAL TOTALS	7	468	51	51	207	28	28	20	37	116	294	20	430	0.92	0.63	4.06	2.53	89
Southern Region		i															!	
Beaver	:	ŀ	1	1	ŀ	ı	ł	ŧ	ł	ŀ	;	ı	1	1	ı	!	ı	ı
Garfield	1	ŀ	ŧ	ı	!	ı	ì	ŧ	;	ı	;	ı	:	1	ı	ŀ	1	ı
Iron	ŀ	ŀ	;	ŀ	ŀ	ı	í	ı	•	ŀ	;	!	ŀ	ı	1	ŀ	ı	1
Kane	ł	ŀ	;	ŀ	ł	ı	1	1	;	;	;	ı	!	ı	ŀ	ŀ	ı	ŧ
Millard	l	ı	ł	ŀ	i	ı	ŀ	!	:	ŀ	ŀ	ŀ	ŀ	ı	I	1	1	ł
Piute	ı	ł	ŀ	;	i	ı	ŀ	ı	:	ŀ	٠,	ı	1	1	ŀ	!	1	1
Sevier	1	ŀ	;	:	ł	ı	i	:	į	i	1	1	ì	1	ŀ	ı	1	ŀ
Washington	i	ŀ	;	:	ì	ı	i	:	ı	i	ł	1	;	ı	ŀ	ŀ	1	ŀ
Wayne	;	i	1	:	;	:	:	1		,	;	!	,		1	,	;	!
REGIONAL TOTALS	,	;	ï	;	ı	ı	ł	ſ	1	;	:	ı	1	:	1	1	:	:
Northeastern Region																		
Daggett	ı	ŀ	1	ŀ	ı	1	1	ı	1	ı	1	ı	ì	ı	1	1	:	!
Duchesne	7	166	ю.	٣	17	0	0	14	7	ĸ	17	7	36	0.22	0.10	2.67	3.40	99
Uintah	7	131	S.	Ŋ	33	0	0	6	0	'n	33	6	47	0.36	0.25	9.60	09.9	100
REGIONAL TOTALS	4	297	∞	<b>∞</b>	20	0	0	23	7	10	20	23	83	0.28	0.17	6.25	5.00	98
Southeastern Region																		
Carbon	1	1	i	1	ł	ŀ	ì	ı	1	ł	ŀ	1	:	ı	ł	;	ŀ	ı
Emery	I	ı	ŀ	!	ŀ	ŀ	ŀ	ŧ	1	ŀ	!	ì	;	ŧ	ŀ	;	ı	:
Grand	ŀ	ı	;	ı	;	ł	ł	ı	1	;	ł	ľ	1	!	;	ı	ı	1
San Juan	!	i	i	ı	;	:	i	ı			:	;	1	!	ŀ	1	ı	
REGIONAL TOTALS	ł	:	1	ı	;	۱ ا	:		ı	;	!	;	1	!	1	1	1	:
STATE TOTALS	14	945	89	89	318	38	119	51	84	154	437	51	642	89.0	0.46	4.68	2.84	69

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Region and						Year						Average
County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1984-93
Northern Region												
Box Elder	0.46	16'0	0.44	18.0	0.63	0.19	0.32	0.21	0.56	0.34	0.72	
Cache	6.19	0.03	0.01	6.29	0.13	0.23	60.0	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	ŀ	į	:	;	i	:	ŀ	:	!	!	:	
Rich	;	1	ł	ł	I	ŀ	ŧ	1	ł	ŀ	ı	
Summit	1	1	:	:	i	ı	ł	ı	1	1	ŀ	
Weber	1.56	1	98.0	ŀ	ı	0.52	1.26	0.48	1.05	ı	ı	
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	ì	0.38	0.50	0.14	I	0.77	0.16	0.14	
Salt Lake	1.80	0.46	2.10	1.08	ı	ı	1.26	1.24	ı	0.31	1	
Sanpete	6.99	1.87	1.15	1.63	1.18	1.70	1.23	0.85	0.67	0.35	0.53	
Tooele	ŀ	ı	0.20	90.0	0.15	1	0.17	0.55	0.14	ı	0.27	
Utah	2.21	ı	2.13	2.35	2.00	1.00	1.45	0.58	2.56	0.93	1.58	
Wasatch	ı	I	;	ŀ	ŀ	ı	ŀ	l	I	I	:	
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	80.0	0.17	ı	:	;	ı	ŀ	;	
Garfield	;	1	1	ŀ	1	1	1	ŀ	ı	ŀ	l	
Iron	ı	90.0	0.01	ŀ	ŀ	ı	;	ŀ	١	ł	ŀ	
Kane	ı	ŀ	:	;	ŀ	ı	;	ì	ŀ	ł	ł	
Millard	1.09	2.27	96.0	19.0	0.67	ı	0.34	0.38	ŀ	1.38	ł	
Piute	1	1	;	i	ŀ	1	1	i	1	ŀ	ŀ	
Sevier	1.52	0.62	1.82	1.95	1.30	1	1	ŀ	ı	1	ı	
Washington	I	0.13	1.30	0.47	0.22	90.0	ŀ	ı	ł	ı	1	
Wayne	1	0.39	0.38	i	1	1	1		1	1	1	
REGIONAL TOTALS	1.09	1.25	1.07	1,44	0.78	90.0	0.34	0.38	ı	1.38	1	98.0
Northeastern Region												
Daggett	ı	:	;	i	ŀ	;	ī	ı	1	1	i	
Duchesne	99.0	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	ŀ	1	•	ŀ	1	ı	ı	1	
Emery	99.0	0.83	0.73	0.72	1.06	1.00	0.61	0.28	0.56	0.39	:	
Grand	ı	1	;	ŀ	;	1	ı	i	ł	1	:	
San Juan	1	!	:	;	:	!	;	;	1	1	:	
REGIONAL TOTALS	99.0	0.59	0.61	0.72	1.06	1,00	0.61	0.28	0.56	0.39	ı	0.65
STATE TOTALS	0.94	0.81	0.80	1.10	0.81	0.71	0.71	0.51	0.75	0.40	99.0	0.75
							i		1			

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Table 5.	

Region and						Year						Average
County	1984	1985	9861	1987	1988	1989	1990	1991	1992	1993	1994	1984-93
Northern Region												
Box Elder	0.26	0.65	6.29	0.62	0.39	0.16	0.27	0.14	0.41	0.28	0.52	
Cache	0.13	0.0	0.00	0.25	0.09	0.14	90.0	0.23	0.42	0.94	i	
Davis	0.16	0.35	0.85	96.0	0.52	0.22	0.31	0.26	0.04	;	ŀ	
Morgan	;	1	;	;	ı	!	1	ł	ŀ	ŀ	ı	
Rich	;	ï	1	ŀ	1	1	;	;	1	;	ı	
Summit	ł	ł	ı	;	ı	ŀ	I	ł	ł	ł	ŀ	
Weber	1.27	ı	0.76	1	1	0.39	0.97	0.30	0.77	i	ŧ	
REGIONAL TOTALS	0.32	0.33	0.32	0.55	0.28	0.20	0.32	0.21	0.41	0.19	0.52	0.31
Central Region												
Juab	0.58	0.39	0.57	ł	0.17	0.08	0.09	ı	0.62	90.0	90.0	
Salt Lake	1.26	0.31	1.62	0.79	1	ı	0.97	0.93	ı	0.24	1	
Sanpete	9.76	1.54	0.90	1.23	96.0	1.30	0.91	0.67	0.53	0.28	0.34	
Tooele	ł	ı	80.0	0.07	0.07	ı	0.10	0.53	0.11	ļ	0.10	
Utah	1.36	1	1.68	1.81	1.57	1.00	1.15	0.49	1.97	69.0	1.12	
Wasatch	ŀ	1	:	1	ł	:	1	1	ı		I	
REGIONAL TOTALS	0.99	1.09	1.26	1.37	1.11	1.10	0.87	0.59	1.38	0.37	0.63	1.01
Southern Region												
Beaver	0.08	0.51	0.14	0.07	0.10	ł	1	ł	ł	ŀ	1	
Garfield	1	ı	;	ł	ŀ	1	1	ı	1	ŀ	1	
Iron	l	0.05	}	0.00	ł	ł	1	1	1	;	ı	
Kane	ı	ı	ł	ł	ŀ	1	1	ł	1	;	ı	
Millard	0.89	0.20	0.76	1.55	0.50	1	0.31	0.28	1	1.18	1	
Piute	ı	1	ł	;	;	ł	ı	ŀ	ł	1	ı	
Sevier	1.19	1.25	1.48	1.54	0.95	ł	I	i	ł	1	ı	
Washington	;	ı	98.0	0.22	0.16	1	'	ŀ	;	ŀ	i	
Wayne	1	0.28	0.19	:	-		ı	ŧ	;	:	;	
REGIONAL TOTALS	0.86	1.03	0.84	1.12	0.57	:	0.31	0.28	;	1.18	1	0.77
Northeastern Region												
Daggett	:	ı	;	ł	ł	1	1	1	1	1	ł	
Duchesne	0.46	0.0	0.29	0.25	0.32	0.20	0.58	0.42	90.0	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	1
REGIONAL TOTALS	0.69	0.14	0.30	0.31	0.32	0.17	0.46	0.37	80.0	0.07	0.17	0.29
Southeastern Region												
Carbon	1	0.03	0.15	ì	ŀ	ŀ	ı	ŀ	1	ŀ	1	
Emery	0.45	0.63	95.0	0.59	0.86	1.00	0.43	0.22	0.43	0.29	ı	
Grand	:	1	ı	ŀ	ŀ	ŀ	1	ŀ	ŀ	ł	ı	
San Juan	;	1	1	;	;	!	i	:	!	!	:	1
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	9,00	0.60	0.61	0.79	0.63	0.62	0.48	0.38	0.55	0.30	0.46	0.56

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Region and						Year		1				Average
County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1984-93
Northern Region												
Box Elder	2.44	3.63	2.38	4.42	2.21	7.00	5.86	1.92	3.04	4.67	3.32	
Cache	3.40	1.50	1	7.17	2.33	2.60	5.50	1.57	3.38	90.9	ŀ	
Davis	1.67	1.26	5.92	3.30	98.9	1.30	2.41	3.00	1.00	ŀ	1	
Morgan	;	;	1	1	1	1	:	;	ı	1	;	
Rich	ł	i	ł	1	ı	ı	i	ı	1	Į	ì	
Summit	ı	ı	:	1	ł	ı	i	i	ı	1	1	
Weber	5.50	1	7.33	ŀ	1	4.80	5.50	2.60	3.35	1	1	
REGIONAL TOTALS	3.23	2.60	3.92	4.18	3.44	2.90	3.86	2.02	3.05	4.80	3.32	3.40
Central Region												
Juab	4.20	4.33	4.00	ı	2.00	0.23	4.00	ł	8.00	1.00	1.50	
Salt Lake	3.58	3.13	5.10	3.88	ı	1	3.80	4.22	ı	10.00	ŀ	
Sanpete	5.38	6,10	3.98	3.25	4.48	3.20	3.34	4.17	4.60	4.77	2.15	
Tooele	ł	1	1.50	9.0	2.00	1	2.00	i	3.00	ı	0.60	
Utah	1.66	ı	4.16	4.18	3.94	3.80	4.31	6.41	4.22	3.76	2.95	
Wasatch	ı	1	ł	ı	ı	ŀ	ŀ	ŀ	1	ŀ	:	
REGIONAL TOTALS	2.59	5.61	4.18	3.89	4.00	4.70	3.92	5.27	4.28	3.92	2.53	4.24
Southern Region												
Beaver	2.33	5.11	2.60	9.00	1.80	1	ł	ı	ı	;	;	
Garfield	ı	t	i	ł	1	ı	i	;	1	;	ŀ	
Iron	:	3.00	i	;	I	ı	ł	1	1	;	:	
Kane	ŀ	:	i	ł	l	ı	į	ŀ	1	ł	:	
Millard	6.24	4.33	4.04	3.99	3.64	ı	15.00	4.86	ŀ	7.23	ı	
Piute	ı	:	i	ł	ſ	ı	ŧ	!	1	1	1	
Sevier	4.64	4.58	5.22	5.14	3.77	ı	;	ŀ	ľ	ł	ı	
Washington	ł	:	2.78	1.11	3.50	i	i	;	!	:	ŧ	
Wayne	:	3.17	2.43		:	1	1	1		:	-	
REGIONAL TOTALS	5.05	5.92	4.43	4.32	3.61	1	15.00	4.86	,	7.23	ŧ	5.60
Northeastern Region												
Daggett	;	;	ı	ŀ	ı	ı	!	!	:	!	:	
Duchesne	3.81	3.00	3.73	3.40	2.36	1.68	7.60	3.81	98.0	1.00	3.40	
Uintah	13.00	11.50	4.13	3.65	3.67	2.33	3.30	3.33	1.70	3.33	09.9	
REGIONAL TOTALS	6.38	5.83	3.88	3.52	2.64	2.01	2.82	3.73	1.02	2.40	5.00	3.42
Southeastern Region			l									
Carbon	ł	0.50	3.00	ł	ı	ı	;	i	ı	ı	ł	
Enery	3.75	4.17	5.15	6.63	6.42	3.60	3.50	5.00	6.50	3.71	1	
Grand	ł	1	:	1	l	i	:	ī	I	ì	1	
San Juan	:	,		1	ł		:	ï	'	ł	:	
REGIONAL TOTALS	3.75	3.80	4.04	6.63	6.42	3.60	3.50	5.00	6.50	3.71	ľ	4.70
STATE TOTALS	3.92	5.04	4.20	4.08	3.68	2.95	3.70	3.81	3.40	4.31	2.84	3.91

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Table 7.	

Region and						Year						Average
County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1984-93
Northern Region												
Box Elder	99	74	<b>48</b>	75	64	100	100	83	74	68	89	
Cache	100	<u>8</u>	;	æ	20	98	67	70	38	100	ŀ	
Davis	33	42	82	<b>68</b>	98	47	<u>8</u>	<del>3</del> 0	0	:	ŀ	
Morgan	ı	ı	ľ	1	ŧ	ı	1	ı	1	ı	ŀ	
Rich	ı	ı	ı	;	I	ı	ł	ŀ	ŀ	:	1	
Summit	ı	ı	ſ	ı	1	1	;	ı	i	:	;	
Weber	92	ı	100	ı	1	100	<b>98</b>	99	\$		ŧ	
REGIONAL TOTALS	99	99	62	28	1.9	76	74	69	19	8	89	7.1
Central Region												
Juab	98	100	100	1	20	9	100	:	i	100	<u>8</u>	
Salt Lake	97	63	8	88	;	:	19	<b>6</b> 8	1	100	1	
Sanpete	96	92	92	82	88	<b>36</b>	78	8	96	8	56	
Tooele	ł	1	<u></u> 20	100	<u>8</u>	1	1	;	1	!	40	
Utah	83	:	<b>%</b>	8	<b>≈</b>	99	<b>&amp;</b>	92	98	8	75	
Wasatch	ł	;	ŀ	ł	ŀ	•	1	;	ı	1	:	
REGIONAL TOTALS	5	56	25	91	28	51	81	08	87	92	89	11
Southern Region												
Веачег	33	<b>68</b>	<b>98</b>	100	40	ł	1	:	I	ı	·	
Garfield	ı	ı	1	ŀ	ı	ı	1	ł	1	1	ı	
Iron	;	100	ı	ł	;	i	1	ı	1	ı	ı	
Kane	;	ı	î	ı	ı	1	;	ı	ŧ	:	ı	
Millard	100	<b>3</b>	85	98	<b>98</b>	i	100	100	;	8	1	
Piute	ı	ł	ł	ı	ı	1	:	ı	ı	. 1	ı	
Sevier	91	<b>&amp;</b>	84	<b>9</b>	69	1	;	ı	;	:	ı	
Washington	:	:	64	22	20	1	;	ı	ì	ı	ı	
Wayne	ł	83	100	1	1	ŀ	:	1	1	ı	ı	
REGIONAL TOTALS	91	82	88	82	74	;	100	100	;	88	1	88
Northeastern Region												
Daggett	1	;	;	;	ŀ	!	ŀ	ı	ı	ı	ı	
Duchesne	<i>L</i> 9	75	57	96	39	61	99	\$	;	8	9	
Uintah	98	75	73	91	75	26	79	100	ı	1.9	100	
REGIONAL TOTALS	72	75	73	94	46	59	29	98	1	09	08	70
Southeastern Region												
Carbon	1	20	99	ł	!	;	i	ı	:	ı	1	
Emery	65	19	92	100	100	64	25	100	88	51	ļ	
Grand	100	ı	1	ŧ	ŀ	;	i	:	ì	1	:	
San Juan	:		1	:	1	1	ï	1	1	1	:	
REGIONAL TOTALS	65	65	91	100	100	64	64	100	83	57	:	46
STATE TOTALS	75	62	83	87	7.2	64	76	62	82	82	69	77
												!

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Table 8

Region and						Year						Average
County	1984	1985	1986	1987	1988	6861	1990	1991	1992	1993	1994	1984-93
Northern Region												
Box Elder	4.63	5.77	5.33	90.9	4.80	8.00	5.40	3.20	4.00	5.40	6.78	
Cache	3.40	3.00	. 1	4.80	4.00	4.00	4.50	5.20	4.67	0.00	:	
Davis	3,33	3.50	5.12	4.40	6.60	4.50	4.20	9.00	ŀ	1	:	
Morgan	ı	•	:	;	ı	ı	:	1	ŀ	ŀ	I	
Rich	;	;	ŀ	ŀ	ı	I	ŀ	ì	!	;	ŀ	
Summit	ŀ	f	ł	ŀ	ŀ	٠,	:	i	!	ı	:	
Weber	90.9	6.33	ŀ	ł	5.50	4.30	;	4.33	3.94	ı	ı	
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												
Juah	9.00	4.33	4.67	ı	4.00	4.00	4.00	ı	8.00	2.00	3.00	
Salt Lake	4.75	5.00	5.70	3.80	3.80	1	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	ŀ	;	3.00	4.00	4.00	ı	3.00	i	1	1	1.00	
Utah	2.95	;	4.75	4.90	4.80	5.10	5.00	5.13	5.44	3.78	4.13	
Wasatch	:	1	1	ŀ	i	;	;	ı		i	:	
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	90.9	4.50	i	ı	1	ı	1	:	
Garfield	1	ï	i	ł	ı	i	ı	į	i	ı	ı	
Iron	;	ı	ł	ı	;	ı	ı	ŀ	i	i	;	
Капе	1	ľ	;	1	ŀ	1	1	1	ŀ	i	;	
Millard	90.9	40.63	3.72	5.30	4.90	ı	3.80	5.40	i	:	;	
Fiute	ł	ľ	ı	:	1	:	!	ŀ	ŀ	ŀ	;	
Sevier	5.10	5.17	5.69	5.80	5.60	!	!	ł	ı	1	;	
Washington	ı	,	4.14	5.00	7.00	1	1	1	ı	1	ı	
Wayne	;	3.33	2.25	1	ı	1	!	1	1	1	:	
REGIONAL TOTALS	5.42	7.35	4.70	5.60	5.30	1	3.80	5.40	1	1	:	5.37
Northeastern Region												
Daggett	ł	ı	;	;	ı	:	1	1	ı	ı	!	
Duchesne	5.87	4.00	5.75	3.90	5.30	2.70	5.30	4.50	89.0	2.00	2.67	
Uintah	5.50	6.33	5.71	4.40	5.30	4.20	4.90	3,33	3.00	4.75	9.90	
REGIONAL TOTALS	5.72	4.78	5.74	4.10	5.30	3.50	5.10	4.18	08.0	3.83	6.25	4.31
Southeastern Region												
Carbon	;	1.00	ł	ı	ŀ	ł	ı	;	1	i	;	
Emery	5.00	5.20	68.9	5.00	7.10	5.70	5.60	4.50	7.00	6.50	;	
Grand	ı	ŀ	1	ı	1	ı	1	ı	ŀ	ı	ł	
San Juan	1	:	:	1	;	ŀ	ŀ	:	ı	ı	ŀ	
REGIONAL TOTALS	2.00	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
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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		<b></b>				
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		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		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
NKNOMN	37	52	35	0.67	0.04	0.05
STATE TOTALS	2,505	129,872	68,698	0.53	100.00	100.00

<sup>\*</sup> Total hunter trips from questionnaire returns.

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

Region and				•	Year			
County	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region	+22.	2,00						
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
REGIONAL TOTALS	0.49	0.40	0.32	0.42	0.44	0.50	0.33	0.46
Central Region								
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
REGIONAL TOTALS	0.65	0.50	0.54	0.51	0.53	0.59	0.45	0.56
Southern Region								_
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
REGIONAL TOTALS	0.60	0.77	0.52	0.56	0.45	0.62	0.47	0.52
Northeastern Regio								
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
REGIONAL TOTALS	0.83	0.56	0.53	0.69	0.58_	0.74	0.67	0.83
Southeastern Regio	n							
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
REGIONAL TOTALS	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
STATE TOTALS	0.60	0.53	0.46	0.49	0.48	0.57	0.45	0.67

<sup>( )</sup>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					Year			<del></del>
County	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region								
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
REGIONAL TOTALS	25.63	26.55	24.09	32.79	33.85	31.86	25.98	33.67
Central Region								
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
REGIONAL TOTALS	44.12	42.96	45.02	39.94	40.30	41.47	34.74	37.18
Southern Region					<del></del>			
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
REGIONAL TOTALS	14.82	13.88	16.80	14.73	12.96	13.19	15.75	14.99
Northeastern Region								
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
REGIONAL TOTALS	10.09	10.30	9.01	8.86	8.79	9.55	11.07	7.78
Southeastern Region								
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
REGIONAL TOTALS	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
STATE TOTALS	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

<sup>( )</sup>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.

Rogion and					Vone			
Region and County	1987	1988	1989	1990	<u>Year</u> 1991	1992	1993	1994
Northern Region	130/	1900	1989	1990	1991	1992	1993	1994
Box Elder	8.67	8.91	8.77	10.67	10 66	11 01	10.00	11 40
					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)		(0.07)	0.15	0.22
Rich	0.01	0.09	(0.07)		(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
REGIONAL TOTALS	31.06	35.24	34.17	38.29	<u>37.10</u>	36.11	35.14	38.37
Central Region								
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)		0.00	0.36	(0.12)	0.05	0.01
REGIONAL TOTALS	40.78	39.06	38.15	38.06	36.66	40.18	34.59	35.15
Southern Region								
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)		(0.08)	0.09	0.19
REGIONAL TOTALS	14.85	13,16	14.58	12.80	13.82	12.10	15.01	15.20
Northeastern Region						: <u>-</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
REGIONAL TOTALS	7.27	7.10	7.70	6.28	7.38	7.32	7.45	4.97
Southeastern Region					,,,,,	,,,,,,		1127
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)		0.05	0.00
REGIONAL TOTALS	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
	0.05	0.00	0.74	0.00	0.00	0.05	1.30	0.04
STATE TOTALS	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

<sup>( )</sup>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.

Table 13.			t narvest statistic		
	Total	Total	Hunter-Days	Pheasants Per	Pheasants Per
<u>Year</u>	Hunters	Harvest	Afield	Hunter-Day	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
		-		1.10	3.32
1967	85,664	284,000	257,033		
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	50,382 47,025	78,944		0.46 0.49	
1990		•	161,634		1.68
	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

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http://dx.com/dx	County	Parties	Hunters	Hours	Birds	100 Hr	Hunts		Hours	Birds	100 Hr	Hunter
h  the control of the	Northern Region											
NALTOTALS   State   Natural Region   N	Box Elder	88	185	516	<b>88</b>	17	1	ł	ł	1	:	i
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NAL TOTALS  *** STATE ST	Davis	ł	!	ŀ	I	ı	!	1	:	1	;	ı
Region	Morgan	;	!	ŀ	:		1	ł	ŀ	ļ	;	i
NAL TOTALS   State	Rich	ŀ	;	ı	ļ	!	ł	1	ŀ	1	ı	ı
NALTOTALS   St.	Summit	ı	;	ı	ł	ŧ	ŀ	1	- 1	ł	ŀ	ı
Region   R	Weber	ł	ı	ı	;	!	;	1	1	ł	;	i
Region	REGIONAL TOTALS	88	185	516	<b>8</b>	17	; ;	:	1	;		1
NAL TOTALS   NAL	Central Region											
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th Region	Tooele	32	æ	246	7	-	94	ş	213	28	<u></u>	0.20
NAL TOTALS   170   478   1,081   82   8   49   95   213   28   13   13   13   13   13   13   13   1	Utah	238	396	835	8	91	1	1	1	1	1	ı
NAL TOTALS   270   478   1,081   82   8   49   95   213   28   13   13   14   15   15   15   15   15   15   15	Wasatch	1	1	ı	ŀ	i	ı	ı	i	ı	1	1
rn Region  d  d	REGIONAL TOTALS	270	478	1,081	82	œ	64	95	213	28	13	0.29
d	Southern Region											
Color   Colo	Beaver	ł	1	1	;	ı	1	1	ı	ı	1	1
	Garfield	ı	ı	ı	ł	1	ı	ł	:	ı	ì	1
	Iron	i	ı	1	t	•	1	1	;	1	;	;
gton	Kane	1	1 '	ł	ı	1	;	1	1	1	ł	;
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NAL TOTALS	Daggett	ŀ	ŀ	1	ı	1	ł	1	ŀ	1	;	1
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80         192         432         55         11         94         197         436         62         14	Emery	<b>98</b>	192	432	55	13	45	102	223	34	15	0.33
80         192         432         55         13         45         102         223         34         15           438         855         2,028         225         11         94         197         436         62         14	Grand	!	;	ł	;	ŀ	ı	ŀ	ı	ı	1	1
80         192         432         55         13         45         102         223         34         15           438         855         2,028         225         11         94         197         436         62         14	San Juan	ŀ	i	ł	!	1	ı	I	ı	ſ	ı	ı
438 855 2.028 225 11 94 197 436 62 14	REGIONAL TOTALS	98	192	432	55	13	45	102	223	34	15	0.33
	STATE TOTALS	438	855	2,028	225	F	94	197	436	62	4	0.31

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Cache	4	0.10	7	0.23	<del>4</del>	0.57	:	;	13	0.63	ı	1
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Central Region												
Juah	ì	ŀ	ł	ł	ł	:	:	;	ı	;	;	1
Salt Lake	i	i	13	0.38	ï	ı	ı	ł	ı	;	i	ı
Sampete	;	I	ı	t	17	1.05	13	0.52	12	0.50	1	ı
Tooele	œ	0.26	ŀ	ı	i	i	1	;	14	0.63	13	0.29
Utah	24	0.53	19	0.40	13	0.34	97	92.0	12	0.36	;	;
Wasatch	;	;	ı	ı	ł	ı	1	;	ı	1	!	;
REGIONAL TOTALS	19	0.46	11	0.40	14	0.47	22	0.70	12	0.39	13	0.29
Southern Region												
Beaver	ŀ	ı	ı	;	;	1	ı	ŀ	i	ı	ı	:
Garfield	ı	i	ı	ł	i	1	1	;	ı	ı	ı	;
Iron	;	ı	1	!	i	I	1	ŀ	ı	ı	ı	:
Kane	ı	:	ı	;	1	I	1	ı	ı	ı	ı	!
Millard	4	0.24	<b>90</b>	0.48	;	I	1	1	1	1	ı	:
Pinte	1	1	ı	1	ì	ı	I	ı	ŀ	I	1	1
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Washington	38	0.71	ı	ı	;	ı	1	1	ŀ	ŀ	1	:
Wayne	1	1	1	1	1	:	ı	1	1	ı	1	
REGIONAL TOTALS	4	0.24	<b>\$</b>	0.05	ì	1	1	1	7	0.38	ı	;
Northeastern Region												
Daggett	1	!	ı	ł	ì	;	i	1	ı	i	i	;
Duchesne	16	0.85	16	0.84	13	0.50	16	1.13	1	ı	;	ł
Uintah	4	0.15	10	0.43	1	;	20	0.50	ı	;	;	;
REGIONAL TOTALS	14	89.0	14	0.65	13	0.48	18	0.92	1	;	:	:
Southeastern Region												
Carbon	25	0.50	1	;	i	ł	:	i	ı		1	ŀ
Emery	97	0.63	6	0.19	22	0.36	34	0.51	22	0.29	15	0.33
Grand	:	1	1	1	ł	ı	ı	ı	42	0.40	!	:
San Juan		1	I	ŀ	ı	;	:	1	1	ŀ	1	:
REGIONAL TOTALS	26	0.53	6	0.19	22	0.36	34	0.51	24	0.31	15	0.33
STATE TOTALS	9	0.30	12	0.36	16	0.42	36	0.46	61	0.31	41	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 inclimate 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>1994</u>	<u>Percent</u> 1993	change from Average
Average doves heard per route	11.47	<b>-</b> 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

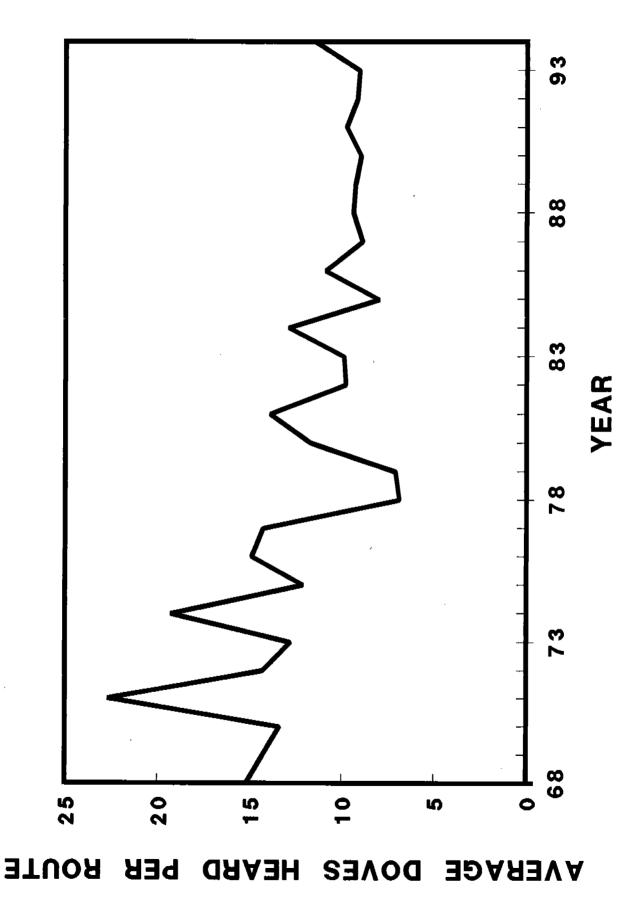
### <u>Hunter Questionnaire</u>

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:

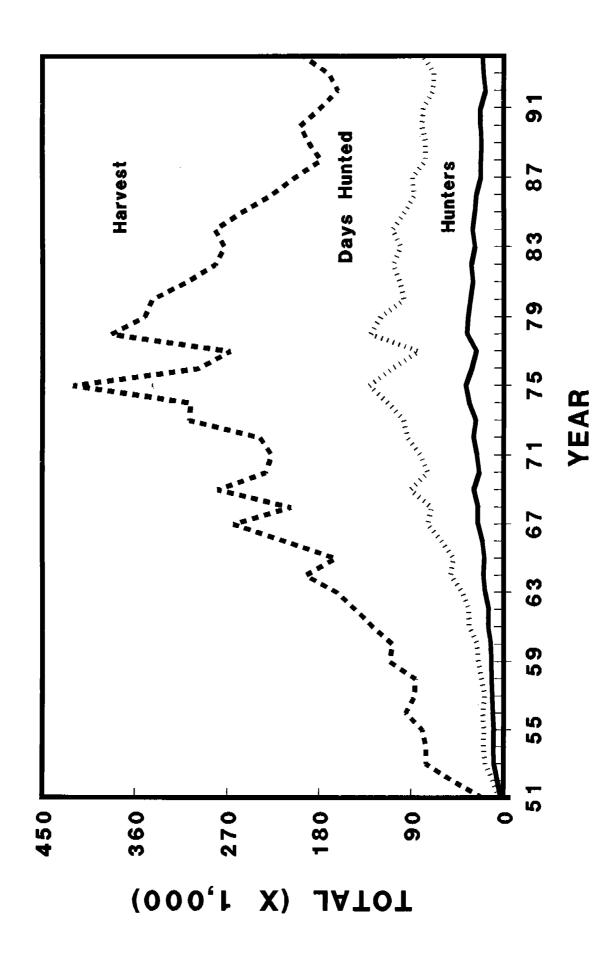
	1994	Percent 1993	change from Average
Mourning dove hunters	20,743	+5	<b>-</b> 6
Mourning doves harvested	195,089	+14	<b>-</b> 5
Hunter-days afield	78,594	+15	+14
Mourning doves per hunter-day	2.48	-1	-25
Mourning doves per hunter	9.41	+9	+4

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.

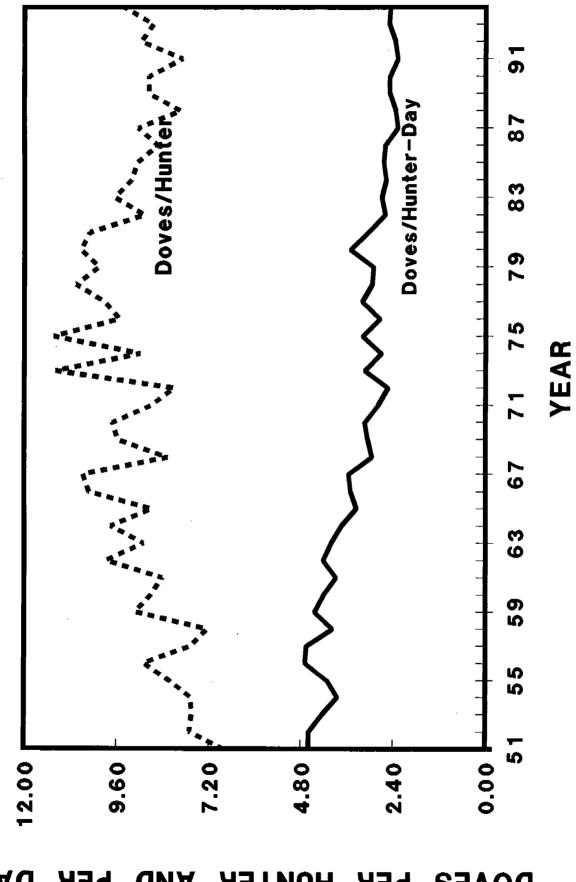
Long-term harvest trends are depicted in Figure 2.



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



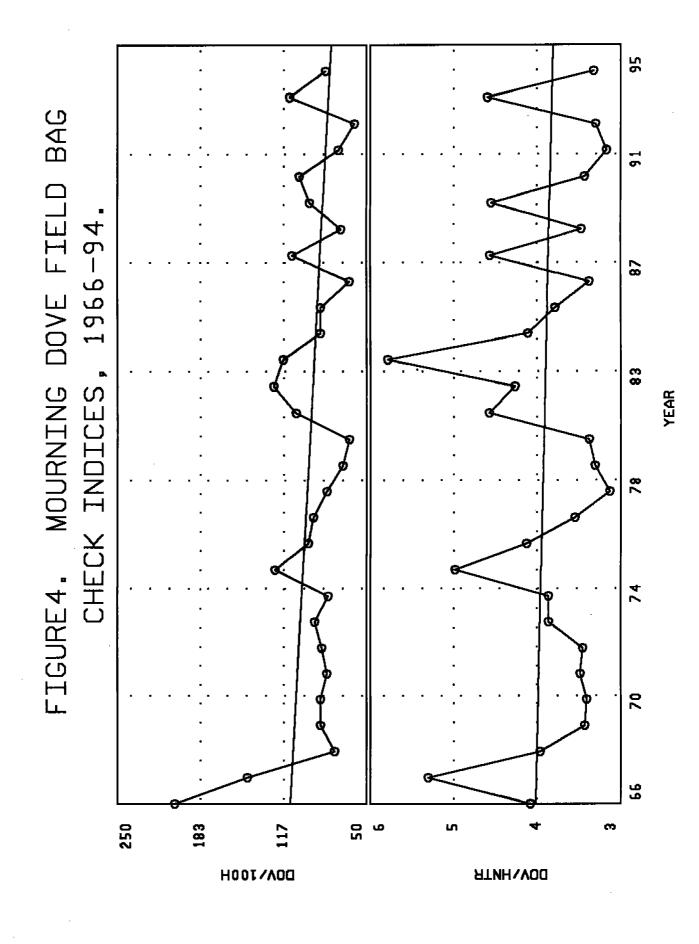
Statewide trends of mourning dove harvest statistics, 1951-94. Figure 2.



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

Figure 3.

YAG PER **QNA** HUNTER PER DONES



## 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:

		Percent o	change from
	<u>1994</u>	<u> 1993</u>	Average
Total hunters checked	397	-45	-71
Total hours hunted	1,373	-51	<del>-</del> 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	<b>-</b> 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>1994</u>	<u>Percent</u> 1993	change from Average
Sample size	1,635	-20	-46
Immatures/100 adults	73	-15	<b>-</b> 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	Route	Total	Doves	Total	Doves
County	Number	Heard /	Route	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				r		umber (	Number of Doves Heard Per Route	Heard P	er 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	7	6	4	œ	1	1	0	0	1	7	•	0	-	<b>—</b>	4	w	7
Summit	R1020	'n	9	S	4	w	ı	_	4	w	3	S	3	3	3	4	4	4
REGIONAL TOTALS		7	15	6	12	5	1	1	4	9	5	5	3	4	4	<b>&amp;</b>	6	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	6	25	19	20	19	16	23	13	36	38	15	42	4
Southern Region																		
Beaver	R3820	•	w	6	۲	13	ಣ	9	9	4	17	13	14	6	ļ	6	_	16
Garfield	R1090	0	0	0	6	7	က	15	ю.	1	1	0	16	•	•	ю	7	0
Iron	R4001	12	14	9	36	21	19	31	41	97	23	20	10	12	15	<b>5</b> 6	49	40
Millard	R3640	<b>∞</b>	4	7	1.0	6	v	14	7	7	e	s	4	w	œ	7	7	10
Sevier-Sanpete	R0370	•	0	က	•	0	8	w	4	4	6	6	7	9	7	Ŋ	7	9
Washington	R4311	-	4	ဗ	9	0	14	_	•	9	7	-	9	12	14	12	91	70
Wayne-Sevier	R0660	1	2	જ	14	4	1	17	3	2	0	3	7	5	0	3	9	0
REGIONAL TOTALS		22	29	62	82	49	47	68	59	45	54	45	59	49	39	59	83	92
Northeastern Region																		
Duchesne	R0080	7	7	1	13	7	•	_	<b>∞</b>	က	4	<b>00</b>	13	11	7	6	7	ı
Uintah	R0220	4	ı	49	19	1	6	10	5	20	12	9	0	5	3	2	3	7
REGIONAL TOTALS		9	2	50	32	8	6	11	13	23	16	14	13	13	10	S	s	7
Southeastern Region																		
Emery	R0540	10	6	7	22	7	11	10	3	10	11	15	œ	7	w	<b>9</b> 0	14	13
San Juan	R1171	74	28	14	38	56	30	21	25	99	31	37	<del>13</del>	31	38	34	21	<b>∞</b>
San Juan	R1450	3	1	3	0	24	5	7	2	0	1	2	1	0	3	6	1	0
REGIONAL TOTALS		37	38	24	09	57	46	74	30	2	43	22	22	33	<b>4</b>	51	36	21
STATE TOTALS		103	66	176	208	128	128	194	126	163	134	141	140	135	137	138	175	172
STATE AVERAGES		78.9	999	17.11	13.87	8 53	8.5 5.7	12.93	04.8	10.87	8.93	9.40	0.33	00.9	9.79	9.20	11.67	11.47
											3	:		3				
PERCENT CHANGE		Ç,	7	Š	2	82	=	S	¥,	96	<u>4</u>	v	٠,	4	-	oq	7.7	Ç
(110111 previous year)		7C-	7	0/	10	50		70	ec-	6	01.	,	-	•	-	٩	i	7

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 <b>,79</b> 7	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
DUCHESNE	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

<sup>\*</sup> Total hunter trips from questionnaire returns.

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

					Year			
Region and	1007	1988	1989	1990	1991	1992	1993	1994
County	1987	<u> TAOO</u>	1909	1990	1991	1994	1000	<u> </u>
Northern Region	3 46	3.41	2.83	2.73	2.27	2.56	2.49	2.63
Box Elder	3.46 1.79	1.92	2.24	1.67	1.97	2.16	1.88	2.54
Cache	1.18	1.51	1.31	1.53	1.77	1.19	1.39	1.26
Davis	3.00	2.36	1.03	1.73	2.31	2.47	0.88	2.93
Morgan	0.00	2.63	1.26	1.95	3.45	2.27	1.18	1.67
Rich	2.50	2.19	1.61	7.00	1.78	3.25	0.25	2.61
Summit	1.15	1.21	1.88	1.48	1.30	1.79	1.50	1.57
Weber	2.19	2.09	2.20	2.02	1.99	2.16	2.00	2.21
REGIONAL TOTALS	2.19	2.09	2.20	2.02	1.33	2.10		2.2.1
Central Region	2.95	3.25	4.45	3.70	3.33	3.34	4.25	2.72
Juab	1.36	1.84	2.18	2.37	2.02	2.14	1.88	2.79
Salt Lake	1.88	2.75	2.40	3.06	2.69	2.06	3.21	1.78
Sanpete	2.17	2.75	2.88	1.90	2.29	2.14	2.06	2.45
Tooele	2.30	1.97	2.08	2.05	1.89	1.77	2.12	2.43
Utah	0.82	1.20	1.22	2.42	2.11	2.37	1.83	2.15
Wasatch	2.11	2.23	2,55	2.41	2.25	2.10	2.51	2.43
REGIONAL TOTALS		2.23	2.55	6.41	2.27	2+10		
Southern Region	1.72	3.50	4.35	1.71	3.32	3.41	1.52	3.72
Beaver Garfield	1.67	3.86	2.27	2.34	2.40	1.67	3.50	1.47
	3.10	3.71	2.91	4.38	2.80	3.96	2.42	3.60
Iron	3.10	1.71	3.11	1.00	3.03	4.05	4.09	3.00
Kane	2.83	3.01	3.54	4.42	3.13	3.30	4.40	3.20
Millard		4.17	0.00	1.45	2.50	1.33	2.83	4.50
Piute	1.67	2.03	2.70	2.18	2.09	2.42	2.10	2.36
Sevier	2.15		2.12	2.18	3.63	2.54	2.74	2.28
Washington	2.68	3.37			0.75	2.86	1.00	2.11
Wayne	5.65	2.29 2.90	3.53 3.01	0.61 3.20	2.87	3.09	2.98	2.94
REGIONAL TOTALS	2.62	2.90	3.01	3.20	2.0/	3.09	2.50	2.94
Northeastern Region	0.03	0.00	0.25	2.00	1.00	3.25	7.00	0.00
Daggett	0.83		1.42	1.85	2.21	2.24	2.52	3.06
Duchesne	2.46 2.82	2.83 2.68	2.33	3.17	1.06	2.06	2.12	3.35
Uintah	2.55	2.68	1.82	2.46	1.64	2.15	2.32	3.25
REGIONAL TOTALS		2.00	1.02	2.40	1.04	2 - 1 - 2	22	<u> </u>
Southeastern Region Carbon	1.94	2.06	0.75	1.18	2.15	1.51	2.82	0.96
	2.41	2.87	1.77	2.04	1.68	3.10	3.73	2.06
Emery					1.13	0.00	2.21	1.50
Grand	2.41	2.00	2.18	4.04			3.46	4.42
San Juan	4.08	2.91	4.22	1.69	3.56	2.61		
REGIONAL TOTALS	2.76	2.56	1.85	2.07	2.14	2.46	3.27	2.19
Unknown Counties	1.93	1.30	2.86	0.00	0.00	0.00	2.40	1.50
STATE TOTALS	2.61	2.28	2.49	2.49	2.28	2.35	2.51	2.48

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

Region and					Year			
County	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region							-	
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
REGIONAL TOTALS	18.92	22,15	23.50	20.88	21.71	24.35	20.37	24.93
Central Region								
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
REGIONAL TOTALS	45.87	44.78	43.08	38.67	44.50	38.27	40.36	40.64
Southern Region								
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
REGIONAL TOTALS	24.05	22.63	2 <u>6.4</u> 6	31.57	26.22	28,19	28.68	26.19
Northeastern Regio								
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
REGIONAL TOTALS	3.70	3.73	2.57	4.15	3.82	3.36	3.77	2.81
Southeastern Region								
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
REGIONAL TOTALS	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
STATE TOTALS	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					Year			······································
County	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region								
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
Central Region								
Juab	6.47	5.82	5.49	6.35	6.01	4.74	6.58	5.26
Salt Lake	9.02		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
Southern Region								
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
Northeastern Regio								
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
Southeastern Regio								
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	100.00	100.00	100.00	100.00	100.00	100.00	100.00

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

	Total	Total	Hunter-Days	Doves Per	Doves Per
Year	Hunters	Harvest	Afield	<b>Hunter-Day</b>	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
Fotals	- ,				~•••
(1951-94)	969,788	9,030,529	3,038,156		
Averages	,	~ , ~ + v, v = ×	-,,	·	<del></del>
1951-93)	22,071	205,475	68,827	3,29	9.04
Estimated.	,		,,		, · · ·

<sup>\*</sup> Estimated.

<sup>\*\*</sup>Bag limit increased to 15.

<sup>\*\*\*</sup>Bag limit reduced to 10.

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Table	

			-			Committee				-	2
Region and	Total	Total	Total	Total	Sirds/	Combien	Complete Total	10ta	Total	Birds/	SILOS/
County	Parties	Hunters	Hours	Birds	100 Hr	Hunts	Hunters	Hours	Birds	100 Hr	Hunter
Northern Region											
Box Elder	1	1	;	1	ı	!	ì	ı	}	:	•
Cache	ı	ı	:	ı	:	;	:	ı	ł	;	ı
Davis	1	ŀ	ŀ	;	!	1	ŀ	ŀ	;	ļ	ł
Morgan	ı	ı	;	1	;	1	;	ı	1	ı	!
Rich	ı	ı	1	ı	;	1	:	1	1	ı	ı
Summit	1	ł	;	ı	:	ı	;	1	ŀ	ı	1
Weber	ŀ	ı	;	1	;	ı	;	ł	}	ł	ı
REGIONAL TOTALS		;	;	1	;	:	:	ł	١,	1	ı
Central Region											
Insh	,	ł		ı	1	!	1	1	i	1	I
Colt I also	l	l	}	l	}		}	l	l	ł	}
алт гаке	ı	:	1	1	:	!	ŀ	ŧ	I	1	ı
Sanpete	:	ı	;	1	1	1	;	ı	ł	:	ı
Tooele	ł	i	1	ı	1	ı	i	ŀ	ŀ	;	ı
Utah	;	i	ł	ļ	ł	1	ı	ı	;	ŀ	i
Wasatch	;	;	1	;	1	!	;	1	!	ł	ł
REGIONAL TOTALS	;	,	,	,	;	;	;	1	ı	,	;
Southern Region											
Beaver	ł	ı	1	:	;	1	;	1	:	:	1
Garfield	;	ı	1	:	ŧ	1	:	1	ı	;	ŀ
Iron	ŀ	ı	1	;	;	ı	:	;	ı	1	:
Kane	١	1	ı	;	;	1	:	;	ı		1
Millard	i	1	1	1	;	!	i	1	ı	1	;
Pinto				H					l	ł	
ine.	ł	1	ŀ	ŀ	ł	I	;	ŀ	1	1	:
Sevier	1	ı	:	ŀ	ľ	ľ	;	ŀ	1	1	ł
Washington	t	!	ı	:	ı	1	;	ŀ	1	;	ŀ
Wayne	,	!	:	-	:	!	:	;	ı	1	:
REGIONAL TOTALS	1	ŀ	1	ı	;	;	;	ı	ı	:	ı
Northeastern Region											
Daggett	1	:	ł	ì	;	1	;	;	i	;	1
Duchesne	ı	ŀ	ı	ŀ	i	1	ŀ	ŀ	ı	ł	ı
Uintah	ŀ	:	:	:	ı	1	ł	ŀ	ı	ı	ı
REGIONAL TOTALS	,	:	1	1		;	;	1	:	ı	;
Southeastern Region											
Carbon	!	ł	1	ı		1	:	1	ŀ	ı	i
Emery	12	53	74	106	144	60	<b>\$</b>	15	49	327	6.13
Grand	1	!	;	;	i	ł	;	,	1	ı	ŀ
San Juan	13	33	71	106	149	¢	70	53	81	154	4.05
REGIONAL TOTALS	25	62	145	212	147	6	38	89	130	193	4.64
LEHI CHECK STATION	195	358	1.224	911	74	123	22.1	780	683	8	3.09
NEPHI CHECK STATION	99	152	453	472	104	41	2	250	330	127	1.70
THIOKOL CHECK STATION	35	72	2 2	410	203	92	5 5	٤	3		}
TOTAL CITICAL STREET											

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Region and County Northern Region Box Elder Cache Davis	Birds/	ll	Birds/									
1. Re									11 00-			
Northern Region Box Elder Cache Davis	100 Hr	Hunter										
Box Elder Cache Davis Morean												
Cache Davis Morean	110	4.55	38	2.29	200	2.27	ı	;	1	1	ı	1
Davis	;	:	;	ı	ı	ı	ı	ı	1	1	ı	ı
Morean	160	5.00	110	1.77	158	1.88	ı	ŀ	1	;	i	ı
Trior Burn	ı	ŀ	;	ŀ	1	ı	1	1	;	:	;	1
Rich	ŀ	ŀ	;	;	ł	ı	ı	1	;	ı	;	1
Summit	ı	1	;	:	:	ł	ı	i	;	I	1	:
Weber	9	0.71	39	0.83	57	1.00	:	1	;	ı	:	;
REGIONAL TOTALS	109	4.42	42	1.93	147	1.79	1	ı	:	1	1	:
Central Region												
Juab	133	6.39	116	4.60	29	2.49	1	ı	110	5.26	1	;
Salt Lake	37	1.30	ŀ	1	14	0.50	ŀ	ı	ı	1	1	1
Sampete	1	:	ŀ	1	1	ŀ	ı	ı	ı	١	ı	1
Tooele	ł	1	282	10.00	1	·	;	i	ı	1	ı	ı
Utah	16	3.47	65	2,43	76	2.86	1	ł	117	4.43	;	ı
Wasatch	I	ı	1	ŀ	ı	1	ı	i	1	ŀ	;	1
REGIONAL TOTALS	108	4.28	114	2.95	70	2.69	١,	:	115	4.64	:	ŀ
Southern Region												
Beaver	1	1	:	ı	i	ł	ı	ı	•	1	ı	1
Garfield	1	1	;	1	ì	i	ı	1	1	;	ı	1
Iron	467	1.40	ı	;	i	ŀ	i	ı	;	ı	1	1
Капе	t	ì	:	ı	1	ì	i	ı	1	;	1	I
Millard	ı	t	104	7.78	1	ı	i	ı	i	;	ı	ł
Piute	:	1	1	:	;	ŀ	ł	i	ı	;	1	1
Sevier	:	ŀ	ŧ	;	;	ŀ	ŀ	i	ı	:	1	ì
Washington	369	1.20	;	ı	1	t	1	1	i	:	1	}
<b>Wayne</b>	1.	1	:	1	:	:	ı	ŀ	:	1		1
REGIONAL TOTALS	444	1.33	104	7.78	1	1	:	1	:	1	ŀ	1
Northeastern Region												
Daggett	:	ŀ	1	ŀ	i	î	1	1	1	ł	1	1
Duchesne	i	ı	:	;	;	ŀ	ı	ł	ł	1	ı	ı
Uintah	214	8.57	1	1		:	;	I	:	1	:	;
REGIONAL TOTALS	214	8.57	1	1	-	:	;	1	1	;	;	1
Southeastern Region												
Carbon	;	1	ι	ı	1	;	219	7.08	280	7.00	;	ŀ
Emery	:	ı	127	4.00	300	7.50	265	4.07	198	7.92	327	6.13
Grand	92	2.00	i	ı		ŀ	ł	i	200	1.00	1	1
San Juan	1	:	129	9.00	250	5.00	ł	1	:	:	154	4.05
REGIONAL TOTALS	92	2.00	127	4.90	294	7.14	235	5.46	202	6.93	193	4.64
LEHI CHECK STATION	91	3.47	33	2.43	76	2.86	20	2.73	130	4.43	88	3.09
NEPHI CHECK STATION	133	6.39	104	7.78	49	2.49	88	4.01	110	5.26	127	3.79
THIOKOL CHECK STATION	1	:			1	1	127	3.64	141	5.21	:	;
STATE TOTALS	110	4.31	104	900	7.1	2.70	99	2.85	112	4.36	8	2.88

Table 16. Age composition (Immatures/100 Adults) of Mourning Doves Barvested, 1934-94.	malures/1	M Adults)	of Mours	Ing cover	Farvener 10	1, 1938ept.	100		oge.		1000	0001		1001		1007	9	20	1007	196	1984-93 Average
County		17 1004(n)	1 2	17 100 A(n)	1 2	1980 [/ 1864(n)	[/ 1004(n)		1, 100A(n)		17 190A(n)	[/ 100A(n)	A(n)	I/ 100A(n)		L/ 100A(n)	2 /	I/ 100A(n)	1/ 100A(n)		I/ 100A(n)
Northern Region																					
Box Elder	135	1,172	146	137	131	1,086		977		28	435	239	487			1	1	ı			
Cache	1	ı	181	\$	ı	ı	325	17		ı	1	•	ı	'		ı	ı	ı		1	
Davis	121	<del>.</del>	88	Z.	ı	,		ı	1	I	1	ı	ı	•	1	1	ı	,	ı	1	
Morgan	t	ı	1	1	1	1				1	,	ı	1			1	ı	ı		ı	
Rich	ß	ន	909	r-	ı	ı	ı	1		1	•		1	1		1	1	ı		•	
Summit	1	ı	1	ı	ı	ı		1		1	ı	ı	ı			1	1	1			
Weber	١	ı	ı		1	,	1	,		ı	1	1	ı	ļ		1	ı	1			1
REGIONAL TOTALS	133	1,237	138	263	131	980'1		787		8	435	239	487			1	:	r		- 143	3 716
Central Region																					
Juab	1	ı	1	ı	1		ı	ı		1	1	1	1			1	ı	ı		1	
Salt Lake	ı	ı	1	,	ı	1	ı		1	1	1	ı	1	1		1	ı	1	ı	1	
Sanpete	ı	ı	t	1	1	1	ı			'	ı	1	1	1		1	ı	ı		,	
Tooele	1	ı	1	,	ı	ı	ı	1	1	1	ı	ı	1			1	ı	1		1	
Ulah	ı	1	1	ı	ı	ı	t	1		1	ı	1	1			1	ı	1		1	
Wasatch	ť	ı	ı		1	1	1	1		ı	1	1	1	1		1	1				
REGIONAL TOTALS	'	١,	ı	,	'	,	,			'	1		1			1	1	1			1
Southern Region						[			l												
Beaver	1	ı	ı	ı	ı	ı	ı	1		1		ı	ı			1	ı	1		1	
Garfleid	•	1	1		ı	ı	ı	1	1	1		1	ı	'		ı	ı	1			
Iron	1	1	ı	ı	ı	ι	ı	ı		1		ı	ı			ı	ı	ı			
Knne	1	1	ı	•	ı	,	r	,		I		1	ı			ı	1	ı		1	
Millard	ı	ı	ı	ı	'	ı	ı	ı	1	ı	1	ı	1	1	1	1	ı	ı	ı	ı	
Plute	ı	ı	ı	1	ı		1	1		1		ı	1			1	1	1			
Sevier	ı	. 1	ı	ı	ı	1	ı			1		ı	ı			1	ı	ı			
Washington	1	ı	1	1	ı	1	ı			1		ı	t			1	ı	ı		,	
Wayne	1	ı	'	1	ı	1	ı			'	١	'	,				'	ا.			
REGIONAL TOTALS	I	1	ı	1	,	,	,	-		'		,				1	:	1	İ		
Northeastern Region																					
Daggett	I	ı	1	ı	ı	ı	ı			ı		1	ı	1		1	1	ı	ı	1	
Ducheane	ı	ı	ı	ı	ı	,	ı	1	1	1	ı	ı	ı			1	1	ı		1	
Untah	ı		1		ı	,		1	1	1		۱				1	•	ا'			
REGIONAL TOTALS	1	1	'	'	1	-	י		ı	1		1				1	ı		-		1
Southeastern Region																		:			
Carbon	ı	t	1	1	1	ı	ı				1	178	Ę	'		<b>3</b>	Æ	<b>9</b>	1	ı	
Етегу	1	ı	ı	ı	S	<i>L</i> 9						£	<b>1</b> 5				ᆶ	ğ		,	
Grand	1	•	1		ı	ı			1	20	2	ı	ı		1	ı	ı	1			
San Juan	ı	,	'	'	ß	77.	æ				l	झ	137			150		1	1		
REGIONAL TOTALS	1	1	1	1	S	294			ŀ		88	æ	353	-	Ì		۶	23	132	Ì	-
LEHI CHECK STATION	96	1,517	107	1,391	137	1,396		1,283				116	4				8	1,048			7
NEPHI CHECK STATION	198	1,130	107	1,678	140	1,137	180 1	1,004 1,047	H7 671		955	134	823		772 93		72	288	133	515 2	230 974
THIOKOL CHECK STATION	1	1	t	1	t	ı											8	289			
STATE TOTALS	131	3,884	117	3,332	121	3,913	137 3	3,536 1	100 1,64	11 77	2,454	127	1,813	114 1,855	55 92	188	98	2,047	73	1,635	113 2,719

		1994	22	œ	4	e	e	0	-	0	0	0	0
		1993	1	ł	ł	ı	1	1	ŧ	ı	i	1	ı
		1992	118	100	34	29	14	13	6	-	i	;	I
		1991	1	1	ł	I	1	1	1	;	ı	;	1
	E SIZE	1990	254	130	4	21	11	60	7	t	:	7	1
	SAMPLE SIZE	1989	81	56	36	13	Ŋ	1	•	1	•	•	•
		1988	I	ı	ı	Ţ	1	ı	1	1	1	ı	1
		1987	155	76	78	47	25	19	17	ĸ	1	1	0
I.		1986	192	215	96	53	53	11	<b>00</b>	6	7	•	0
		1985	115	69	36	10	ß	4	•	0	•	0	18
		1994	53.66	19.51	9.76	7.32	7.32	0.00	2.44	0.00	0.00	0.00	0.00
		1993	ı	ł	ı	1	1	•	1	I	1	1	I
94.	DATE	1992	37.82	32.05	10.90	9.29	4.49	4.17	96.0	0.32	1	1	1
Utah, 1985-94	IATCH	1991	;	ł	1	ŀ	ł	;	1	ŀ	:	t	1
s in Uta	ST BY H	1990	52.20	26.70	13.10	4.30	2.30	0.60	0.40	ı	1	0.40	0.00
ing dove	PERCENT OF HARVEST BY HATCH DATE	1989	41.30	30.10	18.40	09.9	2.60	0.50	0.00	0.50	0.00	0.00	0.00
mourn	NT OF I	1988	1	ı	ı	1	1	Ì	i	1	ı	1	ł
mmatur	PERCE	1987	34.80	21.80	17.50	10.60	5.70	4.30	3.80	1.10	0.20	0.20	0.00
date of is		1986	44.70 31.20 34.80	35.00	15.60	8.60	4.70	2.80	1.30	0.50	0.30	0.00	0.00
atching		1985	44.70	26.80	14.00	3.90	1.90	1.60	0.00	0.00	0.00	0.00	7.00
Table 11. Percent of harvest by hatching date of immature mourning doves in		Ь	none	1	2	е0	4	ΙΩ	•	7	<b>90</b>	6	10
ercent o	Age	(Days)	29	32	38	45	54	63	72	88	102	127	133
Table 11. F	Date	Hatched	Aug 3	Jul 31	Jul 25	Jul 18	6 Inf	Jun 30	Jun 21	)un 8	May 22	Apr 27	Apr 21

P = Last primary molted.

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#### 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.

## <u>Harvest</u>

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.

		Percent	change from
	<u>1994</u>	<u>1993</u>	<u>Average</u>
B1 1-12-12-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	13	163	-70
Band-tailed pigeon hunters	13	+63	
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

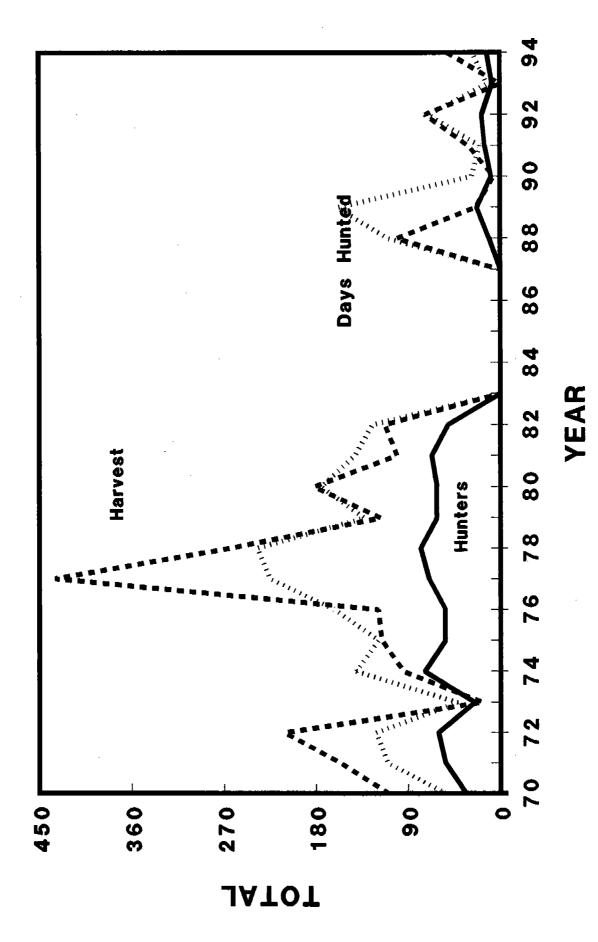
Band-tailed pigeon hunters afield increased from 1993, but remain 70 percent below the long-term average.

Fifty-one pigeons were reported harvested in 1994.

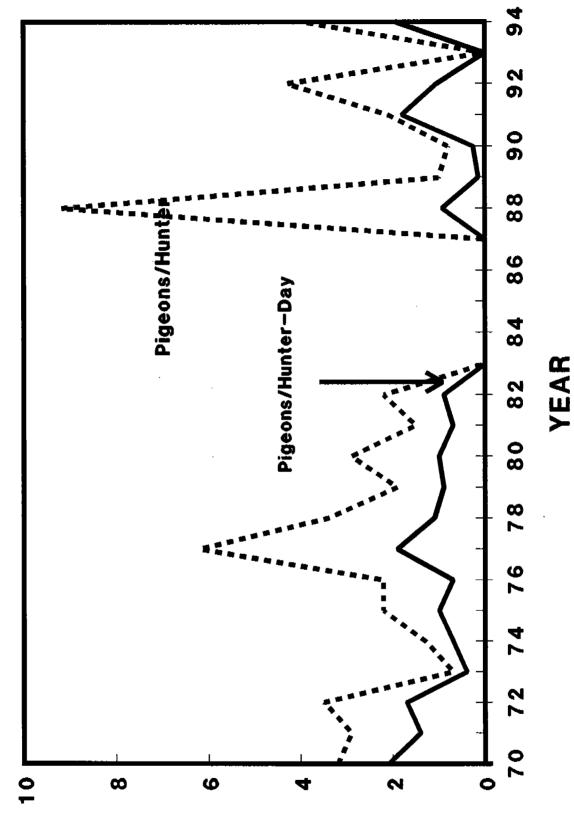
Table 13. Band-tailed pigeon harvest statistics, 1994.

	Participating	Hunters	Hunter-Days Affeld	Afield	Harvest	it	Pigeons/	Percent	Percent
Area Hunted	Reported	Calc.	Reported	Calc.	Reported	Calc.	Hunter-Day	Pressure**	Harvest
Beaver County	¥	÷	*	*	*	*	4	¥	*
Blue Mountain-Elk Ridge	*	÷	*	*	*	÷	*	*	*
Carbon County	*	*	*	*	*	*	*	*	*
Garfield County	*	*	*	*	*	*	¥	*	*
Iron County	. 1	2	m	7	•	•	0.00	16.67	90.0
Kane County	*	*	*	*	¥	*	*	÷	*
LaSat Mountain	*	*	*	*	÷	÷	*	*	*
Millard County	*	*	*	¥	*	₽	*	*	*
Piute County	*	*	*	æ	*	*	*	¥	¥
Sanpete County	*	*	*	æ	¥	끂	*	¥	*
Utah County	1	7	1	2	7	4	2.00	16.67	8.70
Washington County	4	6	œ	18	21	47	2.63	19.99	91.30
Wayne County	÷	*	*	÷	¥	*	*	*	#
Mixed Counties							*	#	•
(Washington and Iron)	÷	*	*	÷	*	#	ŧ	#	¥
Totals	9	13	12	27	23	51	1.92	100.00	100.00

Projection Factor = 2.222222222 (20 permits issued/9 questionnaires returned)



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



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

Figure 5.

PIGEONS PER HUNTER AND PER DAY

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

1970 1971 1972	34 54 61	109 156	53	2.10	3.20
1972		156			
	61		110	1.40	2.90
		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					quality.
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	<u></u>	
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.

प्रश्चिम्बरीके केले किन्तु परि केली है। प्रश्चिम

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>19</u> 94	<u>Percent (</u> <u>1993</u>	change from Average
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.

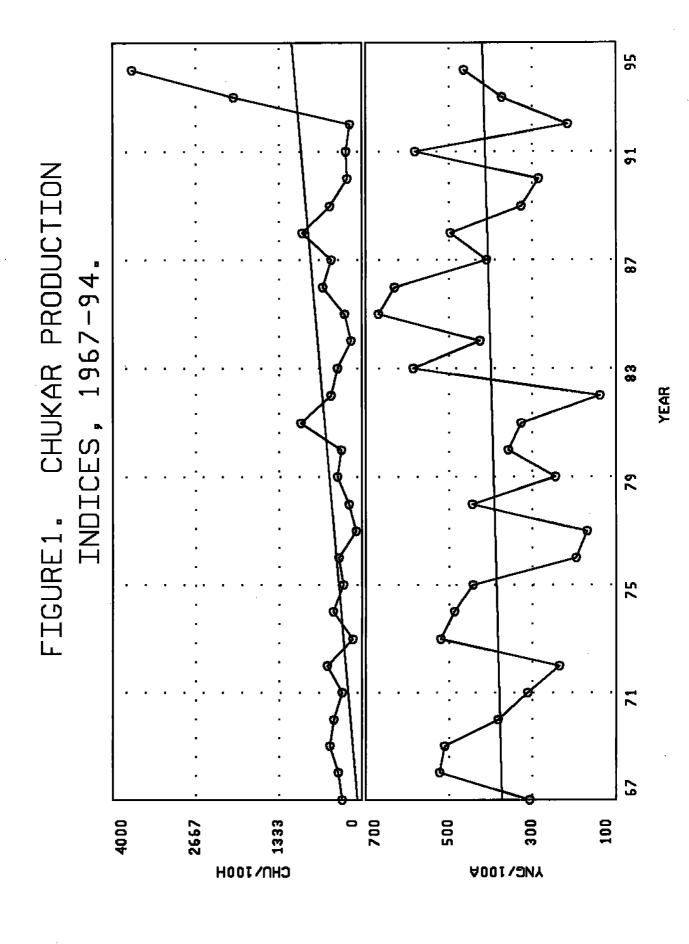
Brood count sample sizes were extremely small or nonexistent for all regions. Brood count data was reported only in the Southeastern Region. Because of extremely small sample sizes, this data can only represent localized population trends.

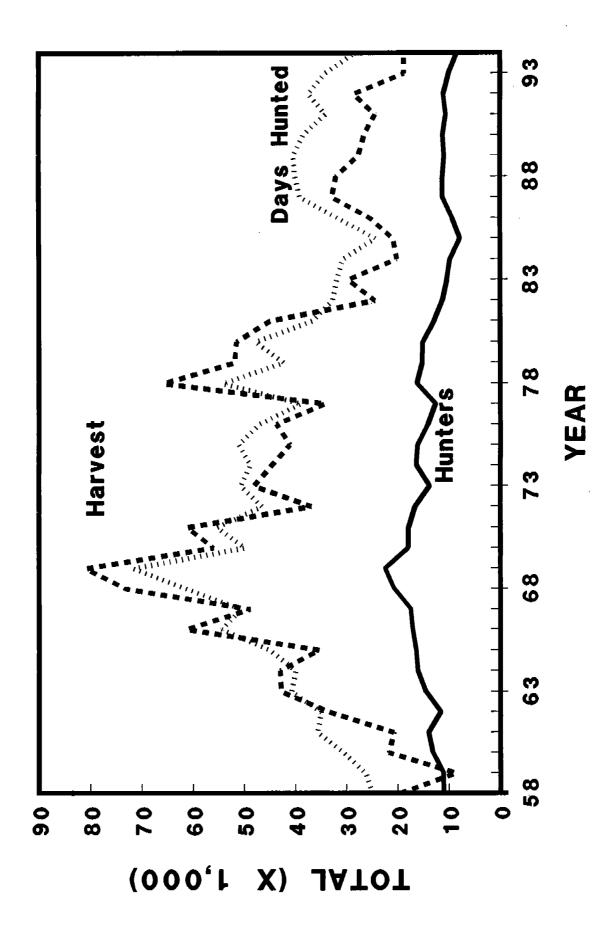
#### <u>Harvest</u>

## **Hunter Questionnaire**

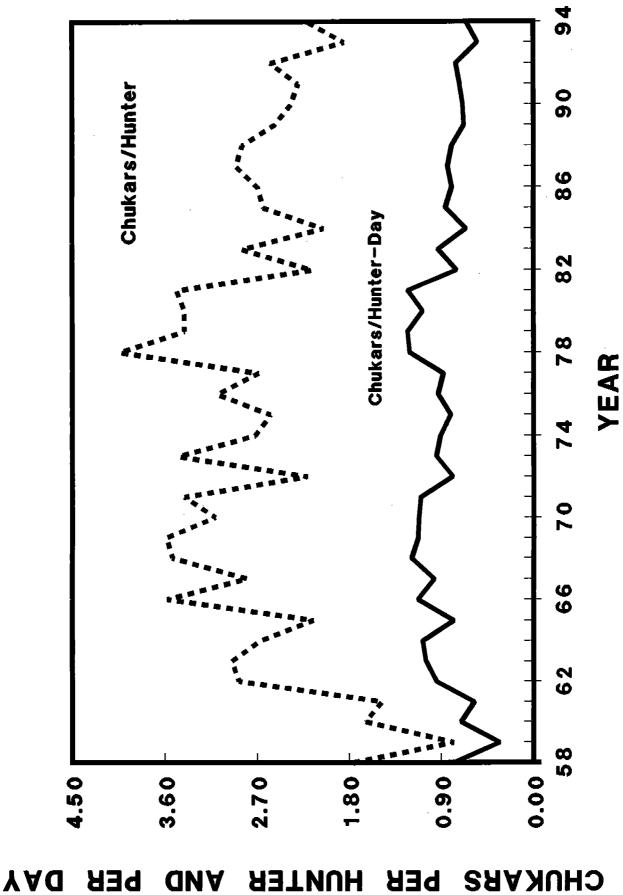
Results of the hunter questionnaire survey for 1994 are shown in Table 5. Long-term trends of chukars bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 6-8 and total statewide harvest statistics in Table 9 and Figures 2 and 3. Following is a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

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

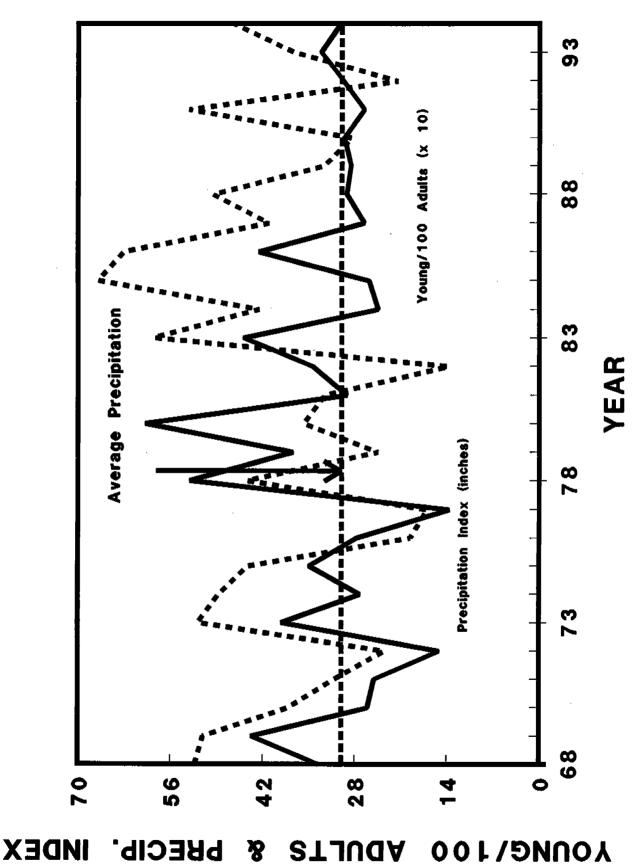




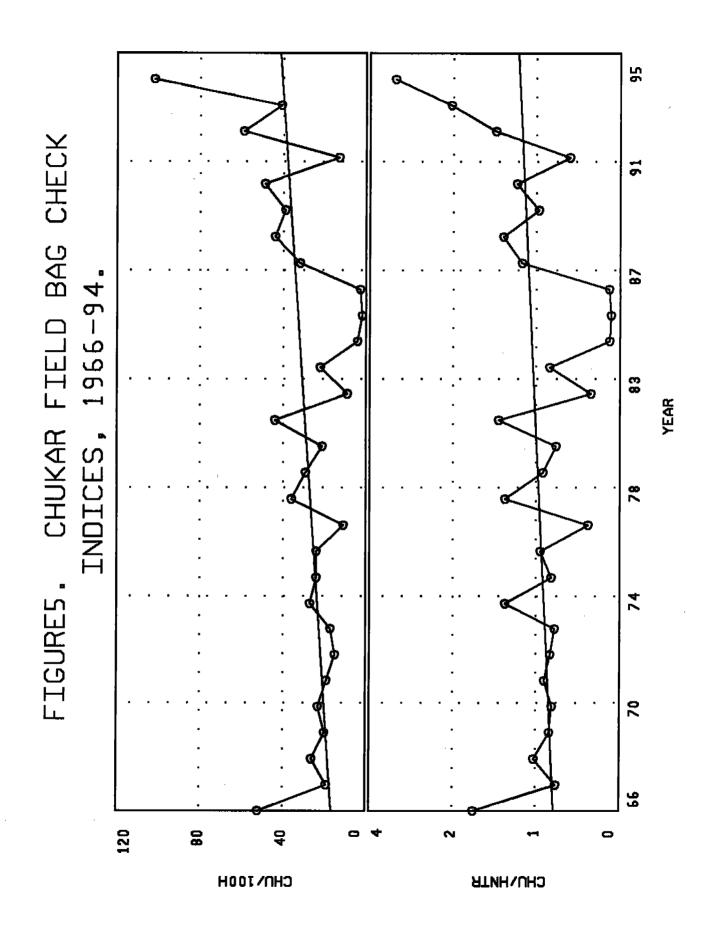
Statewide trends of chukar partridge harvest statistics, 1958-94. Figure 2.



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



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



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:

		Percent	change from
	<u>1994</u>	<u>1993</u>	Average
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	102	+149	+254
(complete hunts)			
Average hours per hunter-day			
(complete hunts)	3.14	-45	-28
Hours hunted per chukar bagged	0.85	-65	-94
(complete hunts)			

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

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County	#	Adults	Adults Young	Brood	Adults	Young	Yenng	Adults	Young	Chukars	100 Adults	Miles	Vehicle	Horse	Walk	Total	100 Hr
Northern Region																	
Box Elder	ı	;	ŀ	;	ŧ	1	ı	ŀ	ı	ı	1	!	ı	ı	1	;	1
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Davis	!	ı	;	ŀ	ł	1	1	i	1	i	1	!	1	1	1	ı	ŀ
Morgan	;	ı	ı	1	i	ı	ı	ı	ı	ı	1	!	ı	ı	ı	ı	1
Rich	;	ı	ı	;	i	ı	1	i	1	ı	ı	ı	1	1	I	ì	ŀ
Summit	ŀ	ı	1	:	ı	1	1	1	ı	ı	ı	1	1	ı	1	ı	1
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Central Region																	
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Saft Lake	ı	1	ı	1	ı	ı	;	ſ	ı	ı	1	ı	i	ı	ı	ı	ı
Sanpete	1	!	1	1	ı	ı	ı	1	1	:	I	1	ı	;	1	ı	ı
Tooele	ı	1	ŀ	ı	:	ı	ł	:	ı	1	l	ı	i	ł	ı	:	ı
Utah	ı	ı	ŀ	ı	ı	ŀ	ı	I	:	1	ı	ı	ı	;	ŀ	ı	I
Wasatch	1	ŀ	;	;	1	:	1	1	:	;	ı	ı	i	ł	1	ı	1
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Southern Region																	
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Iron	ı	1	1	:	!	ŀ	ŀ	ı	ŧ	;	1	ŀ	:	1	ŀ	ŀ	ı
Капе	ı	;	1	:	;	!	:	ı	;	:	ı	ŀ	1	1	!	ŀ	1
Millard	ŀ	;	1	!	1	ŀ	:	I	ŀ	1	ı	ı	:	ı	l	1	1
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Northeastern Region																	
Daggett	ı	ı	ı	;	:	ı	:	1	1	1	ŧ	1	ł	1	1	ı	1
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Emery	ł	ł	:	ŀ	ı	1	ı	1	ı	;	1	1	ı	ı	1	ı	1
Grand	60	က	32	10.67	28	135	ĸ	36	167	203	464	5	9	1	ı	9	3,691
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REGIONAL TOTALS	3	3	32	10.67	28	135	5	36	167	203	464	70	9	1	1	9	3,691
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Region and							Year					Average
County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1984-93
Northern Region									-			
Box Elder	1	4,200	700	283	136	1	;	•	;	ı	;	
Cache	;	;	:	820	300	1	848	:	ı	ı	1	
Davis	•	;	:	24	ı	ı	400	;	300	1	1	
Morgan	;	•	ı	ļ	1	1	;	ł	ı	ı	ı	
Rich	1	:	;	:	ı	ı	;	i	ŀ	ı	;	
Summit	1	ı	ł	ł	ı	ı	ŀ	ŀ	ı	ı	ı	
Weber	1	ŀ	;	ŀ	1	ı	ŀ	i	ŧ	ı	;	
REGIONAL TOTALS	;	4,200	999	125	117	ı	675	,	46	1	;	1,165
Central Region												
Juab	800	ı	739	209	462	120	587	367	1,000	ı	;	
Salt Lake	1	i	;	1	ı	ı	i	ŀ		t	1	
Sanpete	ł	;	1	;	ı	1	ī	1,000	191	ı	ı	
Tooele	436	550	999	535	484	263	157	443	300	1	ı	
Utah	ı	300	ı	875		472	; ;	1,200	1	1	:	
Wasatch	ı	i	ı	ŀ	ŀ	1	ŀ		1	1	ŀ	
REGIONAL TOTALS	481	457	642	591	468	240	266	533	650	,	:	481
Southern Region												
Beaver	ı	1	ı	ł	ŀ	ı	i	i	;	1	ı	
Garfield	1	1	125	i	ı	1	i	ı	:	1	ı	
Iron	ı	ı	1	i	:	1	i	1	ı		1	
Kane	1	ı	ı	ı	:	1	i	ŧ	:	1	ı	
Millard	1	1	ı	ı	550	726	i	:	:	ı	ı	
Piute	1	ı	ı	370	t	1	i	:	:	1	ı	
Sevier	ł	i	ı	ı	ł	1	i	ι	:	1	1	
Washington	ı	1,	ı	ı	ı	;	i	1	ı	ı	ı	
Wayne	-	;	:	:	ı	ŀ	;	;	1	1	1	
REGIONAL TOTALS		1	125	370	550	927	:	<b> </b>	:	1	:	493
Northeastern Region												
Daggett	1	1	t	0	1	ŀ	i	;	1	:	1	
Duchesne	ŀ	ı	:	0	:	1	ŀ	ŧ	:	1	ı	
Uintah	;	:	1	267	:	!	:	1	1	1	1	
REGIONAL TOTALS	:	-	1	267	1	1	:	1	1	1	1	267
Southeastern Region												
Carbon	320	1	1,300	1,014	009	ì	ŀ	ŀ	;	;	i	
Emery	;	1	1	200	ŀ	:	243	;	156	533	ı	
Grand	775	730	730	573	621	2	•	;	700	368	464	
San Juan	337	1		;	1	200	1	ŧ	906	;	1	
REGIONAL TOTALS	392	408	287	631	620	93	131	;	195	373	464	284
STATE TOTALS	426	0.29	631	411	496	327	285	533	215	373	464	437

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Region and						Year						Average
County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1984-93
Northern Region												
Box Elder	i	9.00	:	8.50	7.50	i	1	1	1	1	i	
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Davis	!	I	ŀ	ţ	ı	14.00	12.00	;	3.00	i	ı	
Morgan	1	ŀ	i	i		7.00	1	ï	1	1	ı	
Rich	ı	1	1	ı	ı	ŀ	:	ı	:	i	i	
Summit	1	;	ı	ı	ı	ı	1	i	1	1	ŀ	
Weber	ŀ	ŀ	1	;	ı	;	ı	·	:	ı	ł	
REGIONAL TOTALS	;	90.6	,	8.50	7.00	10.50	13.00	:	3.00	1	;	7.29
Central Region							,					
Juah	8.00	ı	7.45	8.00	6.75	5.50	4.30	ł	10.00	ı	ŀ	
Salt Lake	;	ı	ŀ	ŀ	;	,	:	ı	:	ı	1	
Sanpete	ŀ	ï	ŀ	ı	;	ŀ	i	10.00	;	ı	;	
Tooele	0.00	8.43	7.86	8.00	7.43	6,40	3.40	5.50	;	ı	;	
Utah	1	10.00	;	10.50	ı	3.00	ı	12.00	ł	ı	;	
Wasatch	1	1	ł	ŧ	ı	ı	ı	ı	ì	ı	ì	
REGIONAL TOTALS	6.80	8.63	7.69	8.23	7.07	5.00	3.60	7.33	10.00	1		7.15
Southern Region												
Beaver	1	1	1	ı	ı	ı	ı	ŀ	;	ı	i	
Garfield	1	1	2.00	1	ı	1	1	ı	i	į	ŀ	
Iron	;	1	1	1	ı	1	ı	ŀ	ı	;	ı	
Kane	1	;	1	;	1	ı	1	ŀ	;	1	ŀ	
Millard	;	;	:	ı	7.75	7.50	i	ŀ	ı	1	i	
Piute	ŀ	i	ł	5.00	:	i	1	;	ı	1	ŀ	
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Wayne	ı	1	;	:	;	;	;	:	1	ı	ì	
REGIONAL TOTALS	1	ı	ł	5.00	7.75	7.50	;	;	,	ı	:	6.75
Northeastern Region												
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Southeastern Region												
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Emery	:	5.00	ļ	5.00	ı	i	8.50	;	18.00	3.33	i	
Grand	7.75	9.00	ł	8.57	9.11	1.00	1.	:	4.00	8.00	10.67	
San Juan	:	ł	;	;	ı	4.00	;	:	9.00	ı	-	1
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	5.65	5.50	7.33	7.83	2.67	10.67	7.14

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County         1984         1985           Northern Region         -         239           Cache         -         -           Davis         -         -           Morgant         -         -           Rich         -         -           Weber         -         -           REGIONAL TOTALS         -         -           Sanpete         -         -           Tooele         441         681           Utah         -         -           Wasatch         491         -           REGIONAL TOTALS         291         542           Southern Region         -         -           Beaver         -         -           Iron         -         -           Millard         -         -           Washington         -         -           Wayne         -         -           -         -         -		1986 168	1987 40 83 313   91  1,123 1,950  	236 35 35 500  - 111 111 111  - - - - - - - - -	1989	1990 294 333 333 	1991 	1992 30 67 67		1994	1984-93
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th 441		1,046  1,424	1,123 1,950 - 844	653	314 2,100	365	1,300	2,600	;	ı	
ch 491  NAL TOTALS 291  rn Region		1,424	1,950	- 822	2,100	281	1,300	400	,	ŧ	
th 491  NAL TOTALS 291  rn Region  Id  Id  Igton  In the state of t		1,424	844	822	623	281	434	ì	!	ı	
In Region		1,424	844	822	623	281	434	ı	1	ı	
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REGIONAL TOTALS	;	0	241	:	:	:	ı	1	1	 	121
stern Region											
420				350	;	ı	ı	:	ŀ	:	
Emery 83				ŀ	ŀ	480	ı	511	158	;	
291	424	2,075	1,167	3,983	240	29	ł	100	4,350	3,691	
1,750				ŀ	225	1	1	200	i	;	
ALS 858	530		1,335	3,293	225	150	;	258	2,064	3,691	1,199
STATE TOTALS 176 28			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	ī	17	Ō	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	1,300	0.00	0.00	0.00
WAYNE	2	52	123	2.33	0.19	0.66
WAINE						
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				<b></b>	<b></b> _	
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

<sup>\*</sup>Total hunter trips from questionnaire returns.

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

Region and				Year				
County	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region	1,0,	1700	1,0,	1,,,,		1,,,,	1335	
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
REGIONAL TOTALS	0.64	0.69	0.58	0.82	0.69	0.76	0.36	0.61
Central Region	0.04	0.03	. 0. 30	0.02	0.03		0.50	0.01
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
REGIONAL TOTALS	0.86	0,83	0.78	0.81	0.79	0.73	0.54	0.72
Southern Region	0.00	0.63	0.70	0.01	0.75	0.75	0.54	0.72
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	0.25	1.50	0.00	0.29	0.00
Millard	1.09	0.95	0.57	0.62	0.55	1.35	0.29	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	0.29	0.72	0.18	0.48	0.20
Washington	0.00	0.00	0.47	0.00	0.00			
	2.00	1.83	0.00	0.00	1.80	0.00 0.20	1.82 0.27	0.00 2.33
Wayne REGIONAL TOTALS	0.82	0.72	0.50	0.45				
Northeastern Region	0.02	0.72	0.50	0.45	0.68	0.73	0.53	0.43
Daggett	3.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
Duchesne	0.20	2.12	0.73	0.00	0.19	1.86	0.51	0.00
Uintah	1.68							
		0.69	2.14	0.09	0.79	0.75	0.38	0.00
REGIONAL TOTALS	1.44	1.42	1.81	0.17	0.38	0.95	0.52	0.43
Southeastern Region	0.07	1 20	0.40	0.16	0.46	1 05	0.56	0.00
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
REGIONAL TOTALS	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
STATE TOTALS	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					Year			
County	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region	1707		1,00	1,00				
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
	0.07	0.67	1.43	0.93	1.36	0.93	0.61	2.35
Morgan 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	0.19	0.10	0.19
Weber	0.59	0.26	1.13	1.48	1.93	1.31	2.63	0.19
					31.00		14.68	
REGIONAL TOTALS	13.65	16.51	21.25	28.44	31.00	26.26	14.00	18.87
Central Region	10.00	7 10	F 22	F 13	0 57	c 07	F F7	4 41
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
REGIONAL TOTALS	50.44	50.93	53.30	54.70	50.71	50.84	43.22	49.02
Southern Region								
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
REGIONAL TOTALS	21.79	19.68	13.14	11.19	14.36	13.88	20.65	13.80
Northeastern Region								
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		0.00
REGIONAL TOTALS	2.68	2.44	6.38	0.93	1.21	2.30	2.83	1.31
Southeastern Region				****	2122	2,00		
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
REGIONAL TOTALS	11.41	10.41	5.18	4.74	2.7	6.66	14.98	17.00
1011111		10.11	3.40	3473		0.00	14.70	17.00
Unknown Counties	0.00	0.00	0.75	0.00	0.00	0.06	3.64	0.00
STATE TOTALS	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

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

Region and					Year			
County	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region	-201			<del></del>				
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
REGIONAL TOTALS	17.93	19.24	24.96	24.02	32.33	26.42	22.59	20.56
Central Region	2,,,,,		2		02100	50112		
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
REGIONAL TOTALS	49.34	49.18	47.05	46.71	45.88	52.85	44.02	44.71
Southern Region								
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
REGIONAL TOTALS	22.19	21.94	18,03	17.23	15.09	14.56	21.26	21.36
Northeastern Region								
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
REGIONAL TOTALS	1.56	1.37	2.41	3.75	2.30	1.85	3.01	1.80
Southeastern Region								
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
REGIONAL TOTALS	8,96	8.11	7.04	8.29	4.40	4.08	7.23	11.58
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.

	Total	Total	Hunter-Days	Chukars Per	Chukars Per
Year	Hunters	Harvest	Afield	Hunter-Day	Hunter
1958	11,124	19,578	25,100	0.78	1.76
1959	11,154	8,700	26,364	0.33	0.78
L960	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
987	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
992	11,125	28,599	37,463	0.76	2.57
993	10,128	18,774	34,147	0.55	1.85
1994	8,455	18,721	28,389	0.66	2.21
Fotals	- /		,- +-		
1958-94)	505,419	1,400,011	1,529,543		
Averages		, <u>, , , , , , , , , , , , , , , , , , </u>	_, ,= -=		, , , , , , , , , , , , , , , , , , ,
1958-93)	13,805	38,369	41,699	0.89	2.70

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County	100 Hr	Hunter	100 Hr	Hunter	$100~\mathrm{Hr}$	Hunter	100 Hr	Hunter	100 Hr	Hunter	100 Hr	Hunter
Northern Region												
Box Elder	20	2.50	133	4.00	ŀ	:	1	ı	1	ï	1	:
Cache	•	:	ì	ı	ł	;	1	ŀ	ŀ	1	1	ŀ
Davis	1	1	i	ı	ŀ	ł	:	1	;	ŀ	ı	:
Morgan	ı	ï	;	;	;	:	ı	ı	i	i	1	I
Rich	1	1	1	1	1	:	ı	ı	i	ŀ	ı	1
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REGIONAL TOTALS	50	2.50	133	4.00	1	1		1		:	;	
Central Region												
Juah	95	1.90	116	7.00	29	2.00	ŀ	ŀ	ŀ	;	i	ı
Salt Lake	:	ı	:	1	1	1	;	ı	ı	ł	1	ı
Sanpete	1	ł	1	ł	53	1.25	ı	1	1	ŀ	ì	ı
Tooele	7	0.0	ŀ	1	1	0.02	ŀ	ı	ŀ	ł	1	ı
Utah	20	1.00	10	2.00	29	2.00	ı	ı	ı	1	ŀ	1
Wasatch	1	ł	i	ŀ	ł	1	1	1	1	;	ŀ	1
REGIONAL TOTALS	31	1.00	48	1.36	13	0.70	;	ı	1	+		1
Southern Region												
Beaver	ŀ	ł	1	ı	i	1	ı	1	1	ł	1	:
Garfield	ŀ	;	ı	ı	;	ı	ı	i	1	ı	ŀ	ı
Iron	;	:	;	ı	:	ı	:	ì	1	ı	ŀ	i
Капе	:	:	;	ı	ŀ	ı	;	ì	1	ı	ı	ł
Millard	:	:	:	ı	`;	ı	!	ı	I	ı	ı	ŀ
Piute	;	ı	;	ı	;	ı	ŀ	ı	i	i	I	ı
Sevier	:	ŀ	:	1	:	ı	ı	ı	ı	ì	1	ŀ
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Northeastern Region												
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Duchesne	ı	1	38	1.50	i	:	ı	1	:	ı	1	1
Uintah	I	1	1	1	i	ł	1	ŀ		;	;	:
REGIONAL TOTALS		;	38	1.50	i	ŀ	ı	ļ	1		;	1
Southeastern Region												
Carbon	ł	1	1	1	;	ı	1	ı	1	ı	1	i
Emery	133	4.00	33	1.00	i	ŀ	59	1.74	ł	1	!	1
Grand	75	1.50	ı	ı	;	1	•	ı	41	2.36	102	3.14
San Juan	:	1	1	ı	;	1	:	1	ı	ł	'	;
REGIONAL TOTALS	100	2.30	33	1.00	1	ı	29	1.74	41	2.36	102	3.14
STATE TOTALS	39	1.13	<del>\$</del>	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> 1994</u>	Percent 1993	change from Average
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

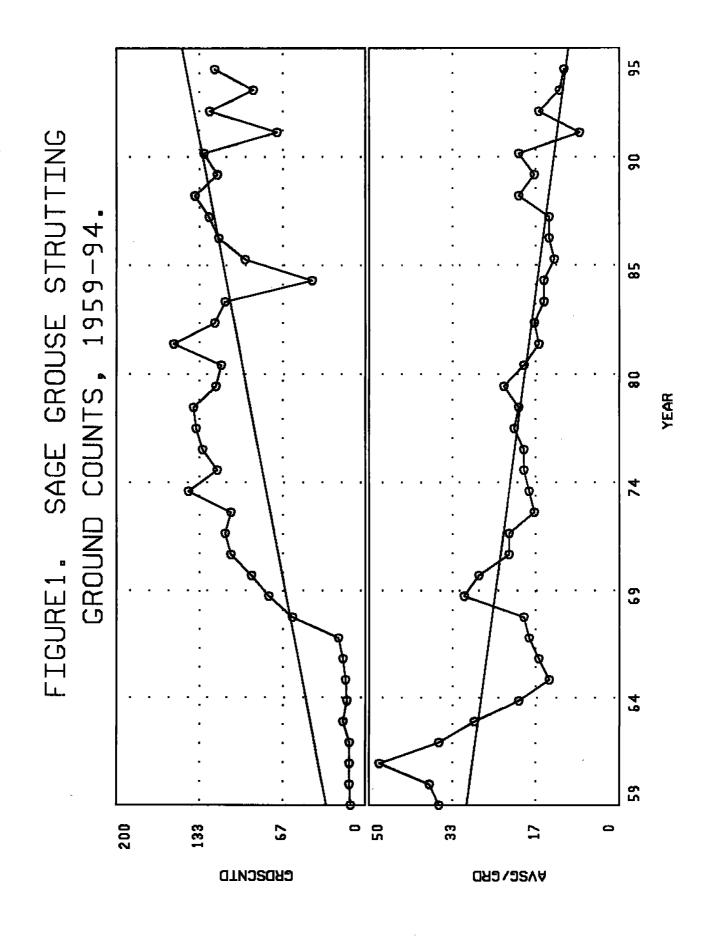
Results of the summer inventory survey for 1994 are found in Table 2. Long-term trends of young per adult ratios, mean brood size and sage grouse observed per 100 hours are shown in Tables 3-5 and Figure 2. Indices for 1994 are compared to 1993 and the previous 10-year (1984-93) average as follows:

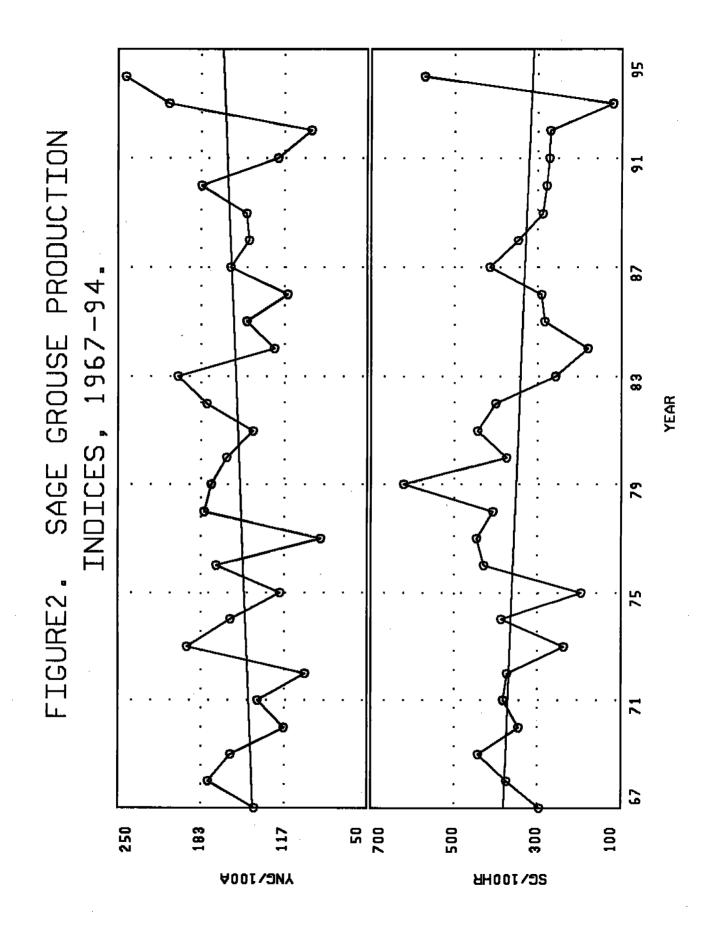
	<u>1994</u>	Percent 1993	<u>change from</u> <u>Average</u>
Total sage grouse counted	289	+70	-69
Young per 100 adults	244	+17	+69
Mean brood size	4.86	+32	+14
Sage grouse observed per 100 hours	572	+369	+108
Total hours effort	51	-64	-84

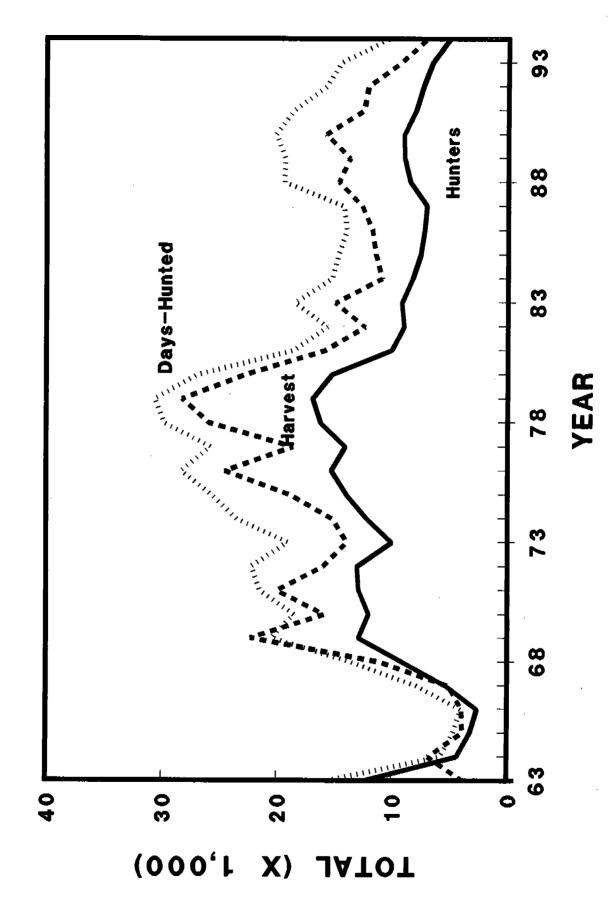
The effort devoted to sage grouse brood counts was 84 percent below average, and the total number of grouse counted was 69 percent below average.

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.

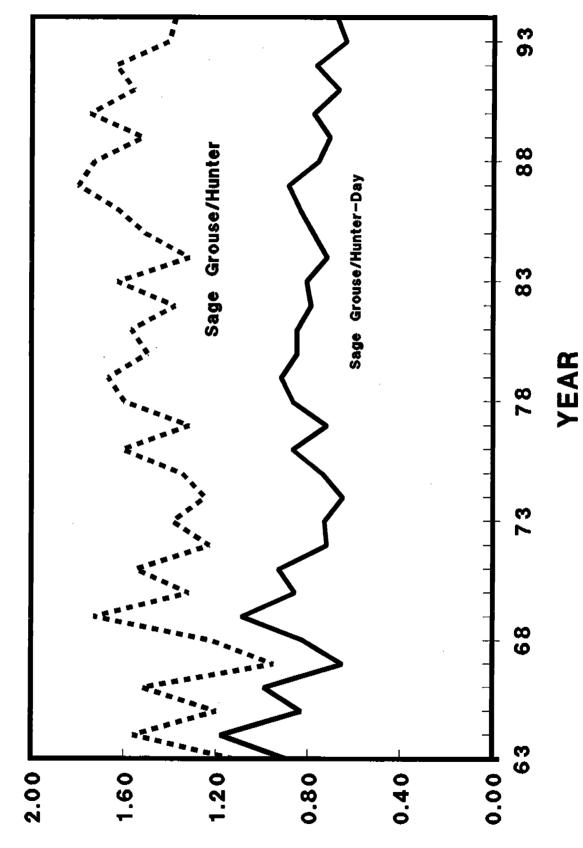
Above average precipitation in April and temperatures during the nesting season were conducive to good sage grouse reproductive efforts in 1994.







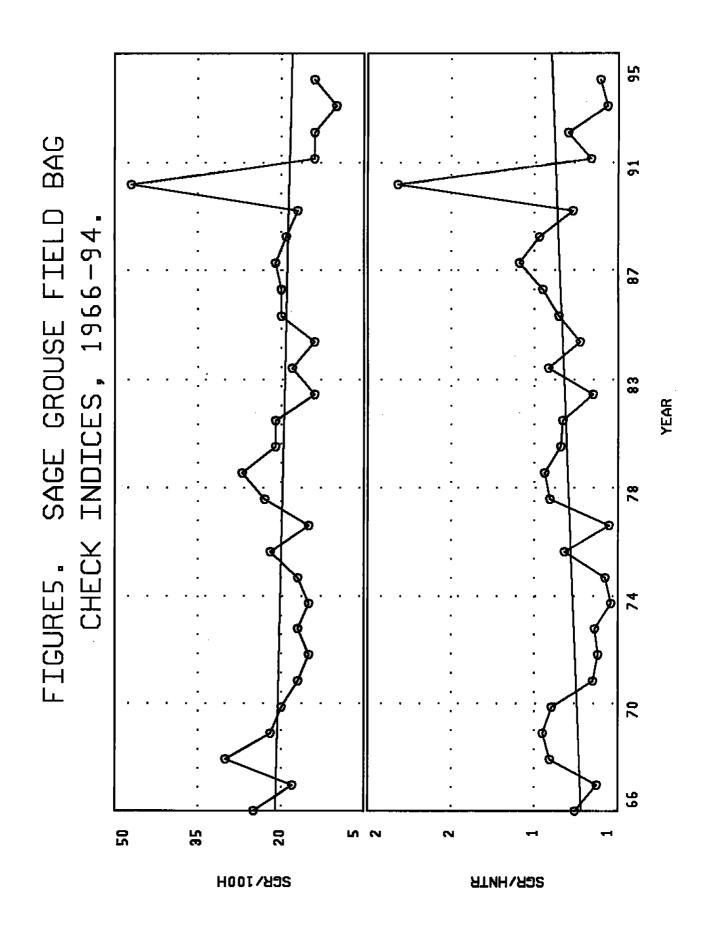
Statewide trends of sage grouse harvest statistics, 1963-94. Figure 3.



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

Figure 4.

SAGE GROUSE PER HUNTER AND PER DAY



# 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>1994</u>	<u>Percent</u> 1993	<u>change from</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>	Percent c 1993	hange from Average
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:

		Percent o	change from
	<u> 1994</u>	1993	Average
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.

Northern Region  Box Elder  No. Strutting Grounds Counted  Total Male Grouse Counted  County Average (all strutting grounds)  % Change From Previous Year - Comparable Grounds  8	84 1985	1986	1987	1988	1080	1000	1001	1992	1993	1604
rounds Counted use Counted (all strutting grounds)				2	1001	1338	177	1		1774
ting Grounds Counted de Grouse Counted tverage (all strutting grounds) e From Previous Vear - Comparable Grounds								i		
parable Grounds										
parable Grounds	32	10	18	15	11	70	16	13	œ	14
parable Grounds	6 309	288	314	419	343	327	1	307	250	220
	7 10	53	18	87	31	23	21	77	17	16.00
		17	-12	33	έż	-17	-11	00	-1	-23
Cache										
No. Strutting Grounds Counted	0	7	-	1	7	ı	1	40	}	7
Total Male Grouse Counted 5	1	<b>∞</b>	•	6	15	ı	1	27	1	· 5
County Average (all strutting grounds) 5	1	4	0	6	∞	ŀ	ı	6	;	5.00
% Change From Previous Year - Comparable Grounds	;	ł	1	100	9	}	;	t	ŀ	
Morgan										
No. Strutting Grounds Counted	€0	60	7	7	ŀ	ł	;	1	I	I
Total Male Grouse Counted	33	22	56	13	ı	;	.1	36	1	ı
County Average (all strutting grounds)	П	1	13	19	1	1	ı	39	ł	ł
% Change From Previous Year - Comparable Grounds -91	1,000	-33	18	-21	ł	ı	i	ł	;	l
Rich										
No. Strutting Grounds Counted 6	18	11	12	ĸ	9	19	22	14	14	53
Total Male Grouse Counted 103	3 399	296	431	319	281	863	710	372	314	325
County Average (all strutting grounds) 17	7 22	27	36	53	41	41	32	27	19	11.00
% Change From Previous Year - Comparable Grounds -2		-28	53	-10	w	Ľ.	-18	-38	-51	9
Summit										
No. Strutting Grounds Counted	•	7	-	10	ı	1	ł	m	ļ	
Total Male Grouse Counted	1	23	25	11	ı	1	ł	•	ı	15
County Average (all strutting grounds) 16	1	63	4	7	;	1	ı	i	ı	15.00
% Change From Previous Year - Comparable Grounds 78	1	i	-65	-32	ı	ŀ	1	ł	1	-29
REGIONAL TOTALS					:					
No. Strutting Grounds Counted 17	53	33	9	33	19	39	38	34	22	46
Total Male Grouse Counted 342	2 741	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		တ္	16	11	ĸ	ı	-15	-15	-29	-33

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Region and					Year						
County	1984	1985	1986	1987	1988	1989	1990	1661	1992	1993	1994
Central Region											
Juah											
No. Strutting Grounds Counted	1	ł	t	-	1	1	1		ť	ю	_
Total Male Grouse Counted	:	ì	:	6	14	11	4	15	w	•	-
County Average (all strutting grounds)	1	t	ŀ	6	14	11	4	15	71	0	1.00
% Change From Previous Year - Comparable Grounds	ı	ı	ı	0	26	-21	Ş	į	-100	-100	100
Sanpete											
No. Strutting Grounds Counted	73	7	7	7	7	7	7	7	ŀ	7	1
Total Male Grouse Counted	0	0	•	0	•	0	0	•	;	0	ı
County Average (all strutting grounds)	;	ŀ	;	ţ	•	0	•	ı	;	•	ŀ
% Change From Previous Year - Comparable Grounds	-100	0	•	•	•	0	0	1	ı	0	ı
Tooele		<b>1</b>   									
No. Strutting Grounds Counted	9	9	9	ĸ	w	Ŋ	ĸ	w	4	4	4
Total Male Grouse Counted	23	55	87	96	8	77	91	83	100	11	12
County Average (all strutting grounds)	4	ō	16	19	81	. 15	18	91	25	ĸ	3.00
% Change From Previous Year - Comparable Grounds	-18	139	149	17	ιċ	-17	20	-15	32	-87	94
Wasatch											
No. Strutting Grounds Counted	7	7	7	7	7	7	7	7	7	7	7
Total Male Grouse Counted	57	63	117	54	25	4	51	11	49	45	7,
County Average (all strutting grounds)	29	32	59	27	56	77	56	9	24	37	12.00
% Change From Previous Year - Comparable Grounds	9	11	205	-54	4	-19	18	-75	300	<b>6</b> -	-12
REGIONAL TOTALS											
No. Strutting Grounds Counted	91	10	10	7	10	10	10	10	6	11	۲
Total Male Grouse Counted	<b>8</b>	118	199	150	155	132	146	108	154	99	37
Average Grouse Per Ground (all strutting grounds)	<b>&gt;</b>	12	18	11	16	13	15	. 12	17	14	5.33
% Change From Previous Year - Comparable Grounds	-11	48	170	-25	-3	-16	11	-45	77	-65	91

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Keylon and					2						
County	1984	1985	9861	1987	1988	1989	1990	1991	1992	1993	1994
Southern Region											
Beaver											
No. Strutting Grounds Counted	4	ю	4	4	63	w	7	1	60	-	च
Total Male Grouse Counted	84	\$	55	52	46	11	33	1	89	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	1	22	Ş.	١	-7	:	1	-54	47	1
Garfield											
No. Strutting Grounds Counted	7	1	<b>\$</b>	6	90	œ	10	1	6	9	11
Total Male Grouse Counted	133	;	152	175	251	126	244	ı	211	77	145
County Average (all strutting grounds)	61	;	19	19	31	16	24	35	23	11	13.00
% Change From Previous Year - Comparable Grounds	46	ŀ	13	•	54	-50	ŀ	ł	-23	-50	78
Iron							i				
No. Strutting Grounds Counted	1	w	9	4	9	9	æ	1	7	-	т
Total Male Grouse Counted	1	81	131	49	111	127	50	ŀ	43	41	39
County Average (all strutting grounds)	1	16	22	16	19	21	20	52	21	41	13.00
% Change From Previous Year - Comparable Grounds	1	ı	49	-11	-13	71	ì	ı	-36	74	0
Kane											
No. Strutting Grounds Counted	:	1	1	;	!	7	ı	1	60	7	7
Total Male Grouse Counted	:	1	;	ı	:	41	ı	t	30	11	1
County Average (all strutting grounds)	;	t	1	1	!	21	1	14	9	5.5	1.00
% Change From Previous Year - Comparable Grounds	•	1	1	1	1	1	1	ı	-28	-61	0
Millard											
No. Strutting Grounds Counted	1	-	1	ı	!	ŀ	ŀ	ı	ı	ì	ł
Total Male Grouse Counted	4	7	ю	ı	;	!	;	ŀ	1	ŀ	;
County Average (all strutting grounds)	4	7	8	ŧ	;	1	ı	1	ı	1	1
% Change From Previous Year - Comparable Grounds	1	ŀ	33	ł	1	i	ł	1	ı	ŀ	1
Sevier											
No. Strutting Grounds Counted	ı	1	7	ı	7	ŀ	ł	1	ю	1	1
Total Male Grouse Counted	ı	1	0	ı	•	ŀ	;	20	22	1	11
County Average (all strutting grounds)	1	ı	1	ł	ı	ı	ı	20	7	1	11.00
% Change From Previous Year - Comparable Grounds	1	ı	1	ı	ŀ	ļ	ì	:	I	ł	1,100
Wayne											
No. Strutting Grounds Counted	(12)*	1	13	13	13	13	10	16	17	I	90
Total Male Grouse Counted	(68)	ŀ	120	182	326	268	259	367	586	ŀ	163
County Average (all strutting grounds)	9	:	6	14	25	21	56	23	22	1	20.00
% Change From Previous Year - Comparable Grounds	ł	ļ	-15	97	-18	ı	ı	;	ı	1	œ
No. Strutting Grounds Counted	12	21	34	30	32	34	25	17	32	10	53
Total Male Grouse Counted	185	391	461	473	734	633	969	387	663	178	416
Average Grouse Per Ground (all strutting grounds)	15	19	14	16	23	19	24	31	17	18	12.00
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Region and					Year						
County	1984	1985	9861	1987	1988	1989	1990	1991	1992	1993	1994
Northeastern Region											
Daggett											
No. Strutting Grounds Counted	ŀ	W	9	9	9	7	9	!	9	3	6
Total Male Grouse Counted	ì	25	77	56	46	25	42	1	17	14	11
County Average (all strutting grounds)	1	S		4	<b>\$</b>	4	7	:	ဗ	4.7	3.70
% Change From Previous Year - Comparable Grounds	ł	-43	;	16	77	-24	24	:	:	r.	-21
Duchesne									v		
No. Strutting Grounds Counted	1	13	14	14	1	11	15	1	16	15	6
Total Male Grouse Counted	ŀ	121	1117	104	6	92	173	ŀ	129	87	37
County Average (all strutting grounds)	ı	6	<b>∞</b>	r.	1	7	17	ŀ	œ	5.8	4.10
% Change From Previous Year - Comparable Grounds	1	-29	ı	-12	-83	167	22	I	ŀ	-10	-51
Grand											
No. Strutting Grounds Counted	ı	ı	1	ł	7	ł	1	1	ŀ	ļ	-
Total Male Grouse Counted	ı	ı	ı	ŀ	ĸ	ı	1	ł	1	1	0
County Average (all strutting grounds)	ı	ŀ	ı	ł	3	ı	}	}	ŀ	ı	ŀ
% Change From Previous Year - Comparable Grounds	ı	1	ı	ı	0	ı	}	;	ı	1	1
Uintah											
No. Strutting Grounds Counted	;	12	14	14	22	20	20	ı	77	22	18
Total Male Grouse Counted	;	190	216	159	468	700	321	ŧ	287	173	208
County Average (all strutting grounds)	;	16	15	11	21	113	16	ł	13	6.7	11.60
% Change From Previous Year - Comparable Grounds	;	-21	1	-26	99	-45	0	ł	1	-34	4
Wasatch											
No. Strutting Grounds Counted	ŀ	ì	;	ı	7	7	1	t	ł	1	7
Total Male Grouse Counted	ì	ŀ	ŀ	1	77	77	1	ı	1	ı	90
County Average (all strutting grounds)	ŀ	ı	1	ı	11	11	1	ŀ	ı	1	4.00
% Change From Previous Year - Comparable Grounds	ŧ	ı	:	ı	120	0	ı	ı	1	ı	-11
REGIONAL TOTALS											
No. Strutting Grounds Counted	1	30	34	34	37	40	41	1	44	9	33
Total Male Grouse Counted	į	336	339	586	550	389	536	i	433	274	797
Average Grouse Per Ground (all strutting grounds)	ı	11	10	٩	15	10	13	ı	ĸ	6.1	5.85
% Change From Previous Year - Comparable Grounds	1	-26	:	-18	37	-37	6	ı	1	-27	-18

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Region and					Year						
County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Southeastern Region											
Carbon	į										
No. Strutting Grounds Counted		ł	7	7	10	10	6	œ	œ	6	7
Total Male Grouse Counted	ı	ŀ	32	55	196	181	146	103	\$	14	3
County Average (all strutting grounds)	ı	;	91	90	20	18	16	13	w	4.7	0.45
% Change From Previous Year - Comparable Grounds	1	;	;	-27	142	œ	-38	-11	<del>-</del> 61	<del>-</del> 46	<i>-</i> 79
Emery											
No. Strutting Grounds Counted	1	1	_	7	7	7	7	7	7	6	7
Total Male Grouse Counted	!	17	11	10	12	28	'n	7	7	6	Ŋ
County Average (all strutting grounds)	:	12	11	S	9	14	æ	4	4	1	2.50
% Change From Previous Year - Comparable Grounds	1	1	œ	-18	70	167	-82	40	0	-57	<i>L</i> 9
San Juan											
No. Strutting Grounds Counted	4	4	4	4	4	4	4	4	4	4	4
Total Male Grouse Counted	57	36	53	35	32	39	4	32	4	4	41
County Average (all strutting grounds)	14	10	7	9	œ	10	10	<b>\$</b>	101	11	10.25
% Change From Previous Year - Comparable Grounds	-14	-29	-76	28	6-	22	S	-22	25	10	1-
REGIONAL TOTALS											
No. Strutting Grounds Counted	4	4	7	13	91	16	15	9	9	7	9
Total Male Grouse Counted	57	39	72	100	240	248	192	47	55	90	53
Average Grouse Per Ground (all strutting grounds)	14	10	91	90	15	16	13	<b>∞</b>	6	7	8.83
% Change From Previous Year - Comparable Grounds	-14	-29	-26	0	74	3	-35	2	-12	-31	9-
STATE TOTALS											
No. Strutting Grounds Counted	43	76	118	126	137	119	130	11	125	<del>8</del>	121
Total Male Grouse Counted	664	1,234	1,708	1,818	2,734	2,041	2,660	1,252	2,050	1,122	1,339
Average Grouse Per Ground (all strutting grounds)	15	13	14	14	20	17	20	18	16	17	11.07
% Change From Previous Year - Comparable Grounds	-18	-1	5	2	51	14	-2	-11	6	-32	39

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Horosok   Mean & Adults Vanag   Young   Total   Total   Young   Yokhele   Horos Walk   Total   Total   Young   Yokhele   Horos Walk   Total   Total   Young   Young   Young   Total   Young   Total   Young   Total   Young   Total   Young   Young   Total   Young   Young   Total   Young   Young   Total   Young   Young   Young   Total   Young			Distinct			Mixed Young											
County	Region and		Broods			& Adu		dults w/o	Total	Total	Young/	Vehicle		Hours o	of Effor	-	Birds/
Programs of the programs of th	County	#	Adults	Young		Adults	Young	Young	Adults	Young	100 Adults	Miles	Vehicle	Horse	Walk		100 Hr
Free Control of the C	Northern Region																
NALTOTALS S S S S S S S S S S S S S S S S S S	Box Elder	7	7	10	5.00	ю	22	53	34	32	94	28	∞	<b>∞</b>	_	16	413
NALTOTALS \$ 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Cache	i	ı	;	ı	:	ı	!	ı	ı	•	ł	ı	1	1	1	ı
NALTOTALS S	Davis	1	ŀ	ł	1	1	1	i	:	i	:	1	;	1	1	1	ı
Colored Science   Colored Sc	Morgan	1	1	:	ı	1	ı	;	;	;	ŀ	1	;	ı	I	1	1
NALTOTALS 8 8 36 450 3 22 29 40 58 145 58 8 8 1 16	Rich	9	9	97	4.33	0	0	0	9	97	433	ı	1	1	:	1	ı
Newploon   State   S	Summit	ı	ı	1	ı	:	ı	;	ı	ï	;	;	ŀ	ł	ı	1	1
Region  Region  Region  Region  Region  Region  NALTOTALS  S	Weber	ı	1	1	1	ł	ı	1	ı	ŀ	ı	ŀ	ı	ŀ	ı	:	ı
Region  Region  Region  Region  RAL TOTALS  Solve and RAL Solve and RAL Solve an	REGIONAL TOTALS	∞	œ	36	4.50		22	29	40	58	145	28	<b>oc</b>	<b>∞</b>	-	16	613
the control of the co	Central Region																
State   Stat	Juah	ı	1	ŀ	!	;	ı	ł	I	ı	:	1	;	1	1	1	1
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the control of the co	Southern Region																
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that TOTALS	Kane	;	1	ı	i	1	ŀ	;	;	ı	ı	;	ı	ŧ	1	1	1
HALTOTALS	Millard	ı	ł	1	1	ı	ı	;	:	ı	ı	;	ı	ı	1	1	:
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ne         2         2         12         6.00         0         0         0         2         12         600         -         -         1         2         2.00         0         20         40         105         263         135         10         10         4         23           NAL TOTALS         22         13         15         16         10         40         22         117         532         135         10         10         10           stern Region           -         -         -         -         -         -         -         -         -         10	Northeastern Region																
NAL TOTALS 12 10 105 5.25 0 0 20 40 105 263 135 10 10 4 23  NAL TOTALS 12 2. 117 5.32 0 0 0 20 40 105 263 135 10 10 4 23  NAL TOTALS 12 2. 117 5.32 0 0 0 20 40 105 263 135 10 10 4 205 13  NAL TOTALS 1 1 2 2.00 0 0 3 4 205 244 413 36 11 4 51	Daggett	7	7	17	6.00	0	0	0	7	12	009	ŧ	1	;	1	1	1,400
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NAL TOTALS 22 22 117 5.32 0 0 0 - 22 117 532 135 10 - 10 10 stern Region.	Uintah	20	20	105	5.25	0	0	20	40	105	263	135	10	10	4	23	636
nn  NAL TOTALS  36  36  37  40  51  51  51  51  52  53  54  54  54  54  54  54  54  54  54	REGIONAL TOTALS	22	22	117	5.32	0	0	ı	22	117	537	135	10	1	1	10	1,463
MAL TOTALS 36 36 175 4.86 8 30 40 84 205 244 413 36 11 4 51	Southeastern Region																
un         -         -         -         -         -         -         -         2         50         30         2         -         2         5           NAL TOTALS         1         1         1         2         2.00         0         0         3         4         2         50         65         5         -         1         3           TOTALS         36         36         175         4.86         8         30         40         84         205         244         413         36         11         4         51	Carbon	ł	ı	;	ł	!	1	ī	ŀ	ŀ	ı	ı	ı	1	1	1	1
1 1 2 2.00 0 0 3 4 2 50 30 2 - 1 3  an	Emery	1.	1	;	;	1	ı	ı	ŀ	!	1	35	33	;	7	ĸ	ı
1     1     2     2.00     0     0     3     4     2     50     65     5     -     3     8       36     36     175     4.86     8     30     40     84     205     244     413     36     11     4     51	Grand	1	-	7	2.00	0	0	60	4	7	22	30	7	ı	_	ю	240
1         1         2         2.00         0         0         3         4         2         50         65         5         -         3         8           36         36         175         4.86         8         30         40         84         205         244         413         36         11         4         51	San Juan	1	:	1	:	!	1	1	!	:	ı	ŀ	ı	ł	I	1	1
36 36 175 4.86 8 30 40 84 205 244 413 36 11 4 51	REGIONAL TOTALS	-	-	2	2.00	0	•	3	4	2	20	65	S	1	3	8	80
	STATE TOTALS	36	36	175	4.86	8	30	40	84	202	244	413	36	11	4	51	572

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

						1001						Average
County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1984-93
Northern Region												
Box Elder	75	597	178	94	108	167	267	161	143	35	94	
Cache	ı	ł	1	;	ı	ı	200	ł	ŀ	;	ł	
Davis	•	1	;	;	I	!	;	ŀ	ł	:	1	
Morgan	ł	300	;	200	1	117	1	1	ŀ	ì	;	
Rich	164	96	91	116	153	ı	100	29	125	217	433	
Summit	ı	400	167	20	ı	ł	i	1	ï	ŀ	ı	
Weber	1	ı	1	ı	I	;	;	ı	1	ŀ	ı	
REGIONAL TOTALS	126	130	103	115	135	156	235	83	132	133	145	136
Central Region												
Juah	ı	ı	1	ŀ	380	250	196	ŀ	450	450	1	
Salt Lake	1	t	1	1	ł	ı	ı	;	;	ł	ı	
Sanpete	1	I	!	1	ł	;	i	ŀ	ŀ	;	1	
Tooele	100	125	106	207	100	194	110	287	300	300	156	
Utah	1	1	}	1	150	1	:	1,200	ŀ	;	ı	
Wasatch	175	43	200	209	300	ı	199	. !	129	350	. 1	
REGIONAL TOTALS	155	64	120	200	135	171	166	344	148	357	156	187
Southern Region					-							
Beaver	400	£	ı	35	1	J	;	ŀ	ı	}	ı	
Garfield	140	229	125	144	144	<del>6</del>	91	129	;	}	1	
Iron	83	1	250	198	146	155	264	100	ŀ	;	1	
Kane	1	ŀ	1	400	;	:	ı	ï	ŀ	:	1	
Millard	ı	1	ı	ŀ	ŀ	:	1	ı	ŀ	1	;	
Piute	1	ł	1	38	;	•	ı	ı	ı	:	;	
Sevier	1	;	1	1	ŀ	525	I	200	i	;	ŀ	
Washington	ł	i	1	1	ŀ	ŀ	ı	1	ı	;	;	
Wayne	411	152	44	455	98	ł	168	478	43	i	1	
REGIONAL TOTALS	92	137	105	216	127	135	154	128	€		1	126
Northeastern Region												
Daggett	250	170	100	124	181	433	533	020	190	1	009	
Duchesne	145	297	180	137	288	217	009	160	ı	260	ŀ	
Uintah	29	261	127	192	164	148	352	114	278	200	263	
REGIONAL TOTALS	126	255	131	159	172	155	374	161	246	380	532	216
Southeastern Region			-							,		
Carbon	238	400	133	150	;	26	33	200	33	200	ı	
Emery	ı	:	I	ì	!	ı	1	1	1	:	;	
Grand	ı	:	ı	;	;	ı	1	1	31	:	50	
San Juan	200	88	09	:	200	20	20	200	20	:	ł	
REGIONAL TOTALS	267	122	81	150	200	55	88	160	34	200	50	136
STATE TOTALS	125	147	114	160	145	147	183	122	50	209	244	145

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

Region and

County	1											
Comme	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1983-92
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	;	1	ŀ	:	ŀ	:	5.00	1	!	:	;	
Davis	;	1	;	ŀ	ı	1	;	ı	ı	:	1	
Morgan	ŀ	3.00	1	5.00	:	7.00	ŀ	ı	1	:	;	
Rich	3.92	3.96	2.08	5.00	4.27	1	2.00	3.00	4.54	2.40	4.33	
Summit	ı	1	4.00	5.00	4.00	I	ì	ŀ	!	ŀ	ı	
Weber	1	;	ŀ	ŀ	ł	ı	1	;	i	ł	1	
REGIONAL TOTALS	4.36	4.39	4.74	4.82	4.17	4.30	3.67	3.36	4.36	3.09	4.50	4.13
Central Region												
Juah	1	;	ŀ	;	6.33	4.00	4.75	1	ł	1	ı	
Salt Lake	!	1	ı	ł	ı	ı	ı	ł	ŀ	ŀ	!	
Sanpete	;	1	;	1	1	ł	ı	ł	ŀ	;	1	
Tooele	3.33	3.29	3.25	3.60	3.50	3.00	3.13	3.83	3.00	3.00	4.00	
Utah	;	;	1	1	1	ł	ı	12.00	1	;	į	
Wasatch	4.90	2.00	5.00	6.94	6.00	ı	6.67	ł	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	4.00	4.17
Southern Region												
Beaver	4.00	2.00	ı	5.00	:	1	1	ı	:	;	ì	
Garfield	4.00	4.50	2.00	4.00	4.60	:	4.00	90.9	ì	;	ı	
Iron	3.50	1	4.00	4.64	3.67	4.66	9.00	5.00	ŀ	;	ı	
Kane	ı	;	ŀ	4.00	;	i	1	ŀ	ı	:	1	
Millard	1	;	:	:	ŧ	;	:	1	ı	;	ı	
Piute	ı	;	;	:	;	i	:	ı	1	:	ı	
Sevier	ı	;	1	;	7.00	1	;	ı	1	;	ł	
Washington	1.	;	ı	ı	ı	t	;	ı	ı	:	;	
Wayne	5.00	3.57	6.00	6.14	6.29	1	4.30	5.00	3.82	:	ı	
REGIONAL TOTALS	4.27	4.00	4.29	4.89	4.89	4.66	4.87	5.60	3.82	:	1	4.58
Northeastern Region								-				
Daggett	4.63	3.00	1.00	4.00	4.45	4.30	00.9	2.00	0.00	:	9.00	
Duchesne	3.77	4.73	4.29	3.54	3.60	2.17	00.9	4.00	ı	2.00	ŀ	
Vintah	3.00	5.00	5.44	5.55	4.05	5.15	5.60	2.00	4.75	2.00	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	4.42
Southeastern Region												
Carbon	4.33	4.00	4.00	1.50	ı	4.50	ı	9.00	2.67	4.00	ı	
Emery	1	ı	:	;	1	ı	;	:	:	:	ı	
Grand	1	ı	ı	ŀ	ı	ŀ	;	1	4.00	;	2.00	
San Juan	5.00	3.50	3.00	ŀ	1	2.00	;	2.00	2.00		ŀ	
REGIONAL TOTALS	4.50	3.67	3,40	1.50	1	3.67		4.00	2.80	4.00	2.00	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	4.27

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

6 1987 1988 6 1987 1988 6 694 6 0 3 7 0 3 7 0 3 7 0 3 7 0 3 7 0 2 7 1 2 7 1 2 7 1 2 7 1 2 7 2 7 2 7 2 7 3 7 3 7 3 7 4 7 6 118 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	304 475		1990	1991 1992	1993	1994	1984-93
ter Till Segion  The Region    The Region    The Region    The Region    The Region    The Segion     304							
ter 195 380 304 475 694  an	304	,					
11			303	102 146	118	413	
Herejon	:				;	ŀ	
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t 21 480 287 287 364 287    21 480 300    21 480 300    15 480 300    15 480 300    150	1			1	ł	ŀ	
NAL TOTALS	282		41 3		68	ŀ	
NAL TOTALS   110   186   198   251   271   186   198   251   271   186   198   251   271   186   198   251   271   186   198   251   271   186   198   251   271   186   198   252   272   242   746   742   150   272	21				ı	ı	
Region	;				;	ı	
Region	198		78 1	155 197	103	613	191
ke							
ke	ł		323	- 367	367	1	
th 122 267 92 792 150  In Region 167 429	i			1	1	ı	
th the first segment of the first segment of the first segment Region    105	ı		ł	1	ŀ	ı	
h 122 267 92 792 27  In Region 167 429 - 575 - 18  In Region 167 429 - 575 - 18  In Region 167 429 - 575 452  In In In In In In In In In In In In In I	746				133	263	
h h h h h h h h h h h h h h h h h h h	1			_	1	I	
In Region         118         244         310         776         118           In Region         167         429         -         575         -           d         257         295         225         275         452           d         260         -         466         1,331         1,517           l         -         -         -         -         -           l         -         -         -         -         -           l         -         -         -         -         -           l         -         -         -         -         -           nAL         100         732         542         -           l         -         -         -         -         -           l         -         -         -         -         -           l         -         -         -         -         -           l         -         -         -         -         -           l         -         -         -         -         -           l         -         -         -         -         - <t< td=""><td>92</td><td></td><td></td><td></td><td>45</td><td>ı</td><td></td></t<>	92				45	ı	
nn Region  167 429 575  d 257 295 225 275 452  d 260 466 1,331 1,517  316  gton	310 776		200 3	338 248	100	263	261
d 257 295 225 275 452  d 257 295 225 275 452  260 466 1,331 1,517  500 500 610  gron 316 417  gron 417  satern Region 417  NAL TOTALS 364 490 474 509 589  stern Region 200 28							
d         257         295         225         275         452           260         -         466         1,331         1,517           -         -         -         -         -           -         -         -         -         -           -         -         -         -         -           -         -         -         -         -           -         -         -         -         -           -         -         -         -         -           -         -         -         -         -           -         -         -         -         -           -         -         -         -         -           -         -         -         -         -         -           -         -         -         -         -         -         -         -           gton         - </td <td> 575</td> <td></td> <td></td> <td></td> <td>i</td> <td>ŀ</td> <td></td>	575				i	ŀ	
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t 308 284 114 492 474  ne 454 325 165 382 141  314 888 813 642 830  NAL TOTALS 364 490 474 509 589  stern Region 415 - 200 28 -  n 57 231 400 -  NAL TOTALS 194 235 271 28 -  NAL TOTALS 194 24 -  NAL TOTALS 194 24 -  NAL TOTALS 194 24 -  NAL TOTALS							
ne         454         325         165         382         141           314         888         813         642         830           NAL TOTALS         364         490         474         509         589           stern Region         415         -         200         28         -           nature         415         -         200         28         -           nature         57         231         400         -         -           nature         57         231         400         -         -           nature         57         231         400         -         -           nature         53         271         28         -	114 492			1,000 580	;	1,400	
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NAL TOTALS 364 490 474 509 589  stern Region 415 - 200 28	813 642			500 523	3,000	929	
nstern Region 415 – 200 28 – .	474 509			356 539	1,600	1,463	619
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57     231     400         194     235     271     28	ı				1	240	
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	271 28	129		100 239	28	8	158
291 415 347	291 415				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*		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		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 - <b></b>	1,248	1,037	0.83 <del>-</del>	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**	. <b></b> 0	O	0 <b></b>	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

<sup>\*</sup> Total hunter-trips from questionnare 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				······································	Year			
County	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region						<del>_</del>		
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
Central Region		0.00	0.03		0.00	0.00	0.55	0.54
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	0.35*	0.96*	0.27*	0.56*
Wasatch	0.58	0.48*	1.50*	0.55*		0.70*		
REGIONAL TOTALS	0.70	0.36	0.42	0.52	0.47*		0.46* 0.59	0.80*
Southern Region	0.70	0.36	0.42	0.52	0.53	0.68	0.59	1.16
Beaver	1.08	0.76	0.40	0.30	0 00	0 00	1 00	0.42
Garfield			0.42	0.38	0.29	0.83	1.00	0.47
	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.
Northeastern Regi								
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
Southeastern Regi								- 1
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	

<sup>\*</sup>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	1000		1000	1000	Year	1000	1000	1004
County	1987	<u> 1988</u>	1989	1990	1991	1992	1993	1994
Northern Region	16 63	16 47	00 00	17 01	10 34	15 50	11.22	20.10
Box Elder	16.63	16.47	22.39	17.21	12.34	15.50		
Cache	5.02*		2.72*	5.22	2.64*	5.12*	2.45*	
Davis	0.00*		2.72*	0.26*	0.28*	1.75*	0.20*	
Morgan	0.96*		1.06*	0.78*	1.80*	1.75*	0.00*	
Rich	8.12	12.04	11.65*	14.99	24.55	15.79	18.57	13.15
Summit	1.16*		0.76*	1.30*	2.22*	1.61*	4.08*	
Weber _	0.96*		2.12*	2.48*	2.91*	1.75*	2.24*	
REGIONAL TOTALS	32.88	39.09	43.42	42.24	46.74	43.27	<u> 38.78</u>	39.70
<u>Central Region</u>								
Juab	0.58*	0.79*	0.30*	0.39*	0.97*	0.15*	0.41*	
Salt Lake	0.00*		0.45*	0.00*	0.97*	0.00*	0.20*	
Sanpete	3.48*		2.57*	1.17*	0.97*	0.73*	0.61*	
Tooele	4.25*		2.27	1.96*	0.97*	1.90*	5.92*	
Utah	4.64	2.15	3.18	2.09	1.66*	7.75*	0.61*	
Wasatch	1.35	1.81*	0.91	0.78*	1.25*	1.02*	1.22*	
REGIONAL TOTALS	4.31	7.95	9.68*	6.39	6.80	11.55	8.98	14.64
Southern Region								
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
Northeastern Red	gion							
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
Southeastern Red	gion							
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	s 0.00	1.47	0.00	0.00	0.00	0.00	4.49	0.00
Closed areas		(14.51)		(13.81)	(21.36)			
	(,	, /	, ,	(3000)	()	(20020)	,,,	(====,
<del> </del>	<del></del>		·····				<del></del>	<del></del>
STATE TOTALS	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

<sup>\*</sup>Closed season

<sup>( )</sup>Percent of total harvest in closed areas.

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

Region and   1987   1988   1989   1990   1991   1992   Northern Region   Box Elder   14.11   15.99   16.81   14.71   15.16   12.39   Cache   11.87*   7.65*   4.28*   7.05   5.61*   7.21*   Davis   0.34*   1.63*   2.66*   0.82*   1.03*   2.25*   Morgan   0.68*   2.83*   1.50*   1.84*   1.31*   1.91*   Rich   8.26   11.26   13.17   13.89   16.46   14.75   Summit   1.89*   2.40*   0.75*   1.33*   2.25*   0.90*   Weber   1.54*   3.09*   5.57   4.49*   5.80*   2.48*   REGIONAL TOTALS   38.72   44.88   44.75   44.13   47.62   41.89   Central Region   Juab   0.86*   0.66*   0.96*   1.53*   1.22*   0.68*   Salt Lake   0.17*   0.17*   1.07*   0.51*   0.94*   0.34*   Sapete   4.99*   4.12*   3.00*   0.92*   1.50*   2.59*   Utah   6.71   3.86   6.85   4.19   1.31*   6.19*   Utah   6.71   3.86   6.85   4.19   1.31*   6.19*   Englonal Region   Beaver   4.47   1.80   1.28   1.33   0.65   2.03   Carfield   2.75   2.49*   5.35   7.56   3.09   2.82   Iron   2.40   1.97   2.78   1.94   1.40   4.39   Millard   0.34*   0.00*   1.18*   0.72*   1.40*   0.56*   Piute   2.06   1.63   1.61   1.02   1.87   0.79   Northeastern Region   Daggett   2.06   5.67   3.53   4.90   5.33   4.62   4.90*   4.39   4.90*   4.39   4.80   6.64   5.86   REGIONAL TOTALS   17.89   18.99   20.56   24.41   20.86   22.07   Northeastern Region   Daggett   2.06   5.67   3.53   4.90   5.33   4.62   4.90*   4.39   4.80   6.64   5.86   REGIONAL TOTALS   17.89   18.99   20.56   24.41   20.86   22.07   Northeastern Region   Daggett   2.06   5.67   3.53   4.90   5.33   4.62   4.90*   4.39   4.80   6.64   5.86   REGIONAL TOTALS   17.89   18.99   20.56   24.41   20.86   22.07   Northeastern Region   Daggett   2.06   5.67   3.53   4.90   5.33   4.62   4.90*   4.39   4.80   6.64   5.86   REGIONAL TOTALS   22.54   15.21   12.85   17.98   19.08   19.37   Southeastern Region   Carbon   1.89   2.14   2.68   2.45   2.43   1.58   Emery   0.17   1.11   2.14   0.51*   0.75*   1.13*   Grand   0.34   0.00   0.21   0.92   0.00   0.68   San Juan   0.17   0.17   0.54*   0.00*   0.6				Vone			
Northern Region   Box Elder		1000	1000	Year	1000	1993	1994
Box Elder		1989	1990	1331	1992	1993	1994
Cache		16.01	14 71	15 16	10 00	0 10	12 40
Davis						9.19	17.40
Morgan						7.35*	4.39*
Rich Summit         8.26         11.26         13.17         13.89         16.46         14.75           Summit         1.89*         2.40*         0.75*         1.33*         2.25*         0.90*           Weber         1.54*         3.09*         5.57         4.49*         5.80*         2.48*           REGIONAL TOTALS         38.72         44.88         44.75         44.13         47.62         41.89           Central Region         Juab         0.86*         0.68*         0.96*         1.53*         1.22*         0.68*           Salt Lake         0.17*         0.17*         1.07*         0.51*         0.94*         0.34*           Sanpete         4.99*         4.12*         3.00*         0.92*         1.50*         2.59*           Tooele         3.44*         5.07         3.96         1.33*         1.87*         2.25*           Utah         6.71         3.86         6.85         4.19         1.31*         6.19*           Wasatch         2.06         2.83*         0.43*         1.12*         1.78*         1.13*           REGIONAL TOTALS         18.24         16.76         16.27         9.60         8.61         13.18		_	_			1.71*	1.01*
Summit   1.89* 2.40*   0.75*   1.33*   2.25*   0.90*   Weber   1.54*   3.09*   5.57   4.49*   5.80*   2.48*   2.48*   44.75   44.13   47.62   41.89*   Central Region   Juab   0.86*   0.68*   0.96*   1.53*   1.22*   0.68*   Salt Lake   0.17*   0.17*   1.07*   0.51*   0.94*   0.34*   0.34*   0.90*   0.92*   1.50*   2.59*   Tooele   3.44*   5.07   3.96   1.33*   1.87*   2.25*   Utah   6.71   3.86   6.85   4.19   1.31*   6.19*   Wasatch   2.06   2.83*   0.43*   1.12*   1.78*   1.13*   REGIONAL TOTALS   18.24   16.76   16.27   9.60   8.61   13.18   Southern Region   Beaver   4.47   1.80   1.28   1.33   0.65   2.03   Garfield   2.75   2.49   5.35   7.56   3.09   2.82   1ron   2.40   1.97   2.78   1.94   1.40   4.39   Kane   0.00   0.08   0.43   1.33   0.28   0.79   Millard   0.34*   0.00*   1.18*   0.72*   1.40*   0.56*   Piute   2.06   1.63   1.61   1.02   1.87   0.79   Sevier   2.06   5.67   3.53   4.90   5.33   4.62   Washington   0.34*   0.42*   0.00*   0.82*   0.19*   0.23*   Wayne   2.44   4.90   4.39   4.80   5.64   5.86   EEGIONAL TOTALS   17.89   18.99   20.56   24.41   20.86   22.07   Northeastern Region   Daggett   2.06   1.28   1.61*   4.09   1.96   1.69   0.23*   Northeastern Region   Carbon   1.89   2.14   2.68   2.45   2.43   1.58   Emery   0.17   1.11   2.14   0.51*   0.75*   1.13*   Grand   0.34*   0.00   0.21   0.92   0.00   0.68   San Juan   0.17   0.17   0.54*   0.00*   0.65*   0.00*	<b>2</b>					1.18*	2.70*
Weber RECIONAL TOTALS         1.54* 3.09* 44.88         44.75         4.49* 44.13         47.62         41.89           Central Region Juab         0.86* 0.68* 0.96* 1.53* 1.22* 0.68* 0.94* 0.34* 0.34* 0.92* 1.50* 0.94* 0.34* 0.34* 0.92* 1.50* 0.94* 0.34* 0.92* 0.92* 0.92* 0.94* 0.34* 0.92* 0.92* 0.92* 0.99* 0						15.09	16.89
REGIONAL TOTALS   38.72						4.72*	3.04*
Central Region   Juab						2.89*	4.39*
Juab         0.86*         0.68*         0.96*         1.53*         1.22*         0.68*           Salt Lake         0.17*         0.17*         1.07*         0.51*         0.94*         0.34*           Sanpete         4.99*         4.12*         3.00*         0.92*         1.50*         2.59*           Tocele         3.44*         5.07         3.96         1.33*         1.87*         2.25*           Utah         6.71         3.86         6.85         4.19         1.31*         6.19*           Wasatch         2.06         2.83*         0.43*         1.12*         1.78*         1.13*           Scouthern Region         Beaver         4.47         1.80         1.28         1.33         0.65         2.03           Garfield         2.75         2.49         5.35         7.56         3.09         2.82           Iron         2.40         1.97         2.78         1.94         4.39           Kane         0.00         0.08         0.43         1.33         0.28         0.79           Millard         0.34*         0.00*         1.18*         0.72*         1.40*         0.56*           Piute         2.06         1.63 </td <td></td> <td>44.75</td> <td>44.13</td> <td>47.62</td> <td>41.89</td> <td>42.13</td> <td>49.83</td>		44.75	44.13	47.62	41.89	42.13	49.83
Salt Lake       0.17*       0.17*       1.07*       0.51*       0.94*       0.34*         Sanpete       4.99*       4.12*       3.00*       0.92*       1.50*       2.59*         Tooele       3.44*       5.07       3.96       1.33*       1.87*       2.25*         Utah       6.71       3.86       6.85       4.19       1.31*       6.19*         Wasatch       2.06       2.83*       0.43*       1.12*       1.78*       1.13*         REGIONAL TOTALS       18.24       16.76       16.27       9.60       8.61       13.18         Southern Region       Beaver       4.47       1.80       1.28       1.33       0.65       2.03         Garfield       2.75       2.49       5.35       7.56       3.09       2.82         Iron       2.40       1.97       2.78       1.94       1.40       4.39         Kane       0.00       0.08       0.43       1.33       0.28       0.79         Millard       0.34*       0.00*       1.18*       0.72*       1.40*       0.56*         Piute       2.06       5.67       3.53       4.90       5.33       4.62         Washingto							
Sanpete Tooele       4.99* 4.12* 3.00* 0.92* 1.50* 2.59* Tooele       3.44* 5.07       3.96 1.33* 1.87* 2.25* 1.20* 1.31* 6.19* 1.31* 6.19* 1.31* 6.19* 1.31* 6.19* 1.31* 6.19* 1.31* 6.19* 1.31* 6.19* 1.31* 6.19* 1.31*						1.18*	1.18*
Tooele 3.44* 5.07 3.96 1.33* 1.87* 2.25* Utah 6.71 3.86 6.85 4.19 1.31* 6.19*   Wasatch 2.06 2.83* 0.43* 1.12* 1.78* 1.13*   REGIONAL TOTALS 18.24 16.76 16.27 9.60 8.61 13.18   Southern Region   Beaver 4.47 1.80 1.28 1.33 0.65 2.03   Garfield 2.75 2.49 5.35 7.56 3.09 2.82   Iron 2.40 1.97 2.78 1.94 1.40 4.39   Kane 0.00 0.08 0.43 1.33 0.28 0.79   Millard 0.34* 0.00* 1.18* 0.72* 1.40* 0.56*   Piute 2.06 1.63 1.61 1.02 1.87 0.79   Sevier 2.06 5.67 3.53 4.90 5.33 4.62   Washington 0.34* 0.42* 0.00* 0.82* 0.19* 0.23*   Wayne 3.44 4.90 4.39 4.80 6.64 5.86   REGIONAL TOTALS 17.89 18.99 20.56 24.41 20.86 22.07   Northeastern Region   Daggett 2.06 1.28 1.61* 4.09 1.96 1.69   Duchesne 3.95 1.97 2.25 3.17 2.81 3.15   Uintah 16.52 11.95 8.99 10.73 14.31 14.53   REGIONAL TOTALS 22.54 15.21 12.85 17.98 19.08 19.37   Southeastern Region   Carbon 1.89 2.14 2.68 2.45 2.43 1.58   Emery 0.17 1.11 2.14 0.51* 0.75* 1.13*   Grand 0.34 0.00 0.21 0.92 0.00 0.68   San Juan 0.17 0.17 0.54* 0.00* 0.65* 0.00*   REGIONAL TOTALS 2.57 3.43 5.57 3.88 3.84 3.38   Unknown counties 0.00 0.68 0.00 0.00 0.00 0.01						0.66*	0.00*
Utah         6.71         3.86         6.85         4.19         1.31*         6.19*           Wasatch         2.06         2.83*         0.43*         1.12*         1.78*         1.13*           REGIONAL TOTALS         18.24         16.76         16.27         9.60         8.61         13.18           Southern Region         Beaver         4.47         1.80         1.28         1.33         0.65         2.03           Garfield         2.75         2.49         5.35         7.56         3.09         2.82           Iron         2.40         1.97         2.78         1.94         1.40         4.39           Kane         0.00         0.08         0.43         1.33         0.28         0.79           Millard         0.34*         0.00*         1.18*         0.72*         1.40*         0.56*           Piute         2.06         1.63         1.61         1.02         1.87         0.79           Sevier         2.06         5.67         3.53         4.90         5.33         4.62           Washington         0.34*         0.42*         0.00*         0.82*         0.19*         0.23*           Wayne         3.44	•					1.18*	1.86*
Wasatch         2.06         2.83*         0.43*         1.12*         1.78*         1.13*           REGIONAL TOTALS         18.24         16.76         16.27         9.60         8.61         13.18           Southern Region           Beaver         4.47         1.80         1.28         1.33         0.65         2.03           Garfield         2.75         2.49         5.35         7.56         3.09         2.82           Iron         2.40         1.97         2.78         1.94         1.40         4.39           Kane         0.00         0.08         0.43         1.33         0.28         0.79           Millard         0.34*         0.00*         1.18*         0.72*         1.40*         0.56*           Piute         2.06         1.63         1.61         1.02         1.87         0.79           Sevier         2.06         5.67         3.53         4.90         5.33         4.62           Washington         0.34*         0.42*         0.00*         0.82*         0.19*         0.23*           Wayne         3.44         4.90         4.39         4.80         6.64         5.86		-				3.54*	2.03*
REGIONAL TOTALS   18.24   16.76   16.27   9.60   8.61   13.18   Southern Region   Beaver   4.47   1.80   1.28   1.33   0.65   2.03   Garfield   2.75   2.49   5.35   7.56   3.09   2.82   Iron   2.40   1.97   2.78   1.94   1.40   4.39   Kane   0.00   0.08   0.43   1.33   0.28   0.79   Millard   0.34*   0.00*   1.18*   0.72*   1.40*   0.56*   Piute   2.06   1.63   1.61   1.02   1.87   0.79   Sevier   2.06   5.67   3.53   4.90   5.33   4.62   Washington   0.34*   0.42*   0.00*   0.82*   0.19*   0.23*   Wayne   3.44   4.90   4.39   4.80   6.64   5.86   REGIONAL TOTALS   17.89   18.99   20.56   24.41   20.86   22.07   Northeastern Region   Daggett   2.06   1.28   1.61*   4.09   1.96   1.69   Duchesne   3.95   1.97   2.25   3.17   2.81   3.15   Uintah   16.52   11.95   8.99   10.73   14.31   14.53   REGIONAL TOTALS   22.54   15.21   12.85   17.98   19.08   19.37   Southeastern Region   Carbon   1.89   2.14   2.68   2.45   2.43   1.58   Emery   0.17   1.11   2.14   0.51*   0.75*   1.13*   Grand   0.34   0.00   0.21   0.92   0.00   0.68   San Juan   0.17   0.17   0.54*   0.00*   0.65*   0.00*   REGIONAL TOTALS   2.57   3.43   5.57   3.88   3.84   3.38   Unknown counties   0.00   0.68   0.00   0.00   0.00   0.11					-	1.44*	2.70*
Beaver						1.71*	0.84*
Beaver		16.27	9.60	8.61	13.18	9.71	<u>8.62</u>
Garfield       2.75       2.49       5.35       7.56       3.09       2.82         Iron       2.40       1.97       2.78       1.94       1.40       4.39         Kane       0.00       0.08       0.43       1.33       0.28       0.79         Millard       0.34*       0.00*       1.18*       0.72*       1.40*       0.56*         Piute       2.06       1.63       1.61       1.02       1.87       0.79         Sevier       2.06       5.67       3.53       4.90       5.33       4.62         Washington       0.34*       0.42*       0.00*       0.82*       0.19*       0.23*         Wayne       3.44       4.90       4.39       4.80       6.64       5.86         REGIONAL TOTALS       17.89       18.99       20.56       24.41       20.86       22.07         Northeastern Region       Daggett       2.06       1.28       1.61*       4.09       1.96       1.69         Duchesne       3.95       1.97       2.25       3.17       2.81       3.15         Uintah       16.52       11.95       8.99       10.73       14.31       14.53         REGIONAL TO							
Iron       2.40       1.97       2.78       1.94       1.40       4.39         Kane       0.00       0.08       0.43       1.33       0.28       0.79         Millard       0.34*       0.00*       1.18*       0.72*       1.40*       0.56*         Piute       2.06       1.63       1.61       1.02       1.87       0.79         Sevier       2.06       5.67       3.53       4.90       5.33       4.62         Washington       0.34*       0.42*       0.00*       0.82*       0.19*       0.23*         Wayne       3.44       4.90       4.39       4.80       6.64       5.86         REGIONAL TOTALS       17.89       18.99       20.56       24.41       20.86       22.07         Northeastern Region       3.95       1.97       2.25       3.17       2.81       3.15         Uintah       16.52       11.95       8.99       10.73       14.31       14.53         REGIONAL TOTALS       22.54       15.21       12.85       17.98       19.08       19.37         Southeastern Region       2.42       2.68       2.45       2.43       1.58         Emery       0.17						1.44	3.21
Kane       0.00       0.08       0.43       1.33       0.28       0.79         Millard       0.34*       0.00*       1.18*       0.72*       1.40*       0.56*         Piute       2.06       1.63       1.61       1.02       1.87       0.79         Sevier       2.06       5.67       3.53       4.90       5.33       4.62         Washington       0.34*       0.42*       0.00*       0.82*       0.19*       0.23*         Wayne       3.44       4.90       4.39       4.80       6.64       5.86         REGIONAL TOTALS       17.89       18.99       20.56       24.41       20.86       22.07         Northeastern Region       1.96       1.69<				3.09		2.76	3.21
Millard       0.34*       0.00*       1.18*       0.72*       1.40*       0.56*         Piute       2.06       1.63       1.61       1.02       1.87       0.79         Sevier       2.06       5.67       3.53       4.90       5.33       4.62         Washington       0.34*       0.42*       0.00*       0.82*       0.19*       0.23*         Wayne       3.44       4.90       4.39       4.80       6.64       5.86         REGIONAL TOTALS       17.89       18.99       20.56       24.41       20.86       22.07         Northeastern Region       3.95       1.97       2.25       3.17       2.81       3.15         Uintah       16.52       11.95       8.99       10.73       14.31       14.53         REGIONAL TOTALS       22.54       15.21       12.85       17.98       19.08       19.37         Southeastern Region       1.89       2.14       2.68       2.45       2.43       1.58         Emery       0.17       1.11       2.14       0.51*       0.75*       1.13*         Grand       0.34       0.00       0.21       0.92       0.00       0.68         San Ju	n 2.40 1.9		1.94	1.40	4.39	5.25	2.87
Piute       2.06       1.63       1.61       1.02       1.87       0.79         Sevier       2.06       5.67       3.53       4.90       5.33       4.62         Washington       0.34*       0.42*       0.00*       0.82*       0.19*       0.23*         Wayne       3.44       4.90       4.39       4.80       6.64       5.86         REGIONAL TOTALS       17.89       18.99       20.56       24.41       20.86       22.07         Northeastern Region       Daggett       2.06       1.28       1.61*       4.09       1.96       1.69         Duchesne       3.95       1.97       2.25       3.17       2.81       3.15         Uintah       16.52       11.95       8.99       10.73       14.31       14.53         REGIONAL TOTALS       22.54       15.21       12.85       17.98       19.08       19.37         Southeastern Region       Carbon       1.89       2.14       2.68       2.45       2.43       1.58         Emery       0.17       1.11       2.14       0.51*       0.75*       1.13*         Grand       0.34       0.00       0.21       0.92       0.00	⊋ 0.00 0.0	0.43	1.33	0.28	0.79	0.00	0.68
Sevier       2.06       5.67       3.53       4.90       5.33       4.62         Washington       0.34*       0.42*       0.00*       0.82*       0.19*       0.23*         Wayne       3.44       4.90       4.39       4.80       6.64       5.86         REGIONAL TOTALS       17.89       18.99       20.56       24.41       20.86       22.07         Northeastern Region       Daggett       2.06       1.28       1.61*       4.09       1.96       1.69         Duchesne       3.95       1.97       2.25       3.17       2.81       3.15         Uintah       16.52       11.95       8.99       10.73       14.31       14.53         REGIONAL TOTALS       22.54       15.21       12.85       17.98       19.08       19.37         Southeastern Region         Carbon       1.89       2.14       2.68       2.45       2.43       1.58         Emery       0.17       1.11       2.14       0.51*       0.75*       1.13*         Grand       0.34       0.00       0.21       0.92       0.00       0.68         San Juan       0.17       0.17       0.54*       0.00* <td>lard 0.34* 0.0</td> <td>* 1.18*</td> <td>0.72*</td> <td>1.40*</td> <td>0.56*</td> <td>0.66*</td> <td>2.03*</td>	lard 0.34* 0.0	* 1.18*	0.72*	1.40*	0.56*	0.66*	2.03*
Washington       0.34*       0.42*       0.00*       0.82*       0.19*       0.23*         Wayne       3.44       4.90       4.39       4.80       6.64       5.86         REGIONAL TOTALS       17.89       18.99       20.56       24.41       20.86       22.07         Northeastern Region       Daggett       2.06       1.28       1.61*       4.09       1.96       1.69         Duchesne       3.95       1.97       2.25       3.17       2.81       3.15         Uintah       16.52       11.95       8.99       10.73       14.31       14.53         REGIONAL TOTALS       22.54       15.21       12.85       17.98       19.08       19.37         Southeastern Region       Carbon       1.89       2.14       2.68       2.45       2.43       1.58         Emery       0.17       1.11       2.14       0.51*       0.75*       1.13*         Grand       0.34       0.00       0.21       0.92       0.00       0.68         San Juan       0.17       0.17       0.54*       0.00*       0.65*       0.00*         REGIONAL TOTALS       2.57       3.43       5.57       3.88			1.02	1.87	0.79	1.05	3.04
Wayne         3.44         4.90         4.39         4.80         6.64         5.86           REGIONAL TOTALS         17.89         18.99         20.56         24.41         20.86         22.07           Northeastern Region         Daggett         2.06         1.28         1.61*         4.09         1.96         1.69           Duchesne         3.95         1.97         2.25         3.17         2.81         3.15           Uintah         16.52         11.95         8.99         10.73         14.31         14.53           REGIONAL TOTALS         22.54         15.21         12.85         17.98         19.08         19.37           Southeastern Region         Carbon         1.89         2.14         2.68         2.45         2.43         1.58           Emery         0.17         1.11         2.14         0.51*         0.75*         1.13*           Grand         0.34         0.00         0.21         0.92         0.00         0.68           San Juan         0.17         0.17         0.54*         0.00*         0.65*         0.00*           REGIONAL TOTALS         2.57         3.43         5.57         3.88         3.84	ier 2.06 5.6	3.53	4.90		4.62	7.35	4.05
REGIONAL TOTALS         17.89         18.99         20.56         24.41         20.86         22.07           Northeastern Region         Daggett 2.06 1.28 1.61* 4.09 1.96 1.69           Duchesne 3.95 1.97 2.25 3.17 2.81 3.15           Uintah 16.52 11.95 8.99 10.73 14.31 14.53           REGIONAL TOTALS 22.54 15.21 12.85 17.98 19.08 19.37           Southeastern Region           Carbon 1.89 2.14 2.68 2.45 2.43 1.58           Emery 0.17 1.11 2.14 0.51* 0.75* 1.13*           Grand 0.34 0.00 0.21 0.92 0.00 0.68           San Juan 0.17 0.17 0.54* 0.00* 0.65* 0.00*           REGIONAL TOTALS 2.57 3.43 5.57 3.88 3.84 3.38           Unknown counties 0.00 0.68 0.00 0.00 0.00 0.00 0.11	hington 0.34* 0.4	* 0.00*	0.82*	0.19*	0.23*	0.00*	0.00*
Northeastern Region           Daggett         2.06         1.28         1.61*         4.09         1.96         1.69           Duchesne         3.95         1.97         2.25         3.17         2.81         3.15           Uintah         16.52         11.95         8.99         10.73         14.31         14.53           REGIONAL TOTALS         22.54         15.21         12.85         17.98         19.08         19.37           Southeastern Region         Carbon         1.89         2.14         2.68         2.45         2.43         1.58           Emery         0.17         1.11         2.14         0.51*         0.75*         1.13*           Grand         0.34         0.00         0.21         0.92         0.00         0.68           San Juan         0.17         0.17         0.54*         0.00*         0.65*         0.00*           REGIONAL TOTALS         2.57         3.43         5.57         3.88         3.84         3.38           Unknown counties         0.00         0.68         0.00         0.00         0.00         0.11			4.80			6.17	4.05
Daggett         2.06         1.28         1.61*         4.09         1.96         1.69           Duchesne         3.95         1.97         2.25         3.17         2.81         3.15           Uintah         16.52         11.95         8.99         10.73         14.31         14.53           REGIONAL TOTALS         22.54         15.21         12.85         17.98         19.08         19.37           Southeastern Region         Carbon         1.89         2.14         2.68         2.45         2.43         1.58           Emery         0.17         1.11         2.14         0.51*         0.75*         1.13*           Grand         0.34         0.00         0.21         0.92         0.00         0.68           San Juan         0.17         0.17         0.54*         0.00*         0.65*         0.00*           REGIONAL TOTALS         2.57         3.43         5.57         3.88         3.84         3.38           Unknown counties         0.00         0.68         0.00         0.00         0.00         0.11	NAL TOTALS 17.89 18.9	20.56	24.41	20.86	22.07	24.67	23.14
Duchesne         3.95         1.97         2.25         3.17         2.81         3.15           Uintah         16.52         11.95         8.99         10.73         14.31         14.53           REGIONAL TOTALS         22.54         15.21         12.85         17.98         19.08         19.37           Southeastern Region           Carbon         1.89         2.14         2.68         2.45         2.43         1.58           Emery         0.17         1.11         2.14         0.51*         0.75*         1.13*           Grand         0.34         0.00         0.21         0.92         0.00         0.68           San Juan         0.17         0.17         0.54*         0.00*         0.65*         0.00*           REGIONAL TOTALS         2.57         3.43         5.57         3.88         3.84         3.38           Unknown counties         0.00         0.68         0.00         0.00         0.00         0.11	eastern Region						
Uintah         16.52         11.95         8.99         10.73         14.31         14.53           REGIONAL TOTALS         22.54         15.21         12.85         17.98         19.08         19.37           Southeastern Region           Carbon         1.89         2.14         2.68         2.45         2.43         1.58           Emery         0.17         1.11         2.14         0.51*         0.75*         1.13*           Grand         0.34         0.00         0.21         0.92         0.00         0.68           San Juan         0.17         0.17         0.54*         0.00*         0.65*         0.00*           REGIONAL TOTALS         2.57         3.43         5.57         3.88         3.84         3.38           Unknown counties         0.00         0.68         0.00         0.00         0.00         0.11			4.09			1.57	1.35
REGIONAL TOTALS 22.54 15.21 12.85 17.98 19.08 19.37           Southeastern Region           Carbon         1.89         2.14         2.68         2.45         2.43         1.58           Emery         0.17         1.11         2.14         0.51*         0.75*         1.13*           Grand         0.34         0.00         0.21         0.92         0.00         0.68           San Juan         0.17         0.17         0.54*         0.00*         0.65*         0.00*           REGIONAL TOTALS         2.57         3.43         5.57         3.88         3.84         3.38           Unknown counties         0.00         0.68         0.00         0.00         0.00         0.11	hesne 3.95 1.9	2.25	3.17			1.84	1.01
Southeastern Region           Carbon         1.89         2.14         2.68         2.45         2.43         1.58           Emery         0.17         1.11         2.14         0.51*         0.75*         1.13*           Grand         0.34         0.00         0.21         0.92         0.00         0.68           San Juan         0.17         0.17         0.54*         0.00*         0.65*         0.00*           REGIONAL TOTALS         2.57         3.43         5.57         3.88         3.84         3.38           Unknown counties         0.00         0.68         0.00         0.00         0.00         0.11			10.73	14.31	14.53	12.07	11.99
Carbon       1.89       2.14       2.68       2.45       2.43       1.58         Emery       0.17       1.11       2.14       0.51*       0.75*       1.13*         Grand       0.34       0.00       0.21       0.92       0.00       0.68         San Juan       0.17       0.17       0.54*       0.00*       0.65*       0.00*         REGIONAL TOTALS       2.57       3.43       5.57       3.88       3.84       3.38         Unknown counties       0.00       0.68       0.00       0.00       0.00       0.11	NAL TOTALS 22.54 15.2	12.85	17.98	19.08	19.37	15.49	14.36
Emery       0.17       1.11       2.14       0.51*       0.75*       1.13*         Grand       0.34       0.00       0.21       0.92       0.00       0.68         San Juan       0.17       0.17       0.54*       0.00*       0.65*       0.00*         REGIONAL TOTALS       2.57       3.43       5.57       3.88       3.84       3.38         Unknown counties       0.00       0.68       0.00       0.00       0.00       0.11							
Grand 0.34 0.00 0.21 0.92 0.00 0.68 San Juan 0.17 0.17 0.54* 0.00* 0.65* 0.00* REGIONAL TOTALS 2.57 3.43 5.57 3.88 3.84 3.38 Unknown counties 0.00 0.68 0.00 0.00 0.00 0.11						1.44	1.69
San Juan         0.17         0.17         0.54*         0.00*         0.65*         0.00*           REGIONAL TOTALS         2.57         3.43         5.57         3.88         3.84         3.38           Unknown counties         0.00         0.68         0.00         0.00         0.00         0.11			0.51*	0.75*	1.13*	0.26*	1.69*
REGIONAL TOTALS 2.57 3.43 5.57 3.88 3.84 3.38 Unknown counties 0.00 0.68 0.00 0.00 0.00 0.11	nd 0.34 0.0	0.21	0.92	0.00	0.68	0.13	0.68
Unknown counties 0.00 0.68 0.00 0.00 0.00 0.11	Juan0.17 0.1	0.54*	0.00*	0.65*	0.00*	0.00*	0.00*
	NAL TOTALS 2.57 3.4	5.57	3.88	3.84	3.38	1.84	4.05
Closed areas (26.46)(25.82) (23.57) (15.94) (26.29) (29.85)	wn counties 0.00 0.6	0.00	0.00	0.00	0.11	6.17	0.00
	d areas (26.46)(25.8	) (23.57)	(15.94)	(26.29)	(29.85)	(28.48)	(25.16)
STATE TOTALS 100.00 100.00 100.00 100.00 100.00	TOTALS 100.00 100.0	100.00	100.00	100.00	100.00	100.00	100.00

<sup>\*</sup>Closed season

<sup>( )</sup>Percent of total pressure in closed areas.

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

	Total	Total	Hunter-Days	Sage Grouse	Sage Grouse Pe
Year	Hunters*	Harvest*	Afield	Per Hunter-Day	Hunter
1951	840	2,458			2.93
1952	678	2,230			3.29
1953	895	2,581			2.88
1954	802	2,510		, <b></b>	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					
1978	16,231	25,938 28,280	29,861	0.87	1.60
	16,927		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
984	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
988	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
Fotals					
1951-94)	324,304	479,698	578,293		
Average					
1951-93)	7,423	10,991	13,207	0.61	1.83

<sup>\*</sup> The number of sage grouse hunters and consequently harvest was limited by permits available from 1951 through 1962.

<sup>\*\*</sup> Estimated.

<sup>\*\*\*</sup> Totals and indices based on indiscrete data.

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First   Birds   Complete   Total   Total   Birds   100 Hr	1	į	ı	All Hunts					Complete Hunts	lunts		
Country   Parties   Hunters   Hours   Birds   100 Hr   Hunts   Hunters   Hours   Birds   100 Hr	Region and	Total	Total	Total	Total	Birds/	Complete	ı	Total	Total	Birds/	Birds/
NALTOTALS   1,240   259   21   94   263   1,240   259   21	County	Parties	Hunters	Hours	Birds	100 Hr	Hunts		Hours	Birds	100 Hr	Hunter
Fig. 1, 249    263    1,240    259    21	Northern Region											
NALTOTALS   150	Box Elder	25	263	1,240	259	21	94	263	1,240	259	21	96.0
139   162   1,048   83   8   139   162   1,048   83   8   8   18	Cache	ŀ	:	ŀ	i	ı	:	;	1	1	1	ı
139   162   1,048   83   8   139   162   1,048   83   8   8   8   8   8   8   8   8	Davis	ı	1	1	1	i	1	;	ı	ł	;	}
139   162   1,048   83   8   139   162   1,048   83   8   8	Morgan	ı	;	ŀ	1	1	;	;	1	1	1	ł
NAL TOTALS   233   425   2,288   342   15   233   425   2,288   342   15   2   2   2   2   2   2   2   2   2	Rich	139	162	1,048	æ	œ	139	162	1,048	83	<b>∞</b>	0.51
Region   September   Septemb	Summit	;	ŀ	, ;	ı	1	1	1	1	1	1	ł
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Region and	Birds/	Birds/	Birds/	Birds/	Birds/	Birds/	Birds/	Birds/	Birds/	Birds/	Birds/	Birds/
County	100 Hr	Hunter	100 Hr		100 Hr	Hunter	100 Hr	Hunter	100 Hr	Hunter	100 Hr	Hunter
Northern Region												
Box Elder	21	1.28	25	1.77	11	0.83	19	1.43	18	0.99	21	86.0
Cache	ł	ı	:	ì	100	2.00	ı	i	;	1	١	;
Davis	t	!	ì	i	ł	0.00	ı	;	i	ì	1	;
Morgan	i	:	ı	ł	1	;	ı	i	1	1	ŀ	:
Rich	<b>∞</b>	0.38	13	19.0	6	0.37	6	0.52	€	0.28	œ	0.51
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REGIONAL TOTALS	16	0.87	20	1.24	10	0.62	15	0.99	9	0.73	15	0.80
Central Region	- -						1					
Juab	:	ı	ı	ı	:	;	ı	ì	ł	1	I	1
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REGIONAL TOTALS	41	0.87	;	!	:	,	,	:	1	:		1
Southern Region							-		<u> </u>			
Beaver	ŀ	ı	ŀ	ı	ı	ı	i	t	;	ı	ŀ	1
Garfield	2	0.33	1	ı	ì	ł	i	ı	;	ı	;	1
Iron	i	0.64	;	ı	;	:	1	:	ļ	1	ı	:
Kane	ı	1	;	1	;	;	ı	;	ł	1	ı	1
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Wayne	ı	1	23	0.81	21	1.02	7	0.44	7	0.43	4	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	9	0.33	17	0.67	35	1.04	1	1	ı	1	ŀ	ı
Duchesne	ı	1	20	1.00	13	0.50	1	1	ŀ	ı	;	ı
Uintah	70	0.87	27	98.0	40	1.11	26	0.81	50	0.50	23	0.78
REGIONAL TOTALS	18	0.84	76	0.83	34	1.01	26	0.81	20	0.50	23	0.78
Southeastern Region									,			
Carbon	77	0.77	13	0.67	ŀ	ı	36	1.43	i	;	ı	ł
Emery	i	ŀ	ı	1	ŀ	ı	;	ı	1	;	1	1
Grand	;	ł	:	1	ı	ł	30	2.40	17	0.43	!	ı
San Juan	t	•	:	;	ı	;	:	1	:	;		;
REGIONAL TOTALS	22	0.77	13	0.67	1	;	32	1.83	17	0.43	:	1
STATE TOTALS	17	0.85	47	1.83	14	0.75	14	0.88	10	99.0	14	0.70

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

Region and		Adults			Yearling	gs		Immature	s	Sample	Young/	Young/
County	M	F	Total	M	F	Total	M	F	Total	Size	100 Adults	100 Hens
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							ميد	**				
Kane					**							
Millard					_			••				
Piute				**								
Sevier												
Washington								_				
Wayne	2	24	26	18	31	49	31	55	86	161	115	156
REGIONAL TOTALS		24	26	18	31	49	31	55	86	161	115	156
Northeastern Region				10	J1	7,	<u> </u>				113	130
Daggett												
Duchesne	•									 		
Uintah					_				<del></del>		 	
REGIONAL TOTALS		<del></del>			<del></del>							
Southeastern Region									<del></del>	<del></del>		
Carbon												
Emery												••
Grand			 								••	-
San Juan									••		-	
REGIONAL TOTALS							<del></del>					-*
STATE TOTALS	 59	105	164	75	77	107	155	226	202		141	 016
STATE TOTALS	אָכ	105	164	35	72	107	157	226	383	654	141	216

San San Maria			1001		f			2001					1003				100				ľ	Angrees 1001.03	g	
Region and		Sex Ratio %	3%	Young	Young/		Sex Rado %		Young/	Young	Seg	Sex Ratio %	, Å	Young/ You	Y oung/	Sex	Sex Ratio %	Young,	Young/		Sex Ratio %	عي أ	Young!	Young/
County	ш	M	r.	100H	100A	Ħ	Σ	F	H001	100A	a	M	F 10		100A		M	H001	190A	u	M	la.	100H	100A
Northern Region																ļ								
Box Edder	Ē	39	19	ĸ	z	137	4	ĸ	167	æ	E			_				191	13.5					
Carte	ı	ı	1	ı	ı	1	ı	1	ı	ı	1							1	ı					
Davis	1	1	ı	ı	ı	ı	ı	1	1	1	1							1	ı					
Morgan	1	1	ı	ı	1	1	1	1	1	1	ı							ı	1					
Rich	439	20	S,	13	89	338	ż	8	220	129	661	1	1	178	178 3	310 3	38 62	235	163					
Sucurit	t	ı	ı	1	,	,	t	1	1	1	1							•	ı					
Weber	'	1	1	ı	ı	ı	ı	ı	ı	,	ı							1	ı					
REGIONAL TOTALS	610	77	28	113	3	\$0\$	ê	8	192	36	369							Ħ	zsi.	485	\$	8	125	8
Central Region																								
Jush	1	t	ı	ı	ı	ı	ı	ı	ı	1	ı							1	ı					
Salt Lake	I	1	ı	ı	ı	ı	,	ı	ı		1		,	,	,	1	1	ı						
Sanpete	1	1	ı	ı	,	ı	1	ı	1	ı	1							1	t <sub>.</sub>					
Tooste	1	1	ı	ı	. 1	,	ı	ı	ı	ı	ı							1	J					
Ulah	1	1	ı	ı	1	ı	ı	ı	1	ı	1							1	1					
Wassich	1	ı	ı	ı	ı	ı	ı	ı	1	1	1							1	ı					
REGIONAL TOTALS	1	ı	ı	  -	۱	ŀ	١	١,	ı	,	1						İ	  - 	1	ľ	,	١,	t	
Southern Region																								
Beaver	t	ı	1	1	1	ı	1	1	1	ı	1							1	1					
Carfield	1	ı	1	1	1	1	1	1	t	ı	ı							1	1					
<u>13</u>	1	ı	ı	ı	,	1	1	ι	1	ı	89							1	1					
Kane	1	1	ı	1	,	ı	ı	1		ı	ı							ı	1					
Millard	1	1	1	1	1	ı	ı	ı		ı	ı							1	1					
Plute	t	1	1	1	ı	ı	ı	1	1		ı	,	,	,		· ·	1	•	1					
Sewier	1	ı	ı	1	•	1	•	ı	1	•	1							1	1					
Washington	•	ı	ı	1,	•	1	J	,	1	ı	t							1	1					
Wayne	333	4	28	187	521	292	35	88	138	103	23						1	156	115					
RECIONAL TOTALS	333	4	88	187	123	292	88	8	138	163	822						ŀ	156	115	887	36	ত্ত	183	120
Northeastern Region						į	ı	1	ţ	;														
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Grand	1	1	,	1	1	1	ı	1	1	ı	1							,	ı					
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REGIONAL TOTALS	1	ı		ļ ,		2	36	3	22	æ	=							,	1	ız	32	8	*	£5
STATE TOTALS	Z	4	88	136	Н	930	¥	85	691	101	029					l		216	141	Ē	30	19	2	3

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:

	1994	Percent 1993	change from <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:

•	1004		change from
	<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.

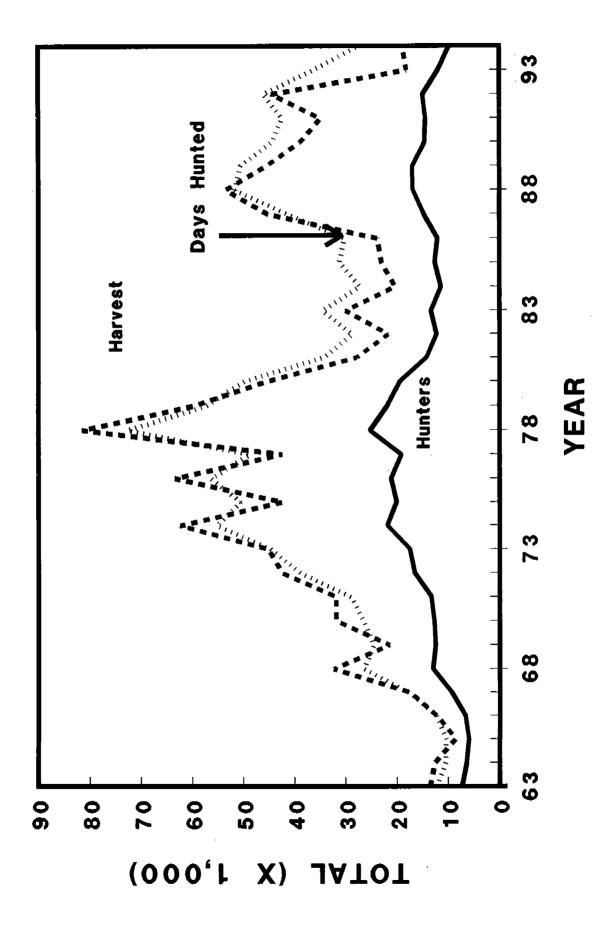
# <u>Harvest</u>

# <u>Hunter Questionnaire</u>

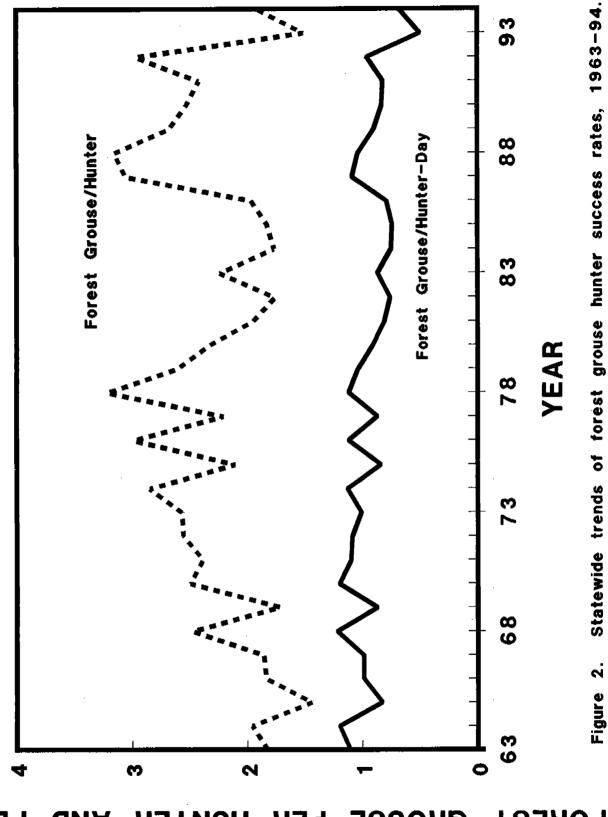
Results of the 1994 blue grouse, ruffed grouse and combined hunter questionnaire are shown in Table 10, 11 and 12 respectively. Long-term trends of forest grouse bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) by county are found in Tables 13-15 and total statewide harvest 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:

		Percent	change from
	<u>1994</u>	1993	Average
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	<b>−</b> 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.



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



FOREST GROUSE PER HUNTER AND PER DAY

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

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 composisiton 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>1994</u>	<u>Percent</u> 1993	<u>change from</u> <u>Average</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:

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

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

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Table 1.	

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County	<b>*</b>	Adults Young	Young	Brood	Adults Young		Young	Adults	Young	6/3	Miles	Vehicle	Horse	Walk	Total	100 Hr
Northern Region						D	D		D							
Box Elder	:	i	ı	ì	;		ł	;	I	ı	ł	ł	ŀ	ı	ł	;
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Davis	ì	ł	ł	1	ı	ŀ	i	:	ı	1	1	ì	1	i	1	i
Morgan	;	1	ı	1	ı	i	ï	:	i	ï	ı	ŀ	ŀ	ı	ŀ	ı
Rich	;	ı	1	1	1	1	ì	ŀ	ı	ŀ	ı	;	ı	ı	ı	ı
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Central Region																
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Sanpete	1	;	ł	i	i	ı	1	ŀ	;	1	1	1	ŀ	ŀ	ı	ı
Tooele	ı	ŀ	ı	i	ŀ	1	;	;	;	;	ŀ	ŀ	ŀ	ŀ	ı	1
Utah	ı	i	;	ì	;	ı	ł	;	ł	:	ı	1	i	ŀ	ı	1
Wasatch	!	i	1	ł	i	ŀ	ł	;	ł	ł	ı	1	ı	ŀ	ı	1
REGIONAL TOTALS	;	ı	1	ı	1	;	1		<b> </b> ;	;	1	1	ı	!	ı	
Southern Region		ļ   	, 					:								
Beaver	;	ı	1	1	ı	ŀ	ì	1	ï	;	ŀ	ı	ŀ	ŀ	ŀ	:
Garfield	;	ı	:	:	1	;	ï	1	:	ŀ	ŀ	ı	ŀ	ļ	ŀ	1
Iron	;	ı	1	1	ı	+	ı	ŀ	i	;	ı	1	ı	ŀ	ı	ł
Kane	i	:	ŀ	1	1	1	ľ	1	ŀ	;	;	4	ı	ı	ı	ł
Millard	ı	•	!	1	;	1	ı	1	i	ľ	ł	1	1	ı	ı	ļ
Piute	ı	•	ŀ	:	1	ŀ	ı	:	ı	ı	ı	1	ł	ı	1	;
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Washington	ı	t	1	}	ł	J	ı	;	ı	i	ì	1	ı	:	ı	;
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REGIONAL TOTALS	:	1	i	ŀ	ŀ	1	1	:	1	ä	ı	1	ł	1	ì	1
Northeastern Region																
Daggett	-	-	4	4.00	0	0	0	1	4	400	1	1	10	ŀ	10	<del>.20</del>
Duchesne	•	ı	1	1	;	ı	;	;	1	i	ı	;	ı	1	ı	;
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REGIONAL TOTALS	_	-	4	4.00	0	0	0	1	4	400	1	1	10	;	10	50
Southeastern Region																
Carbon	ı	1	ı	ı	ı	ŀ	ı	;	1	ı	ı	ŀ	ı	1	ı	;
Emery	ı	ŀ	ŀ	ı	I	1	ł	i	:	ı	I	ŀ	ı	1	1	ŀ
Grand	ŀ	1	!	ŀ	ì	;	ł	ì	į	t	32	9	ı	ł	9	1
San Juan	1		;	1	ı	;	1	;	!	1	ı	:	ı	1	ı	;
REGIONAL TOTALS	,	;	1	!	1	1	ı	;	,	ı	35	9	ì	;	9	;
STATE TOTALS	-	1	4	4.00	0	0	0		4	400	35	9	10	0	16	31

1984-94.	
0 adults,	
g per 10	
ruse youn	
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Trend of 1	
Table 2. 1	

Region and						Year						Average
County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1984-93
Northern Region												
Box Elder	;	ı	433	150	20	i	300	250	400	;	ı	
Cache	ı	350	100	300	267	300	150	225	167	ł	1	
Davis	ł	1	:	1	136	1	;	į	217	ŀ	ł	
Morgan	ı	ı	ł	ł	ŧ	ı	;	ı	ı	;	ı	
Rich	:	199	200	1	267	ı	;	i	:	;	ı	
Summit	ľ	200	400	200	ŀ	300	450	400	1	ı	ł	
Weber	:	150	1	380	220	ı	ŀ	700	467	ŀ	1	
REGIONAL TOTALS	:	308	300	337	141	300	300	355	277	:	,	285
Central Region												
Juab	i	;	ł	i	ł	:	ı	ł	!	i	;	
Salt Lake	ŀ	1	150	0	ł	1	ı	:	;	ŀ	;	
Sanpete	ł	8,700	:	1	;	ŀ	1	300	400	ı	;	
Tooele	ı	. 1	:	ı	;	ŀ	;	; ;		ı	ŀ	
Utah	ı	ı	460	320	300	300	;	ı	100	100	1	
Wasatch	;	ı	1	ı	1	ì	780	ŀ	1	ŀ	ŀ	
REGIONAL TOTALS		700	322	320	300	300	780	300	250	100		319
Southern Region												
Beaver	;	:	ŀ	ı	i	ı	ŀ	ì	1	I	ı	
Garfield	;	ı	ŀ	ì	1	ı	1	į	1	I	ŀ	
Iron	i	;	!	ŀ	1	ı	1	ı	ŀ	ŀ	ŀ	
Kane	ŀ	1	:	i	ŀ	1	1		ì	ł	ŀ	
Millard	i	ı	1	1	ł	ı	1	ı	ı	ł	ı	
Piute	ı	i	;	1	ŀ	1	ı	ı	i	ľ	ł	
Sevier	ı	ı	1	1	450	ı	i	ı	ı	ŀ	ŀ	
Washington	ı	ı	ı	1	1	1	ı	ı	ı	ł	ł	
<b>Wayne</b>	1	ı	:	;	1	ł	333	1	i	;	;	
REGIONAL TOTALS	1	1	,		450	;	333	1	1	1	:	392
Northeastern Region												
Daggett	1	1	ı	ı	1	150	ı	ļ	I	1	400	
Duchesne	1	ı	1	ı	ı	400	009	,	1	ì	1	
Uintah	t	1	;	400	ł	267	909	ł	1	ı	ì	
REGIONAL TOTALS	1	1	   1	400	1	250	909		1	1	400	417
Southeastern Region												
Carbon	ı	:	:	ł	i	ı	:	ı	ł	ł	ŀ	
Emery	ŀ	!	ŀ	300	1	ı	ŀ	!	1	;	ì	
Grand	1	:	:	ł	I	1	•	1	:	I	i	
San Juan	;	!	;	1	1	1	ŀ	1	1		i	
REGIONAL TOTALS	-	. 1	1	300	;	ı	1	<b>;</b>		1	;	300
STATE TOTALS	1	336	312	306	160	277	356	350	273	100	400	274

1984-94
grouse,
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Region and						Year						Average
County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1984-03
Northern Region												200
Box Elder	ì	1	2.00	3.00	3.00	ı	3.00	5.00	4.00	;	;	
Cache	ı	3.50	1.00	3.14	4.00	3.00	3.00	3.00	2.00	ŀ	i	
Davis	1	;	:	ł	4.00	1	ı	ł	4.33	ŀ	ł	
Morgan	;	;	1	ı	i	ı	;	3,33	i	ŀ	:	
Rich	;	19.9	3.00	1	ı	3.00	:	;	ı	1	1	
Summit	ŀ	3.33	4.00	5.00	1	3.00	4.50	4.00	:	ı	;	
Weber	1	3.00	1	4.75	3.67	ı	;	7.00	4.67	ŀ	!	
REGIONAL TOTALS	:	4.44	2.60	3.93	3.64	3.00	3.75	4.13	4.50		1	3.75
Central Region												3
Juab	!	;	ŀ	;	ŀ	;	ı	1	i	;	;	
Salt Lake	l	ı	;	ı	i	;	:	i	i	· •		
Sanpete	;	7.00	1	ł	ŀ	:	1	3.00	4.00	ı	ı	
Tooele	ı	ı	I	ł	ł	1	;	. 1	2 1	ı	1 1	
Utah	1	:	4.60	3.20	3.00	3.00	í	ı	9	1 60		
Wasatch	1	ł	ŀ	i	1	ı	4.70	Į	<u> </u>	1	1	
REGIONAL TOTALS	1	7.00	4.60	3.20	3.00	3.00	4.70	3.00	2.50	1.00		3.56
Southern Region												
Beaver	;	i	ı	1	1	ŀ	1	ŧ	1	;	ł	
Garfield	ł	ı	ı	;	ł	;	ŀ	i	1	i	ı	
Iron	ı	:	ı	1	:	;	;	ł	1	1	ı	
Kane	:	:	1	1	:	ı	ł	ì	1	1	ı	
Millard	1	;	1	ŧ,	:	ı	i	1	;	1	:	
Piute	ı	ı	;	ł	;	ı	ı	ŀ	ł	:	;	
Sevier	1	i	ŀ	ı	4.50	1	ı	ı	i	ŀ	•	
Washington	1	1	ı	ŀ	. 1	ı	I	ı	ı	;	ŧ	
Wayne		ı	ı	1	1	ł	2.00	ı	ı	1	1	
REGIONAL TOTALS	!		ı	ı	4.50	,	5.00		ı	,	1	4.75
Northeastern Region												
Daggett	;	ł	ı	ı	1	3.00		ı	ŀ	ı	4.00	
Duchesne	;	ŀ	:	ı	ł	4.00	90.9	ı	ŀ	i	ı	
Uintah		:	1	4.00	ŀ	4.00	00.9	ł	;	ı	J	
REGIONAL TOTALS	,	1	1	4.00	1	3.75	6.00	1	:	:	4.00	4.58
Southeastern Region												
Carbon	ı	ı	ı	ŀ	1	1	1	ł	í	ŀ	;	
Emery	I	1	1	3.00	:	;	t	;	ŀ	ł	ŀ	
Grand	1	ı	ł	ı	ŀ	;	:	ł	ì	:	ł	
San Juan	1	•	:	ì	;	;	1	:	1	i	ł	
REGIONAL TOTALS	1	:	1	3.00	;	:	ı	ı	1	ŀ	:	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

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Region and						Year						Average
County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1984-93
Northern Region												
Box Elder	ŀ	1	<b>0</b> 8	31	100	ł	49	59	45	:	1	
Cache	ı	17	20	28	17	46	ĸ	92	9	ı	1	
Davis	I	:	;	ł	114	ŀ	ł	1	92	ı	ŀ	
Morgan	1	7	ı	ł	;	ł	;	<u>S</u>	;	1	ŀ	
Rich	1	1,150	83	ŀ	20	;	ł	1	;	ł	1	
Summit	ı	25	36	906	1	6	9	20	ŀ	:	ı	
Weber	1	21	ı	267	178	;	ŀ	76	170	ł	1	
REGIONAL TOTALS	ı	76	30	<b>S</b> 6	62	22	13	32	47	ł	ı	36
Central Region												
Juah	1	ŀ	ŀ		1	ŀ	;	:	:	:	i	
Salt Lake	ı	:	167	:	ı	;	1	ł	1	ı	ı	
Sanpete	ı	160	ı	;	ŀ	1	;	12	38	t	ŀ	
Tooele	!	;	1	ł	ł	1	;	ł	ı	;	ı	
Utah	1	:	400	<u>S</u>	133	133	;	ł	13	14	ŀ	
Wasatch	98	,	1	25	ı	ŧ	9	ŀ	;	ı	1	
REGIONAL TOTALS	98	14	88	30	133	133	78	9	13	7	ı	54
Southern Region												
Beaver	1	;	ŀ	:	1	:	ŀ	:	;	ı	ı	
Garfield	1	ı	ı	ı	ı	:	:	1	ı	ı	١	
Iron	ŀ	ı	ı	ı	ı	ı	:	1	i	ı	•	
Капе	:	ı	1	1	ı	!	;	1	1	ì	1	
Millard	1	•	1	:	1	!	ł	1	1	1	1	
Piute	ŀ	ı	1	1	1	1	ł	I	1	1	1	
Sevier	ı	:	1	1	138	:	;	1	1	ı	ł	
Washington	ļ	ŀ	1	1	1	1	ŀ	t	ı	1	1	
Wayne		1	1	ı	ı	1	;	ı	ı	1	ı	
REGIONAL TOTALS	1	:	ł	ł	138	ı	433	ı	ı	:	-	286
Northeastern Region												
Daggett	1	ı	1	ŀ	1	109	ŀ	1	ŀ	ŀ	20	
Duchesne	ŀ	ı	ı	4	1	33	175	ŀ	ì	ł	1	
Uintah	1	:	ı	89	ı	87	180	1	;	;	ı	
REGIONAL TOTALS	;	:	1	28	1	28	105	1	:	:	50	54
Southeastern Region												i
Carbon	1	1	1	ı	;	ı	ı	ł	ł	ł	ł	
Emery	1		1	400	ì	ı	ı	1	;	;	;	
Grand	ı	!	1	1	ł,	1	ì	1	;	1	ı	
San Juan	ı	:	1	I		;	1	:	;	;	;	
REGIONAL TOTALS	1	:	ı	400	1	;	:	:	:	:		400
STATE TOTALS	98	22	47	45	46	26	30	23	31	2	31	36

Table 5. Blue grouse summer inventory, 1994.

Distinct

Region and		Broods		Mean	& Adults		Adults w/o	Total	Total	Young/	Vehicle		Homes	Hours of Effort		Rirde/
County	#	Adults	Adults Young	Brood	Adults	Adults Young	Young	Adults	Young	100 Adults Miles	Miles	Vehicle	Horse Walk	Walk	Total	100 Hr
Northern Region									D							200
Box Elder	ĸ	ĸ	19	3.80	0	•	1	11	61	173	30	4	:	1	4	750
Cache	;	i	1	ŀ	ı	1	۱ ا	1	ì	<b>;</b> ;	; ;	۱ ٠	ł		٠ :	<u> </u>
Davis	1	i	1	ı	ı	;	ŀ	;	!	1	ı	١	ŀ	<b> </b>	: :	
Morgan	1	ı	ŀ	1	ł	i	;	:	:	:	;	;	;	۱ ا		
Rich	1	:	ì	I	;	;	1	1	1	1	ı	ı	;			ļ
Summit	;	!	ı	;	:	;	1	;	;	1			ŀ	ł	1	1
Weber	1	1	1	ł	i			: ;	)	<b>!</b>	ı	ı	ŀ	1	!	ł
RECIONAL POTALS	u	4	1	2 00				:   ;	:   ;	:   {	۱	٠	1	ı	,	:
Central Region	0	n	2	0.00	<b>-</b>	-		T	19	173	≅	4	1	1	4	250
Juab	7	7	7	3.50	0	0	3	w	7	140	;	;	1	1	;	909
Salt Lake	1	I	ı	I	ł	I	;	1		1	ı	;	1	ł	1	3
Sanpete	1	1	ł	1	!	ŀ	7	7	!	ı	ŀ	ı	1	1	· :	
Tooele	1	_	7	2.00	•	0	4	V)	7	€	1	ł	;	ı	!	350
Utah	-	1	6	3.00	0	0	33	4	6	75	I	1	ŀ	1	ļ	320
Wasatch	;	ı	;	;	ł	,	ı	ŀ	ł	;	ı	ŀ	٦	ı	;	1
REGIONAL TOTALS	4	4	12	3.00	0	0	12	16	17	75	:		1	;		1
Southern Region																
Beaver	ı	1	i	1	1	;	;	ı	ı	ı	ł	ŀ	ŀ	ŀ	ı	1
Garfield	1	ŀ	ı	ı	:	;	;	1	:	ı	ŀ	ŀ	:	ı	ı	!
Iron	1	ı	ı	:	1	i	ŀ	ŀ	ŀ	ı	;	:	:	ı	ı	1
Kane	1	1	. !	ł	i	1	ı	ŀ	ŀ	:	i	ı	ı	ı	ı	1
Millard	;	1	ł	ł	ł	1	1	ŀ	:	1	ı	ı	ı	ı	ł	ŀ
Finte	1	ì	1	1	ŀ	1	1	ı	ŀ	ı	ı	ı	ı	ı	ı	ì
Sevier	1	ŀ	;	ł	t	1	ı	ı	ì	ı	ł	1	ı	1	ŀ	ł
Washington	ı	ı	ŀ	ŀ	ı	1	ŀ	1	ı	ł	;	:	ı	l	ı	ı
Wayne	1	:		1	;	;	;	1	ı		:	1	ı	ı	i	ı
REGIONAL TOTALS	l	:	1	:	+	ŀ	1	1	:	ı	;	;	ŀ		1	!
Northeastern Region																
Daggett	0	٥	0	ı	0	0	0	0	0	1	ŀ	;	9	1	10	1.
Duchesne	1	ł	ı	;	;	!	ı	;	ì	1	ı	i	;	ł	1	ì
Uintah	٥	0	0	1	0	1	0	0	1	;	ı	ŀ	7	ŀ	7	20
REGIONAL TOTALS	0	-	0	;	0	1	0	0	1	;	ı	1	12	:	12	8
Southeastern Region																
Carbon	ı	1	ı	I	ı	;	;	i	ŀ	ľ	;	:	;	ı	1	ł
Emery	ı	!	ŀ	ŀ	ı	ı	1	1	i	i	1	1	1	1	ļ	1
Grand	7	-	28	4.00	0	•	۲-	14	78	200	72	6	ı	ŀ	6	467
San Juan	ı	!	1		;	1		ŀ	;	1	1		ı	ł	1	1
REGIONAL TOTALS	7	_	28	4.00	0	•	7	14	. 28	200	7.7	6	:	۱.	6	467
STATE TOTALS	16	7	9	2 60	<		÷		**	17.7						

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

Region and

County   1984   1985   1986   1986   1987   1988   1989   1990   1991   1992   1993   1994   1984-43   1984-43   1984-43   1984   1984-43   1984-43   1984   1984-43   1984-43   1984   1984-43   1984   1984-43   1984   1984   1984   1984-43   1984   198	Region and						Year		į				Average
1.55   1.67   1.100     1.70	County	1984	1985	1986	1987		1989	1990	1991	1992	1993	1994	1984-93
Sign   Fig.   Sign	Northern Region					ì							27.27
TALE   167   1   150	Box Elder	350	ł	100	1	ŀ	700	144	400	200	1	173	
250   183   150   222   248   200   480   260   180       100   450     433       600   178   155     173     100   450     380     380     186   190     173     100   450     380     380     186   190     173     100   450     380     380     380     186   100     173     100   100   0   180     380     380     186   170     173     100   100   180     380     380     186   170     173     100   100   157   169   273   486   317   286   170     100   175     100   300   200   245   260     23     194   80   60     194     100   300   200   475   250     246       100       100   300   200   475   250     246       100       100   300   200   475   250     246       100       100   300   200   475   250     246       100       100   300   200   475   250       246       100       100   300   200   475   250     246           100   300   200   330   335     340   233     400     100     100   300   200   300   230   138   364   233     400     100     100   300   200   300   234   318   60     360   235   260       100   300   200   300   234   318   60     360   234   316     360   234   316     360   234   316     360   234   316     360   234   316     360   234   316     360   235   234   234   344   340   361     360   235   234   344   340   361     360   240	Cache	:	167	ł	300	363	257	300	909	€ &	ı	; ;	
100   500   200	Davis	250	183	150	222	248	200	480	260	180	I	;	
FALS   Sign	Morgan	300	906	ı	433	ŀ	:	1	1	1	ŧ	ŀ	
Sho   450   - 1	Rich	;	i	350		I	1	ł	909	400	1	;	
TALS 310	Summit	200	450	ı	200	!	200	178	155	:	!	1	
TALE   300   269   222   300   279   244   292   277   207     173	Weber	1	400	1	380	400	ì	1	186	100	;	ı	
4400   0   180         700       140     140     160     80       160   160     160     160   160	REGIONAL TOTALS	300	569	222	300	279	244	292	277	207	1	173	366
140   0   180       140     140     140       140         140         140       140       140       140       140       140       140       140       140       140       140       140       140       140       140       140       140       140         140           140             140	Central Region												
Table   Tabl	Juab	400	0	180	ł	ł	:	200	:	1	;	140	
TALS 1400 150 500 6000 800 800 100 100 100 100 100 100 100 100 10	Salt Lake	ï	ı	1	ł	ı	:	1	ŀ	1	۱ ا	} :	
TALE   168   167   218   650   650   276   231   304     40   105     175     256   267   267   286   170     100   100     175     256   267   267   286   170     100   100     175     256   267   286   194   80   60   75     175     255   240   245   160     23     255   200   245   160     23       255   200   245   250         255   200   245   250         255   200   245   250         255   200   245   250           255   200   200         255   200   200         255   200   200         255   250           255   250           255   250           255   250           255   250         250   250         250   250   250       250   250   250       250   2	Sanpete	1	!	1	009	;	9	ŀ	,			<b>!</b>	
TALS 400 157 169 273 486 317 286 170 75  250 200 267 133 109 23 100 100 75  241 200 245 160 23 23 100 100 15  100 300 245 160 23 23 100 100 100 100  200 300 300 350 375 150 100 100 100 100  ALS 164 282 279 230 118 23 246 100 100 100  ALS 200 200 200 233 1318 364 233 600 200 100  ALS 200 200 200 233 31 318 364 233 600 200 100  ALS 200 200 200 200 233 318 60 500 200 100  ALS 200 200 200 200 200 200 200 200 200  ALS 200 200 200 200 200 200 200 200 200  ALS 200 200 200 200 200 200 200 200 200  ALS 200 200 200 200 200 200 200 200 200  ALS 200 200 200 200 200 200 200 200 200  ALS 200 200 200 200 200 200 200 200 200  ALS 200 200 200 200 200 200 200 200 200  ALS 200 200 200 200 200 200 200 200 200  ALS 200 200 200 200 200 200 200 200 200  ALS 200 200 200 200 200 200 200 200 200  ALS 200 200 200 200 200 200 200 200 200  ALS 200 200 200 200 200 200 200 200 200  ALS 200 200 200 200 200 200 200 200 200  ALS 200 200 200 200 200 200 200 200 200 20	Tooele	;	168	167	218	029	Ş (Ş	376	231	300		;	
FALS 400 157 169 273 486 317 286 194 80 60 75  250 200 267 133 109 -	Utah	1	175	1	256	267	267	286	170	8	ļ	? !	
TALS   400   157   169   273   486   317   286   194   80   60   75     250   200   267   133   109	Wasatch	ŀ	i	ì	1	1	ŀ	ı	; ;	901	9	5 1	
250 200 267 133 109	REGIONAL TOTALS	400	157	169	273	486	317	286	194	<b>2</b>	9	7.	247
250   200   267   133   109	Southern Region									3	3	2	
14   200   245   160     23	Beaver	250	200	267	133	109	ł	1	ŀ	;	ı	١	
TALS   140   255   500   475   250	Garfield	241	200	245	160	;	23	1	1	ì	ı	;	
100   300   200   425   60     -   -   -   -   -     -     -	Iron	1	1	i	300	1	;	ŀ	;	ŀ	1	١	
100   300   200   425   60	Kane	:	255	200	475	250	ı	ŧ	ı	ı	;	ı	
200         300         300         — </td <td>Millard</td> <td>100</td> <td>300</td> <td>200</td> <td>425</td> <td>99</td> <td>:</td> <td>ı</td> <td>;</td> <td>ı</td> <td>;</td> <td>ī</td> <td></td>	Millard	100	300	200	425	99	:	ı	;	ı	;	ī	
Rotation   Rotation	Piute	200	300	300	;	ı	ı	1	ŧ	ŀ	ı	ŀ	
TALS   164   282   279   230   375   -	Sevier	<b>0</b> 8	417	;	150	<b>6</b>	;	1	;	;	ı	;	
TALS         164         282         279         375         -         -         246         -	Washington	ŀ	:	233	533	1	ŀ	ŀ	;	ŀ	ı	ŀ	
TALS   164   282   279   230   118   23     246	Wayne	:	909	ı	350	375	ı	ł	246	ı	!	;	
ion	REGIONAL TOTALS	164	282	279	230	118	23	1	246	1	:	,	102
ALS	Northeastern Region												
ALS 228 129 190 - 600 - 800 200 - 60	Daggett	1	;	282	331	318	364	233	1	009	:	ı	
ALS           140         500         234         138         60           600            ion         300         150         500          400         100           600            25         200         150         500           500           600            ALS         300         150         260           500               ALS         140         260         27         300          200         286         289         200           ALS         140         200         213         360                ALS         140         200         213         360         233         167            ALS         140         200         75          350         234         240         200           300         225         274         238         243         291         167	Duchesne	ŀ	ł	228	129	190	1	009	ł	008	200	,	
FALS         -         -         -         235         305         254         268         223         -         400         -         -           ion         300         150         500         -         -         -         500         -         -           25         200         260         -         227         300         -         -         -         -         -           ALS         140         206         300         140         200         75         -         500         233         167         -           ALS         140         206         300         140         200         75         -         350         284         240         200           ALS         190         225         268         207         225         274         238         243         291         167	Uintah	1	i	140	200	233	138	9	;	1		,	
doing           300         150         500         -         -         -         -         500         - <td>REGIONAL TOTALS</td> <td> </td> <td>ا, ا</td> <td>235</td> <td>305</td> <td>254</td> <td>268</td> <td>223</td> <td>:</td> <td>400</td> <td>3 1</td> <td>   </td> <td>181</td>	REGIONAL TOTALS		ا, ا	235	305	254	268	223	:	400	3 1		181
300         150         500         -         -         -         -         -         500         -         -         -           25         200         260         -         227         300         -         200         286         289         200           ALS         175         300         -         300         213         300         -         500         233         167         -           ALS         140         206         300         140         200         75         -         350         284         240         200           190         229         225         268         207         225         274         238         243         291         167	Southeastern Region												
ALS 140 206 229 225 207 300 - 500 286 289 200 300 - 500 286 289 200 300 300 140 200 75 - 500 238 249 240 200 300 329 207 325 289 207 300 329 300 325 268 207 225 274 238 243 291 167	Carbon	300	150	200	ì	:	ŀ	1	ı	200	ı	;	
25         200         260         -         227         300         -         200         286         289         200           ALS         175         300         -         300         213         360         -         500         233         167         -           ALS         140         206         300         140         200         75         -         350         284         240         200           190         229         225         268         207         225         274         238         243         291         167	Emery	;	,	:	400	100	:	ı	ı	1	. 1	i	
ALS 140 206 300 140 200 75 - 350 243 167 - 190 229 225 268 207 225 274 238 243 291 167	Grand	25	200	700	i	227	300	:	200	286	289	200	
ALS 140 206 300 140 200 75 350 284 240 200 100 229 225 268 207 225 274 238 243 291 167	San Juan	175	300		300	213	300	ł	200	233	191	1	
190 229 225 268 207 225 274 238 243 291 167	REGIONAL TOTALS	140	506	300	140	200	75	1	350	284	240	200	215
	STATE TOTALS	190	229	225	268	207	225	274	238	243	291	167	239

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Region and						Year						Average
County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1984-93
Northern Region										ı		
Box Elder	7.00	ł	2.00	ŀ	;	7.00	3.20	4.00	5.00	ı	3.80	
Cache	1	3.33	!	3.67	3.63	3.60	3.70	4.50	4.00	ŀ	!	
Davis	5.50	3.67	3.00	2.83	4.00	4.50	6.50	4.33	3.00	1	ł	
Morgan	3.00	9.00	:	4.33	;	1	!	ì	ŧ	:	!	
Rich	ŀ	1	!		1	1	ŀ	90.9	90.9	ł	ŀ	
Summit	5.00	4.50	1	5.00	ŀ	3.00	4.00	3.40	ŀ	ŀ	ì	
Weber	1	5.33	4.00	4.75	4.00	1	ı	3.25	ŀ	ł	ŀ	
REGIONAL TOTALS	4.83	4.73	3.25	3.88	3.84	3.86	4.30	4.05	4.31	,	3.80	4.12
Central Region												
Juab	4.00	0.00	;	ı	ł	. 1	7.00	ı	ı	;	3.50	
Salt Lake	i	ł	;	I	•	•	;	ı	;	;	:	
Sanpete	ŀ	;	}	6.00	ł	2.00	;	ı	ŀ	!	ŀ	
Tooele	ł	3.38	3.20	3.43	9.00	00.9	3.13	3.60	3.00	;	2.00	
Utah	1	3.50	ŀ	3.45	5.00	5.00	5.00	3.22	ŀ	. }	3.00	
Wasatch	ŀ	;	ı	ı	ŀ	ı	ł	I	1.00	3.00	ŀ	
REGIONAL TOTALS	4.00	3.43	3.20	3.62	4.67	4.20	4.00	3.36	2.00	3.00	3.00	3.55
Southern Region												
Beaver	3.33	2.00	2.67	4.00	4.00	ı	1	1	ŀ	ŀ	ł	
Garfield	3.22	;	4.50	3.29	ı	:	:	1	i	;	;	
Iron	ŀ	;	ï	3.50	1	1	:	1	;	;	1	
Kane	ł	i	1.00	4.75	4.00	;	;	ł	1	:	ł	
Millard	2.67	4.00	4.00	4.25	1.50	ł	3.00	ı	ì	;	ŀ	
Piute	4.00	3.00	3.00		ı	ŀ	1	;	l	:	ł	
Sevier	2.00	4.16	1	4.57	2.33	ı	;	ı	1	;	1	
Washington	ł	1	3.50	5.33	;	ı	ı	ı	i	1	;	
Wayne		0.00	ı	3.50	3.75	ı	1	4.57	1	ł	;	
REGIONAL TOTALS	2.95	3.21	3.53	4.12	2.71	1	3.00	4.57	;	!	!	3.44
Northeastern Region											:	
Daggett	ı	ł	3.75	4.71	3.20	3.89	3.50	ŀ	90.9	:	ł	
Duchesne	ı	;	3.25	2.50	2.50	t	6.00	;	8.00	2.00	ì	
Uintah	I	-	4.00	5.00	3.50	2.20	ı	١	ı	90.9	;	
REGIONAL TOTALS	1	:	3.56	4.52	3.00	3.29	4.33	1	29.9	4.00	:	4.17
Southeastern Region												
Carbon	3.00	3.00	5.00	1	1	ı	1	;	2.00	1	;	
Emery	!	:	ŀ	4.00	4.00	ł	ı	ŀ	ı	;	;	
Grand	1	3.00	3.25	1	2.78	3.00	:	2.00	4.38	3,17	4.00	
San Juan	1.75	3.00	1	3.00	3.00	3.00	1	5.00	3.50	2.50	;	
REGIONAL TOTALS	2.17	3.00	3.60	3.50	2.93	3.00	1	3.50	4.13	2.90	4.00	3,19
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

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Region and						Year					i I	Average
County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1984-93
Northern Region												
Box Elder	38	;	20	0	1	i	200	21	136	I	750	
Cache	ł	11	1	71	<u>\$</u>	114	108	165	45	1	:	
Davis	110	8	S(	232	300	120	426	<b>\$</b>	112	:	:	
Morgan	200	23	4	59	t	17		ı	ł	}	ŀ	
Rich	:	ı	53	0	•	ı	ł	175	79	ŧ	;	
Summit	13	38	ı	906	ŀ	21	100	55	: 1	1	ł	
Weber	:	167	100	267	26	<b>!</b>	1	<b>.</b>	9	ı	· •	
REGIONAL TOTALS	28	28	27	109	8	79	133	63	22		750	74
Central Region									3			
Juah	125	30	156	•	ŀ	1	800	;	!	1	909	
Salt Lake	;	ı	1	400	;	ŧ	} 1	1	:	ļ	3	
Sanpete	1	ı	ı	1.400	;	71	4	ŀ	23	35	: :	
Tooele		536	444	506	1.000	1.000	233	:	200	}	36.	
Utah	ŀ	165	ŀ	229	367	367	113	318	} :	: :	350	
Wasatch	1	;	1	0	1		ı	<u>}</u> ;	ō	150	} ;	
REGIONAL TOTALS	17	183	254	194	683	27	75	180	24	50	'	171
Southern Region										ì		
Beaver	233	33	137	175	164	ı	1	J	;	;	1	
Garfield	ŀ	122	141	195		ł	100	:	ł	!	!	
Iron	;	;	;	1,200		ł	;	;	ł	;	:	
Kane	ı	213	257	383	127	1	;	1	i	ł	1	
Millard	107	133	200	525	001	1	;	:	ı	i	ı	
Piute	200	19	366	ı	1	1	ı	1	i	1	ı	
Sevier	77	155	;	275	738	ı	1	1	!	1	ı	
Washington	1	1	333	950	1	1	ı	ł	ł	ŧ	1	
Wayne	ł	200	1	450	475	t	ŀ	2,250	;	;	ı	
REGIONAL TOTALS	122	140	178	309	247	ı	200	2,250	ļ ;	;		492
Northeastern Region				•								}
Daggett	;	;	300	1,255	230	265	286	ı	1.400	ł	1	
Duchesne	ı	;	51	<b>2</b>	121	ŀ	175	1	225	120	ŀ	
Untah	1	ŀ	009	25	37	84	320	ŀ	1	3.500	9	
REGIONAL TOTALS	ı	i	126	286	120	56	94	:	200	370	s   œ	220
Southeastern Region				}							,	
Carbon	53	33	99	1	ı	ı	ŀ	1	240	ı	ı	
Emery	ı	;	:	200	1	1	ŀ	i	ı	ł	ŀ	
Grand	20	360	120	300	ł	68	ı	300	540	875	467	
San Juan	73	53	;	400	:	400	1	909	909	457	:	
REGIONAL TOTALS	99	123	96	400	   	88	1	450	480	113	467	226
STATE TOTALS	55	101	110	197	166	81	93	112	130	89	384	691
									; !	!		

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

County         Miles         Vehicle         Horse         Walk         Total           Northern Region         30         4           4           Cache                Davis               Morgan               Rich               Summit               Weber               REGIONAL TOTALS         30         4           4           Central Region                Salt Lake                Sanpete                Tooele                Utah                REGIONAL TOTALS	Region and	Vehicle		Hours of E	Effort	
Northern Region   Box Elder   30		Miles	Vehicle	Horse	Walk	Total
Box Elder 30 4 4 Cache						
Cache Davis	<del>=</del>	30	4			4
Davis						
Morgan						
Rich						
Summit						
Weber            4           REGIONAL TOTALS         30         4           4           Central Region         Juab <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td></t<>						
REGIONAL TOTALS       30       4        4         Central Region       Juab	Weber					
Central Region   Juab		30	4			4
Salt Lake	<del></del>			_		
Salt Lake Sanpete Tooele Utah Wasatch REGIONAL TOTALS						
Sampete	_					
Tooele Utah  Wasatch  REGIONAL TOTALS  Southern Region  Beaver  Garfield  Iron  Kane  Millard  Piute  Sevier  Washington  Wayne  Wayne  TREGIONAL TOTALS  Northeastern Region  Daggett  Daggett  Duchesne  Uintah  REGIONAL TOTALS  Southeastern Region  Carbon						
Utah  <	<del>-</del>					
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       Southeastern Region     Carbon           Emery           Grand   72   9     9						
Beaver				,, . <u>.</u>		4
Garfield	<u>-</u>					
Iron			**			
Kane  <						
Millard						
Piute						
Sevier              Wayne              REGIONAL TOTALS              Northeastern Region         10        10         Duchesne              Uintah         2        2         REGIONAL TOTALS         12        12         Southeastern Region              Carbon              Emery           9						
Washington						
Wayne			~=			
REGIONAL TOTALS </td <td><del>-</del></td> <td></td> <td></td> <td></td> <td></td> <td></td>	<del>-</del>					
Northeastern Region   Daggett	•					
Daggett         10        10         Duchesne               Uintah         2        2         REGIONAL TOTALS         12        12         Southeastern Region         Carbon              Emery              Grand       72       9         9						
Duchesne	<del>=</del>			10		10
Uintah           2          2           REGIONAL TOTALS           12          12           Southeastern Region                 Emery                 Grand         72         9           9						
REGIONAL TOTALS           12          12           Southeastern Region   9           9           9						
Southeastern Region         Carbon              Emery              Grand       72       9         9						
Carbon              Emery              Grand       72       9         9						
Emery           Grand     72     9       9						
Grand 72 9 9						
<del></del>		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.

a pr				·		
REGION AND COUNTY	SAMPLE SIZE*	HUNTER-DAYS AFIELD		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		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		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
HATU	23	1,072	896 808	0.75	7.70	6.82
WASATCH	10	492	351	0.71	3.54	2.96
REGIONAL TOTALS	74	3,550	2,882		25.51	24.30
SOUTHERN REGION						
BEAVER	5	281	140		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
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		2.65	3.56
DUCHESNE	2	105	87		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
UNKNOMN	0	0	0	0.00	0.00	0.00
STATE TOTALS	243	13,922	11,865	0.85	100.00	100.00
			<b></b>			<b></b>

<sup>\*</sup>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 PER HUNTER-DAY	% OF PRESSURE	% OF HARVEST
NORTHERN REGION						
BOX ELDER	10	826	474		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 9.45	3.31 10.43
SUMMIT	18	914	720	0.79	9.45 8.36	7.63
WEBER	15 	808 <b></b>	527	0.65	••••••••••••••••••••••••••••••••••••••	7.03
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		1.64	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	ō	0	0	0.00	0.00	0.00
SAN JUAN	Ó	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

<sup>\*</sup>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	1,634 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		0.58	
SALT LAKE	11	404	351		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		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		7.92	8.20
WASHINGTON	1	175	105	0.60	0.64	0.56
WAYNE	4	193	87		0.70	0.47
REGIONAL TOTALS	84	4,658	2,988	0.64	16.93	15.84
NORTHEASTERN REGION					<del></del>	
DAGGETT	13	878	509	0.58	3.19	2.70
DUCHESNE	14	527	298		1.92	1.58
UINTAH		1,388	738		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

<sup>\*</sup>Total hunter trips from questionnaire returns.

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

Region and			Process of the Park Control of the Park Contro		Year			
County	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region		4,500				<del> <b></b> </del>		
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
	1.41	0.99	1.00	0.73	0.72	1.01	0.51	0.51
Weber		1.07	0.88	0.74	0.76	0.92	0.37	0.72
REGIONAL TOTALS	1.12	1.07	0.88	0.74	. 0.76	0.92	0.57	0.72
Central Region	1 1 1	0.86	0 71	0.88	0.65	0.79	0.84	0.56
Juab	1.14		0.71					
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
Northeastern Req	<u>ion</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
Southeastern Req								
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
MEGICINAL TOTALL	T - + T	0.75	0.57	0.05	<u> </u>	<u> </u>	U.U.	0.07
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.

D 1					Year			
Region and	1987	1988	1989	1990	1991	1992	1993	1994
<u>County</u> Northern Region		1900	1303	1990	1331	1334_	1993	1007
Box Elder	1.62	3.83	5.02	6.51	5.53	4.83	1.99	6.15
						17.65	12.36	19.01
Cache	14.98	21.10	15.18	15.47	17.45			
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	<u> 34.93</u>	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		23.94	25.49	25.21	21.83	24.39	24.40	24.04
Southern Region							•	
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
			0.73	1.00	0.65	0.72	1.78	0.47
Wayne	0.48	0.09				21.72	28.06	15.84
REGIONAL TOTALS		18.92	19.92	20.31	22.23	21.12	20.00	13.04
Northeastern Re			0.46		1 65	1 00	1 70	2 70
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 TOTAL		6.14	6.38	7.68	8.87	7,15	10.26	8.20
Southeastern Re								
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 TOTAL	s 3.51	2.40	1.46	3.84	2.29	2.20	4.19	4.01
Unknown Countie	es 0.64	0.21	0.73	0.00	0.00	0.00	1.68	0.00
STATE TOTALS	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

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

Region and					Year			
County	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region			200		1774	+122		
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
	1.24	2.77	5.08	2.92	2.86	2.50	2.66	2.62
Morgan	2.84	5.13	5.53	4.63	4.95	4.04	3.97	3.13
Rich				5.83	7.73	4.78	4.75	7.28
Summit	4.08	4.26	4.63		8.10	9.36	8.93	9.71
Weber	5.14	9.94	9.34	9.21		46.84	42.45	45.37
REGIONAL TOTALS	34.02	46.93	47.60	48.10	48.61	40.04	42.45	40.37
<u>Central Region</u>						1 01	0.00	0.50
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		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
REGIONAL TOTALS	3 27.63	25.46	25.52	23.33	20.13	25. <u>5</u> 0	23.60	23.45
Southern Region								
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
REGIONAL TOTALS		16.88	15,36	17.08	20.95	17.60	19.58	16.93
Northeastern Re		10.00	10,00	17.00	20.33	27809		
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
REGIONAL TOTALS		7.26	8.36	6.85	7.86	7.36	8.62	10.16
Southeastern Re		7.20	0.50	0.03	7.00	7.50	0.02	
	0.76	0.93	1.23	2.36	0.90	0.23	0.78	1.47
Carbon	1.47	1.12	0.61	1.20	0.37	1.00	2.09	1.73
Emery		0.87	0.81	0.79	0.37	1.19	0.89	0.26
Grand	0.65					0.27	0.89	0.26
San Juan	0.47	0.19	0.16	0.28	0.90			
REGIONAL TOTALS	s 3.37	3.12	2.29	4.63	2.45	2.70	3.86	4.09
Unknown Countie	es 1.30	0.32	0.86	0.00	0.00	0.00	1.88	0.00
STATE TOTALS	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

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Table 16.

	Total			Total Harvest	sst				Hunter-Days	Grouse	Grouse/Hunter-Day		Grouse/Hunter	Hunter	
Year	Hunters	Ruffed	Percent	Blue	Percent	Unknown	Percent	Total	Affeld	Ruffed	Blue	Total	Ruffed	Blue	Total
1963	7,425	5,470	40.20	7,372	54.17	992	5.63	13,608	12,313	0.44	99.0	1.11	0.74	66.0	1.83
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	1.96
1965	6,005	3,225	37.20	4,924	56.80	520	00.9	8,669	10,504	0.31	0.47	0.83	0.54	0.82	1.44
1966	6,683	996'9	56.54	4,659	37.81	969	5.65	12,321	12,387	95.0	0.38	0.99	1.04	89.0	1.84
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	69.0	1.86
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	96.0	2.48
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	9.76	0.83	1.72
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	2.50
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	2.39
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	2.56
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	2.57
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	2.85
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	2.11
1976	21,186	23,551	37.13	35,660	56.21	4,225	99.9	63,436	56,422	0.42	0.63	1.12	1.11	1.68	2.99
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	2.21
1978	25,318	30,340	37.20	46,651	57.20	4,567	9.60	81,558	72,732	0.42	0.64	1.12	1.20	1.84	3.22
1979	21,993	23,156	38.69	33,070	55.25	3,625	90.9	59,851	57,404	0.40	0.58	1.04	1.05	1.50	2.61
1980	119,511	15,457	33.96	27,588	09.09	2,477	5.44	45,522	49,899	0.31	0.55	0.91	0.79	1.41	2.33
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	1.95
1982	12,384	7,509	34.48	12,138	55.74	2,131	9.79	21,778	28,767	0.26	0.42	9.76	0.60	96.0	1.76
1983	13,414	11,366	37.78	16,955	56.35	1,767	5.87	30,088	34,530	0.33	0.49	0.87	0.84	1.26	2.24
1984	11,511	6,780	33.24	12,647	62.01	696	4.75	20,396	27,244	0.25	0.46	0.75	0.59	1.10	1.77
1985	12,646	8,701	37.67	13,416	58.09	086	4.24	23,097	31,290	0.28	0.43	0.74	69.0	1.06	1.83
1986	12,117	8,819	36.95	14,156	59.31	894	3.75	23,869	30,312	0.79	0.47	0.79	0.73	1.17	1.97
1987	14,831	15,811	34.88	28,068	61.92	1,447	3.19	45,326	41,428	0.38	99.0	1.09	1.07	1.89	3.06
1988	16,947	19,100	35.66	31,556	58.91	2,906	5.43	53,562	51,726	0.37	19.0	1.04	1.13	1.86	3.16
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	96.0	1.64	2.68
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	2.53
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	2.42
1992	15,000	15,017	33.73	29,146	65.47	355	08.0	44,518	46,136	0.33	0.63	96.0	1.00	1.94	2.97
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	1.51
1994	9,827	806'9	36.62	11,865	62.90	88	0.47	18,862	27,510	0.25	0.43	89.0	0.70	1.21	1.91
Totals															
(1963-94)	462,222	418,384	;	632,623	ı	63,856	;	1,114,863	1,172,327	:	ı	;	ŀ	i	1
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(00-00-11)	255,91	Ciator	10:00	170,04	55.55	4,037	3.70	SCC, CC	36,536	0.30	45.0	6.70	000	1.67	00.4

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Table 17.	

Name         Parente         Trontal         T	Table 17	Total Total	Total	Total	unt regulations	, 1903-1994.					
Grower         Grower         Grower         Hunder         Hunder Days         Season Leagth         Bag Liams           1 mresst         Harvest         Harvest         Harvest         Hunder         Afrida         Open         Choe         Days         Days           5,374         6,685         12,691         6,487         10,566         975         10/15         2**         4           6,566         6,685         12,691         6,487         10,566         975         10/15         2**         4           6,566         4,689         6,605         16,697         10,566         972         10/15         2**         4           1,7048         12,694         8,699         6,005         11,573         972         10/15         2**         4           1,7048         12,736         9,490         11,704         9,24         10,619         3**         4         4           1,5790         13,749         31,901         13,563         29,100         9,25         11,030         9         4         4         4         4         4         4         4         4         4         4         4         4         4         4         4		Ruffed	Blue	Forest	Total	Total				Aggreg	ate
Hurveet         Harvest         Harvest         Affield         Affield         Open         Close         Diags         Diags           5.3470         7.372         13,688         7,435         13,313         7         7         7***         4           5.3470         7.372         13,688         7,435         13,513         6,683         11,337         9,24         10,02         28         4           6,966         4,659         12,331         6,683         12,337         9,24         10,02         28         4           17,048         12,604         37,414         9,249         17,719         37,414         9,249         10,021         28         4           17,048         12,604         17,231         6,683         17,387         9,24         10,02         28         4           17,048         12,604         17,73         9,23         10,02         28         4 </th <th></th> <th>Grouse</th> <th>Grouse</th> <th>Grouse</th> <th>Hunters</th> <th>Hunter Days</th> <th></th> <th>Season Leugth</th> <th></th> <th>Bag Lir</th> <th>nits</th>		Grouse	Grouse	Grouse	Hunters	Hunter Days		Season Leugth		Bag Lir	nits
5,470         7,372         13,688         7,425         12,313         9         9         9         9           5,344         6,685         12,691         6,887         10,566         9,26         10016         21         4           3,324         6,685         12,691         6,688         10,367         9,29         10,713         28         4           6,966         4,689         12,321         6,688         12,387         9,24         10,71         28         4           17,048         12,560         3,414         13,661         9,28         10,721         28         4           9,80         13,515         31,898         12,775         9,28         10,02         32         4           15,590         13,515         31,898         12,775         9,480         9,72         11,00         7         4           15,590         13,515         31,898         12,775         9,480         9,72         11,00         7         4           15,790         13,741         13,486         24,490         9,72         11,00         7         4           15,706         23,486         45,232         13,98         56,422	Year	Harvest	Harvest	Harvest	Affeld	Affeld	Open	Close	Days	Daily	Possession
5,354         6,685         12,091         6,487         10,566         9/26         10/16         21         4           6,966         4,685         12,091         6,487         10,564         10,713         9/24         10/21         28         4           6,966         4,689         12,321         1,387         9/24         10/21         28         4           8,476         6,773         17,526         9,430         17,773         9/24         10/21         28         4           17,048         12,644         13,611         13,627         9/24         10/21         28         4           15,590         13,518         12,773         9/24         11/10         37         4           15,590         13,749         31,901         13,583         29,100         9/25         11/30         67         4           20,648         15,759         13,401         13,583         29,100         9/25         11/30         67         4           44,561         30,700         55,461         20,102         9/22         11/30         67         4         4           15,764         31,786         45,461         20,102         55,289 <td>1963</td> <td>5,470</td> <td>7,372</td> <td>13,608</td> <td>7,425</td> <td>12,313</td> <td>٠.</td> <td>ć</td> <td>***</td> <td>4</td> <td>80</td>	1963	5,470	7,372	13,608	7,425	12,313	٠.	ć	***	4	80
6,966         6,065         10,074         9/25         10,02         28         4           6,966         4,689         13,31         6,683         11,387         9/24         10,021         28         4           8,476         6,773         13,211         6,683         11,237         9/24         10,021         28         4           17,048         12,644         33,414         13,661         26,537         9/24         11023         32         4           15,590         13,515         31,808         12,723         24,572         9/25         1106         22         4           20,648         19,211         42,518         16,640         38,940         9/26         1106         67         4           20,648         19,211         42,518         16,640         38,940         9/26         1106         67         4           20,648         19,211         42,518         16,640         38,940         9/28         1130         67         4           20,648         13,101         13,33         23,100         36,542         9/18         1130         70         4           4,5551         24,43         20,102         37,24<	1964	5,354	6,685	12,691	6,487	10,566	9/26	10/16	21	4	œ
6,966         4,689         12,321         6,683         12,387         9/24         10,21           8,476         6,773         17,526         9,420         17,773         9/23         10,31           17,048         12,604         33,414         13,661         26,537         9/28         10,73           15,590         13,515         31,898         12,733         26,619         9/26         11,06           15,590         13,515         31,898         12,732         26,619         9/26         11,06           15,790         13,515         31,898         12,733         26,619         9/26         11,06           20,648         19,221         45,132         17,588         44,738         9/26         11,06           20,646         45,232         17,588         44,738         9/26         11,30           24,661         23,456         21,486         55,228         9/29         11,30           15,766         23,455         42,471         19,188         11,30         11,30           15,767         23,456         42,471         19,188         8,4746         9/12         11,30           15,457         23,456         24,471         19,1	1965	3,225	4,924	8,669	6,005	105,074	9/25	10/22	28	4	<b>\$</b>
8,476         6,773         17,526         9,420         17,773         9,23         10,31           17,048         12,664         32,414         13,661         26,537         9,28         10,29           17,048         12,604         32,414         13,661         26,537         9,28         10,029           15,590         13,474         31,898         12,732         26,619         9,26         11,06           20,648         19,211         42,518         16,640         38,940         9,23         11/30           20,648         19,211         42,513         17,528         44,738         9,23         11/30           24,561         32,436         62,439         21,920         55,258         9,23         11/30           15,760         23,456         42,461         20,102         9,23         11/30           15,766         23,455         42,461         20,102         9,23         11/30           15,766         23,456         42,461         20,102         9,23         11/30           15,766         23,455         42,461         20,102         9,23         11/30           15,766         23,456         42,461         21,38         74	1966	6,966	4,659	12,321	6,683	12,387	9/24	10/21	28	4	<b>\$</b>
17,048         12,064         32,414         13,061         26,537         9,28         10,29           9,490         10,419         21,498         12,523         26,537         9,28         11,002           15,590         13,515         31,808         12,775         26,619         9,26         11,002           15,759         13,746         31,901         13,363         29,100         9,25         11,002           20,648         19,221         45,518         16,640         38,940         9/25         11/30           7,153         36,846         45,232         11,758         46,4738         9/29         11/30           15,750         23,138         42,461         20,102         36,476         9/13         11/30           15,766         23,455         42,461         20,102         36,429         9/13         11/30           15,766         23,455         42,477         19,188         48,746         9/15         11/30           23,156         23,457         21,238         25,238         25,422         9/18         11/30           11,366         13,460         23,430         24,430         9/10         11/30           11,366         <	1967	8,476	6,773	17,526	9,420	17,773	9/23	10/31	39	4	<b>\$</b>
9,490         10,419         21,498         12,523         24,572         9,77         11,02           15,590         13,515         31,898         12,775         26,619         9,26         11,06           15,759         13,749         31,901         13,463         29,100         9,72         11,00           20,648         19,211         42,518         16,640         38,940         9,72         11,30           24,561         32,236         62,439         17,920         55,458         9/28         11/30           15,750         23,138         42,461         20,102         56,422         9/28         11/30           15,760         23,455         42,477         19,188         56,422         9/18         11/30           15,760         23,455         42,477         19,188         56,422         9/18         11/30           23,540         46,651         81,558         25,318         75,449         9/17         11/30           23,540         46,651         81,558         12,318         48,746         9/19         11/30           23,540         46,651         81,558         12,318         48,746         9/19         11/30	1968	17,048	12,604	32,414	13,061	26,537	9/28	10/29	32	4	<b>o</b> o
15,590         13,515         31,898         12,775         26,619         9726         11/06           16,559         13,749         31,901         13,363         29,100         9/25         11/30           20,648         19,221         42,518         16,640         38,940         9/25         11/30           24,561         23,346         45,222         17,588         44,738         9/22         11/30           15,750         23,436         62,439         21,186         56,579         9/29         11/30           15,766         23,456         62,430         21,186         56,579         9/18         11/30           15,766         23,455         42,447         19,188         46,746         9/18         11/30           23,551         34,660         63,436         21,188         46,746         9/18         11/30           23,560         63,446         19,511         49,899         9/19         11/30           15,477         11,384         48,746         9/19         11/30           4,545         11,329         34,365         9/19         11/30           11,360         16,953         34,305         9/19         11/30      <	1969	9,490	10,419	21,498	12,523	24,572	72/6	11/02	37	4	<b>∞</b>
15,759         13,749         31,901         13,363         29,100         9025         11/30           20,648         19,221         42,518         16,640         38,940         9723         11/30           7,153         36,846         45,232         17,588         44,738         9/22         11/30           24,561         32,236         62,439         21,920         55,288         9/28         11/30           15,750         23,458         42,461         20,102         50,579         9/120         11/30           15,766         23,455         42,461         20,102         56,722         9/18         11/30           23,561         36,670         43,477         19,188         48,746         9/17         11/30           23,470         30,340         59,851         21,993         57,462         9/16         11/30           23,477         27,884         45,522         19,511         49,899         9/16         11/30           15,477         27,894         14,329         34,365         9/16         11/30           4,580         12,138         21,784         28,767         9/18         11/30           8,781         14,451         1	1970	15,590	13,515	31,898	12,775	26,619	9/26	11/06	42	4	<b>∞</b>
20,648         19,221         42,518         16,640         38,940         9723         11/30           7,153         36,846         45,232         17,588         44,738         972         11/30           24,561         32,336         62,439         21,920         55,258         9/28         11/30           15,750         23,138         42,461         20,102         50,579         9/20         11/30           23,551         35,660         63,436         21,186         56,422         9/18         11/30           15,766         23,455         42,477         19,188         48,746         9/17         11/30           15,766         23,455         42,477         19,188         48,746         9/17         11/30           15,766         23,455         42,477         19,188         48,746         9/17         11/30           15,766         23,455         21,395         11,39         57,404         9/15         11/30           15,457         27,589         12,384         12,384         28,740         9/15         11/30           11,366         13,580         11,511         49,899         9/16         11/30           11,581         26	1971	15,759	13,749	31,901	13,363	29,100	9/25	11/30	29	4	<b>∞</b>
7,153         36,846         45,232         17,588         44,738         9722         11130           24,561         32,336         62,439         21,920         55,288         9728         11130           15,750         23,138         42,461         20,102         56,222         9718         11130           23,551         35,660         63,436         21,186         56,422         9718         11130           15,766         23,455         42,477         19,188         48,746         9717         11130           30,340         46,651         81,558         25,318         72,732         9716         11130           15,457         27,588         45,522         19,511         49,899         9720         11130           15,457         27,589         47,329         34,305         9719         11130           11,360         16,955         30,088         13,414         34,530         9719         11130           46,780         12,647         20,396         11,511         27,244         9718         11130           48,791         13,416         23,097         12,446         9712         1130           48,819         14,156         2	1972	20,648	19,221	42,518	16,640	38,940	9/23	11/30	69	4	•
24,561         32,236         62,439         21,920         55,258         9728         11/30           15,750         23,138         42,461         20,102         56,579         9/20         11/30           23,551         35,660         63,436         21,186         56,422         9/18         11/30           15,766         23,455         42,477         19,188         48,746         9/17         11/30           23,456         35,600         63,436         21,186         56,422         9/18         11/30           15,766         23,455         42,477         19,188         48,746         9/17         11/30           23,156         33,070         59,851         21,933         57,404         9/15         11/30           15,457         27,588         45,522         19,511         49,899         9/19         11/30           11,360         15,487         14,329         34,365         9/19         11/30           11,366         15,114         34,530         9/14         11/30           4,780         15,484         24,47         11/30         11/30           4,780         15,484         14,421         34,43         11/30      <	1973	7,153	36,846	45,232	17,588	44,738	9/22	11/30	70	4	•
15,750         23,138         42,461         20,102         56,579         9/20         11/30           23,551         35,660         63,436         21,186         56,422         9/18         11/30           15,766         23,455         42,477         19,188         48,746         9/17         11/30           23,156         23,455         42,477         19,188         48,746         9/17         11/30           23,156         33,070         59,881         21,993         57,404         9/15         11/30           15,457         27,588         45,522         19,511         49,899         9/20         11/30           115,457         27,589         14,329         34,365         9/19         11/30           4,580         12,138         21,778         28,764         9/18         11/30           6,780         12,647         21,384         28,766         9/18         11/30           8,701         13,416         21,344         34,530         9/14         11/30           8,780         12,449         14,428         9/15         11/30           8,819         14,451         34,530         9/14         11/30           11,010	1974	24,561	32,236	62,439	21,920	55,258	87/6	11/30	64	4	<b></b>
23,551         35,660         63,436         21,186         56,422         9718         1130           15,766         23,455         42,477         19,188         48,746         9/17         11/30           30,340         46,651         81,558         25,318         72,732         9/16         11/30           23,156         33,070         59,851         21,993         57,404         9/15         11/30           15,457         27,588         45,522         19,511         49,899         9/20         11/30           8,557         17,882         27,894         14,329         34,365         9/19         11/30           11,366         16,955         30,088         13,414         34,530         9/19         11/30           6,780         12,647         20,396         12,117         34,530         9/14*         11/30           8,701         11,346         23,097         12,646         31,290         9/14*         11/30           8,819         14,415         23,869         12,117         30,312         9/14*         11/30           18,100         31,556         53,562         16,947         51,726         9/14         11/30           1	1975	15,750	23,138	42,461	20,102	50,579	9/20	11/30	7.2	4	œ
15,766         23,455         42,477         19,188         48,746         9/17         11/30           30,340         46,651         81,558         25,318         72,732         9/16         11/30           23,156         33,070         59,851         21,993         57,404         9/15         11/30           15,457         27,588         45,522         19,511         49,899         9/16         11/30           15,457         17,852         27,894         14,329         34,305         9/19         11/30           11,360         12,138         21,778         12,384         28,767         9/18         11/30           6,780         12,647         20,396         11,511         27,244         9/15         11/30           6,780         12,647         20,396         11,511         27,244         9/15         11/30           8,819         14,156         23,697         12,117         30,312         9/14*         11/30           8,819         14,156         23,869         12,117         30,312         9/12         11/30           16,323         27,794         45,487         16,987         50,631         9/19         11/30           11	1976	23,551	35,660	63,436	21,186	56,422	81/6	11/30	74	4	œ
30,340         46,651         81,558         25,318         72,732         9/16         11/30           23,156         33,070         59,851         21,993         57,404         9/15         11/30           15,457         27,588         45,522         19,511         49,899         9/20         11/30           8,557         17,852         27,894         14,329         34,305         9/19         11/30           11,360         16,955         30,088         13,414         34,530         9/19         11/30           6,780         12,647         20,396         11,511         27,244         9/15         11/30           8,701         13,416         23,997         12,646         31,290         9/14*         11/30           8,819         14,156         23,869         12,117         30,312         9/13         11/30           15,811         28,068         45,326         14,831         41,428         9/13         11/30           16,323         27,794         45,487         16,987         50,631         9/09         11/30           11,010         26,115         38,922         14,521         9/12         11/30           15,017         29	1977	15,766	23,455	42,477	19,188	48,746	9/17	11/30	75	4	<b>90</b>
23,156         33,070         59,851         21,993         57,404         9/15         11/30           15,457         27,588         45,522         19,511         49,899         9/20         11/30           8,557         17,882         27,894         14,329         34,365         9/19         11/30           1,509         12,138         21,778         12,384         28,767         9/19         11/30           11,366         16,955         30,088         13,414         34,530         9/19         11/30           6,780         12,647         20,396         11,511         27,244         9/15         11/30           8,701         13,416         23,097         12,646         31,290         9/14*         11/30           8,819         14,156         23,869         12,117         30,312         9/13         11/30           8,819         14,156         23,869         12,117         30,312         9/13         11/30           16,381         28,688         45,326         14,831         41,428         9/12         11/30           16,310         26,115         38,922         14,521         9/18         11/30           15,017         29,1	1978	30,340	46,651	81,558	25,318	72,732	9/16	11/30	76	4	œ
15,457         27,588         45,522         19,511         49,899         9/20         11/30           8,557         17,822         27,894         14,329         34,305         9/19         11/30           1,509         12,138         21,778         12,384         28,767         9/19         11/30           11,366         12,647         20,396         11,511         27,244         9/15         11/30           8,701         13,416         23,097         12,617         30,312         9/15         11/30           8,819         14,156         23,869         12,117         30,312         9/13         11/30           15,811         28,068         45,326         14,831         41,428         9/13         11/30           19,100         31,556         53,562         16,947         51,726         9/11         11/30           11,010         26,115         38,922         14,421         9/16         11/30           15,017         29,146         44,518         15,000         46,136         9/14         11/30           6,508         11,040         18,147         12,029         36,390         9/11         11/30           6,908         11,86	1979	23,156	33,070	59,851	21,993	57,404	9/15	11/30	77	4	90
8,557         17,852         27,894         14,329         34,365         9/19         11/30           7,509         12,138         21,778         12,384         28,767         9/18         11/30           11,366         16,955         30,088         13,414         34,530         9/17         11/30           6,780         12,647         20,396         11,511         27,244         9/15         11/30           8,819         14,156         23,869         12,117         30,312         9/14         11/30           15,811         28,068         45,326         14,831         41,428         9/13         11/30           19,100         31,556         53,562         16,947         51,726         9/11         11/30           16,323         27,794         45,487         16,987         50,631         9/09         11/30           11,010         26,115         38,922         14,591         44,452         9/14         11/30           15,017         29,146         44,518         15,000         46,136         9/12         11/30           6,508         11,040         18,147         12,029         36,390         9/11         11/30           6,50	1980	15,457	27,588	45,522	119,511	49,899	9/20	11/30	77	4	<b>\$</b>
7,509         12,138         21,778         12,384         28,767         9/18         11/30           11,366         16,955         30,088         13,414         34,530         9/17         11/30           6,780         12,647         20,396         11,511         27,244         9/15         11/30           8,819         14,156         23,869         12,117         30,312         9/14         11/30           15,811         28,068         45,326         14,831         41,428         9/12         11/30           19,100         31,556         53,562         16,947         51,726         9/11         11/30           16,323         27,794         45,487         16,987         50,631         9/09         11/30           11,010         26,115         38,922         14,591         44,452         9/09         11/30           12,073         21,310         34,897         14,421         42,517         9/14         11/30           6,650         11,040         18,147         12,029         36,390         9/11         11/30           6,908         11,865         18,862         9,827         27,510         9/10         11/30	1981	8,557	17,852	27,894	14,329	34,305	61/6	11/30	73	4	<b>90</b>
11,366         16,955         30,088         13,414         34,530         9/17         11/30           6,780         12,647         20,396         11,511         27,244         9/15         11/30           8,701         13,416         23,097         12,646         31,290         9/14*         11/30           8,819         14,156         23,869         12,117         30,312         9/13         11/30           15,811         28,068         45,326         14,831         41,428         9/12         11/30           19,100         31,556         53,562         16,947         51,726         9/11         11/30           16,323         27,794         45,487         16,987         50,631         9/09         11/30           11,010         26,115         38,922         14,591         44,452         9/08         11/30           12,073         21,310         34,897         14,421         42,517         9/14         11/30           6,650         11,040         18,147         12,029         36,390         9/11         11/30           6,908         11,865         18,862         9,827         27,510         9/10         11/30	1982	7,509	12,138	21,778	12,384	28,767	81/6	11/30	74	4	<b>o</b> c
6,780         12,647         20,396         11,511         27,244         9/15         11/30           8,701         13,416         23,097         12,646         31,290         9/14*         11/30           8,819         14,156         23,869         12,117         30,312         9/13         11/30           15,811         28,068         45,326         14,831         41,428         9/12         11/30           19,100         31,556         53,562         16,947         51,726         9/11         11/30           16,323         27,794         45,487         16,987         50,631         9/09         11/30           11,010         26,115         38,922         14,591         44,452         9/08         11/30           12,073         21,310         34,897         14,421         42,517         9/14         11/30           6,650         11,040         18,147         12,029         36,390         9/11         11/30           6,508         11,865         18,862         9,827         27,510         9/10         11/30	1983	11,366	16,955	30,088	13,414	34,530	9/17	11/30	75	4	œ
8,701         13,416         23,097         12,646         31,290         9/14*         11/30           8,819         14,156         23,869         12,117         30,312         9/13         11/30           15,811         28,068         45,326         14,831         41,428         9/12         11/30           19,100         31,556         53,562         16,947         51,726         9/11         11/30           16,323         27,794         45,487         16,987         50,631         9/09         11/30           11,010         26,115         38,922         14,591         44,452         9/08         11/30           12,073         21,310         34,897         14,421         42,517         9/14         11/30           6,650         11,040         18,147         12,029         36,390         9/11         11/30           6,908         11,865         18,862         9,827         27,510         9/10         11/30	1984	6,780	12,647	20,396	11,511	27,244	9/15	11/30	77	4	œ
8,819         14,156         23,869         12,117         30,312         9/13         11/30           15,811         28,068         45,326         14,831         41,428         9/12         11/30           19,100         31,556         53,562         16,947         51,726         9/11         11/30           16,323         27,794         45,487         16,987         50,631         9/09         11/30           11,010         26,115         38,922         14,591         44,452         9/08         11/30           12,073         21,310         34,897         14,421         42,517         9/14         11/30           15,017         29,146         44,518         15,000         46,136         9/12         11/30           6,650         11,040         18,147         12,029         36,390         9/11         11/30           6,908         11,865         18,862         9,827         27,510         9/10         11/30	1985	8,701	13,416	23,097	12,646	31,290	9/14*	11/30	78	4	<b>∞</b>
15,811         28,068         45,326         14,831         41,428         9/12         11/30           19,100         31,556         53,562         16,947         51,726         9/11         11/30           16,323         27,794         45,487         16,987         50,631         9/09         11/30           11,010         26,115         38,922         14,591         44,452         9/08         11/30           12,073         21,310         34,897         14,421         42,517         9/14         11/30           15,017         29,146         44,518         15,000         46,136         9/12         11/30           6,650         11,040         18,147         12,029         36,390         9/11         11/30           6,908         11,865         18,862         9,827         27,510         9/10         11/30	1986	8,819	14,156	23,869	12,117	30,312	9/13	11/30	79	4	<b>∞</b>
19,100         31,556         53,562         16,947         51,726         9/11         11/30           16,323         27,794         45,487         16,987         50,631         9/09         11/30           11,010         26,115         38,922         14,591         44,452         9/08         11/30           12,073         21,310         34,897         14,421         42,517         9/14         11/30           15,017         29,146         44,518         15,000         46,136         9/12         11/30           6,650         11,040         18,147         12,029         36,390         9/11         11/30           6,908         11,865         18,862         9,827         27,510         9/10         11/30	1987	15,811	28,068	45,326	14,831	41,428	9/12	11/30	08 8	4	<b>∞</b>
16,323         27,794         45,487         16,987         50,631         9/09         11/30           11,010         26,115         38,922         14,591         44,452         9/08         11/30           12,073         21,310         34,897         14,421         42,517         9/14         11/30           15,017         29,146         44,518         15,000         46,136         9/12         11/30           6,650         11,040         18,147         12,029         36,390         9/10         11/30           6,908         11,865         18,862         9,827         27,510         9/10         11/30	1988	19,100	31,556	53,562	16,947	51,726	9/11	11/30	83	4	<b>∞</b>
11,010         26,115         38,922         14,591         44,452         9/08         11/30           12,073         21,310         34,897         14,421         42,517         9/14         11/30           15,017         29,146         44,518         15,000         46,136         9/12         11/30           6,650         11,040         18,147         12,029         36,390         9/11         11/30           6,908         11,865         18,862         9,827         27,510         9/10         11/30	1989	16,323	27,794	45,487	16,987	50,631	60/6	11/30	83	4	<b>∞</b>
12,073         21,310         34,897         14,421         42,517         9/14         11/30           15,017         29,146         44,518         15,000         46,136         9/12         11/30           6,650         11,040         18,147         12,029         36,390         9/11         11/30           6,908         11,865         18,862         9,827         27,510         9/10         11/30	1990	11,010	26,115	38,922	14,591	44,452	80/6	11/30	83	4	<b>&amp;</b>
15,017         29,146         44,518         15,000         46,136         9/12         11/30           6,650         11,040         18,147         12,029         36,390         9/11         11/30           6,908         11,865         18,862         9,827         27,510         9/10         11/30	1991	12,073	21,310	34,897	14,421	42,517	9/14	11/30	7.1	4	<b>*</b>
6,650     11,040     18,147     12,029     36,390     9/11     11/30       6,908     11,865     18,862     9,827     27,510     9/10     11/30	1992	15,017	29,146	44,518	15,000	46,136	9/12	11/30	79	4	<b>∞</b>
6,908 11,865 18,862 9,827 27,510 9/10 11/30	1993	6,650	11,040	18,147	12,029	36,390	9/11	11/30	83	4	<b>∞</b>
	1994	806'9	11,865	18,862	9,827	27,510	9/10	11/30	81	4	œ

<sup>\*</sup> Season opener changed to the second Saturday in September from the third Saturday in September.

<sup>\*\*</sup> From 1950 to 1963 a grouse stamp was requried to hunt any grouse. In 1964, the entire state was opened to hunting without a stamp.

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'		ALL	ALL HUNTS					COMPLETE HUNTS	LE HONE	S	
Region and	Total	Total	Total	Total	Birds/	Complete	Total	Total	Total	Birds/	Birds/
County	Parties	Hunters	Hours	Birds	$100~\mathrm{Hr}$	Hunts	Hunters	Hours	Birds	Hunter	100 Hr
Northern Region											
Box Elder	;	ı	ı	1	ł	;	1	;	ŀ	:	!
Cache	<b>\$</b>	133	572	79	14	\$	133	572	62	0.59	14
Davis	1	;	:	ı	1	;	1	ł	ł	ŀ	ł
Morgan	1	ŀ	ł	ı	;	ŀ	I	ŀ	ı	1	ŀ
Rich	139	128	497	92	15	139	128	497	92	0.59	15
Summit	ı	ŀ	;	:	,	ŀ	1	ı	ŀ	1	ı
Weber	1	ł	;	;	1	l <sup>'</sup>	I	i	;	ı	ı
REGIONAL TOTALS	223	261	1,069	155	14	223	197	1,069	155	0.59	14
Central Region											
Juah	1	ŀ	;	:	;	i	ı	1	!	1	1
Salt Lake	1	i	ŀ	ı	;	1	ı	;	;	ı	ł
Sanpete	1	ŀ	ŀ	1	ļ	i	I	;	ł	ı	ı
Tooele	1	i	:	!	1	i	1	;	:	1	ı
Utah	;	;	:	ı		i	ı	;	:	1	1
Wasatch	ı	:	•	ı	1	ł	1	;	:	1	1
REGIONAL TOTALS	1	1	:	. 1	ţ	;	1	ı	:	ı	1
Southern Region											
Beaver	ł	;	:	;	ŀ	i	i	ł	ı	ı	i
Garfield	1	ı	;	ŀ	;	:	ı	;	1	i	i
Iron	ı	ı	i	ı	ı	ï	I	ŀ	:	ì	ł
Капе	ı	ı	:	1	1	;	ı	i	1	ı	ı
Millard	1	ı	:	;	ı	;	ı	;	1	ŀ	1
Piute	ı	1	:	:	ŀ	;	ı	;	ı	ì	ì
Sevier	!	1	;	1	•	;	ı	:	ı	ŀ	1
Washington	1	I	1	!	:	:	1	:	!	i	t
Wayne	ŀ	1	1	'	1	1	,		ı	ı	;
REGIONAL TOTALS		1	:			-	-	-	ı	1	:
Northeastern Region											
Daggett	t	ı	ı	ŀ	•	;	ì	:	1	1	ı
Duchesne	1	ı	;	ı	ŀ	1	ı	i	ı	ŀ	;
Uintah	28	69	244	14	9	22	55	188	14	0.25	7
REGIONAL TOTALS	28	69	244	14	9	22	55	188	14	0.25	7
Southeastern Region											
Carbon	1	ŀ	i	ŀ	ŀ	;	;	:	i	;	ı
Emery	1	ŀ	i	ŀ	;	:	ŀ	ŀ	;	;	;
Grand	ı	1	;		ŀ	ŀ	ı	ŧ	i	1	ł
San Juan	:	1	-	:	:	:	1	:	ŀ	:	l
REGIONAL TOTALS	:	ı	ł	1	:	1	ł	ł	1	;	1
STATE TOTALS	251	330	1,313	169	13	245	316	1,257	169	0.53	13

1988-94.	
checks,	
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determined by	
unter success trend as d	
success	
Forest grouse l	
Table 19. For	

	1989		1990		1991		1992		1993		1994	
Region and	Birds/	Birds/	Birds/	Birds/	Birds/	Birds/	Birds/	Birds/	Birds/	Birds/	Birds/	Birds/
County	Hunter	100 Hr	Hunter	100 Hr	Hunter	100 Hr	Hunter	100 Hr	Hunter	100 Hr	Hunter	100 Hr
Northern Region												
Box Elder	2.60	45	2.00	300	1.43	30	}	;	1	:	1	ł
Cache	0.63	<b>∞</b>	;	ı	0.23	ţ	95.0	;	;	;	0.59	14
Davis	0.50	<del>6</del>	i	1	;	ı	ı	1	:	;	•	ł
Morgan	1	ţ	1	1	;	ı	ι	;	;	:	ı	;
Rich	0.32	7	1	ı	ţ	:	0.77	-1	;	ì	0.59	15
Summit	1	1	!	ì	1	I	ł	ŧ	ŀ	;	ŀ	ŀ
Weber	0.53	19	1.33	33	0.32	ı	:	ı	i	;		1
REGIONAL TOTALS	0.62	14	1.60	57	0.47	55	0.70	 	ı	ŀ	0.59	14
Central Region									;	;		
Juab	2.30	26	11	ŀ	ŀ	1	1	ı	ŀ		ı	ł
Salt Lake	ı	1	1	ŀ	ł	ł	ŀ	ł	i	ŀ	ŀ	;
Saupete	98.0	33	;		I	1	ı	t	;		ŀ	I
Tooele	2.00	29	1.60	47	0.22	œ	:	ļ	i	ŀ	ŀ	I
Utah	1.90	39	0.97	31	0.41	11	0.82	18	ł	;	ì	ı
Wasatch	ı	1	ŧ	1	1	1	i	1	1	1	:	1
REGIONAL TOTALS	1.41	33	1.04	33	0.36	11	0.82	18		:	1	1
Southern Region									;	1		
Beaver					ı	i	;	:	ı	ŀ	ì	ı
Garfield	2.75	550	:	1	;	i	ı	ı	ì	;	1	1
Iron	2.25	1	,	ŀ	;	;	1	ı	ı	;	1	1
Kane	:	ı	ı	ŀ		;	ı	١.	ı	;	1	1
Millard	;	1	:	ı	,	1	ı	ł	t	:	ı	1
Piute	ŀ	;	:	1	•	1	1	t	ı	ı	I	1
Sevier	i	;	:	ì	ı	1	ı	ı	ı	1	1	ı
Washington	I	ı	ł	i	:	1	1	ı	1	1	1	ı
Wаупе 	,	1	1	1	1	:	:	1	1	1	ı	1
REGIONAL TOTALS	2.50	1000	ŀ	1	1	ı	;	ŀ	ŧ	1	1	t
Northeastern Region									;	I		
Daggett	0.85	37	09.0	6	2.22	43	1.17	<u></u>	;	;	1	1
Duchesne		ı	ı	;	·	;	;	ı	ı	1	ı	ı
Uintah	0.32	7	1.95	99	3,33	111	1.50	100	1	1	0.25	7
REGIONAL TOTALS	0.40	6	1,34	30	2.50	22	1.25	29	;	1	0.25	7
Southeastern Region									ł	:		
Carbon	1.20	32	ŀ	;	1	ţ	ł	ı	•	1	!	ł
Emery	ı	ı	!	ì,	ı	;	;	ı	1	1	:	
Grand	ı	1	:	i	1	1	ŀ	ı	:	1	1	:
San Juan	,	1	:	1	:	1	ı	1	;	:	:	1
REGIONAL TOTALS	1.20	32	1		:	ţ		ť		:	-	ł
STATE TOTALS	99.0	16	1.14	33	0.50	32	0.74	87	1	1	0.53	13

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

Region and	Sample_		Adults			Young		Young/	Young/
County	Size	M	F	Total	M	F	Total	100 Adults	100 Hens
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		·							
Juah									
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
UZZZZ X VXAAD	17/		- 10	7#	JJ	<u> </u>		220	シアサ

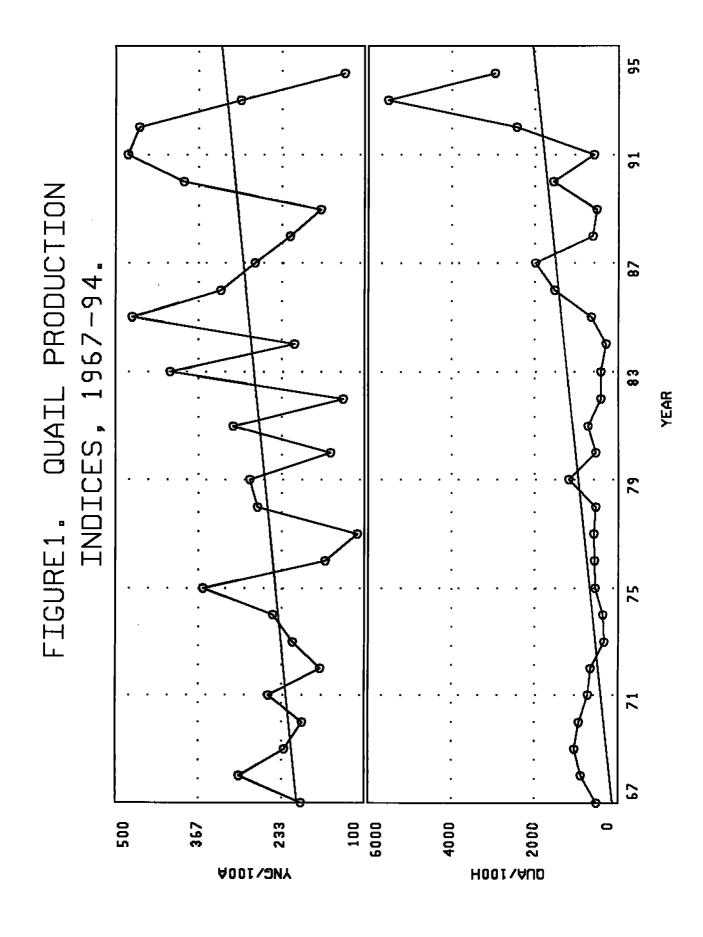
Table 21. Sex and age composition of harvested ruffed grouse, 1994.

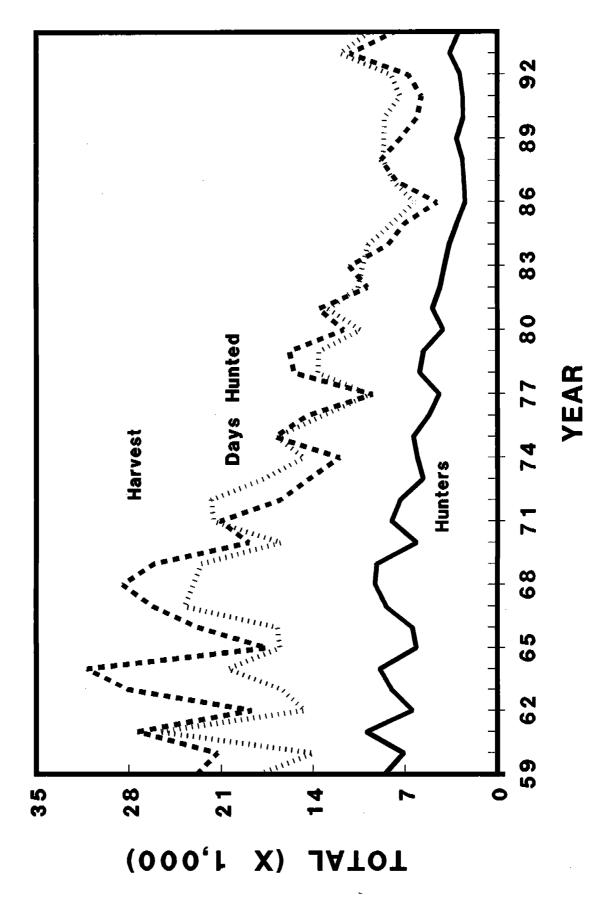
Region and	Sample_		Adults			Young		Young/	Young/
County	Size	M	F	Total	M	F	Total	100 Adults	100 Hens
Northern Region									
Box Elder									
Cache	47			15			32	213	
Davis									
Morgan			~-						
Rich									
Summit									
Weber									
REGIONAL TOTALS	47			15			32	213	
Central Region						<del>.</del>		- 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	
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.

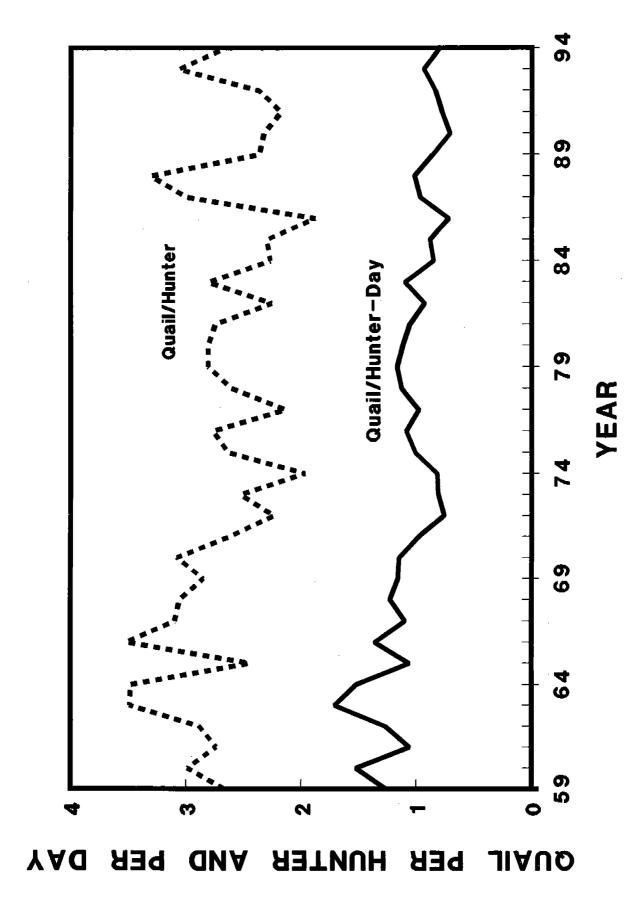
Statewide harvest statistics, when compared to 1993, showed a decrease in total hunters and in total harvest. Hunter success (birds per hunter-day) decreased 15 percent and remained below average statewide. Hunter-days afield decreased 19 percent from 1993. The Southern Region accounted for 50 percent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





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



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

#### 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>1994</u>	Percent 1993	change from Average
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:

		Percent	change from
	<u>1994</u>	<u>1993</u>	Average
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.

1994.	
inventory,	
summer	
Quail	
Table 1.	

Bringle   Bringle   Adults   Voing   Adults   Adu			Distinct			Mixed Young	/oung										
County   # Adults Young Brood Adults Young Stool   Adults   Young Stool   Adults   Young Stool   Adults   Young Stool   Adults   Young Stool   Adults   Young Stool   Adults   Young Stool   Adults   Young Stool   Adults   Young Stool   Adults   Young Stool   Young St	Region and		Broods	S	Mean	& Adu		dults w/o	Total	Total		Vehicle		Hours of Effort	f Effort		Birds/
NALTOTALS   NALT	County	#	Adults	Young	Brood	Adults	Young	Young	Adults	Young	100 Adults	Miles	Vehicle	Horse		Total	100 Hr
NAL TOTALS	Northern Region				:												
NALTOTALS  NALTOTALS	Box Elder	ŀ	1	ŀ	1	1	;	1	;	!	ì	;	1	!	ı	ı	:
Placegoon   Plac	Cache	1	1	ı	1	ŀ	;	;	;	:	;	1	1	1	ł	;	;
NAL TOTALS  NAL TO	Davis	:	ŀ	ŀ	ł	ŀ	i	;	i	:	1	;	ŀ	ı	ı	I	;
NAL TOTALS    Region	Morgan	1	1	ł	1	}	;	!	;	!	ŀ	1	!	1	;	t	;
Region	Rich	1	ł	;	ŧ	ł	ŀ	;	1	:	:	;	ŀ	;	í	ŀ	ł
Region	Summit	ı	ŀ	1	:	1	i	ŀ	1	ł	ŀ	ł	ł	}	!	i	;
Region   R	Weber	1	t	ŀ	1	ŀ	ł	ł	;	;	;	ŀ	1	1		ŧ	ı
Region   Negion   N	REGIONAL TOTALS	۱	1		,	1		1	1	:	:	:					
He had to the control of the control	Central Region																
h NNAL TOTALS  NAL	Inah	;	!	1	ŀ	1	1	1									
Hart Totals   19 48   114   6.00   19   21   35   102   135   132   132   134	Salt Lake			l		ł	i	l	<b>!</b>	ŀ	ŀ	:	l	<b>!</b>	!	ł	ı
HALTOTALS  HALTOTALS	Sant Lane	ļ	!	ı	ŀ	ı	ı	1	1	ŀ	ı	1	:	;	ı	:	ŀ
Hydra Totals	Sanpete	I	1	!	ŀ	ı	ı	1	1	ŀ	ı	1.	;	1	1	1	ı
HANTAL TOTALS  The Region  The	Tooele	ı	!	1	I	ł	1	1	1	ſ	1	;	ı	;	ı	1	ı
HALTOTALS	Utah	1	;	ł	ı	ŀ	ı	;	ŀ	i	1	:	;	i	ı	1	ł
MAL TOTALS	Wasatch	!	;	1	ŧ	1	ł	ı	ŀ	į	ŀ	;	ŀ	i	4	1	ŀ
### Region  ###################################	REGIONAL TOTALS	؛	;		: ا	,				1	;	1	1				:
A	Southern Region																
Harman Region   Harman Regio	Веачег	1	;	;	:	ł	;	;	;	ł	ł	;	ł	ı	ŀ	ì	;
gton* 19 48 114 6.00 19 21 35 102 135 132	Garfield	1	:	1	:	;	ı	;	ł	ı	;	;	1	ı	;	;	;
gton*  19 48 114 6.00 19 21 35 102 135 132	Iron	ł	f	i	:	;	ı	١	ı	ı	ŀ	١	1	ı	ı	1	!
geon* 19 48 114 6.00 19 21 35 102 135 132	Капе	ı	1	ŀ	,	1	' ¦	: :		l				ı	l	ı	ŀ
gton* 19 48 114 6.00 19 21 35 102 135 132	Millord						:	ł	l	ł	l	ŀ	I	ŀ	ı	ł	;
gton* 19 48 114 6.00 19 21 35 102 135 132	ivital u	ŀ	1	I	;	ı	ł	1	ı	ŀ	ı	;	ı	ı	ı	1	ı
gton* 19 48 114 6.00 19 21 35 102 135 132	Flute	;	ł	ı	;	ı	:	ı	ı	!	I	1	1	1	ı	ì	ł
ggon* 19 48 114 6.00 19 21 35 102 135 132	Sevier	;	1	t	i	ı	ŀ	1	ı	ŀ	ı	ł	1	1	ŧ	i	;
ANAL TOTALS   19   48   114   6.00   19   21   35   102   135   132	Washington*	19	84	114	00.9	61	21	32	102	135	132	ł	ı	1	;	<b>00</b>	2,963
Astern Region	Wayne*	ı	1	ı	1	:	i	1	:	1	1	ŀ	ı	ŀ	;	ŀ	;
satern Region  t  ne  no  NAL TOTALS  natern Region  m  NAL TOTALS  natern Region  m  NAL TOTALS  natern Region	REGIONAL TOTALS	19	48	114	6.00	19	21	35	102	135	132		<b> </b> ;	ı	ł	8	2,963
ne	Northeastern Region																
NAL TOTALS	Daggett	ł	1	;	ı	!	ı	1	1	1	1	ı	1	ı	ł	1	ł
INAL TOTALS	Duchesne	1	;	1	1	:	i	ı	ı	1	1	ł	1	ı	ł	ŀ	ŀ
NAL TOTALS	Uintah	ı	ł		1	:	1	1	ı	;	1	ŀ	ŀ	ł	i	;	r
nstern Region	REGIONAL TOTALS	:	1	;	ŀ	1	1		1	۱	1			1	;	ı	:
nn	Southeastern Region																
m NAL TOTALS	Carbon	;	i	i	1	•	ı	ı	;	1	1	ł	ł	ı	ŀ	ŀ	ŀ
MAL TOTALS	Emery	:	ŀ	i	1	1	1	1	;	1	1	ı	1	ŀ	ŀ	ŀ	ŀ
	Grand	ł	ı	1	;	;	ŀ	ł	;	ì	:	ì	;	ı	ł	ı	ł
	San Juan	1	;			;	!	1	;	ı	ŀ	i	ł	ŀ	i	i	ŀ
	REGIONAL TOTALS	ŀ	:	ı	1	1	ŀ	ı	;		:		۱.	1	ı		;
21 35 102 135	STATE TOTALS	19	48	114	6.00	19	21	35	102	135	132		  -		;	œ	2.963
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Region and						Year						Average
County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1984-1993
Northern Region												
Box Elder	;	I	ł	ı	I	ŀ	!	ï	;	ŀ	ł	
Cache	:	ı	ı	1	:	ì	1	•	ŀ	ı	ŀ	
Davis	;	;	ı	!	;	1	:	ŀ	;	i	1	
Morgan	1	1,050	1	:	1	i	ı	;	;	1	1	
Rich	:	ı	ı	1	;	ı	;	ł	I	ı	ı	
Summit	:	:	ı	ŀ	:	1	ŀ	.I	ï	:	ı	
Weber	125	ł	ł	1,400	ŀ	ı	ı	:	;	!	ŀ	
REGIONAL TOTALS	125	1,050	:	1,400	224	1	959	;	1	,	1	691
Central Region												
Juab	ł	;	ŀ		;	1	ı	;	ı	;	1	
Salt Lake	ŀ	ı	I	:	ı	1	1	1	ı	ł	ł	
Sanpete	ı	ı	ı	ŀ	ŀ	ŀ		ı	1	1	t	
Tooele	1	i	ı	i	ı	ŧ	;	ı	ı	ı	ŀ	
Utah	;	700	700	220	ı	ł	;	006	1	;	;	
Wasatch	:	ì	1	i	1	ı	ı	1	ı	ŀ	ı	
REGIONAL TOTALS	:	700	700	220		;	ı	006	;	;	:	630
Southern Region			!									
Beaver	:	;	:	Г	;	1	ı	1	ı	;	;	•
Garfield	ı	ł	ŀ	i	ı	ı	ı	ŀ	ŀ	ŀ	ŀ	
Iron	1	ı	!	1	1	ı	I	ŀ	ŀ	ŀ	ŀ	
Kane*	ı	:	:	1	1	ı	1	;	ŀ	;	1	
Millard	133	138	4	545	790		179	1	ı	;	•	
Piute	:	:	1	1	ı	1	1	;	ŀ	;	;	
Sevier	ı	:	ı	1	1	ſ	1	ł	,	1	;	
Washington*	224	571	412	250	126	194	367	;	1	794	132	
Wayne*	:	1	1	;	1	1	1	ł	ŀ	1	ŧ	
REGIONAL TOTALS	213	434	456	272	242	194	252	;	;	294	132	295
Northeastern Region									i			
Daggett	;	ł	i	•	ŀ	ı	1	ŀ	ł	ı	ŀ	
Duchesne	1	1	i	1	300	1	1	375	ŀ	400	ı	
Uintah	1	ì	ı	;	126	420	199	ı	370	333	i	
REGIONAL TOTALS	;	ŀ	i	1	177	420	199	375	370	336	,	391
Southeastern Region												
Carbon	ı	:	ı	;	ŀ	1	ł	ı	191	ı	;	
Emery	1	1	1	ì	1	ı	ŀ	ł	ı	ŧ	1	
Grand	ı	1	ı	ł	;	1	1	;	;	;	;	
San Juan	1		11	-	:	1	ł	;	:	ı	1	
REGIONAL TOTALS	1	ŀ	ı	-	:	1	1	:	191	ŀ	ı	191
STATE TOTALS	412	213	473	331	276	220	391	480	462	299	132	356
*Washinoton Kane and Wavn	Wayne Co	untion Can	tholls and	· oll othors	Colifornia	liono						

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

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1984   1985   1986   1987   1988   1989   1990   1991   1993   1994	Region and						Year						Average
Pregion 1	County	1984	1985	1986	1987		1989	1990	1991	1992	1993	1994	1984-93
Frequence of the state of the s	Northern Region					1							
Region  NAL. TOTALS  A.A. TOTAL	Box Elder	;	1	;		:	:	1	1	1	ľ	!	
AALTOTALS  AALTOTALS	Cache	ŀ	!	:	ı	1	1	ł	1	ŀ	:	;	
National State   Nati	Davis	ı	;	ŀ	;	6.33	ŀ	11.80	:		:	;	
NALTOTALS   3.75	Morgan	ı	10.50	ŀ	ł	ł	I	1	ł	;	;	!	
NAL. TOTALS	Rich	ı	1	:	ļ	ţ	1	ŀ	ļ	:	;	ŀ	
Nat. Totals	Summit	1	ŀ	ŀ	;	;	1	;	:	ŀ	!	ŀ	
NAL TOTALS	Weber	3.75	:	;	ŀ	14.00	1	. 1	ı	ł	ŀ	ļ	
Region	REGIONAL TOTALS	ŀ	10.50	1	14.00	5.33	1	11.80	:	;	1	,	10.41
ALTOTALS   Color   C	Central Region												
Colored   Colo	Juab	:	ŀ	ŀ	1	ı	ŀ	ł	1	ı	ŀ	ł	
No.   1.00   1	Salt Lake	;	;	;	ı	ı	ŀ		1	ł	ł	ł	
AL TOTALS	Sanpete	ŀ	ł	;	ŀ	ł	;	;	:	;	;	;	
VAL TOTALS	Tooele	ŀ	ł	1	١	ı		ł	ļ	ł	ŀ	. 1	
AL TOTALS	Utah	l	7.00	7.50	11.00	;	;	;	. 6	1	:	!	
Region   1.80   7.50   11.00       9.00         9.00   .	Wasatch	ŀ	1	1	ŀ	ŀ	;	. 1		ŀ	1	;	
thegion	REGIONAL TOTALS		7.00	7.50	11.00	:	;	1	9.00	1	1	!	8.63
ton* 5.09 8.43 7.85 5.59 4.64 11.00 6.05 6.00  AL TOTALS	Southern Region		:										
ton* 5.09 8.43 7.85 5.59 4.64 11.00 6.05 6.00  AL TOTALS 8.15 4.50 6.70 7.40 6.25  AL TOTALS 8.15 4.50 6.70 7.40 6.25  AL TOTALS 8.15 4.50 10.45 9.00 7.50 7.50 6.70  7.50 6.70  7.50 6.70  7.50 6.70 6.70  7.50 6.70  7.50 6.70 6.70  7.50 6.70  7.50 6.70 6.70  7.50 6.70  7.50 6.70  7.50 6.70  7.50 6.70  7.50 6.70  7.50 6.70  7.50 6.70  7.50 6.70  7.50 6.70  7.50 6.70  7.50 6.70  7.50 6.70  7.50 6.70  7.50 6.70  7.50 6.70 6.70  7.50 6.70  7.50 6.70 6.70  7.50 6.70 6.70  7.50 6.70 6.70 6.70 6.70 6.70 6.70 6.70 6.7	Beaver	1	1	1	ï	i	:	1	1	1	!	!	
tern Region  1.	Garfield	ŀ	1	ł	ı	ı	•	ŀ	;	1	:	ı	
tern Region  AL TOTALS	Iron	ł	1	1	i	:	;	ı	ł	ı	:	ı	
ton* \$ 5.09	Kane*	ı	1	ŀ	ı	ł	ì	:	1	ı	1	1	
ton* 5.09 8.43 7.85 5.59 4.64 11.00 6.05 6.00  AL TOTALS 5.06 8.56 6.64 6.16 7.22 11.00 6.05 6.00  stern Region 8.50 4.50 6.70 7.40 7.00 1.40 7.00 1.40 7.00 1.40 7.00 1.40 7.00 1.40 7.00 1.40 7.00 1.40 7.00 1.40 7.00 1.40 7.00 1.40 7.00 1.40 7.00 1.40 7.00 1.40 7.00 1.40 7.00 1.40 7.00 1.40 7.00 1.40 7.00 1.40 7.00 7.40 7.40 7.40 7.40 7.40 7.40 7	Millard	4.00	9.00	1.80	12.00	11.28	i	12.50	1	ł	1		
ton* 5.09 8.43 7.85 5.59 4.64 11.00 6.05 6.00 stern Region.  e	Piute	ı	ŀ	ı	ı	ı	ŀ	1	1	ŀ	!	;	
ton* 5.09 8.43 7.85 5.59 4.64 11.00 6.05 6.00  AL TOTALS 5.06 8.56 6.64 6.16 7.22 11.00 6.05 6.00  stern Region  AL TOTALS 8.15 4.50 6.70 7.40 7.00  AL TOTALS 5.06 8.62 6.70 6.62 7.25 4.50 10.45 9.00 7.50 6.07  COLUMN S.06 8.62 6.70 6.62 7.25 4.50 10.45 9.00 7.50 6.07  COLUMN S.06 8.62 6.70 6.62 7.25 4.50 10.45 9.00 7.50 6.07  COLUMN S.06 8.62 6.70 6.62 7.25 4.50 10.45 9.00 7.50 6.07  COLUMN S.06 8.62 6.70 6.62 7.25 4.50 10.45 9.00 7.50 6.07  COLUMN S.06 8.62 6.70 6.62 7.25 4.50 10.45 9.00 7.50 6.07 6.00	Sevier	ı	1	1	ŀ	ı	ì	1	1	ł	;	1	
ttern Region  e  AL TOTALS  5.06  8.56  6.64  6.16  7.22  - 11.00  - 6.05  6.00  - 6.05  6.00  - 6.05  6.00  - 6.05  6.00  - 6.05  6.00  - 6.05  6.00  - 7.40  7.40  7.40  7.40  7.40  - 7.40  7.40  - 7.40  7.40  - 7	Washington*	5.09	8.43	7.85	5.59	4.64	1	11.00	ł	ł	6.05	9.00	
ttern Region	Wayne*	1	ł	ŀ	-		;	1	:	:	. 1		
tern Region  e	REGIONAL TOTALS	5.06	8.56	6.64	6.16	7.22	:	11.00	:	;	6.05	00.9	7.24
tern Region	Northeastern Region												
NAL TOTALS 9.00 4.00 4.00 8.50 4.50 6.70 7.40 7.00 stern Region 8.15 4.50 6.70 7.40 6.25 stern Region 8.15 4.50 6.70 7.40 6.25 1.40 6.25 1.40 6.25 1.40 6.25 1.40 6.25 1.40 6.25 1.40 6.25	Daggett	ı	:	:	}	;	ŀ	ı	ŀ	;	;	ı	
NAL TOTALS 8.50 4.50 6.70 7.40 7.00 stern Region 7.67 -	Duchesne	ı	;	1	;	9.00	;	1	ł	l	4.00	!	
NAL TOTALS 8.15 4.50 6.70 7.40 6.25 stern Region  NAL TOTALS 8.15 4.50 6.70 7.67	Uintah	1	1	:	!	8.50	4.50	6.70	ŀ	7.40	7.00	ı	
nstern Region	REGIONAL TOTALS	**		:		8.15	4.50	6.70	:	7.40	6.25	!	99.9
nu NAL TOTALS 5.06 8.62 6.20 6.62 7.25 4.50 10.45 9.00 7.50 6.07 6.00	Southeastern Region												
MAL TOTALS 5.06 8.62 6.70 6.62 7.25 4.50 10.45 9.00 7.50 6.07 6.00	Carbon	ŀ	1	:	1	1	ì	1	1	1.67	ł	ł	
ALS	Emery	ţ	ı	:	;	ı	i	t	ı	ı	1	ı	
ALS 7-7-7 7-67 7-7-7 7-7-7 7-7-7	Grand	ŀ	١,	;	1	1	i	ı	ı	ı	;	ı	
ALS - 7.67 - 7.67 7.67 7.67 7.06 8.62 6.70 6.62 7.25 4.50 10.45 9.06 7.50 6.07 6.00	San Juan	ı	1	;	1	1	1	1	1	1	!	1	
5.06 8.62 6.70 6.62 7.25 4.50 10.45 9.06 7.50 6.07 6.00	REGIONAL TOTALS	:		:	-		1	1		19.1	ı	I	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

<sup>\*</sup>Washington, Kane and Wayne Counties, Gambel's quail; all others, California quail.

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Region and						Year						Average
County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1984-93
Northern Region												1
Box Elder	i	;	1	ì	1	:	ı	ŀ	:	;	1	
Cache	}	ì	:	;	:	ŀ	;	ŀ	;	;	:	
Davis	1		ı	ı	1,100	:	ì	i	;	;	1	
Morgan	;	ł	:	;	ı	!	;	;	1	1	ì	
Rich	ı	ı	1	i	ı	:	;		:	ŀ	1	
Summit	1	ŀ	:	ı	;	;	;	ŀ	ı	ı	ŀ	
Weber	ı		1	1,500	ļ	i	;	;	;	ı	1	
REGIONAL TOTALS	,	:	;	1,500	1,100	;	;	;	,	  - 	ı	867
Central Region						i						
Juab	ł	:	:	i	ŀ	;	ŀ	;	i	ı	ı	
Salt Lake	:	ł	1	i	1	:	;	;	:	1	i	
Sampete	ł	:	:	ì	;	;	ł	ı	;	:	ì	
Tooele	;	;	1	i	:	ŀ	ł	;	ı	1	ı	
Utah	;	320	2,000	1,600	ı	!	ļ	1,000	I	ı	:	
Wasatch	I	ł	ť		1	;	;	. 1	ï	ì	ŀ	
REGIONAL TOTALS -	;	320	2,000	1,600	ı	:	1	1,000	;	;		1,230
Southern Region												
Beaver	;	1	ŀ	.1	1	ı	;	1	:	ì	ı	
Garfield	;	;	;	ı	ı	ł	ł	1	ł	ı	:	
Iron	1	1	ı	ł	1	ŀ	ŀ	ı		ŀ	ŀ	
Kane*	ł	•	i	1	ì	:	:	1	1	÷	ŧ	
Millard	111	344	298	1,303	1,271	;	975	ı	1	1	ı	
Piute	1	ı	1	ı	:	ı	;	;	ı	1	1	
Sevier	;	•	:	ı	1	ì	;	;	ı	1	ı	
Washington*	380	783	1,604	2,029	530	53	1,050	;	ł	7,788	2,963	
Wayne*	ł	ł	1	ı	ı	ŀ		;	ł	ı	ı	
REGIONAL TOTALS	357	663	1,484	1,958	527	53	1,013	;	:	7,788	2,963	1,730
Northeastern Region												
Daggett	ł	1	ł	1	ŀ	:	ı	;	ł	;	;	
Duchesne	1	i	:	I	356	!	ı	475	;	250	1	
Uintah	1	1	1	1	1,800	371	191		4,700	3,033	:	
REGIONAL TOTALS	1	;	:	ı	717	371	191	475	4,700	1,920	:	820
Southeastern Region												
Carbon	;	:	ł	I	1	•	1	ı	1,300	;	;	
Emery	;	ı	1	1	ı	1	1	1	:	:	:	
Grand	ı	1	:	1	1	ŀ	:	;	;	1	1	
San Juan	;	-	1	1	:	:	1	1	1	1	1	
REGIONAL TOTALS	:	:	-	1	-	:	t	;	1,300	ı	ı	1,300
STATE TOTALS	297	645	1,519	1,984	622	524	1,564	280	2,433	5,531	2,963	1,570
"Washington, Kane and Wayne Counties, Gambel's quail; all others,	Wavne Co	unation Gar	uhel's anail	all others		Gora						

"Washington, Kane and Wayne Counties, Gambel's quail; all others, California q

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			· <b>-</b>			
BOX ELDĒR	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	. <u></u>					
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					<b></b>	
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

<sup>\*</sup>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					Year			
County	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region								
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
Central Region								
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
Southern Region								
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
Northeastern Region								
Daggett	<sub>0.50</sub>	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
Southeastern Region	on							
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

<sup>\*</sup>Closed Season

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

Region and					Year			
County	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region								
Box Elder	0.96	1.50	2.53	4.05	1.51	4.45	0.68	1.35
Cache	1.92	0.37*			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*	0.00*	0.17*	
Rich	0.00	0.18*			0.00*	0.00*	0.00*	
Summit	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
Central Region								
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*			0.00*	0.00*	0.17*	
Tooele	0.64	6.79*			0.60*	0.00*	0.00*	
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*	
REGIONAL TOTALS	25.32	30.00	26.41	22.30	30.43	16.76	9.17	19.10
Southern Region	20.02	30.00	20.11	22.00	50115			277
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
Northeastern Regi		33.11	40.17	23.31	30.20	21.77	31.44	47.22
	0.32	0.00	0.00	0.00	0.30	0.00	0.00	0.00
Daggett			9.55	7.10		18.33	9.00	7.64
Duchesne	4.16 3.84	6.41	2.92	13.85	6.63	18.85	6.11	9.44
Uintah	8.33	11.32 17.73		20.95	8.13			
REGIONAL TOTALS		1/./3	22.47	20.95	15.06	37.18	15.11	17.08
Southeastern Reg		0.56	1 40	2 20	- An	4 07	0.60	0 00
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	100.00	100.00	100.00	100.00	100.00	100.00	100.00

<sup>\*</sup>Closed Season

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

Region and					Year			
County	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region						2222	#222	4,7,7
Box Elder	4.02	1.92	2.41	4.09	3.06	3.08	1.75	1.45
Cache	4.33	1.73*			1.41*	1.10*	1.75*	
Davis	4.33	9.61	2.17	6.25	1.41	3.30	1.27	1.99
Morgan	0.30	0.19*			0.00*	2.64*	1.11*	
Rich	0.00	0.19*			0.00*	0.00*	0.00*	
Summit	0.30	0.57*			0.71*	0.00*	0.00*	
Weber	2.78	3.84	7.95	7.69	3.06	5.51	4.77	6.51
REGIONAL TOTALS	16.08	8.07	14.70	21.39	9.65	15.64	10.65	12.12
Central Region	10.00		17.70	21.00	7.03	10.04	10.00	12.12
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*			0.94*	0.00*	0.16*	
Tooele	0.61	5.57*	0.96*		1.65*	1.54*	0.48*	
Utah	30.65	20.76	21.69	16.11	22.12	19.16	16.54	13.56
Wasatch	1.23	20.76 4.61*				0.22*		
REGIONAL TOTALS	38.99	38.26	26.03	28.85	<u>0.00*</u> 27.06		0.00*	
Southern Region	30.99	30.20	20.03	20.00	27.06	23.13	18.13	18.08
	0 00	0.00	0.00	0.00	0.00	6.00	0.16	1 01
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
REGIONAL TOTALS	26.62	16.52	28.92	25.00	41.89	18.28	42.93	44.12
Northeastern Req		-						
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 <u> </u>	7.12	13.26	<u>15.18</u>	10.10	13.41	17.62	9.06	9.95
REGIONAL TOTALS	9.90	20.57	28.44	15.63	18.12	32.82	17.17	15.55
Southeastern Req	<u>ion</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
REGIONAL TOTALS	8.34	4.22	1.93	9.13	3.06	10.13	8.90	9.95
							<u> </u>	
Unknown counties	0.00	2.30	0.00	0.00	0.24	0.00	2.23	0.18
STATE TOTALS	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

<sup>\*</sup>Closed Season

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

	Total	Total	Hunter-Days	Quail Per	Quail Per
Year	Hunters	Harvest	Afield	Hunter-Day	Hunter
951	3,856	6,362	7,069	0.90	1.65
952	2,694	6,105	5,500	1,11	2.27
953	2,676	5,753	4,494	1.28	2.15
954	3,855	7,479	8,696	0.86	1.94
955				0.17	2.10
956					2.26
957		·			1.85
958					3.73
959	8,554	22,854	18,174	1.26	2.67
960	7,117	21,272	13,971	1.52	2.99
961	9,980	27,362	25,746	1.06	2.74
962	6,462	18,710	14,660	1.27	2.89
963	8,059	28,088	16,383	1,71	3.49
964	8,951	31,189	20,510	1.52	3.48
965	6,163	17,532	16,528	1.06	2,45
966	6,465	22,771	16,720	1.36	3.52
967 .	8,455	26,187	23,806	1.10	3.10
968	9,302	28,469	23,132	1.23	3.06
969	9,160	26,119	22,529	1.16	2.85
970	6,141	18,896	16,452	1.15	3.08
971	8,039	21,082	21,595	0.98	2,62
972	7,380	16,504	21,779	0.76	2.24
973	5,654	14,324	17,777	0.81	2.53
974	6,097	12,005	14,702	0.82	1.97
975	6,397	16,903	16,805	1.01	2.64
976	5,215	14,454	13,261	1.09	2.77
977	4,446	9,496	9,646	0.98	2.14
978	5,924	15,491	13,649	1.13	2.61
979	5,632	15,821	13,550	1.17	2.81
980	4,156	11,690	10,400	1.12	2.81
981	4,946	13,586	12,843	1.06	2.75
982	4,368	9,870	10,575	0.93	2.26
983	4,012	11,248	10,232	1.10	2.81
984	3,654	8,303	9,805	0.85	2.27
985	3,065	7,051	7,994	0.88	2.30
986	2,432	4,574	6,326	0.72	1.88
987	2,549	7,648	7,918	0.97	3.00
988	2,671	8,849	8,682	1.02	3.31
989	3,111	7,384	8,607	0.86	2.37
990	2,614	6,091	8,561	0.71	2.33
991	2,644	5,775	7,393	0.78	2.18
992	2,861	6,788	8,068	0.84	2.37
993	3,649	11,192	11,952	0.94	3.07
994	2,936	7,822	9,721	0.80	2.66
otals	2,700	7 30 22 2	791WI	V.0V	2.00
1951-94)	212,342	579,099	536,211		
verages		2,2,9022	UN UŞMAL		
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.

								Year												Average
Index	1976	1976 1977 1978 1979 1980 1981	1978	1979	1980	1861	1982	1983	1984	1985	1986	1987	1988	1989	1990	1661	1992	1993	1994	1976-93
Total Young	61	I	19	253	72	37	82	114	166	47	163	348	59	35	33	802	415	465	135	135
Total Adults	83	i	29	11	25	25	33	14	98	11	8	139	41	18	6	35	128	158	102	33
Total Quail	114	17	98	330	124	62	118	128	252	28	211	487	106	53	42	243	543	623	237	178
Young per 100 Adults	115	ŀ	353		138	148	258	814	193	427	340	250	126	194	367	594	324	294	132	300

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Region and County Northern Region Box Elder Cache Davis Morgan Rich Summit	Total Parties	Total Hunters	Total Hours	Total Birds	Birds/ 100 Hr	ů.	Complete	Total	Total	Total Birds	Birds/ Hunter	Birds/ 100 Hr
County Northern Region Box Elder Cache Davis Morgan Rich Summit	Parties	Hunters	Hours	Birds	100 Hr		Manage		Hours	Birds	Hunter	100 Hr
Northern Region Box Elder Cache Davis Morgan Rich Summit							rithics	Hunters				
Box Elder Cache Davis Morgan Rich Summit												
Cache Davis Morgan Rich Summit	;	:	;	ı	:	1	;	ŀ	ŀ	1	1	ı
Davis Morgan Rich Summit	ł	:	ı	ı	:	1	ŧ	ļ	ı	1	1	1
Morgan Rich Summit Wabor	ŀ	ŀ	i	i	1	:	ł	:	1	1	1	!
Rich Summit Waber	1	;	;	1	1	ı	;	ı	1	;	:	1
dummit Wabar	ł	ŀ	ł	ŀ	ł	;	ŀ	1	;	1	ı	I
Wohor	;	ì	;	1	1	1	;	1	٠,	1	ı	ì
	;	:		i	1	ı	;	ŀ	1	;	1	,
REGIONAL TOTALS	1	1	:	1	1	ı	1	;	:	:	1	-
Central Region	;	1	1	;	ı	;	!	1	;	ŀ	i	1
Juab	ŀ	1	:	;	ł	ı	;	ł	ŀ	1	1	1
Salt Lake	:	1	1	ı	t	ı	ŀ	ţ	ı	;	1	1
Sanpete	ł	ŧ	ŀ	1	ŀ	ì	ı	ŀ	ŀ	;	1	1
Tooele	!	1	1	!	;	ŀ	ı	:	;		1	1
Utah	1	ı	1	1	;	ŀ	ı	:	;	;	ŀ	1
Wasatch	1	1	1	!	;	;	:	:		1		1
REGIONAL TOTALS	ı	,	1	ı	:	1	1	:	1	:	1	1
Southern Region	:	1	1	1	:	1	ŧ	1	1	:	1	+
Beaver	1	1	ı	I	;	ı	ŀ	ŀ	;	;	ŀ	1
Garfield	ı	ı	ı	1	ŀ	ı	ŀ	ı	:	1	ı	;
Iron	ì	ı	ì	1	;	ı	ŀ	i	;	!	ŀ	!
Kane	ı	i	;	ŀ	;	ı	ŀ	ı	1	:	1	!
Millard	;	i	;	1	:	i	;	ŀ	ŀ	í	ŀ	1
Piute	;	i	i	t	:	ı	:	ł	1	i	;	1
Sevier	i	ï	i	1	:	ı	ŀ	;	ı	ŀ	;	ı
Washington	ł	;	;	ł	1	1	1	:	1	;	:	ı
Wayne	:	•	:	:	-		ı	:	:	:	ŧ	١
REGIONAL TOTALS	-	:	:	1	ı	1	-	:	:		1	1
Northeastern Region	;	;	1	1	ŀ	;	ı	ŀ	1	1	ì	1
Daggett	ł	;	!	ŀ	ŀ	ŀ	ŀ	ı	ı	ı	•	ŀ
Duchesne	;	ŀ	ŀ	1	ı	1	;	ı	ı	1	ı	!
Uintah	1	:	ı	1	;	1		1	1		1	1
REGIONAL TOTALS	1	1	1	1			:	ŀ	+	1	:	ı
Southeastern Region												
Carbon	;	1	1	1	ł		!	i	ŀ	1	ı	1
Emery	33	6	17.7	18	7		11	25	86	6	0.36	6
Grand	1	ı	ï	ı	;		ı	ţ	!	1	ł	1
San Juan	1	ı	ì	ı	1		ı	:	:	1	1	1
REGIONAL TOTALS	33	92	271	18	7		11	25	86	6	0.36	6
STATE TOTALS	33	92	271	18	7		11	25	86	6	0.36	6

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</u>	change from
	<u> 1994</u>	1993	Average
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.

#### <u>Harvest</u>

# 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</u>	<u>change from</u>
	<u>1994</u>	1993	<u>Āverage</u>
Hungarian partridge hunters	1,899	<del>-</del> 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

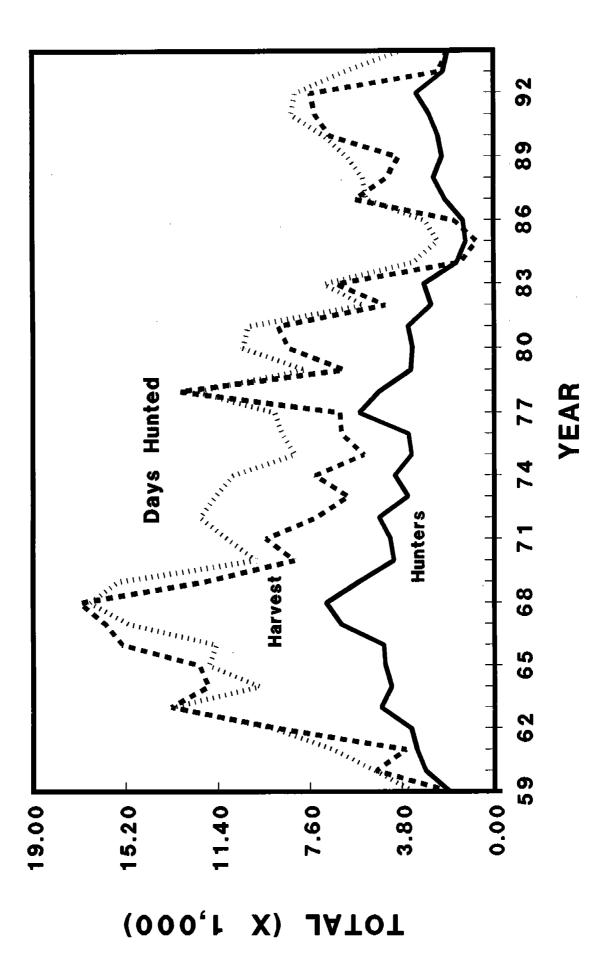
Hungarian partridge hunters and hunting pressure decreased in 1994. Success decreased 16 percent from 1993. Harvest was 74 percent below the long-term average.

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.



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

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

1994.	I
inventory,	
summer	
partridge	
Hungarian	
able 1.	

		Distinct			Mixed Young											
Region and		Broods		Mean	& Adults		Adults w/o	Total	Total	Young/ Vehicle	Vehicle		Hours of Effort	f Effort		Birds/
County	#	Adults	Adults Young	Brood	Adults	Adults Young	Young	Adults	Young	100 Adults Miles	Miles	Vehicle Horse Walk	Horse		Total	100 Hr
Northern Region																
Box Elder	•	0	0	1	0	0	0	•	•	ì	;	i	<b>∞</b>	ı	<b>90</b>	1
Cache	ŀ	1	1	ł	1	. 1	1	:	1	!	ı	ı	1	ŀ	0	1
Davis	:	1	ı	1	I	ł	ı	ı	1	:	ı	1	1	ì	:	ı
Morgan	;	ŀ	ı	;	1	:	ı	;	!	:	1	I	1	i	:	ı
Rich	1	:	ł	ł	1	ŀ	ı	1	ı	1	ı	1	ı	;	:	ı
Summit	:	;	1	1	1	1	i	1	!	ŀ	ŧ	i	1	i	;	ı
Weber	1	:	!	1	:	:	;	:	1	1	:		ı		ı	ı
REGIONAL TOTALS	0	0	0	!	0	0	0	0	0	1	1	-	8	;	8	1
Central Region																
Juah	1	ļ	1	!	ŀ	ŀ	ł	1	1		;	ŀ	ı	;	;	ì
Salt Lake	!	ŀ	:	;	1	-1	;	:	I	i	;	ı	ŀ	ŀ	ł	1
Sanpete	!	1	ı	;	ł	ţ	ł	1.	1	:	ı	ŀ	ŀ	ŀ	ı	1
Tooele	ł	I	;	1	1	;	;	1	I	ŀ	ı	ŀ	ŀ	1	ı	;
Utah	ł	1	!	ı	1	1	;	ŀ	ı	ì	ı	ł	ı	ı	ı	;
Wasatch	ł	;	1	1	1	:	;	1	i	;	ł	:	!	:	;	1
REGIONAL TOTALS	!	۱	1	1	ŗ	1	ł	!	1	;	1	1	1	1	1	1
Southern Region Beaver Garfield																
Iron																
Kane						_	NOT APPLICABLE	ICABLE								
Millard																
Piute																
Sevier																
Washington																٠
Wayne																
REGIONAL TOTALS																
Northeastern Region																
Daggett	ı	ı	1	I	1	ı	ı	ł	1	1	;	1	!	ı	ı	1
Duchesne	1	1	ı	ı	ļ	ı	ı	i	!	1	1	1	1	ı	1	;
Uintah	1	;	ł	1	!	ı	ı	;	:	1	!	ł	ı	1	:	;
REGIONAL TOTALS	1	ļ	1	1	;	ł	ı	;	1	1	ı	1	ı	1	1	1
Southeastern Region																
Carbon								*								
Emery						_	NOT APPLICABLE	CABLE								
Grand																
San Juan																
REGIONAL TOTALS									}							
STATE TOTALS	=	0	0	1	0	0	0	0	0	1	;	1	<b>x</b>	,	<b>∞</b>	;

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Region and						Year						Average
County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1984-93
Northern Region												
Box Elder	;	i	450	<b>2</b> 69	307	1	396	793	711	ı	ł	
Cache	ŀ	ł	;	1	400	ł	433	;	260	ı	ŀ	
Davis	ŀ	;		ŀ	ı	1	:	;	ł	ı	1	
Morgan	1	ı	ı	ı	ı	1	;	ŀ	i	1	1	
Rich	ŀ	i	;	ł	1	1	ŀ	1	;	;	ŀ	
Summit	:	i	I	1	1	;	;	1	ŀ	1	;	
Weber	ŀ	I	;	1	•	1	!	;	;	;	1	
REGIONAL TOTALS	1	-	450	569	324	425	400	793	550	;	1	202
Central Region												
Juab	;	ŀ	ŀ	;	ı	i	1	ľ	800	:	ŀ	
Salt Lake	;	ł	1	1	:	1	!	:	;	:	1	
Sanpete	ŀ	;	;	1	1	1	;	1	;	;	ł	
Tooele	ŀ	ŀ	1	ł	1	1	!	:	;	:	1	
Utah	J	;	:	;	1	1	ì	1	1	1	ŀ	
Wasatch	;	;	400	ł	400	ı	1	ı	1	1	ŀ	
REGIONAL TOTALS	!	;	400		400	1	1	ī	800	1	1	533
Southern Region												
Beaver												
Garfield												
Iron												
Kane			NOT APPLICABLE	<b>ICABLE</b>								
Millard												
Piute												
Sevier												
Washington												
Wayne												
REGIONAL TOTALS												
Northeastern Region												
Daggett										ł	1	
Duchesne										ł	ŀ	
Uintah										750	!	
REGIONAL TOTALS										750	1	750
Southeastern Region								1				
Carbon												
Emery			NOT APPLICABLE	ICABLE								
Grand												
San Juan												
REGIONAL TOTALS												
STATE TOTALS	:	1	440	269	328	425	400	793	267	750	;	534

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	1984	1005	1007	1007	1000	1080	1000	1001	1003	1993	1004	1084.03
		1705	1980	1201	1700	1707	177V	1321	1324	7//2	1777	1704-7J
Northern Region												
Box Elder		ł	18.00	11.88	8.60	8.50	8.25	12.50	9.00	ı	ı	
Cache	;	1	;	1	ı	ı	6.00	:	ŧ	ı	ı	
Davis	:	:	;	!	:	1	:	ŀ	;	ı	i	
Morgan	:	!	;	:	ŀ	;	ı	:	;	:	i	
Rich	;	:	ï	i	1	ı	:	!	;	;	ì	
Summit		ı	;	ŀ	1	ŀ	ı	1	1	:	1	
Weber	!	1	ł	1	ı	;	;	-	:	-	;	
REGIONAL TOTALS		,	18.00	11.88	8.60	8.50	8.90	12.50	00.6	-		11.05
Central Region												
Juab	ŀ	ı	ŀ	ì	ı	ł	ŀ	1	8.00	ŧ	1	
Salt Lake	ŀ	ì	ŀ	·	1	ì	ŧ	ı	1	1	ŀ	
Sanpete	1	:	:	1	:	ı	i	ı	;	ı	ŀ	
Tooele		1	1	:	ı	1	;	ı	ı	ì	ı	
Utah	:	;	}	1	1	1	1	ł	i	ŀ	ı	
Wasatch	:	1	4.00	1	4.00	1	1	ľ	:	1	;	
REGIONAL TOTALS	1	1	4.00	1	4.00		1	:	8.00	1	i	5.33
Southern Region												
Beaver												
Garfield												
Iron												
Kane	Ż	NOT APPLICABLE	ICABLE									
Millard												
Piute												
Sevier												
Washington												
Wayne												
REGIONAL TOTALS												
Northeastern Region												
Daggett										1	ŀ	
Duchesne										;	;	
Uintalı										15.00	:	
REGIONAL TOTALS										15.00	1	15.00
Southeastern Region												
Carbon												
Emery	Ż	NOT APPLICABLE	ICABLE									
Grand												
San Juan												
REGIONAL TOTALS												
STATE TOTALS	:	ŀ	11.00	11.88	7.83	8.50	8.90	12.50	8.83	15.00	1	10.56

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Trend of Hungarian partridge observed per 100 hours.
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Table 4.

Region and						Year						Average
County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1984-93
Northern Region												
Box Elder	ı	•	96	561	438	1	529	327	96	1	;	
Cache	1	ł	1	:	;	88	238	;	257	1	ł	
Davis	1	ı	1	:	ł	ŀ	ł	1	ı	1	1	
Morgan	ı	:	ļ	ł	ŀ	;	ı	ı	1	ŀ	1	
Rich	1	1	1	ł	ŀ	ŀ	ı	ł	ł	1	1	
Summit	ı	ł	:	ł	ł	;	;	ı	:	ł	ł	
Weber	:	1	!	:	;	;	ı	ı	ŀ	:	:	
REGIONAL TOTALS		0	.50	435	240	88	517	327	110	1	1	221
Central Region												
Juah	ŀ	•	1	ł	ŀ	ì	ı	ı	450	ŀ	;	
Salt Lake	1	1	ŀ	ł	;	;	;	ł	;	;	1	
Sanpete	ı	ì	ł	ł		ŀ	ı	ı	;	ł	1	
Tooele	ł	ŀ	ŀ	1	;	;	ŀ	i	ŀ	1	j	
Utah	;	;	ŀ	:	:	ŀ	ŀ	i	ł	ı	ı	
Wasatch	!	ł	200	;	200	ŀ	:	i	;	1	ı	
REGIONAL TOTALS	;	:	200	1	200	1	:	;	450	1	ı	483
Southern Region								i				
Beaver												
Garfield												
Iron												
Kane		NOT APPLICABLE	LICABLE									
Millard												
Pinte												
Sevier												
Washington												
Wayne												
REGIONAL TOTALS												!
Northeastern Region			:									
Daggett										1	1	
Duchesne										ì	ł	
Uintah										8,500	ı	
REGIONAL TOTALS										8,500	ı	8,500
Southeastern Region											   	
Carbon												
Emery		NOT APPLICABLE	LICABLE									
Grand												
San Juan												
REGIONAL TOTALS												
STATE TOTALS	:	0	93	435	248	88	517	327	118	9	;	218

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

and nunting	pressure	by region and	county,	1334.		
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	<b>17</b> 5	140	0.80	4.59	7.34
SUMMIT	1	35	0	0.00	0.92	0.00
WEBER	2	87	ō	0.00	2.29	0.00
REGIONAL TOTALS	92	3,550	1,863	0.52	92.67	97.25
CENTRAL REGION		~ ~ <del>~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ </del>			· <b></b>	
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	ī	35	52	1.50	0.92	2.75
UTAH**	1	17	0	0.00	0.46	0.00
WASATCH**	Ō	O	0	0.00	0.00	0.00
REGIONAL TOTALS	4	105	52	0.50	2.75	2.75
SOUTHERN REGION					<del></del> -	
BEAVER**	1	17	0	0.00	0.46	0.00
GARFIELD**	ō	0	ō	0.00	0.00	0.00
IRON**	Õ	ō	ō	0.00	0.00	0.00
KANE**	ŏ	ŏ	ŏ	0.00	0.00	0.00
MILLARD**	ő	ŏ	ŏ	0.00	0.00	0.00
PIUTE**	ŏ	ŏ	ŏ	0.00	0.00	0.00
SEVIER**	ĭ	17	ŏ	0.00	0.46	0.00
WASHINGTON**	ō	0	ő	0.00	0.00	0.00
WAYNE**	ŏ	ő	ŏ	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	Ó	0.00	0.00	0.00
SAN JUAN**	0	Ō	ō	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
~~~			<b>-</b>			

<sup>\*</sup> 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	······································	<u></u>		· <u>.</u>	Year			
County	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region	1307							<del> ·</del>
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		<u> </u>						
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	0120							
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 Regi			_0.00	0.00	0.00	1.40	0.50	0.00
Daggett 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 Regi		0.00	0.00	0.00			0.00	0.00
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
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

<sup>\*</sup>Closed Season

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

Region and				· · · · · · · · · · · · · · · · · · ·	Year			
County	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region			<u> </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
Central Region								
Juab	1.28	0.00*		0.00*	0.00*	0.47	0.00	0.00
Salt Lake	0.00	0.37*		0.00*	0.00*	0.24*	0.00	0.00*
Sanpete	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*	0.47*	3.33	0.00*
Wasatch	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
Southern Region								
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*
Piute	0.00	0.00	0.00*	0.00*	0.00*	0.00*	0.00	0.00
Sevier	1.71	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*
Wayne	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
Northeastern Reg	<u>ion</u>							
Daggett	0.00	0.00*		0.00*	1.18*	0.00*	0.00	0.00*
Duchesne	0.00	0.00*		0.00*	0.24*	0.00*	0.00	0.00*
Uintah <u> </u>	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
Southeastern Reg								
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	100.00	100.00	100.00	100.00	100.00	100.00	100.00

<sup>\*</sup>Closed Season

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

Region and					Year			
County	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region		<del>,                                    </del>						
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
Central Region		· · · · ·					-	
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		4.43	9.36	5.42	12,27	2.75
Southern Region	·							
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*	0.22*	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
Northeastern Req								
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
Southeastern Reg								
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	100.00	100.00	100.00	100.00	100.00	100.00	100.00

<sup>\*</sup>Closed Season

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

	Total	Total	Hunter-Days	Huns Per	Huns Per
Year	Hunters	Harvest	Afield	Hunter-Day	Hunter
955				<b></b>	0.39
956					0.89
957					0.45
958		-			1.34
959	1,846	1,820	3,354	0.54	0.99
960	2,847	4,877	4,929	0.99	1.71
961	3,205	3,648	6,645	0.54	1.13
962	3,440	8,970	9,153	0.98	2.61
963	4,676	13,343	13,291	1.00	2.85
964	4,249	11,812	9,688	1.22	2.78
965	4,498	12,183	11,798	1.03	2,71
966	4,549	15,348	11,473	1.34	3.37
967	6,321	16,049	15,105	1.06	2.54
968	6,935	17,089	16,674	1,02	2.46
969	5,591	11,966	15,515	0.77	2.14
970	4,128	8,236	9,818	0.84	2.00
971	4,276	9,407	11,011	0.85	2.20
972	4,754	7,335	12,135	0.60	1.54
973	3,566	6,014	11,516	0.52	1.69
974	4,103	7,389	10,789	0.68	1.80
975	3,409	5,358	8,216	0.65	1.57
976	3,517	6,287	8,753	0.72	1.79
977	5,557	6,360	9,058	0.70	1.79
978	4,743	12,969	12,328	1.05	2.73
979	3,435	6,200	7,787	0.80	1.80
980	3,359	8,466	10,366	0.82	2.52
981	3,545	8,916	10,147	0.88	2.52
982	2,590	4,475	5,379	0.83	1.73
983	2,889	6,506	6,998	0.93	2.25
984	1,523	1,360	3,309	0.41	0.89
985	1,157	707	2,314	0.31	0.61
.986	1,257	1,627	2,843	0.57	1.30
987	2,010	5,711	5,246	1.09	2.53
.988	2,471	4,424	5,392	0.82	1.79
.989	2,136	3,920	6,035	0.65	1.83
1990	2,305	6,770	6,976	0.97	2.94
991	2,662	7,376	8,367	0.88	2.77
992	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

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		]	All Hunts					l	Complete Hunts	Tunts		
Region and	Total	Total	Total	Total	Birds/		Complete	Total	Total	Total	Birds/	Birds/
County	Parties	Hunters	Hours	Birds	100 Hr		Hunts	Hunters	Hours	Birds	Hunter	100 Hr
Northern Region												
Box Elder	:	t	ı	ı	ı	ı	1	ł	ı	ł	i	ŀ
Cache	1	;	ŀ	ı	;	1	1	:	1		i	ı
Davis	ı	ł	i	1	1	1	1	1	ı	ł	ŀ	I
Morgan	ı	ł	i	ł	ł	:	;	ı	:	i	;	:
Rich	1	;	:	1	1	ı	1	1	I	;	ı	ţ
Summit	ı	ł	ŀ	ı	ı	ı	:	ł	ı	ł	ŀ	ı
Weber	;	1	-	:	1	-	:	!	ı	1	:	
REGIONAL TOTALS	1	;	;	:	:	:	-		1	1	1	1
Central Region	ı	ł	í	:	1	ı	;	1	ł	i	ı	;
Juah	1	ı	ı	ŀ	ŀ	ł	:	ł	ŀ	i	i	;
Salt Lake	:	1	1	1	ï	1	1	ł	1	ı	ı	!
Sanpete	i	ł	ı	ı	ı	1	1	1	ŀ	ŀ	1	ŀ
Tooele	i	1	1	ı	ŀ	1	1	;	ì	;	1	•
Utah	1	ı	1	ı	ı	1	ì	;	;	ı	1	ł
Wasatch	1	1	1	ı	-	ı	1	:	:	:	1	;
REGIONAL TOTALS	1	1	1	ı	ı	1	;	ŀ	;	1	1	,
Southern Region												
Beaver								-				
Garfield												
Iron												
Kane			_	NOT APPLICABLE	JCABLE.							
Millard												
Piute												
Sevier												
Washington												
Wayne												
REGIONAL TOTALS												
Northeastern Region												
Daggett												
Duchesne			_	NOT APPLICABLE	CABLE							
Uintah												
REGIONAL TOTALS												
Southeastern Region												
Carbon												
Emery			_	NOT APPLICABLE	ICABLE.							
Grand												
San Juan												
REGIONAL TOTALS												
STATE TOTALS	:	:	,	ŀ	;	:	1	;	1	1	1	1

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	1989		1990		1991		1992		1993		1994	
Region and	Birds/	Birds/	Birds/	Birds/	Birds/	Birds/	Birds/	Birds/	Birds/	Birds/	Birds/	Birds/
County	Hunter	100 Hr	Hunter	100 Hr	Hunter	100 Hr	Hunter	100 Hr	Hunter	100 Hr	Hunter	100 Hr
Northern Region												
Box Elder	181	9.50	ŀ	ı	25	0.55	1.50	20	ı	i	ì	;
Cache	I	ı	:	1	;	;	:	;	i	:	ł	1
Davis	1	:	:	:	!	:	ı	;	i	ı	ŀ	ı
Morgan	1	ŀ	:	ı	!	:	ı	;	;	;	;	:
Rich	1	:	:	:	1	:	0.55	98	;	ŧ	ŀ	1
Summit	1	ı	ı	ı	I	:	;	;	;	I	1	1
Weber	:	1	ı	ı	ı	:	:	: :	1	1		:
REGIONAL TOTALS	181	9.50	:	;	55	0.55	69.0	69	!	1	1	1
Central Region									1	1	ı	1
Juab	1	ł	ı	1	ı	:	;	1	!	ı	1	1
Salt Lake	1	1	1.	i	ı	ł	ì	ı	;	1	1	1
Sanpete	}	ı	ł	i	ŀ	1	;	ŀ	ŀ	ŀ	1	i
Tooele	ı	1	ŀ	ŀ	ł	ŧ	1	ı	1	1	1	1
Utah	I	}	ŀ	;	;	1	ı	1	ı	1	1	ı
Wasatch	;	:	:	;	;	;	;	ı	1	ı	ļ	;
REGIONAL TOTALS	i	1	1	;	:	:	ŀ	1	ı	1	-	
Southern Region												
Beaver												
Garfield												
Iron												
Kane		NOT APPLICABLE	CICABLE									
Millard												
Piute												
Sevier												
Washington												
Wayne												
REGIONAL TOTALS												
Northeastern Region												
Daggett												
Duchesne		NOT APPLICABLE	LICABLE									
Uintah											i	
REGIONAL TOTALS												
Southeastern Region												
Carbon												
Emery		NOT APPLICABLE	LICABLE									
Grand												
San Juan												
REGIONAL TOTALS												
STATE TOTALS	181	9.50	1	1	25	0.55	0.69	69	ı	1	:	1

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:

		Percent	change from
	<u> 1994</u>	1993	Average
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:

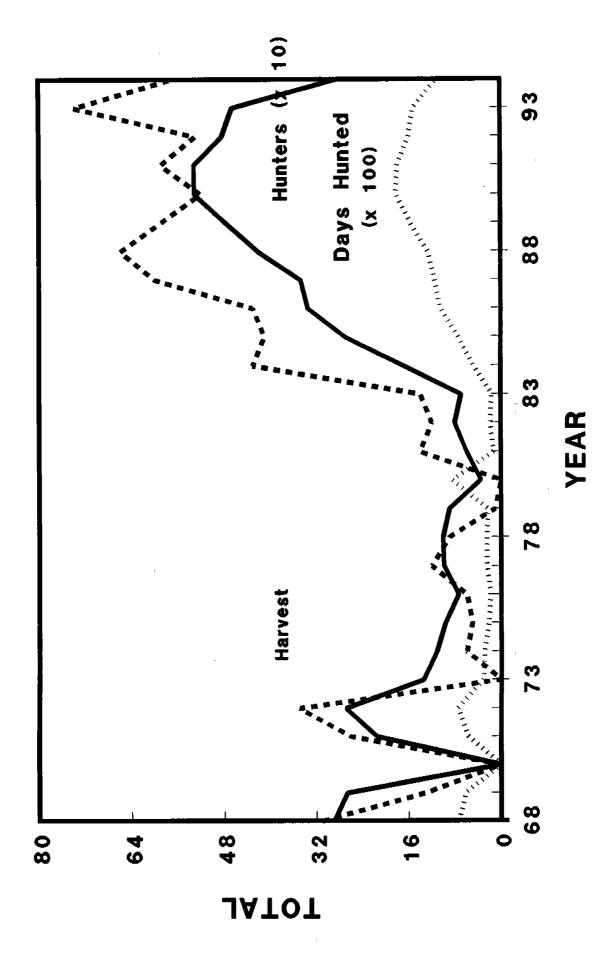
		Percent	<u>change from</u>
	<u>1994</u>	<u>1993</u>	<u>Average</u>
Permits sold	105	<del></del>	
Hunters afield	105		
Turkeys harvested	79		
Hunter-days afield	464		
Percent hunter success	75		
Turkeys bagged per hunter-day	0.17		
Percent of hunters who observed			
turkeys	***		

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.

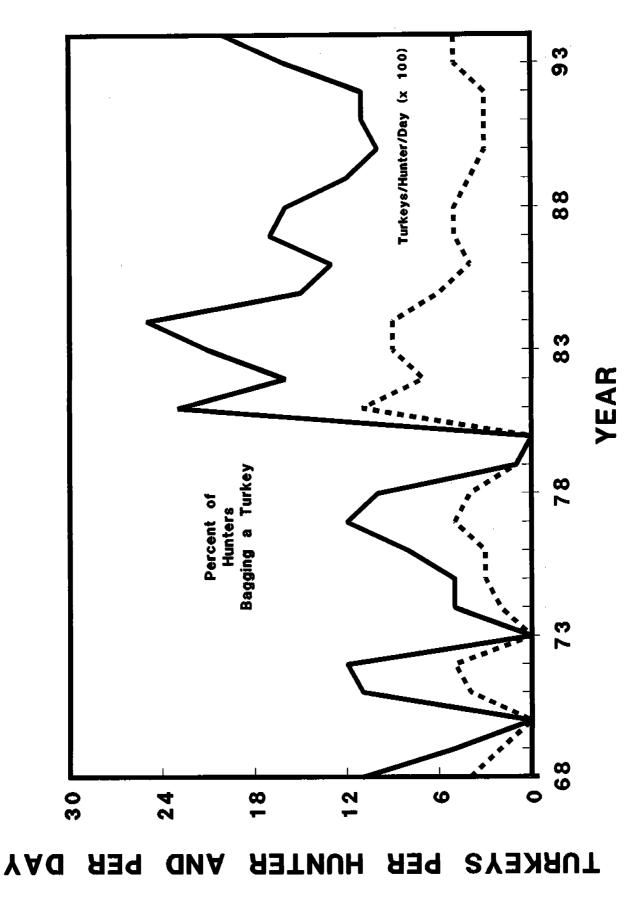
As other Rio Grande populations continue to grow throughout the state, more limited entry opportunities will be provided.

# Brood Counts

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



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



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

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

	Boulder (early)	(early)	Boulder (late)	(late)	Zion (early)	ırly)	Zion (late)	(a	Kolob		STATE	STATE TOTALS
Data	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc	Rep't	Calc
Permits Sold	75		75		75		75		35		335	
No Hunts	:		:		;		1		:		ŀ	
Hunters Afield	48	64	41	8	47	89	41	19	18	53	195	285
Hunter-Days	168	225	180	265	165	238	168	274	79	126	160	1,112
Turkeys Bagged	14	19	4	9	10	41	œ	13	3	S	39	21
Percent Success	29	ŀ	10	ŀ	21	ł	20	ŀ	17	ł	70	ŀ
Turkeys Bagged Per												
Hunter-Day	0.08	1	0.05	ł	90.0	ı	0.05	ŀ	0.04	1	0.05	ŀ
Reported Crippling Loss	7	:	•	;	1	:	•	ł	1	1	4	1
(Loss/100 Bagged)	14	1	•	:	10	1	0	ł	33	ı	10	ı
Average Turkeys Observed												
Gobblers	1.5	1	1.1	ł	1.2		9.0	ł	2.4	:	1.4	1
Hens	1.6	1	1.9	ŀ	1.8	ŀ	1.0	ŀ	2.2	1	1.7	ŀ
Unidentified	ł	:	1	1	1	1	;	ŀ	ł	ł	I	ł
Number of Hunters												
Who Saw Turkeys	1	ŀ	1	ŀ	ŀ	1	I	ı	1	l	ŀ	1
Percent of Hunters												
Who Saw Turkeys	1	I	ł	ł	1	:	:	:	t	-	:	:

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STATE TOTALS         Year         Affeld         Harroset           1969         290         31           1970         267         13           1970         267         13           1971         215         26           1972         269         35           1973         135         0           1974         112         6           1975         99         12           1976         74         6           1977         99         12           1978         101         9           1978         101         9           1980         35         0           1981         60         14           1982         80         14           1983         270         43           1986         270         43           1988         421         66           1989         477         59           1990         53         52           1994***         285         57           1994***         285         57           1968*94)         6310         791		Hunters	Total	Hunter-Days	Percent	Percent Turkeys Per	Percent of Hunters	Tolai
1968 290 1969 267 1970 267 1971 215 1972 268 1973 135 1974 1112 1975 99 1977 99 1977 99 1978 101 1979 90 1980 35 1981 60 1982 80 1983 60 1984 169 1985 270 1986 335 1987 477 1989 477 1999 531 1999 531 1999 631		Afield	Harvest	Afield	Success*	Hunter-Day	Observing Turkeys	Permits**
1968 290 1969 267 1970 267 1971 215 1972 269 1973 135 1974 112 1975 97 1976 74 1977 99 1977 99 1978 101 1980 35 1981 60 1983 60 1984 169 1985 270 1986 335 1987 477 1989 477 1999 531 1999 531 1999 6310				;	:		:	ć
1969   267     1970   1971   215     1973   1973   135     1974   112     1975   97     1976   74     1977   99     1978   101     1979   90     1981   60     1982   80     1984   169     1985   270     1986   335     1987   247     1990   531     1991   532     1993   466     1994***   285     1994***   285		067	<del>.</del>	/38	=	40.0	14	310
1970 1971 215 1972 269 1973 1975 1975 1976 1977 1977 1977 1980 1981 60 1982 80 1984 1692 1987 1987 1987 1988 477 1989 1989 477 1999 1999 1999 1999 1994 1993 466	1969	267	13	612	Ŋ	0.02	22	276
1971     215       1972     269       1973     135       1974     112       1975     97       1976     74       1977     99       1978     101       1979     90       1980     35       1981     60       1982     80       1983     60       1984     169       1985     270       1986     335       1987     477       1990     531       1991     532       1994***     285       1994***     285	1970				NO SEASON			
1972 269 1973 135 1974 112 1975 97 1976 74 1977 99 1977 99 1978 101 1980 35 1981 60 1982 80 1984 169 1985 270 1986 335 1987 471 1989 477 1990 531 1991 532 1991 532 1991 532	1971	215	97	576	=	20.0	38	223
1973 135 1974 112 1975 97 1976 74 1977 99 1977 99 1987 101 1983 69 1984 60 1985 270 1986 335 1987 240 1989 477 1989 477 1989 477 1989 484 1991 532 1997 1997 1999 531	1972	269	35	751	12	0.05	39	285
1974 112  1975 97  1976 74  1977 99  1978 101  1980 35  1981 60  1982 80  1983 69  1985 270  1986 335  1987 421  1989 477  1989 477  1989 484  1991 532  1997 484  1993 466	1973	135	•	311	•	0.00	10	150
1975 97 1976 74 1977 99 1978 101 1980 35 1980 35 1981 60 1983 69 1984 169 1985 270 1986 335 1987 477 1989 477 1989 477 1999 531 1990 531 1991 532 1991 532	1974	112	9	289	w	0.02	. 22	121
1976 74  1977 99  1978 101  1980 35  1981 60  1982 80  1984 169  1985 270  1986 335  1987 477  1989 477  1989 477  1990 531  1990 531  1991 532  1994 484  1993 466	1975	76	Ir)	219	v,	0.03	29	103
1977 99 1978 101 1979 90 1980 35 1981 60 1982 80 1983 63 1984 169 1988 270 1988 421 1989 477 1990 531 1991 532 1991 532 1991 532	1976	74	9	185	œ	0.03	32	81
1978 101  1979 90  1980 35  1981 60  1982 80  1983 63  1985 270  1986 335  1987 477  1988 421  1989 477  1990 531  1991 532  1991 532  1992 484  1993 466	1977	66	13	248	12	0.05	39	108
1979 90 1980 35 1981 60 1982 80 1983 69 1984 169 1986 335 1986 335 1988 421 1989 477 1990 531 1991 532 1991 532	1978	101	6	246	10	0.04	42	116
1980 35 1981 60 1982 80 1983 69 1984 169 1986 270 1986 335 1987 477 1989 477 1990 531 1991 532 1991 532 1992 484 1993 466	1979	8	-	237	-	10.0	<b>%</b>	113
1981 60 1982 80 1983 69 1984 169 1986 270 1986 335 1988 421 1989 477 1990 531 1991 532 1991 532 1992 484 1993 466	1980	35	•	3	•	0.00	17	4
1982 80 1983 69 1984 169 1985 270 1986 335 1988 421 1989 477 1990 531 1991 532 1992 484 1993 466	1981	93	14	129	ន	0.11	53	8
1983 69 1984 169 1985 270 1986 335 1987 347 1988 421 1989 477 1990 531 1991 532 1992 484 1993 466	1982	<b>08</b>	12	184	16	0.07	62	91
1984 169 1985 270 1986 335 1987 421 1989 477 1990 531 1991 532 1992 484 1993 466 1994*** 285	1983	69	14	161	77	0.09	55	92
1985 270 1986 335 1987 347 1988 421 1989 477 1990 531 1991 532 1992 484 1993 466 1994*** 285	1984	169	<del>5</del>	482	23	0.00	27	190
1986 335 1987 347 1988 421 1980 477 1990 531 1991 532 1992 484 1993 466 1994*** 285	1985	270	41	747	15	0.00	52	314
1987 347 1988 421 1989 477 1990 531 1991 532 1992 484 1993 466 1994*** 285	1986	335	43	1,054	13	0.04	S	362
1988 421 1989 477 1990 531 1991 532 1992 484 1993 466 1994*** 285	1987	347	09	1,150	11	0.05	23	384
1989 477 1990 531 1991 532 1992 484 1993 466 1994*** 285	1988	421	<b>3</b>	1,267	16	0.05	50	490
1990 531 1991 532 1992 484 1993 466 1994*** 285	1989	477	83	1,568	12	0.04	55	527
1991 532 1992 484 1993 466 1994*** 285	1990	531	83	1,812	10	0.03	51	673
1992 484 1993 466 1994*** 285	1991	532	ŝ	1,792	11	0.03	64	587
1993 466 1994*** 285 6,310	1992	484	S3	. 665'1	=	0.03	45	538
1994*** 285	1993	466	74	1,508	16	0.05	54	200
6,310	1994**		52	1,112	20	0.05	1	335
6,310	જુ							
		6,310	791	19,061		1	;	866'9
STATE AVERAGES	3ES							
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<sup>\*</sup>Based on the number of hunters bagging one or more turkeys.

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

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

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Statewide summary	
Table 3.	

Permits Hunters	Permits	Hunters	Hunter-Days Turkeys	Turkeys	Percent	Turkeys per	Crippling Loss/	Turkevs	Percent of Hunters
Year	Sold	Affeld	Affeld	Bagged	Success**	Hunter-Day	100 Bagged	Observed	Observing Turkeys
1964	229	211	362	81	38	0.22	15	1,158	99
1965	214	207	406	50	24	0.12	<b>∞</b>	730	29
*9961	192	187	471	43	23	0.00	7	756	36
1961	146	135	405	40	30	0.10	16	748	84
1968*	368	344	883	183	38	0.21	15	2,321	54
1969	223	210	549	36	11	90.0	19	466	17
1970	197	174	418	28	24	0.14	9	564	31
1971	<del>2</del> 2	174	444	99	21	0.14	<b>9</b> 5	451	28
1972	124	118	303	12	7	0.04	10	173	21
1973***	I	i	1	1	ŀ	:	ŀ	1	1
1974	29	26	79	ಣ	12	0.04	33	83	38
1975	58	46	115	7	15	0.06	0	57	26
9261	89	98	136	15	27	0.11		182	32
1917	93	S	133	7	15	9.00	0	84	18
1978*	102	88	223	7	6	0.03	33	335	38
6261	46	36	71	۳	6	0.05	0	61	19
1980	43	35	69	11	32	0.16	38	127	44
1981	63	55	114	12	22	0.11	26	141	32
1982	56	20	136	11	23	90.0	10	185	47
1983	19	64	112	15	28	0.13	0	303	49
1984	76	98	193	28	32	0.14	14	380	49
1985***	1	:	1	1	ł	1	1	1	•
1986***	l	ı	;	ŀ	ŀ	I	1	I	ļ
1987***	ı	ı	ı	ı	1	ı	1	I	ŀ
1988***	ı	1	:	1	1	ı	!	;	!
1989***	1	ı	1	ı	1	ı	;	ı	;
1990***	1	ı	1	1	I	ı	ı	•	;
1991***	1	i	ı	1	1	1	ī	1	:
1992***	ı	ŀ	i	1	•	ı	i	1	ì
1993***	ŀ	;	ł	ŀ	I	1	;	ı	1
1994***	1	;		1		-		1	1
TOTALS									
(1964-84)	2,560	2,340	5,622	682	1	ı	1	9,269	ı
AVERAGES									
(1964-84)	122	111	268	32	21	0.10	14	441	34

<sup>\*</sup>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.

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. \*\*During 1968, the Boulder Mountain and East Zion units had two-bird season limits and the LaSal

	Beaver		Duchesne-Ulntah Co,	Ulntah Co.	Emery County	'ounly	Grand County	yunty	Millord		Morgan-Summil	ummil	Pine Vailey	Æ	Utah County	inty	Weber County	ounty	STATE TOTALS	FOTALS
Data	Rep't	Çaji Caji	Rep't	Calc	Rep'1	Caic	Rep't	Calc	Rep't	Calc	Rep'1	Calc	Rep't	Calc	Rep'1	Calc	Rep't	Calc	Rep't	Calc
Permits Sold	9	!	s		r.		w		s		s		ห		20		ĸ		105	
No Hunts	t		1		1		1		ı		ı		1		•		1		•	
Hunters Affeld	16	ন	-	ĸ	3	w	m	ĸ	6	v	7	w	ន	83	92	23	3	L/A	69	105
Hunter-Days	u	127	9	98	61	33	13	ĸ	61	32	4	9	3	8	z	콜	2	អ	305	<b>4</b>
Turkeys Bagged	13	ន	-	S	60	w	6	v	6	w	-	6	17	77	6	10	61	3	ß	79
Percent Success	156	ı	100	ı	100	1	100	1	100	1	<b>9</b> 5	ı	88	ı	20	1	19	•	<b>5</b> 5	1
Turkeys Bagged Per																				
Hunter-Day	0.18	1	0.17	1	0,16	ı	0.23	•	0.16	1	0.25	ı	0.26	1	0.10	ı	0.15	1	0.17	1
Reported Crippling Loss	1	ı	0	1	0	1	-	ı	•	1	•	ı	-	1	•	ı	•	ı	61	•
(Loss/160 Bagged)	80	ı	•	ı	0	ı	•	1	0	ı	0	ı	•	ı	<b>-</b>	1	•	ı	4	1
Total Turkeys Observed																				
Gobbiers	189	1	17	ı	8	ı	£.	•	ŝ	1	r i	ı	121	1	7	ı	33	ı	218	t
Kens	318	ı	27	ı	135	ı	<u>~</u>	1	57	ı	2	ı	181	1	61	1	30	ı	3	1
Unidentified	135	ı	0	•	•	ı	17	ı	ĸ	ı	7	1	34	1	1	ı	2	ı	215	1
Number of Hunters																				
Who Saw Turkeys	1	ı	,	,	1	1	1	ı	1	ı	ı	t	t	1	1	1	ı	1	ı	ı
Percent of Hunters							-													
Who Saw Turkeys	ı	1	1	1	1	ı	ı	ı	ı	ı	ı	ı	1	1	¥	ı	ı	I	t	ı

		Hunters	Total	Hunter-Days	Percent	Turkeys Per	Turkeys Per Percent of Hunters	Total
Hunting Unit	Year	Affeld	Afield Harvest	Affeld	Success*	Hunter-Day	Observing Turkeys Permits*	Permits*
STATE TOTALS	1991	18	Ξ	17	19	0.15	ŗ	50
	1992	20	15	3	75	0.23	:	21
	1993	41	97	200	8	0.13	ı	4
	1994	105	97	464	52	0.17	1	105
STATE TOTALS								
(1991-94)		184	131	799	;	t	-	188
STATE AVERAGES								
(1991-93)		97	71	112	٤	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				
101	Beaver	30	212	7
102	Duchesne-Uintah County	w	<i>L</i> 9	13
103	Emery County	w	99	12
104	Grand County	w	25	w
105	Milford	w	53	11
106	Morgan-Summit County	w	43	6
107	Pine Valley	25	163	7
108	Utah County	20	453	23
109	Weber County	S	86	20
	Total	105	1,174	11
Merriam's				
201	Boulder Mountain (early)	75	157	2
202	Boulder Mountain (late)	75	59	Undersubscribed
203	Kolob	35	16	Undersubscribed
204	Zion (early)	75	53	Undersubscribed
205	Zion (late)	75	18	Undersubscribed
	Total	335	303	I

1,477

440

**Grand Total** 

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		Distinct	, ,		Mixed		Adults w/o	٩								
Region and		Broods	S	Mean	Observations	tions	Young Total	Total	Total	Young/	Vehicle		Hours o	Hours of Effort		Birds/
County	#	Adults Young	Young	Brood	Adult	Adult Young		Adults	Young	100 Ad	Miles	Vehicle	Horse	Walk	Total	100 Hr
Northern Region																
Box Elder	1	ł	ı	ı	1	;	ı	ı	1	1	ŀ	ı	ı	•	;	1
Cache	ı	t	1	:	ı	1	1	ŀ	ı	1	ı	ı	ı	1	1	ı
Davis	1	ı	ı	:	1	:	ı	ı	1	ŧ	ł	ŀ	ł	ı	;	ı
Morgan	ŀ	ı	1	ı	t	;	;	;	;	ı	ł	1	ŀ	1	1	ı
Rich	1	ł	1	1	;	1	ŀ	;	:	;	1	ı	1	ı	ı	;
Summit	7	7	11	5.50	Ŋ	6	ŀ	7	70	286	ı	ŀ	1	ı	ı	;
Weber	1	1	۲	7.00	ł	1	1	1	7	700	ı	1	ŀ	;	ı	:
REGIONAL TOTALS	8	3	18	6.00	S	٥	;	œ	7.7	338	۱,	ı	,	1	1	1
Central Region													!	,		
Juah	;	ł	1	ł	ŀ	ł	ı	!	;	:	ļ	ı	t	;	1	ı
Salt Lake	1	;	ı	!	;	ı	;	1	ı	1	ł	i	ı	;	ı	ı
Sanpete	ŧ	ŀ	ı	ł	!	1	ł	ı	1	1	ı	1	i	1	;	1
Tooele	1	1	;	ı	1		ı	1	ŀ	1	ı	;	i	!	1	1
Utah	1	1	ı	;	ł	ı	ı	1	:	ŀ	!	:	ı	ı	:	:
Wasatch	1	ı	ŀ	;	:	ı	1	1	ı	1	;	:	;	1	1	:
REGIONAL TOTALS	۱,	ı	,	;	,	ı	,		,	١	ı	ŀ	ŀ	:	:	
Southern Region																
Веаver	;	1	ı	1	ı	1	1	ı	;	i	i	1	1	;	1	1
Garfield	t	1	1	;	ı	1	ì	ı	ŀ	ŀ	i	1	1	ł	ı	1
Iron	;	ı	1	!	ı	1	ł	ŀ	ŀ	ł	i	1	1	1	:	1
Kane	;	t	1	ł	ı	ŀ	ŀ	1	1	1	1	;	:	ı	:	ı
Millard	;	ı	:	1	ı	ł	ŀ	1	1	1	f	;	1	1	:	ı
Piute	ı	ı	ı	1	i	ŀ	1	ı	1	1	;	;	ı	1	;	1
Sevier	:	ı	;	1	ı	ŀ	;	ł	ŀ	1	ı	:	ı	1	ı	;
Washington	;	ŀ	1	ı	i	;	ı	1	;	1	1	:	ŀ	1	ı	:
Wayne	;	1	1	١	;	!	;	ı	:	1	:	:		ŀ	ı	
REGIONAL TOTALS	;	I,	;	1	:	:	ı	,	!	ı	1	ı	1	ŀ		۱
Northeastern Region																
Daggett	:	;	ı	ı	ŀ	ı	1	1	ı	i	:	:	1	ı	ı	:
Duchesne	61	7	91	5.00	;	ı	t	7	2	200	21	m	ŀ	!	m	90
Uintah	62	33	16	5.33	١	ı	ı	8	16	533	:	;	:	1	;	۱
REGIONAL TOTALS	S	S	26	5.20	1	1	1	S	26	520	57	3	+	,	3	1,033
Southeastern Region																
Carbon	:	ŀ	ı	ŀ	;	ŀ	1	ł	i	1	1	ı	1	ı	ı	ı
Emery	ı	1	;	ŀ	1	ŀ	1	;	ł	1	!	ŀ	ı	ì	ŀ	1
Grand	1	_	91	10.00	1	1	12	13	10	11	!	ı	ı	;	ŀ	ı
San Juan	;	I	}	:	9	28	4	2	78	280	38	4	1	ŀ	4	920
REGIONAL TOTALS	1	1	10	10.00	9	28	16	23	38	165	38	4	1	!	4	1,525
STATE TOTALS	. 6	9	54	00.9	11	37	16	36	91	253	95	7	;	0	-	1,814
								!	:	!			Ì			

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.

1978-943.
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grouse
summary of sharp-tailed grouse dancing grous
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Summar
Inble 1.

	Dancing Ground							Year	(ear									
County	Name	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	8861	1989	1990	1991	1992	1993	1994
			,		;	,												  - 
DOX Exact		ı	2	4	12	0	7	<b>-</b>	18	<b>4</b>	<del>\$</del>	33	40+	75	<b>33</b>	55**	S	9
	Hunsaker's Field (Located 1977)	16	E	<b>Q</b>	¢	0	0	Đ	•	18	0	6	0	ı	e	32	4	7
	South White's Valley (Located 1977)	1	•	o	0	φ	Ф	0	7	•	9	۲		ï	0	13	:	7
	North White's Valley (Located 1977)	15	•	•	•	•	Ф	•	•	:	18	=	**6	ţ	7	۱s	60	7
	Middle Canyon (Located 1991)														**6	1464	7	9
	Pocatello Valley Complex (Located 1978)	42	7	7	61	61	7	ĸ	ç	20	20	61	16**	Ξ	4	SC	:	7
	Blue Creek (Located 1991)														**9	2**	•	٠ <
	Howell Valley #1 (Located 1991)														13**	**9	ı	. 1
	Microwave Tower (Located 1987)								_	9	•	7	•	ŀ	1	X	:	1
	Sunset Pass (Located 1991)														***	2**	:	ı
	Nucor (Located 1991)														*	•	*	1
	Wellsville-Cottonwood (Located 1991)														**8	œ	en	71
	Snowville-Radio Tower (Located 1991)														**	4	0	NC
	Johnson Canyon (Located 1994)																	
	,																	•
Cache	Bankhead Well (Relocated 1975)	7	7	7	•	0	ı	ŀ	1	;	t	ı	ı	1	NA	NC	1	ı
	Baxter Ridge (Relocated 1975)	:	ı	6	v,	ь		1	1	ŀ	ı	;	;	;	NA NA	NC	1	ı
	Crow Mountain Complex (Located 1979)	•	13	4	11	6	ı	1	1	;	ı	0	ı	ı	27**	18**	œ	<b>\$</b>
	High Creek (Located 1981)				7	;	1	ı	i	:	ŀ	•	1	1	22++	NC	ı	13
	Clarkston (Located 1991)														20++	<b>2</b>	¥	12
	Four Mile #1 (Located 1991)														<b>\$</b>	27**	1	t
	Four Mile #2 (Located 1991)														**		1	1
	McKenzie Flat (Located 1992)		۰													63	t	t
Morgan	Cottonwood (Located 1975)	22	28	1	1	ı	1	1	1						2			
1	Deep Creek	i	ì	4	:	:	: 1	· •		1	<b>)</b> 1	l I	1		t 2	ָ בַּ	:	ı
	Bohman Hollow (Located 1991)													i	**11	N S	1 1	1 1
Weber	Monastery (Located 1969)	¥	en	Φ	c	c	ı	:	:	1	1	1	I	Í	I	Ş		
Total Grow	Total Grounds Counted	٩	15	91	17	15	11	7	=	9		12	=	2	81	2 2		12
Total Grouse Counted	se Counted	102	11	77	23	31	28	ĸ	29	35	8	<b>2</b>	11	8	236	210	. 70	8
Average Nu	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 sage	**High sagebrush precluded an accurate countbirds were counted when flushed.	counted wh	en flushe															
	CALLOLD BY INDICATED BY CHINE HILLS IN ICH. AND CON.	7.7.7	2				2000											

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

1994.
inventory,
ummer in
Sharp-tailed grouse s
Ptailed
Shar
Table 2.

		Distinct			Mixed Young	oung										
Region and		Broods		Mean	& Adults		Adults w/o	Total	Total	Young/ Vehicle	Vehicle		Hours of Effort			Birds/
County	#	Adults	Young	Brood	Adults Young	Young	Young	Adults	Young	100 Adults Miles		Vehicle	Horse Walk	l	Total	100 Hr
Northern Region																
Box Elder	7	7	9	3.00	0	0	6	11	9	55	ı	ı	<b>\$</b>	ŀ	<b>&gt;</b>	227
Cache	ı	:	ŀ	ı	ŀ	i	ſ	:	ı	ı	ı	;	ı	1	ı	1
Davis	ŀ	1	;	ı	:	ı	ŀ	ŀ	ł	ŀ	ı	1	ı	;	1	ı
Morgan	ŀ	ı	ŀ	I	ŀ	ŀ	i		:	1	ı	1	ŀ	;	i	i
Rich	1	1	ı	ŀ	:	ŀ	ŀ	!	ł	1	ı	1	ì	ł	1	1
Summit	ł	ı	ŧ	ł	ł	I	ł	ļ	ı	1	ı	ı	ı	;	1	ŀ
Weber	:	ı	-	;	ŀ	ì	+	:	-	;	:	ı	1	1	,	
REGIONAL TOTALS	2	2	9	3.00	0	0	6	11	9	55	1	ï	œ		<b>&amp;</b>	227
Central Region																
Juab																
Salt Lake																
Sanpete			~	NOT APPLICABLE	CABLI	رخا.										
Tooele																
Utah																
Wasatch															į	
REGIONAL TOTALS																
Southern Region																
Beaver																
Garfield																
Iron																
Kane			_	NOT APPLICABLE	LICABLE	r-i										
Millard																
Piute																
Sevier																
Washington																
Wayne																
REGIONAL TOTALS																
Northeastern Region																
Daggett																
Duchesne			-	NOT APPLICABLE	LICABLI	E-1										
Uintah																
REGIONAL TOTALS																
Southeastern Region																
Carbon																
Emery				NOT APPLICABLE	LICABLI	( <del>-</del> -1										
Grand																
San Juan																
REGIONAL TOTALS																
STATE TOTALS	7	7	9	3.00	0	•	6	11	9	55	1	•	œ	ł	æ	227

The white-tailed ptarmigan (<u>Lagopus leucurus</u>) 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.

		0	)									
		(6/18-19)										
County	Location	1984	1985	1986	1987	1988	1988 1989(2)	1990	1991	1992	1993	1994
											ı	
Duchesne	Painter Basin											
Duchesne	Gilbert Basin		C(1)	C(1)		Z		Z	·	Z	Z	Z
			A	Ą		0		0	0	0	0	0
Duchesne	Atwood Basin		Z	Z								
			ນ	၁		S		S	S	S	S	S
Duchesne	Yellowstone River		囝	Ħ		Û		n ·	Ω	Ω	Ω	Ω
			Г	Γ		~		×	×	~	~	8
Summit	Henry's Fork		Г	Г		^		>	Λ	^	^	^
			国	田		퍼		闰	田	덢	ਸ	囝
Summit	Flat Top Mountain	1	Q	D	ю	¥		<b>×</b>	Y	Y	Y	<b>X</b>

Uintah Leidy Peak

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

(2) Investigator was incapacitated.

Summit

Lake Blanchard

Beaver Creek

Summit

Summit Smith's Fork

1984-94.	
ood inventory,	
ptarmigan br	
White-tailed	
Table 2.	

Area:				DATE							
Statistics	8/26-28-84	8/14-22/85	98/8	8/87	8/25-31/	68/8	8/90	8/91	8/92	8/93	8/94
Painter Basin											
п	1	6	ŀ	•	:	;	ı	ı	1	:	;
Mean Brood	ı	ı	;	1	;	ł	ı	1	ı	;	;
Young/100 Adult Hens	1	1	:	١	ı	ı	ı	١	ı	ŀ	ŀ
Hens w/o Broods	ı	;	1	ı	;	1	ł	1	1	;	ŀ
Adult Males	ł	1	;	1	:	·	ŀ	ı	ı	;	·
Henry's Fork					<b>©</b>						
9	•	;	4	6	æ	;	1	:	ı	i	;
Mean Brood	ı	;	3.75	4.00	2.33	ł	ŀ	ŧ	ŀ	ł	ŀ
Young/100 Adult Hens	ı	ı	375	217	233	i	1	ŀ	1	;	ł
Hens w/o Broods	1	ı	0	3	•	1	ŀ	ı	1	ŀ	;
Adult Males	:	1	;	ł		;	;	ı	1	;	1
Yellowstone											
ធ	ı	ı	t	ı		2	Т	ı	ı	ı	;
Mean Brood	ı	1	ı	ı		4.00	4.00	ı	ı	t	·
Young/106 Adult Hens	1	ı	1	ı		366	400	ı	1	;	;
Hens w/o Broods	į	1	ı	:		4	0	1	ŧ	,	;
Adult Males		1	ı	;		18	0	1	1	1	;
Smith's Fork											
п	•	I	=			1	ł	1	:	ı	;
Mean Brood	6.00	1	ŀ	6.00		Ļ	ł	1	ı	ł	;
Young/100 Adult Hens	300	1	ł	120		;	ï	ı	ı	1	:
Hens w/o Broods	П	1	:	4		ı	ŀ	ı	ı	;	;
Adult Males		1	:			1	;	1	ı	:	:
Atward Rosin											
								•			
	1	;	:			ı	;	-	ı	ŀ	;
Mean Brood	•	I	1			ı	ì	2.00	ı	ŀ	;
Young/100 Adult Hens	1	į	ı			1	1	200	1	;	ı
Hens w/o Broods	1	;	ı			1	:	•	1	;	;
Adult Males	1	;	ŀ			1	;	•	ı	1	1

Table 2. (continued)											
Area:				DATE							
Statistics	8/26-28-84	8/14-22/85	98/8	8/87	8/25-31/	8/89	8/90	8/91	8/92	8/93	8/94
Flat Top Mountain					3						
	-			-	9 ~	;					
Mean Brood	00.9			. 9.9	4.33	1 1	:	: :			: 1
Young/100 Adult Hens				8	433	;	;	ŀ	:	ı	ı
Hens w/o Broods	1			•	•	ı	ł	ł	;	;	;
Adult Males				0	0	:	-	:	!	ı	1
Little E. Fork - Black's Fork											
g.				١		:	l	ı	1	1	ł
Mean Brood				ı		ı			۱ :	1 1	
Young/100 Adult Hens				;		ı	:	: 1	۱ ا	I	: :
Hens w/o Broods				ı		;	ł	1	!	ı	;
Adult Males				1		:	1	ı	ŀ	ı	;
Rainbow Basin										-	
		;	:	١		;	ŀ	ì	ŀ	;	1
Mean Brood	:	ı	ı	ı		·	:	:	;	ŀ	1
Young/100 Adult Hens	i	t	ı	١		;	;	ŀ	;	;	1
Hens w/o Broods	ı	ı	1	ı		:	;	ŀ	;	;	,
Adult Males	-	:	ı	١		ŧ	ı	ì	;	;	1
F T H											
Gloeff Baem											
a	1	ŀ		I		ı	ı	ŀ	;	ı	:
Mean Brood	:	ŀ		ı		ı	;	1	;	;	ŀ
Young/100 Adult Hens		1		ı		:	ŀ	ı	ţ	ŀ	:
Hens w/o Broods	1	1		t		;	ŀ	ı	ı	ı	:
Adult Males	ı	1		:		;	:	1	1	1	,
Samuel's Draw											
F	;										
Mean Brood		ļ	ì	l			ŀ	ì	1	ı	:
Vouna/100 Adult Hone	l	ŀ	l	ŀ		ł	ŧ	:	:	1	:
roughty Adult nens	ı	1	:	;			:	:	:	ı	:
Hens W/o Broods	;	ı	ı	1		ı	;	:	:	ı	
Adult Males	:	:	:	;		:	;	,	;	:	ı
Leidy Peak											
				-							
Mean Brood				2.00		: <b>:</b>	: ;			: :	1 :
Young/100 Adult Hens				200		:	;			ı	:
Hens w/o Broods				•		. 1	;	1			
Adult Males				• •		١.	l	ł	:	ł	1
				,		:	ا ؛			:	,

Area:				DATE							
Statistics	8/26-28-84	8/14-22/85	98/8	8/87	8/25-31/	68/8	06/8	8/91	8/92	8/93	8/94
East F. Black's Fork											
п				ı		;	ł	ı	ł	:	ı
Mean Brood				1		;	ŀ	ı	;	ı	ı
Young/100 Adult Hens				ı		;	i	;	:	ı	;
Hens w/o Broods				ı		;	:	ı	;	1	1
Adult Males				4		ŀ	;	ı	1	1	ı
Joulious Creek					9						
•				1	0	1	;	1	1	1	ı
Mean Brood				1.00	0.00	ŀ	1	ı	I	ı	ŧ
Young/100 Adult Hens				300	•	ŀ	ı	ı	ı	:	ı
Rens w/o Broods				•	4	1	ı	١	:	١	1
Adult Males				•	0	:	1	:	ı		,
TOTALS					9						
п	1	3	ĸ	9	9	7	-	1	;	ŀ	;
Mean Brood	6.00	3.50	3.75	3.86	3.33	4.00	4.00	2.00	;	1	1
Young/100 Adult Hens	300	350	375	236	333	366	400	200	;	ŀ	ì
Heas w/o Broods	7	0	0	۲-	91	4	•	•	ŀ	ı	!
Adult Males	0	0	0	•	•		•	0	ŀ	ı	ŀ
Total Birds Observed	:	œ	10	74	45	95	le:	₹*	:	,	:

n 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.

									% Hunters	
	Permits	Hunters	Hunter-Days	Ptarmigan	Birds/	Ptarmigan/	Crippling Loss/	Ptarmigan	Observing	Observing Immatures per
Year	Sold	Afield	Afield	Bagged	Hunter	Hunter-Day	100 Bagged	Observed	Ptarmigan	100 Adults
1982	48	21	33	0	00.0	0.00	•	0	l	1
1983		13	21	14	1.08	0.67	•	25	30	1
1984		20	25	36	1.80	4.1	•	1	1	ł
1985	<b>32</b>	10	13	7	0.70	0.54	14	6	14	ŀ
1986		14	21	œ	0.57	0.36	•	œ	22	ł
1987		6	6	œ	0.89	0.89	ł	I	ł	ł
1988**		15	15	22	1.47	1.47	i	59	1	4.50(11)
1989	70	m	18	13	4.33	0.72	ı	35	1	' I
1990		11	27	17	1.55	0.63	•	28	35	ł
1991		13	16	26	2.00	1.63	•	95	20	ł
1992		11	17	0	0.00	0.00	0	26	36	ł
1993	10	10	13	13	1.30	1.00	•	140	38	:
1994	1994 14	4	9	0	0.00	0.00	0	6	100	ł

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

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

#### <u>Hunter Questionnaire</u>

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>Percent</u>	<u>change</u> from
	<u>1994</u>	<u>1993</u>	<u>Average</u>
Cottontail hunters	12,709	<del>-</del> 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	<del>-</del> 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.

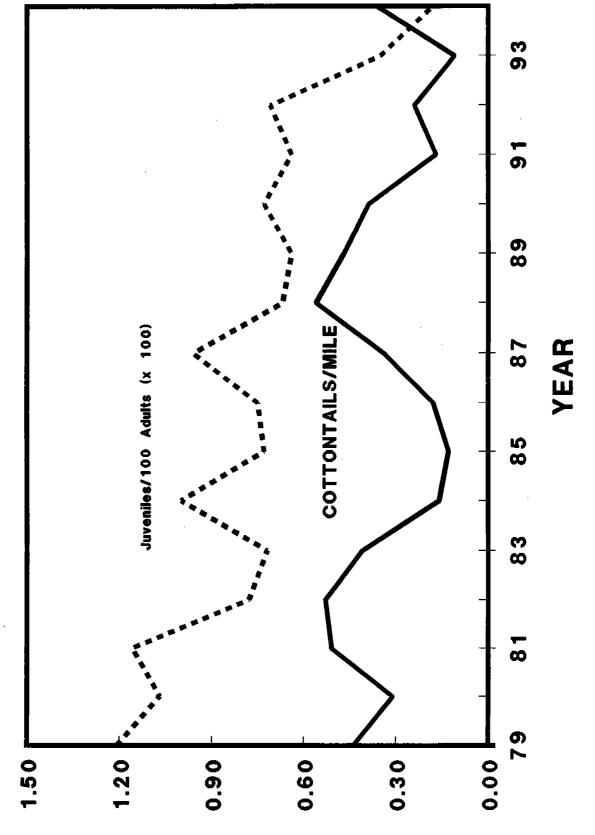
## Field Bag Checks

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.

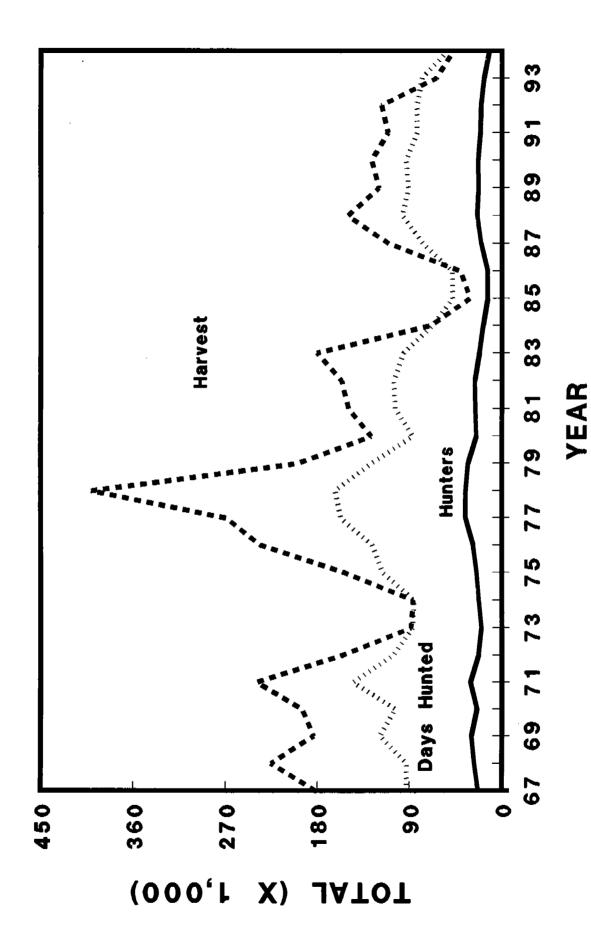
	1994	Percent 1993	change from Average
Total hunters check			
Total hours hunted			
Cottontails per hunter			
(complete hunts)			
Cottontails bagged per 100 hours			
Hours per hunter day			
Hours per cottontail bagged			
(complete hunts)			

No cottontail field bag check data was collected in 1994.

## COTTONTAILS/MILE AND JUVENILES/ADULT

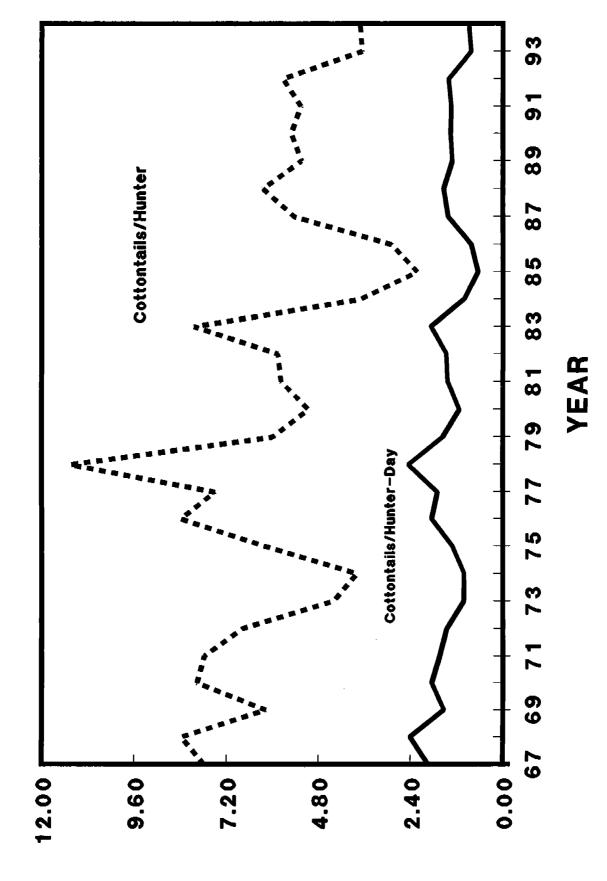


Cottontail rabbit population indices trends, 1979-94. Figure 1.



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

# COTTONTAILS PER HUNTER AND PER DAY



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

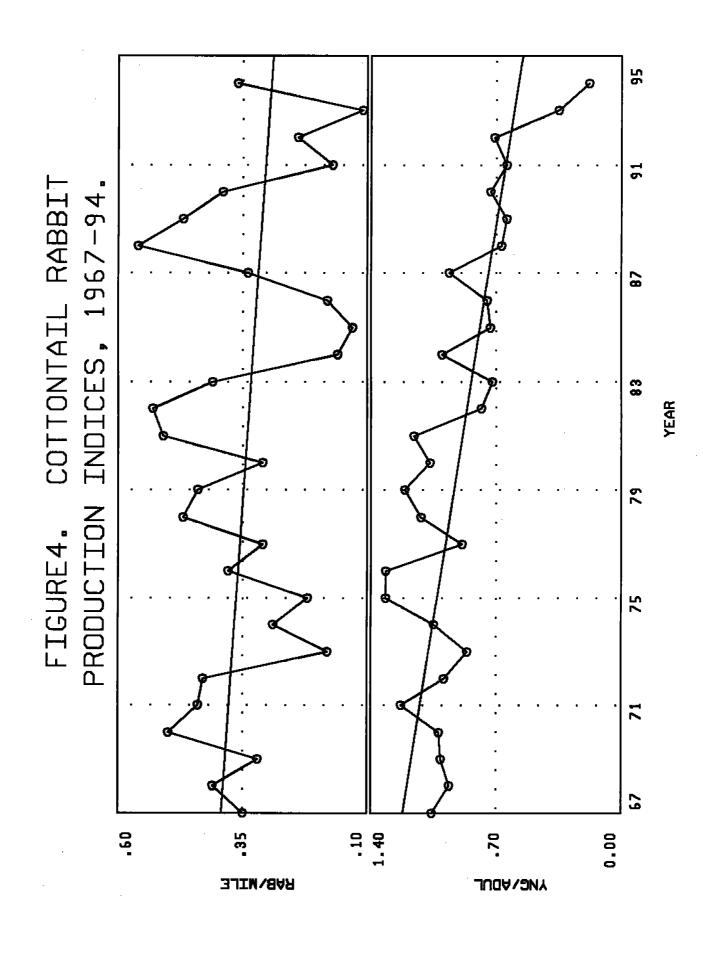


Table 1. Cottontail rabbit summer inventory summary, 1994.

Region and	Miles		Rabbits Ob	served		Young/	Rabbits/
County	Driven	Adults	Young	Unclassified	Total	100 Adults	Mile
Northern Region							
Box Elder	-						
Cache							
Davis				<u></u>			
Morgan			_				
Rich				·			
Summit							
Weber							
REGIONAL TOTALS							
Central Region		****					
Juab							
Salt Lake							
Sanpete			_	75			
Tooele							
Utah							
Wasatch							
REGIONAL TOTALS							
Southern Region				•			
Beaver							
Garfield			_	<del></del>			
Iron							
Kane							
Millard							
Piute							
Sevier						<u></u>	
Washington	**						
Wayne							
REGIONAL TOTALS							7-
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		- <del> </del>					1
Carbon							
Emery							
Grand				~~			
San Juan							
REGIONAL TOTALS							
STATE TOTALS	148	44	8	2	54	18	0.36

<del>2</del> -9
<u>.</u>
inventory
summer
during
per mile
observed
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cottontail
Summary of
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Region and						Year						Average
County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1984-93
Northern Region												
Box Elder	;	ı	0.02	0.03	ļ	0.03	0.39	0.10	90.0	ı	•	
Cache	;	;	1	:	ı	:	1	ı	ı	1	i	
Davis	ı	i	1	:	1	ŀ	;	ı	ŀ	i	ŀ	
Morgan	ı	ı	:	1	ł	ŀ	;	ı	1	1	:	
Rich	ı	:	0.05	;	ì	ł	ł	ı	ı	1	:	
Summit	ŀ	I	ŀ	ì	ı	ŀ	ı	1	1	ŀ	;	
Weber	ı	1	1	ł	i	ł	1	ı	ı	;	1	
REGIONAL TOTALS	,	1	0.02	0.03		0.03	0.39	0.10	0.08	1		0.11
Central Region	i											
Juah	0.00	0.00	0.07	0.00	0.54	0.30	0.23	1	;	i	i	
Salt Lake	ı	1	1	ı	1	ŀ	i	!	1	1	i	
Sanpete	ŀ	:	ı	ı	0.47	0.22	9.0	0.00	0.15	0.01	i	
Tooele	0.03	0.00	0.01	0.02	0.18	I	I	1	0.03	1	ı	
Utah	1	•	1	I	ł	1	l	ı	;	ı	1	
Wasatch	1	1	ŀ	1	ł	ļ	ľ	ı	;	ı	i	
REGIONAL TOTALS	10.0	0.00	0.01	0.02	0.36	0.26	0.45	0.0	90.0	0.01	ı	0.14
Southern Region												
Веаvет	0.01	0.03	0.10	0.04	90.0	ı	ł	ł	;	ŀ	ı	
Garfield	ŀ	90.0	0.13	:	i	:	ı	:	;	!	ı	
Iren	0.27	0.33	0.53	0.26	ì	;	:	1	;	;	ı	
Kane	ı	0.52	0.47	0.97	1.09	1	;	ì	;	;	ı	
Millard	0.04	0.02	0.08	0.0	0.09	ì	90.0	ì	i	;	;	
Piute	:	;	90.0	0.02	1	ŀ	ı	i	ŀ	1	1	
Sevier	1	ŀ	ŀ	1	!	;	ı	1	1	;	ı	
Washington	ł	0.23	0.12	0.12	0.36	0.33	ı	ı	i	ł	1	
Wayne	0.80	;	0.20	0.24	0.34	I	1	0.83	0.21	1	ı	
REGIONAL TOTALS	0.18	0.19	0.24	0.27	0.33	0.33	90.0	0.83	0.21	;	ŧ	0.30
Northeastern Region												
Daggett	0.22	0.12	0.22	99.0	0.85	0.50	0.55	1	0.28	0.0	0.07	
Duchesne	0.28	0.13	0.44	98.0	1.49	1.04	0.23	0.03	0.00	0.23	0.56	
Uintah	0.11	0.00	0.03	0.36	1.26	1.40	1.00	ŀ	0.18	0.17	0.24	
REGIONAL TOTALS	0.21	0.09	0.25	9.0	1.18	0.91	0.57	0.03	0.38	0.16	0.36	0.44
Southeastern Region												
Carbon	ì	0.05	0.08	0.33	0.41	0.34	0.03	0.20	0.21	0.13	i	
Emery	0.18	0.20	1	0.40	0.34	0.33	0.40	0.37	0.34	90.0	ı	
Grand	0.13	0.67	08'0	;	0.10	0.00	0.01	0.05	0.13	0.20	1	
San Juan	ı	0.14	0.37	0.29	0.59	0.55	0.80	0.28	0.34	0.16	ï	
REGIONAL TOTALS	0.17	0.13	0.17	0.38	0.36	0.32	0.36	0.24	0.26	0.14	ı	0.25
STATE TOTALS	0.16	0.13	0.18	0.34	0.56	0.47	0.39	0.17	0.24	0.11	0.36	0.27

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

Region and

Region and						Year						Average
County	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1984-93
Northern Region												
Box Elder	;	I	0	25	:	200	200	13	<i>L</i> 9	:	ı	
Cache	;	1	;	ŀ	:	!	ı	ı	;	ł	ŀ	
Davis	ŀ	:	;	•	ì	:	ł	1	ı	;	ı	
Morgan	ì	1	;	1	;	:	1	ŀ	i	:	1	
Rich	:	ı	50	ı	:	ŀ	;	ŀ	ı	1	ŀ	
Summit	I	:	1	ł	;	:	1	1	1	;	1	
Weber	1	ł	ı	ł	;	;	1	ŀ	ı	;	ŀ	
REGIONAL TOTALS	!		20	25	ì	200	200	13	19	;	:	87
Central Region												
Juab	0	0	0		20	13	ı	J	I	i	1	
Salt Lake	ŀ	ł	ı	ł	. 1	ł	ŀ	ı	ı	i	ı	
Sanpete	;	i	;	ı	<b>\$</b>	9	9	20	<u>30</u>	1	;	
Tooele	;	1	;	100	120	1	ï	1	100	1	;	
Utah	;	ı	;	ł	1	ı	ŀ	;	:	1	;	
Wasatch	1	;	ł	ł	1	ŀ	ŀ	1	:	ı	ı	
REGIONAL TOTALS	0	0	•	100	57	23	27	30	57	I	١,	31
Southern Region												
Beaver	1	;	77	ı	1	ŧ	1	1	1	ı	ı	
Garfield	1	33	38	ì	;	•	:	:	i	:	1	
Iron	<del>\$</del>	<b>%</b>	<b>5</b> 5	;	ı	1	1	:	;	;	1	
Kane	;	100	71	111	149	ŀ	1	1	ì	!	I	
Millard	75	200	170	114	110	ı	100	•	1	;	1	
Piute	i	1	;	!	1	:	1	ł	1	;	ı	
Sevier	ı	ı	;	:	1	i	1	1	1	1	1	
Washington	ï	73	133	175	100	131	;	ł	1	;	ł	
Wayne	380	1	360	2100	244	1	ŀ	369	138	ŀ	:	
REGIONAL TOTALS	215	82	100	137	136	131	100	369	138			157
Northeastern Region												
Daggett	33	46	136	116	30	59	55	ŀ	8	33	1	
Duchesne	77	15	97	24	39	67	ł	20	138	36	17	
Uintah	233	0	100	264	170	239	95	1	10	<b>\$</b>	99	-
REGIONAL TOTALS	42	31	88	74	46	82	28	95	28	47	18	58
Southeastern Region												
Carbon	ı	i	150	267	200	400	400	:	25	ı	ŀ	
Emery	217	216	:	54	20	1	;	1	ı	1	ŀ	
Grand	33	300	300	i	;	1	ı	ŀ	<del>\$</del>	ł	ŀ	
San Juan	1	43	61	47	49	80	09	54	37	81	;	
REGIONAL TOTALS	156	88	69	100	64	110	29	100	33	18	;	81
STATE TOTALS	100	73	75	96	19	64	73	64	11	35	18	72
	1											

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

	SAMPLE SIZE*	HUNTER-DAYS AFIELD	BAGGED	COTTONTAILS HUNTER-DAY	PRESSURE	% OF HARVEST
NORTHERN REGION						
BOX ELDER	100		4,183		9.55	8.84
CACHE	8	580	755	1.30	1.09	1.60
DAVIS	4	175	0	0.00	0.33 1.06 0.63	0.00
MORGAN	5		263	0.47	1.06	0.56
RICH	9	333				
SUMMIT	10	492	193 158	0.39	0.93	0.41
WEBER	7	562	T28	0.28	1.06	0.33
REGIONAL TOTALS	143	7,787	5,959	0.77	14.64	12.59
CENTRAL REGION						
JUAB	48		1,933 140	0.64	5.72	4.09
SALT LAKE	4		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 2,091	0.70	13.39 8.50	10.59
UTAH	71	4,517	2,091	0.46	8.50	4.42
WASATCH	3	123	193		0.23	0.41
REGIONAL TOTALS	268	16,770			31.54	23.89
SOUTHERN REGION		و ب <b>ي</b> ن جو هد هد خد هد چه ه <b>د اد</b> م دد هد سه				
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 0.91	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		2.98	2.23
WASHINGTON		2,918		1.01	5.49	6.24
WAYNE	. 8		615	1.06	1.09	1.30
REGIONAL TOTALS	130	11,355	10,600	0.93	21.36	22.40
NORTHEASTERN REGION			- <b></b>			
DAGGETT	11		562	1.52	0.69	1.19
DUCHESNE	47	1,933	2,759	1.43	3.64	5.83
UINTAH	49	3,533	2,759 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	<b></b> 100.00	100.00

<sup>\*</sup>Total hunter trips from questionnaire returns.

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

Region and					Year			
County	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region			<del></del>					
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
Central Region	2.11	1.7	1.07		1.7/	1.50	0.71	0.,,
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	<u>0.67</u>
Southern Region		- 44						
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
Northeastern Regi								
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
Southeastern Regi	on						-	
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					Year			
County	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region		<del></del>						
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		0.59	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
Northeastern Reg		2 02	2 21	0.37	3 00	1 63	2 12	1 10
Daggett Duchesne	4.41 7.68	2.82 9.43	3.21 12.37	2.37 8.55	3.28	1.63	3.13	1.19
Uintah	7.03				10.98	8.67	12.95	5.83
REGIONAL TOTALS	19.13	13.20 25.45	19.31 34.89	<u>13.44</u> 24.27	9.10 23.36	7.25 17.55	8.29 24.37	11.55
Southeastern Reg		23.43	34.69	44.41	23.36	1/.55		18.57
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		2.24	0.24	0.00	0.00	0.00	2.80	0.00
					0.00	0.00	2.00	0.00
STATE TOTALS	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

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

Booles and					¥			
Region and	1987	1988	1989	1990	<u>Year</u> 1991	1992	1993	1994
Northern Region	1907	1900	1303	1990	1331	1992	1993	1994
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	
REGIONAL TOTALS	11.07	15.51	2.80	15.74	16.33	19.88	13.70	14.64
Central Region								
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
Southern Region								
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
Northeastern Req								
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
Southeastern Reg								
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	100.00	100.00	100.00	100.00	100.00	100.00	100.00

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

	Total	Total	Hunter-Days	Cottontails Per	Cottontails Per
Year	Hunters	Harvest	Afield	Hunter-Day	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
19 <b>7</b> 1	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
L9 <b>74</b>	22,737	86,506	85,499	1.01	3.80
1975	24,803	154,182	116,707	1.32	6.22
19 <b>7</b> 6	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
982	26,714	156,696	105,644	1.48	5.87
1983	22,467	180,767	96,151	1.88	8.05
984	18,616	69,186	67,643	1.02	3.72
1985	14,059	31,397	48,371	0.65	2,23
986	13,992	40,636	48,694	0.83	2.90
.987	20,322	110,411	77,047	1.43	5.43
1988	24,076	150,386	97,190	1.55	6.25
989	22,878	120,075	91,264	1.32	5.25
990	23,070	127,389	93,515	1.36	5.52
991	21,137	111,407	82,772	1.35	5.27
992	20,509	117,454	83,154	1.41	5.73
993	17,578	64,400	77,968	0.83	3.66
1994	12,709	47,322	53,175	0.89	3.72
<b>Fotals</b>					
(1967-94)	667,926	4,221,900	2,737,930		, <b></b>
Averages					<del></del>
(1967-93)	24,267	154,614	99,435	1.48	6.05

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Region and	Total	Total	Total	Total	Rabbits/	Complete	Total	Total	Total	Rabbits/	Rabbits/
County	Parties	Hunters	Hours	Rabbits	100 Hr	Hunts	_	Hours	Rabbits	Hunter	100 Hr
Northern Region											
Box Elder	ł	:	1	;	1	1	ı	i	ı	i	1
Cache	;	;	ı	ŧ	ŀ	!	ŀ	ŀ	ŀ	1	ı
Davis	i	ı	ı	ł	;	!	1	ł	ŀ	ŀ	;
Morgan	ŀ	;	1	;	;	1	ı	;	ı	i	;
Rich	ŀ	ì	1	;	ŀ	1	ı	;	1	ı	:
Summit	1	;	ı	ŀ	1	;	;	ŀ	1	ŀ	1
Woher	ŀ	1	I	ı	}						
menet	1	ł	ı		<u> </u>	:	ا ا	;	1	ı	:
KEGIONAL TOTALS	t	:		1	-	:		:	:	1	:
Central Kegion											
Juah	ŀ	1	:	ı	;	;	1	ı	ŀ	;	ŀ
Salt Lake	ı	1	ŀ	·	ł	;	I	ı	:	:	:
Sanpete	ı	ı	:	;	ŀ		ŀ	;	1	ì	ŀ
Tooele	ı	:	ŀ	;	1		ı	ı	;	1	;
Utah	ł	;	ł	ł	ł	;	I	1	!	i	;
Wasatch	;	;	ŀ	ł	1		I	ı	:	1	:
REGIONAL TOTALS		<b> </b>	   <b>:</b>	;			ı	,	1	1	:
Southern Region	1	1	   •	;	1		I	,	۱,	1	;
Beaver	ï	:	ï	1	1		ı	ı	1	1	:
Garfield	;	ł	;	ï	1		1	1	1	1	:
Iron	ì	ł	ŀ	i	:		ŀ	ı	ı	i	;
Kane	ŀ	ł	i	i	1		:	:	1	1	;
Millard	ŀ	1	ı	i	!		:	•	1	ŀ	i
Piute	ŀ	1	ı	1	;		1	1	:	ł	i
Sevier	ı	ı	ı	ı	1		ŀ	ı	:	ì	ì
Washington	1	ı	1	ı	;		ı	1	:	i	1
Wayne	1	1	1	1	-		. :	:	:	:	1
REGIONAL TOTALS	1	1	-	-	+		:	1	1	:	1
Northeastern Region	i	ŀ	1	1	:		:	1	1	:	1
Daggett	ı	ı	ŀ	;	ł		;	ı	1	:	1
Duchesne	1	1	ı	ı	ŀ		:	i	ı	i	1
Uintah	:	:	:	:	-		:	1	ı	:	ı
REGIONAL TOTALS	!	1	ŀ	-	1	-	1	1	ı	:	1
Southeastern Region	;	ŀ	,	:	1		;	1	1	i	ı
Carbon	ŀ	;	ŀ	;	ŀ		:	ŧ	ı	ŀ	1
Emery	1	:	1	1	ì	!	i	ı	1	1	i
Grand	i	;	ŀ	i	ł		i	:	1	:	1
San Juan	ŀ	1	;	1	:		;	:	1	:	1
REGIONAL TOTALS	-	;		;	;		ŀ	ı	ı	1	ı
STATE TOTALS	i										

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Table 10.	

Region and	Rabbits/	Rabbits/	Rabbits/	Rabbits/	Rabbits/	Rabbits/	Rabbits/	Rabbite/	Rabbits/	Rabbits/	Rabbits/	Rabbits/
-							The same of the same of					
Commy	Hunter	100 Hr	Hunter	100 Hr	Hunter	100 Hr	Hunter	100 Hr	Hunter	100 Hr	Hunter	100 Hr
Northern Region												
Box Elder	314	3.14	25	1.50	313	3.57	ı	:	1	;	;	;
Cache	ļ	1	ï	ı	1	ı	ı	ı	;	;	:	1
Davis	100	1.25	;	1	ı	ı	ŀ	;	:	;	;	1
Morgan	1	I	ı	ł	ł	ŀ	i	ŀ	:	:	ł	:
Rich	42	1.86	ŀ	ŀ	ı	ı	i	ţ	ì	:	ł	1
Summit	1	1	1	i	ł	ı	i	;	;	:	ł	ŀ
Weber	ł	ı	ī	ı	1	1	1	ı	ı	:	i	!
REGIONAL TOTALS	93	2.22	25	0.21	313	3.57	;	1	1	:	ŀ	:
Central Region												
Juab	;	1	1	1	ł		ı	i	;	;	ŀ	1
Salt Lake	I	ł	ı	ŀ	ì	ļ	i	ı	ŀ	i	ł	ł
Sanpete	I	ł	ı	t	ı	;	1	ı	ł	;	ł	<u> </u>
Tooele	1	ŀ	I	ı	i	ı	ı	ı	ł	ı	ŀ	ł
Utah	ı	ı	ŀ	:	ı	ł	ı	ŀ	ŀ	ı	ŀ	:
Wasatch	ŀ	ì	ŀ	ı	ı	ı	1	ì	;	i	ŀ	1
REGIONAL TOTALS	1	ŀ	;	1	1		,	ı	ŀ		ł	۱.
Southern Region				:					1	1	1	
Beaver	ı	ı	ì	!	ı	ı	1	1	;	ı	1	:
Garfield	ľ	ı	:	ŀ	1	:	1	1	ŀ	;	ł	:
Iron	ı	ı	ı	;	1	;	1	ŀ	ì	ı	1	:
Kane	l	ı	ŧ	ł	1	;	i	;	ł	ŀ	ŀ	:
Millard	1	ı	:	ı	1	ı	ı	ŀ	ŀ	ŀ	ŀ	!
Piute	ŀ	ŀ	i	ı	1	;	1	ı	ŀ	ŀ	ŀ	
Sevier	!	:	:	:	1	,	ı	ŀ	ŀ	:	i	ı
Washington	150	1.50	ı	ł	;	ı	1	ì	ŀ	:	i	1
<b>Wayne</b>	1		1	;	21	1.02	;	1	:	ı	:	1
REGIONAL TOTALS	150	0.17	1	;	21	1.02	1	ı	1	ı	:	:
Northeastern Region									:	ł	ł	1
Daggett	ŀ	ŀ	I	ŀ	ı	I	1.25	<b>9</b> 2	:	1	ı	:
Duchesne	1	ı	450	9.00	48	1,38	;	ı	ı	:	:	:
Uintah	93	2.20	179	8.10	99	1,91	!	1	ł	i	ì	ł
REGIONAL TOTALS	93	0.73	187	5.10	19	1.77	1.25	20	:	i	:	1
Southeastern Region									:	ì	ł	1
Carbon	;	ŀ	1	1	ı	i	ł	i	1	:	ı	:
Emery	1	ł	1	ı	1	ŀ	1	ŀ	1	1	:	1
Grand	;	ì	ı	ı	1	ŀ	ł	ï	1	1	1	1
San Juan	;	;	ı	ı	1	;	:	:	1	1	:	:
REGIONAL TOTALS	:	;	1	ı	ı	i			•	1	1	1
STATE TOTALS	95	2.15	143	5.19	29	1.26	1.25	20	1	1	1	ł

#### SNOWSHOE HARE

#### <u>Harvest</u>

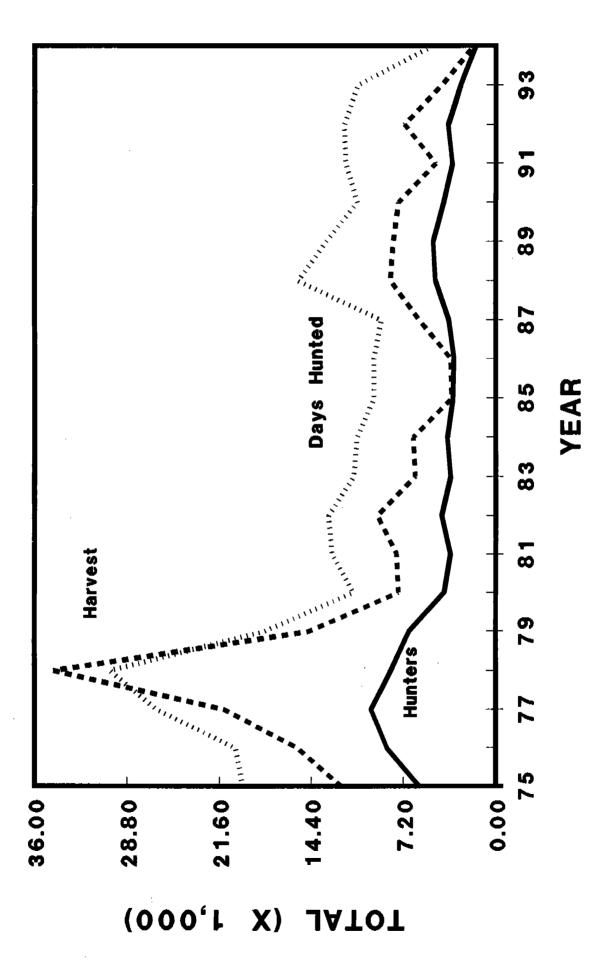
Results of the 1994 hunter questionnaire are found in Table 11. Trends of snowshoe hares bagged per hunter-day, percent of harvest and percent of pressure (hunter-days) are found in Tables 12-14. Trend in statewide harvest statistics by year are shown in Table 15 and Figures 1 and 2. The 1994 season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

		<u>Percent</u>	change from
	<u> 19<b>94</b></u>	1993	<u>Average</u>
Snowshoe hare hunters	1,5 <b>65</b>	-43	-68
Snowshoe hares harvested	1,722	-59	-83
Hunter-days afield	4,922	<b>~</b> 54	-66
Snowshoes per hunter-day	0.35	-10	-44
Snowshoes per hunter	1.10	<del>-</del> 29	-42

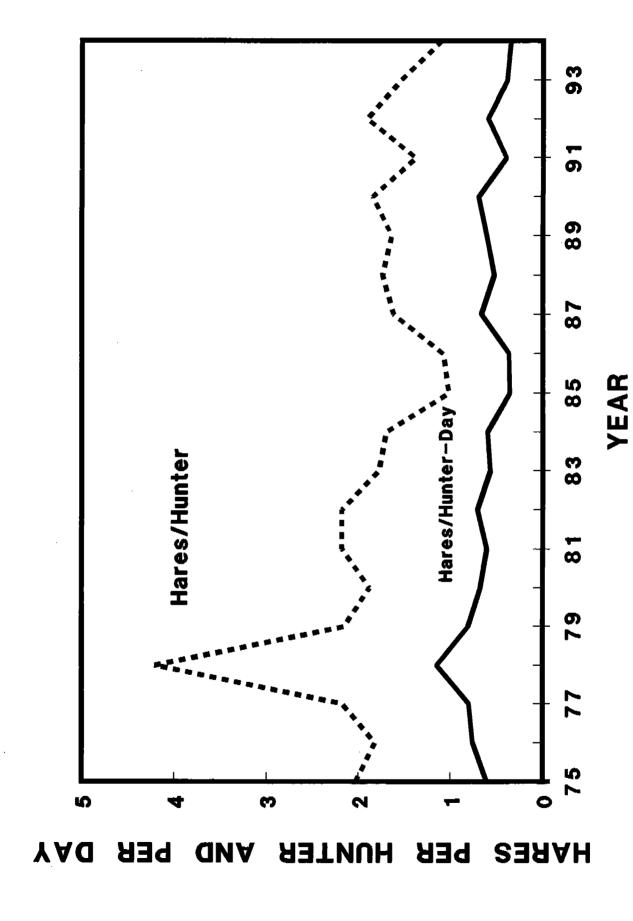
Significant misidentification of white-tailed jackrabbits as snowshoe hares was anticipated prior to mailing the harvest questionnaire following the first season in 1975. This proved to be the case as a significant harvest of snowshoe hares was reported for counties outside the known range of the species. 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.



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



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

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	í	17	0	0.00	0.36	0.00
DAVIS	1	35	ŏ	0.00	0.71	0.00
MORGAN	3	158	5 <b>2</b>	0.33		
RICH	3				3.21	3.06
		123	70	0.57	2.50	4.08
SUMMIT WEBER	4 1	105 17	0	0.00 <b>0.</b> 00	2.14 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	Õ	0	0	0.00	0.00	0.00
SANPETE	4	210	175	0.83	4.29	
	7					10.21
TOOELE	•	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	Ö	ō	0.00	0.00	0.00
MILLARD	ī	17	ō	0.00	0.36	0.00
PIUTE	ō	Ō	ŏ	0.00	0.00	0.00
SEVIER	5	210	87	0.42	4.29	5.10
WASHINGTON	ĭ	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	ĭ	70	10	0.00	1.43	0.00
GRAND	ō	ő	ŏ	0.00	0.00	0.00
SAN JUAN	Ö	ō	ō	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

<sup>\*</sup>Total hunter trips from questionnaire returns.

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

Region and					Year			
County	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region	<del> </del>	<del></del>		<u></u>			<u> </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
Central Region	0,170	9.130	0.00	<u> </u>		<u>0.5.</u>	0.40	9.7.7
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	0.48	0.64	1.08	0.78	0.43	0.67	1.02
Tooele	0.75	0.28	0.77	0.32	0.75	0.58	0.25	0.70
Utah	0.75	0.44	0.77	0.52	0.35	0.38	0.08	0.76
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
Southern Region	0.00	0.00	0.00	0 50	0.00	0.00	0.00	1 50
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
Northeastern Region								
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
Southeastern Region								
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					Year			
County	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region	1307	* 200	1,0,				<u> </u>	#774
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
Central Region	32.43	29.34	42.20	43.02	30.10	20.91	14.04	42.00
Juab	0.81	0.00	2.71	1.47	3.23	0.00	E 70	1.02
: -:							5.72	
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
Southern Region								
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
Northeastern Reg	ion		•					
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
Southeastern Req								
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
REGIONAL TOTALD	2.12	10.00	0.50		4.14	3.14	41.33	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					Year			1930   100
County	1987	1988	1989	1990	1991	1992	1993	1994
Northern Region	1307	1700	1707	1,7,0			1,,,,	4,334
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	0.19	0.89	1.95	0.53	3.21
Rich		5.18	9.25			3.00	1.41	2.50
	4.10			12.93	6.22			
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
Central Region								
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
Southern Region								
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
Northeastern Req.		3.27	13.30	14.07	7.33	13.47	12.00	
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
Southeastern Req.		10.91	13.73	12.30	22.22	10.52	29.03	0,/9
Carbon	3.83	1 40	6 50	2.66	2 01	1 20	2 47	11 70
	7.67	1.40 3.67	6.58 8.46	5.13	2.81	1.20 2.25	2.47	11.79 1.43
Emery Grand		0.00		0.38	1.63		0.88	
	0.00		0.00		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.

<del></del>	Total	Total	Hunter-Days	Hares Per	Hares Per
Year	Hunters	Harvest	Afield	Hunter-Day	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				<u> </u>	
(1975-94)	93,932	189,989	280,623		
Averages			-		
(1975-93)	4,861	9,909	14,511	0.63	1.89

## APPENDICES

#### 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.

		<u>re</u>	Mai	Apr	May	Diagram (	3	Aug	Sep	ğ	Weather Division Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov	<u>۾</u>
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	6.64	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-	7.6
No.2 Dixie												
Normal	38.8	44.1	49.2	56.6	65.7	75.6	81.7	79.4	71.9	6.09	48.0	39.5
1994	42.7	41.5	55.1	58.8	9.19	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	8.64	31.8	31.2
Departure (degrees)	90 P.	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	6.7.9	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	9.59	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	4.0	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	8.94	56.2	65.3	72.2	8.69	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	8.19	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	8.0-	-3.4	9'9
No.7 Southeast												
Normal	26.9	34.2	41.9	50.5	0.09	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
eparture (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	50.3	60.3	71.0	75.6	75.0	65.3	49.8	32.8	30.9
Demandered (december)	7	4	c L	,	,	7 1	0	,	•	,		

Weather Division	Jan	Feb	Mar	Apr	May	<u>m</u>	围	Aug	Division Jan Feb Mar Apr May Jun Jul Aug Sep O	Oct O	Nov	Dec
No. 1. Workers												
Normal	0 53	8 <u>7</u>	85	080	0.98	0.71	0.73	0.83	0 10	0.81	89 0	95
7601	0.34	0.63	0.84	9	0.77	0 13	Cr O	1	0.84	1 46	1 38	0.38
Donarture (inches)	0.00	20.0	0.01	0.61	0.21	25.0	10.41	81.0	90.0	9 0	9	0.00
charac (menes)	(4.0	20.0	7	70.0				01.0	3	0.0	3	
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	92.0	1.92	1.65	2.41	1.2	0.07	0.13	98.0	0.99	E	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	96.0	0.60	1.07	1.38	1.18	1.05	1.07	1.02
1994	0.39	1.81	99.0	1.78	0.47	90.0	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	0.02	0.13	1.16	69.0	-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	98.0	0.71	0.71	0.73	98.0	96.0	0.56	0.00
1994	90.0	0.56	0.16	96.0	0.37	0.21	0.18	69.0	96.0	3.36	9.78	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	99.0	0.59	0.81	99.0	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	0.02	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	90.0	0.11	0.10
STATE AVERAGES												
Normal	1.02	1.01	1.29	1.16	1.09	0.74	0.00	1.05	1.09	1.15	1.09	1.05
1994	0.46	1.59	68.0	1.78	0.74	0.14	0.28	96.0	1.01	2.25	1.78	0.85
Donarturo (inches)	95 O	8/ C	07 O-	0.63	0.25	09 0	17 0	000	900	4	,	,

# Oct Sep Aug Juh Jul MONTH May Apr Mar Feb Jan **DEPARTURE JAMRON FROM**

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

Dec

No.

# Dec No No Oct Sep Aug 亨 MONTH Jun May Apr Mar Feb Jan 0 3

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

PRECIP.

**JAMRON** 

**FROM** 

**DEPARTURE** 

## 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.

Table 1.	Adult		<del>**</del>	Res.		Res.		
		Game	-	Game		Game	Combination	License
Year	Issued	Cost	Issued	Cost	Issued	Cost	Issued	Cost
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.

<u> </u>	Utah	Resident Small Game	Proportion	
Year	Population	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	<b>7.1</b>	
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	<b>5.1</b>	
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	

<sup>1</sup> 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 (JSC=juvenile small game, RSG=adult resident small game, CIMB = combination license, NRSG = nonresident small game).

		The same of			TT 1 1 1 1 0						-			
785,536	48,920	413,459	309,504	13,653	15,539	1,223	59,824	25,792	4,551	40.00	25.00	12,00	90.9	1994
897,438	46,000	585,989	250,788	14,661	15,223	1,150	78,030	20,899	4,887	40.00	25.00	12.00	90.9	1993
924,734	47,800	598,417	262,224	16,293	14,801	1,195	78,940	21,852	5,431	40.00	35.00	12.00	90.9	1992
859,675	48,480	563,485	279,312	16,878	18,770	1,212	79,165	23,276	5,626	40.00	35.00	12.00	90.9	1991
855,356	51,160	543,986	294,324	17,046	15,969	1,279	76,292	24,527	2,682	40.00	35.00	12.00	90.9	1990
891,138	56,880	563,691	310,140	17,307	13,857	1,422	74,274	25,845	5,769	40.00	35.00	12.00	6.00	1989
873,261	57,120	535,971	308,796	28,494	15,400	1,428	72,846	25,733	9,498	40.00	35.00	12.00	9.00	1988
794,406	49,400	439,350	321,372	33,684	19,625	1,235	66,715	26,781	11,228	40.00	35.00	12.00	90.9	1987
786,615	20,960	395,973	354,804	35,838	25,533	1,274	67,435	39,567	11,946	40.00	35.00	12.00	6.00	1986
884,431	000,09	484,246	361,224	38,961	30,235	1,500	82,137	30,102	12,987	40.00	35.00	12.00	6.00	1985
565,444	48,990	250,544	288,560	26,340	34,237	1,633	73,081	36,070	13,170	30.00	23.00	8.00	4.00	1984
588,539	50,134	257,670	305,249	25,620	33,642	1,685	73,529	39,602	13,814	30.00	23.00	8.00	4.00	1983
638,477	49,110	315,597	294,800	28,080	34,116	1,637	82,970	36,850	14,040	30.00	23.00	8.00	4.00	1982
661,985	46,770	331,805	302,432	27,748	32,123	1,559	83,486	37,804	13,874	30.00	23.00	8.00	4.00	1981
694,716	39,900	425,120	241,512	28,084	34,369	1,330	100,177	30,189	14,042	30.00	23.00	8.00	4.00	1980
494,488	31,500	252,862	220,326	21,300	35,255	1,575	84,450	36,721	14,200	20.00	18.00	90.9	3.00	1979
467,339	28,980	221,719	222,492	23,128	38,091	1,449	81,227	37,082	15,419	20.00	18.00	90.9	3.00	1978
418,734	25,400	176,204	218,838	23,692	40,319	1,270	74,600	36,473	15,795	20.00	18.00	90.9	3.00	1977
407,534	22,820	184,675	198,468	24,391	40,658	1,141	76,587	33,078	16,261	20.00	18.00	90.9	3.00	1976
330,993	19,340	234,701	76,756	19,836	39,652	196	115,362	17,057	15,869	20.00	10.00	4.50	2.50	1975
344,374	19,480	245,504	78,453	20,417	38,575	974	117,770	17,434	16,334	20.00	10.00	4.50	2.50	1974
352,704	19,280	247,290	84,762	20,652	35,665	964	115,436	18,836	16,522	20.00	10.00	4.50	2.50	1973
340,288	21,500	230,553	89,082	20,653	33,042	4,075	107,414	19,796	16,523	20.00	10.00	4.50	2.50	1972
313,676	20,000	200,557	93,064	20,055	37,588	1,000	102,284	20,681	16,044	20.00	10.00	4.50	2.50	1971
TOTAL(1)	NRSG	CMB(2)	RSG	JSG(4)	Sold(3)	NRSG	CMB	RSG	JSG(4)	NRSG	CMB	RSG	)SC	Year
ате (\$)	to Small G	Fotal Gross Revenues Attributed to Small Game (\$)	oss Revenue	Total Gr	Duck Stamps	P	Number of Licenses Sold	Number of			Fees	License Fees		
					No. Federal									

<sup>1</sup> 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.

from combination liceuse sales when projecting revenue generated. The proportion of the combination liceuse fee attributed They may fish and hunt big game but they do not hunt any other small game. Therefore, duck stamp sales are subtracted Combination license values are based on the assumption that all waterfowl hunters purchased only combination licenses. 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,

<sup>3</sup> 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.

<sup>4</sup> 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.

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Regional and statewide summary
Table 1.

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260          442          780          435          273          273          273          273          273          1905          273          1905          273          1905          1905          1906          2730          1906          2730          2730          2730          2730          2730          2730          2730          2730          2730          2730          2730          2730          2730          2730          2730          2730          2730          2730          2730          2730          2730          2730          2730          2730          2730          2730          2730          2730          2730          2730          2730	1982	437	;	639	:	283	1	477	!	332	1	2,468	;
4.46          359          473          463          166          1,000           4.55          333          343          463          166          1,000           4.55          518          574          546          190          1,000           4.55          518          574          546          90          1,000           518          518          574          546          90          1,000           418          518          577          90          1,444           488          486          120          240          1,444           413          487          80          240          1,444           413          488          430          277 <td>1063</td> <td>. 090</td> <td></td> <td>4</td> <td></td> <td>8</td> <td>1</td> <td>700</td> <td>1</td> <td>130</td> <td>!</td> <td>2.238</td> <td>,</td>	1063	. 090		4		8	1	700	1	130	!	2.238	,
444         -         359         -         473         -         473         -         100         -         1,000           453         -         673         -         679         -         473         -         1,000           453         -         671         -         669         -         520         -         1,000         -         1,000           373         -         451         -         669         -         520         -         2,000         -         2,501           493         -         457         -         669         -         530         -         1,000         -         1,501           493         -         457         -         669         -         530         -         1,501         90         -         1,501           413         -         457         -         609         -         530         -         1,501         90         -         1,501           418         -         463         -         -         463         -         90         -         1,501         90         -         1,501         90         -         1,501	2061	207	I	7	I	8 !	ŀ	074	ì	955	I	0044	ı
383         -         343         -         650         -         492         -         189         -         2,008           455         -         679         -         492         -         199         -         2,008           455         -         679         -         674         -         674         -         90         -         2,531           499         -         456         -         674         -         90         -         1,664           418         -         574         -         664         -         463         -         90         -         1,664           418         -         549         -         463         -         90         -         1,664           418         -         549         -         463         -         90         -         1,664           413         -         549         -         463         -         90         -         1,664           413         -         489         -         493         -         493         -         1,664           413         -         489         -         490	1984	444	ŀ	339	I	5/4	:	463	:	8	1	1,905	1
455          617          669          520          279          2,511           432          436          456          90          1,664           334          436          463          90          1,664           499          427          463          90          1,664           488          465          403          90          1,664           488          469          120          403          1,664           488          469          97          1,664          1,664           413          469          90          1,664          1,664          1,664          1,664          1,664          1,664          1,664          90          1,664          90          <	1985	383	ŀ	303	ı	020	1	492	1	180	ı	2,008	;
432         -         518         -         574         -         546         -         90         -         2,160           493         -         436         -         468         -         90         -         1,953           499         -         436         -         604         -         468         -         1,664           518         -         436         -         97         -         240         -         90         -         1,464           413         -         496         -         97         -         240         -         90         -         1,464           413         -         547         -         90         -         1,464         -         1,464           413         -         549         -         -         240         -         90         -         1,464           119         -         547         -         240         -         90         -         1,464           119         -         547         -         240         -         90         -         1,464           119         -         548         -	1986	455	;	617	;	<del>\$</del>	;	520	1	270	;	2,531	;
334          426          469          90          1,564           499          447          463          90          1,464           418          468          463          90          1,464           488          466          375          90          1,464           413          456          100          657          90          1,464           413          456          90          1,464          1,464          1,464          1,464          1,466          1,466          1,466          1,466          1,466          1,466          1,466          1,466          1,466          1,466          1,466          1,466          1,466          1,466           1,466 <t< td=""><td>1987</td><td>432</td><td>;</td><td>518</td><td>:</td><td>574</td><td>,</td><td>546</td><td>1</td><td>2</td><td>ł</td><td>2,160</td><td>1</td></t<>	1987	432	;	518	:	574	,	546	1	2	ł	2,160	1
499          427          45          403          90          1,464           488          496          97          240          1,566           413          456          97          375          90          1,464           413          456          97          340          1,566           149          458          90          1,566           149          468          297          90          1,566           1180          468          297          90          1,566           1180          468          297          90          1,566           11065         11         1,464         107         72         43         40         90          1,566         378         368         368         368         378         368         368 <td>1988</td> <td>334</td> <td>;</td> <td>436</td> <td>:</td> <td>69</td> <td>;</td> <td>469</td> <td>1</td> <td>90</td> <td>:</td> <td>1,933</td> <td>1</td>	1988	334	;	436	:	69	;	469	1	90	:	1,933	1
518          509          97          240          90          1,454           485          496          120          657          90          1,566           413          436          30          340          1,566           180          435          90          1,566           180          488          90          1,566           1,063         119         1,483         131         950         37         1,012         69         984         58         5,081           1,063         119         1,494         167         72         10         705         48         702         68         4,036           1,158         19         1,694         167         72         10         705         48         702         68         3,08           1,168         1,664         110         482         34         400         71         429         40         3,13	1989	499	;	427	:	45	;	403	ı	06	;	1,464	ı
485          496          170          375          90          1,566           443          456          100          657          90          1,566           249          456          100          657          90          1,566           180          468            277          90          1,566           1,063         119         1,434         157         72         69         984         965         4,066           1,063         119         1,494         167         72         449         30         1,115         67         368         3,718           1,883         30         808         85         892         41         908         88         9,64         110         465         32         777         60         711         429         32         3,583         44         312         86         32         3,583         44         30         1,115         60         37	1990	818	;	200		8	I	240	ļ	06	;	1,454	1
413         -         455         -         -         677         -         90         -         1,516           249         -         547         -         90         -         1,516         -         1,516           249         -         547         -         90         -         -         1,516           180         -         60         -         297         -         -         90         -         1,516           110         -         68         -         -         297         -         -         945         -         1,306           11063         119         1,494         107         72         10         705         48         702         68         4,036           1125         31         1,591         107         72         10         70         88         5,081           1125         31         1,594         107         72         10         70         88         5,081           1126         31         110         465         32         727         67         40         37,18           1128         12         20         21         20 <td>201</td> <td>36.</td> <td>1</td> <td>) ¥</td> <td>ı</td> <td>130</td> <td></td> <td>3 L C</td> <td>, ,</td> <td>3</td> <td>;</td> <td>1 566</td> <td>;</td>	201	36.	1	) ¥	ı	130		3 L C	, ,	3	;	1 566	;
415         -         547         -         0         -         0         -         1,010           180         -         545         -         0         -         0         -         1,010           180         -         545         -         0         -         0         -         1,010           180         -         468         -         -         0         -         -         0           1,063         119         1,494         167         72         10         705         48         50         984         58         5,081           1,1063         119         1,494         167         72         10         705         48         702         68         4,036           1,1063         119         1,494         167         72         10         705         48         702         68         4,036           1,1063         119         1,494         107         72         10         705         71         88         5,08         4,036         71         88         5,08         703         60         3,138         3,138         3,23         3,14         3,15         3,14 <td>1001</td> <td>2 5</td> <td></td> <td>2</td> <td>1</td> <td>3</td> <td></td> <td></td> <td></td> <td>2</td> <td>l</td> <td>1 615</td> <td></td>	1001	2 5		2	1	3				2	l	1 615	
249         -         547         -         547         -         547         -         548         -         1,000           1180         -         -         468         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -	7661	7	ı	e i	:	> 8	I	/ 60	:	2 8	ł	200,1	ł
180         —         468         —         297         —         —         945           712         91         1,423         131         950         37         1,012         69         984         58         5,081           1,063         119         1,494         167         72         10         705         48         702         68         4,006           1,153         11         1,591         107         564         43         908         88         702         68         4,006           1,185         13         107         564         43         908         88         702         68         4,006           1,185         10         465         32         77         60         71         429         44         3,235           1,894         120         601         37         600         71         429         44         3,233           1,659         14         315         22         29         44         3,233         44         3,15         23         1,84         3,233         44         3,15         23         1,84         3,14         3,233         3,23         1,84	383	647	l	Ž,	ŀ	€	1	340	1	3	;	005,1	1
712         91         1,423         131         950         37         1,012         69         984         58         5,081           1,063         119         1,494         167         72         10         705         48         702         68         4,036           1125         31         1,591         107         564         43         440         30         1,115         67         3,852           875         36         808         85         82         41         908         88         736         53         3,552           875         75         964         110         465         32         777         67         687         66         3,718           339         28         49         410         315         60         71         449         35         35         35         35         35         35         35         35         35         35         35         35         35         35         35         35         35         35         35         35         36         37         110         47         35         36         37         110         47         35         36 <td>19<u>9</u>2</td> <td>180</td> <td>:</td> <td>468</td> <td>;</td> <td>ì</td> <td>ı</td> <td>297</td> <td>;</td> <td>ŀ</td> <td>:</td> <td>945</td> <td>ł</td>	19 <u>9</u> 2	180	:	468	;	ì	ı	297	;	ŀ	:	945	ł
712         91         1,423         131         950         37         1,012         69         984         58         5,081           1,063         119         1,494         167         72         10         705         48         702         68         4,036           1,125         31         1,494         167         72         10         705         48         702         68         4,036           1188         30         88         86         82         41         908         88         4,036         93         4,036         93         4,036         93         4,036         93         9,02         1,115         67         3,835         95         3,835         3,835         3,835         3,835         3,138         3,138         3,738         3,738         3,738         3,738         3,738         3,738         3,738         3,738         3,738         3,738         3,738         3,738         3,738         3,738         3,738         3,738         3,738         3,738         3,738         3,738         3,738         3,738         3,738         3,738         3,738         3,738         3,738         3,748         3,748         3,748         <	104												
1,05         11         1,494         177         2         1,05         1,115         67         3,635           1,53         11         1,494         177         24         440         30         1,115         67         3,835           115         30         88         88         786         55         3,582           875         75         964         110         465         32         727         67         687         66         3,718           405         75         964         110         465         32         727         67         687         66         3,718           405         75         964         110         465         32         727         67         687         66         3,718           405         59         42         135         14         315         23         23         23         23         23         36         1,904         14         315         36         23         36         1,904         14         315         36         31         33         32         34         31         36         32         34         36         36         37	1073	717	ē	1 403	131	020	75	1 013	9	780	85	5.081	386
125         11         1591         100         72         70         70         70           185         31         1,591         107         564         43         440         90         76         55         3,835           188         30         808         85         804         41         948         76         55         3,835           875         75         964         110         465         32         777         67         687         66         3,718           405         50         1,198         120         601         37         600         71         429         44         3,233           359         28         459         42         135         14         315         23         23         23         23         3,23         3         3,23         3         3,23         3         3,23         3         3,23         3         3         3,23         3         3         3         3,23         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3	1001	100	: =	707	Ę	<b>E</b>	; 5	301	) <del>(</del>		3	4 036	412
125         31         1,591         107         504         45         440         50         1,115         67         67         67         67         67         57         3,532           88         30         808         85         892         41         908         88         786         55         3,718           405         50         1,198         120         601         37         600         71         429         44         3,738           546         54         198         120         601         37         600         71         429         44         3,718           283         28         459         42         135         12         0         0         53         1,804           283         58         124         235         12         0         0         53         10         2,239           330         56         591         49         147         11         245         21         20         23         1,804           473         34         571         56         475         35         20         23         1,804           17         15		CDO,1	;		ì i	: }	£ 5	3 5	2	707	9 5	3,036	920
188         30         88         89         41         908         88         796         55         3,582           875         75         75         60         71         69         75         55         3,582           405         75         75         77         60         71         66         3,718           405         56         1,198         120         601         37         66         3,718           546         54         793         76         415         22         293         23         56         1,804           283         68         1,668         124         235         12         20         14         2,334           283         68         1,668         147         11         245         21         260         32         260         32         23         32         32         32         44         101         9         1,880         14         101         9         1,880         14         101         9         1,880         14         103         3         1,880         1,880         1,880         1,880         1,880         1,880         1,880         1,880	4/4	571	16	Ivc, I	10/	200	<b>5</b>	3	₹ :	cit,	/0	5,635	017
875         75         964         110         465         32         727         67         687         66         3,718           405         50         1,198         120         601         37         600         71         429         44         3,733           359         28         459         42         135         14         315         23         536         52         1,804           546         54         459         42         135         14         315         23         56         42         1,804           330         56         591         49         147         11         245         21         60         37         10         2,39           473         34         56         475         35         260         37         10         32         2           473         34         57         48         44         103         7         818           54         81         303         32         -         -         -         -         118         16         1,075           54         43         43         36         -         -         -	1975	188	8	808 808	æ	892	4	808	88	786	22	3,582	£
405         50         1,198         120         601         37         600         71         429         44         3,233           359         28         459         42         135         14         315         23         536         52         1,804           540         54         54         459         46         135         14         315         23         536         52         1,804           283         68         1,668         124         235         12         0         0         53         10         2,314           283         68         1,668         124         235         12         0         0         53         10         2,314           473         56         475         35         260         37         101         9         1,880           17         15         190         17         20         2         488         44         103         7         818           17         453         36         -         -         -         -         -         118         16         1,775           236         435         36         0         3	1976	875	75	<b>9</b> 64	110	465	35	727	29	687	ક્ર	3,718	350
359         28         459         42         135         14         315         23         536         526         1,804           546         54         793         76         415         22         293         23         56         514         235         12         9         23         56         14         2,314           283         68         1,668         124         235         12         0         0         53         10         2,239           330         56         591         49         147         11         245         21         560         32         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         3         3         3         3	1977	405	<b>9</b> 5	1,198	120	109	37	909	17	429	4	3,233	322
546         54         793         76         415         22         293         23         267         14         2,314           283         68         1,668         124         235         12         0         0         53         10         2,239           330         56         591         49         147         11         245         21         260         32         2           473         34         571         56         475         35         260         37         101         9         1,880           17         15         190         17         20         2         488         44         103         7         818           236         81         303         32         -         -         -         -         118         16         1,75           236         73         453         36         -         -         -         -         174         12         863           344         65         43         37         -         -         -         -         -         -         -         -         -         -         -         -         -	1978	359	28	459	42	135	14	315	23	536	25	1,804	159
283         68         1,668         124         235         12         0         63         10         2,239           330         56         591         49         147         11         245         21         260         32         2           473         34         571         56         475         35         260         37         101         9         1,880           17         15         190         17         20         2         488         44         103         7         818           54         81         303         32         -         -         -         -         118         16         1,755           236         73         453         36         -         -         -         174         12         863           344         65         43         36         6         7         -         -         -         961           813         19         36         6         7         -         174         12         861           105         14         8         -         -         185         8         14         10         160	1979	546	\$	793	92	415	22	293	23	267	41	2,314	189
330         56         591         49         147         11         245         21         60         32         2           473         34         571         56         475         35         260         37         101         9         1,880           17         15         190         17         20         2         488         44         103         7         818           654         81         303         12         -         -         -         118         16         1,075           236         73         62         -         -         -         -         174         12         863           344         65         43         36         0         3         365         14         -         -         961           813         119         398         36         0         3         305         32         175         23         1,691           105         17         60         7         -         -         180         14         1,075           105         17         1,190         7         -         -         180         14         12	1980	283	89	1,668	121	235	12	•	•	83	10	2,239	214
473         34         571         56         475         35         260         37         101         9         1,880           17         15         190         17         20         2         488         44         103         7         818           654         81         303         12         20         2         488         44         103         7         818           236         81         1         1         1         1         1         803         1         803         1         803         1         803         1         803         1         803         1         804         1         803         1         804         1         803         1         803         1         803         1         803         1         1         804         1         1         804         1         1         804         1         1         1         804         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1 </td <td>1981</td> <td>330</td> <td>36</td> <td>201</td> <td><del>\$</del></td> <td>147</td> <td>11</td> <td>245</td> <td>21</td> <td>260</td> <td>32</td> <td>2</td> <td>169</td>	1981	330	36	201	<del>\$</del>	147	11	245	21	260	32	2	169
17         15         190         17         20         2         488         44         103         7         818           654         81         15         190         17         20         2         488         44         103         7         818           236         73         453         36         -         -         -         118         16         1,075           394         65         432         37         -         -         174         12         863           413         119         398         36         0         3         305         32         175         23         1,691           105         17         49         60         7         -         -         180         14         1,076           105         17         505         30         11         8         -         -         144         12         765           1         1,190         77         -         -         85         8         235         20         1,510           0         0         331         18         0         0         0         225         11	1982	473	34	571	9	475	35	260	37	101	•	1.880	171
654         81         303         32         -         -         -         -         118         16         1,075           236         73         453         36         -         -         -         174         12         863           394         65         432         37         -         -         174         12         863           813         119         398         36         0         3         305         32         175         23         1,691           105         17         505         30         11         8         -         -         144         12         765           -         21         1,190         77         -         -         85         8         235         20         1,510           0         0         311         18         0         0         0         225         11         536           178         27         270         12         0         0         0         0         22         300           -         -         -         -         -         -         -         -         -         -         -	1983	17	<u> 12</u>	£	1	50		488	4	103	7	818	\$2
236         73         453         36         -         -         -         174         12         863           394         65         432         37         -         -         135         14         -         -         961           813         119         398         36         0         3         305         175         23         1,691           105         17         505         30         11         8         -         -         144         12         765           -         21         1,190         77         -         -         85         8         235         20         1,510           0         0         311         18         0         0         0         225         11         536           178         27         270         12         0         0         0         0         22         300           -         -         -         -         -         -         -         -         1,510           0         0         0         0         0         0         225         111         536           -         -	1067	; 22	: =	303	; ;	}	i l	}	:	118	<u>, 7</u>	1 075	120
236         75         455         36         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         - </td <td>1004</td> <td>5 6</td> <td>5 6</td> <td>3 5</td> <td>3 %</td> <td>l</td> <td>ļ</td> <td></td> <td>ł</td> <td>277</td> <td>2 5</td> <td>. E38</td> <td>2</td>	1004	5 6	5 6	3 5	3 %	l	ļ		ł	277	2 5	. E38	2
394         65         432         37         -         -         135         14         -         -         961           813         119         398         36         0         3         305         32         175         23         1,691           379         35         457         49         60         7         -         -         180         14         1,076           105         17         505         30         11         8         -         -         144         12         765           0         0         311         18         0         0         0         0         1,510           178         27         270         12         0         0         0         0         216         24         664           178         27         270         12         0         0         0         2         300         2	282	007	3 ;	6	96	1	ï	: }	. :	:	71	96	171
813         119         398         36         0         3         305         32         175         23         1,691           379         35         457         49         60         7         -         -         180         14         1,076           -         21         1,190         77         -         -         8         235         20         1,510           0         0         311         18         0         0         0         225         11         536           178         27         270         12         0         0         0         0         216         24         664           -         -         -         -         -         -         -         300         22         300	1986	304	65	432	37	ı	1	135	4	1	l	198	91
379         35         457         49         60         7         -         -         180         14         1,076           105         17         505         30         11         8         -         -         144         12         765           -         21         1,190         77         -         -         85         8         235         20         1,510           0         0         311         18         0         0         0         225         11         536           178         27         270         12         0         0         0         216         24         664           -         -         -         -         -         -         300         2         300	1987	813	119	398	36	•	3	305	32	175	23	1,691	213
105         17         505         30         11         8           144         12         765            21         1,190         77          85         8         235         20         1,510           0         0         0         0         0         225         11         536           178         27         270         12         0         0         0         216         24         664               300         22         300	1988	379	32	457	<b>\$</b>	8	7-	;	;	180	<u>4</u>	1,076	105
-         21         1,190         77         -         85         8         235         20         1,510           0         0         0         0         0         225         11         536           178         27         270         12         0         0         0         216         24         664           -         -         -         -         -         300         22         300	1989	105	17	505	æ	П	90	1	ı	4	12	765	<i>L</i> 9
0         0         311         18         0         0         0         0         225         11         536           178         27         270         12         0         0         0         216         24         664           -         -         -         -         -         300         22         300           -         -         -         -         -         -         70	1990	ı	21	1,190	7.	ı	:	82	œ	235	50	1,510	126
178     27     270     12     0     0     0     0     216     24     664           300     22     300           300     22     300	1991	•	0	311	18	0	٥	o	0	225	11	536	23
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Miles         Miles         Hours         Hours         Hours         Miles         Hours         Hours <th< th=""><th>,</th><th>Northe</th><th>ا ء</th><th>Centra</th><th>,</th><th>Souther</th><th>F .</th><th>Northeaste</th><th>E :</th><th>Southeaster</th><th>ا</th><th>STATE TO</th><th>IALS</th></th<>	,	Northe	ا ء	Centra	,	Souther	F .	Northeaste	E :	Southeaster	ا	STATE TO	IALS
6.3         3.2.3         1.187         1.44         2.12.3         1.79         1.41         2.02.3           1.46         3.12.3         1.87         1.44         2.12.3         1.79         1.41         2.02.3           2.46         3.21         1.57         1.47         1.16         1.82.3         2.86         1.41         3.02.3           2.46         3.22         1.42         1.17         1.16         1.88         2.26         1.49         1.14         3.02           3.41         1.32         1.41         2.26         1.88         2.26         1.41         3.02           4.61         1.37         4.62         1.32         1.41         3.02         1.14         3.02         1.16         3.99         1.14         3.02           4.61         1.62         3.43         1.61         3.99         1.41         3.02         3.02         3.02         3.02         3.02         3.02         3.02         3.02         3.02         3.02         3.02         3.02         3.02         3.02         3.02         3.02         3.02         3.02         3.02         3.02         3.02         3.02         3.02         3.02         3.02         3.	pecies		Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Wiles	Hours
6.6         2.1         1.1         1.4         2.1.2         1.1         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2         1.2 </td <td>age Gro</td> <td>use , / / oc</td> <td></td> <td>ţ</td> <td>Ş</td> <td>į</td> <td>;</td> <td></td> <td>į</td> <td></td> <td>;</td> <td></td> <td>Š</td>	age Gro	use , / / oc		ţ	Ş	į	;		į		;		Š
146   253   257   147   147   146   148   258   248   248   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249   249	7/61	879'1	575	1,18/	143	ē :	44	2,125	D/.T	087,1	<u>1</u>	1/6'0	176
0.05         2.11         1.581         1.581         1.581         1.581         1.581         1.581         1.581         1.581         1.581         1.581         1.581         1.581         1.581         1.592         1.193         5.909           566         2.81         4.66         1.11         2.79         1.582         2.73         1.193         5.909         1.193         5.909         1.193         5.909         1.193         5.909         1.193         5.909         1.193         5.909         1.193         5.909         1.193         5.909         1.193         5.909         1.193         5.909         1.193         5.909         1.193         5.909         1.193         5.909         1.193         5.909         1.193         5.909         1.193         5.909         1.193         5.909         1.193         5.909         5.909         5.909         5.909         5.909         5.909         5.909         5.909         5.909         5.909         5.909         5.909         5.909         5.909         5.909         5.909         5.909         5.909         5.909         5.909         5.909         5.909         5.909         5.909         5.909         5.909         5.909         5.909	1973	3,146	323	927	147	1,171	116	1,952	238	496	4	7,692	895
2.44         9.63         11.3         71.4         2.36         1,868         2.36         1,1908         13.1         5,897           9.66         2.84         9.63         11.3         71.4         2.36         1,888         2.36         1,199         11.2         1,998         13.1         1,881         2.37         1,998         13.1         1,998         13.2         1,199         2.37         1,998         13.2         1,199         2.39         13.2         1,998         2.15         1,998         13.2         1,199         2.39         14.6         5,934           0.13         1.39         3.68         3.43         1,171         1.20         2.79         2.74         4,934           1.10         1.39         3.69         4.54         8.79         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11         1.11	1974	2,026	321	1,551	115	1,881	193	2,964	248	887	124	606,6	1,001
968         281         426         111         379         158         127         1,272         161         5,873           408         27         426         171         139         158         1,471         122         161         5,873           408         27         448         177         1,995         226         777         106         677           91         207         448         177         146         279         279         279         4,971           104         207         448         152         1471         184         278         279         4,971           104         154         469         152         1471         184         279         279         4,971           104         154         469         152         1471         184         278         279         4,972           105         154         460         157         1471         184         278         177         174         174         174         174         174         174         174         174         174         174         174         174         174         174         174         174         17	\$261	1,254	249	963	123	714	226	1,868	236	1,098	131	5,897	965
966         318         1,370         133         465         157         1,995         215         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97         97	9261	1,965	281	426	121	379	183	1,881	722	1,222	191	5,873	673
440         267         541         124         499         152         1,616         226         879         97         4,934           151         158         740         152         156         143         1,719         286         97         4,934           151         158         356         143         1,719         283         97         99         4,912           150         158         356         244         51         364         377         39         5,743           160         159         258         54         520         95         156         97         4,912           160         159         258         54         520         95         156         97         4,912           160         150         244         51         96         41         171         188         17         37         264         43         99         14         17         189         17         37         36         43         43         43         43         43         43         43         43         43         43         43         43         43         43         43         43 <td< td=""><td>1977</td><td>1,966</td><td>305</td><td>1,370</td><td>133</td><td>465</td><td>157</td><td>1,995</td><td>215</td><td>928</td><td>116</td><td>6,724</td><td>976</td></td<>	1977	1,966	305	1,370	133	465	157	1,995	215	928	116	6,724	976
651         159         700         132         563         143         1,719         200         279         20         4,312           669         189         218         574         147         184         278         90         4,976           669         189         518         574         771         184         277         90         4,976           669         189         702         484         813         882         116          9,744           411         278         286         481         872         116          9,744           411         278         286         481         882         116         17         264           411         140         482         882         116         17         264         496           224         186         486         59         1114         124         196         197           244         286         59         1114         124         196         197         196         197         196         197         196         197         196         197         196         197         196         197	1978	1,408	267	541	124	490	152	1,616	226	618	76	4,934	998
010         118         918         150         518         918         1471         1184         2778         60         4076           010         123         92         225         57         771         1163         277         99         273           010         158         226         53         57         116          377         99         2743           101         158         228         53         54         520         116          377         99         2744           104         158         228         52         586         54         516         67         116         17         5744           104         158         160         43         586         54         116         17         5744           105         186         16         43         586         141         154         146         146         17         5744           105         186         16         43         586         141         154         146         146         146         174         146         17         174         174         176         174         174	6261	1,051	150	700	132	563	143	1,719	203	279	70	4,312	648
194         601         99         288         57         771         163         377         99         2743           106         186         196         601         99         284         81         972         116           3/47           100         186         284         81         82         116           3/47           411         278         288         81         119         166         9         580         191         17         2644           999         206         172         37         286         89         1114         124         196         19         2,644           999         176         172         37         286         89         1114         124         196         19         3,756           999         177         444         89         99         42         244         39         70         17         1,000           54         176         176         176         176         176         176         176         176         176         176         176         176         176         176         176	1980	1,003	218	908	150	518	\$	1,471	184	278	8	4.076	706
669         169         762         96         464         88         862         116            3747           111         178         278         278         51         920         115         108         10         2744           164         189         54         284         51         920         115         106         9         3747           164         189         184         58         50         1114         106         9         3776           164         181         241         410         45         666         94         166         94         166         94         166         94         166         3776           465         198         210         46         19         587         61         166         3776         17         1762           57         198         198         21         69         41         166         39         18         3776         178         1766         177         178         1766         178         178         1766         178         178         1766         178         178         178         178	1881	619	194	69	\$	285	22	177	163	37.7	39	2.743	552
11         278         288         284         51         992         173         108         10         2714           411         278         288         284         51         992         125         108         10         2714           411         278         288         54         520         95         151         17         2644           929         178         173         286         50         1114         124         195         18         3706           929         172         37         286         50         1114         124         195         18         3706           929         172         37         286         50         1114         124         195         19         3706           929         172         37         286         30         1114         124         195         19         3706           929         170         270         21         244         30         21         244         30         30         30         30           920         170         270         170         170         170         170         170         170	1080	1 660	16.0	267	3 2	454	: \$	28	911	; ;	; 1	3 747	709
11         2.78         2.84         2.94         2.94         2.94         2.94         2.94         2.94         2.94         2.94         2.94         2.94         2.94         2.94         2.94         2.94         2.94         2.94         2.94         2.94         2.94         2.94         1.04         1.04         2.94         3.94         1.04         1.04         2.94         3.94         1.04         1.04         3.94         3.04         3.04         3.94         3.04         3.04         3.94         3.04         3.04         3.94         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3.04         3	5	610	3 2		; 5	2	3 4	<b>1</b> &	201	901	: 5	4100	303
441         1.78         2.89         2.89         5.90         5.00         5.00           441         1.78         2.89         2.89         5.90         5.95         1.91         1.91         5.00           422         1.92         1.80         4.3         6.66         9.9         1.91         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95         1.95	200	are,	65 5	37	<b>*</b>	<b>3</b>	1.	766	57	601	er !	41/7	000
106         188         74         410         45         666         84         106         9         3827           214         166         181         74         410         45         666         84         106         9         3827           205         187         188         315         66         600         91           3775           467         187         188         315         66         600         91           3775           54         186         18         31         66         600         91          3775           54         180         36         44         36         21         60         31         60         3775         378           54         196         27         140         16         176         140         36         378         378           54         140         45         244         30         70         71         378         378           54         140         45         461         140         351         461         378         461         371         461         <	784	1,411	\$17	283	26	586	5 4	530	S.	151	13	2,664	270
924         197         281         39         166         43         948         94         146         14         2588           939         265         172         37         266         60         1,114         124         195         18         3,706           959         168         186         36         60         101         17         24         195         18         170         3,706           65         108         36         56         46         19         587         61         167         24         1,575           74         210         36         32         24         30         13         100         370           84         210         36         41         265         50         193         18         204         23         130           84         156         32         2         2         65         3         190         43         3         3         3         3         4         4         3         3         3         3         3         4         3         3         3         3         3         3         3         3         3	1985	2,164	169	481	4	410	45	999	¥	106	٥	3,827	381
939         246         172         37         286         50         1,114         124         195         18         3,706           949         188         188         34         66         600         91            3,775           75         187         446         86         46         24         244         30         70         7         1,023           54         210         270         21         39         21         66         24         244         30         70         7         1,023           54         210         270         21         36         21         60         21         86         13         1,000           58         16         126         36         21         60         13         60         70         7         1,023           58         16         15         26         42         244         30         7         1,023         143         140         13         1,000         143         140         140         140         140         140         140         140         140         140         140         140	9861	1,024	197	281	33	169	43	948	ᆶ	146	14	2,568	387
992         177         678         188         315         66         690         91           3,775           54         186         340         19         557         61         167         24         1,585           54         210         270         21         30         21         64         30         16         17         1,695           54         210         270         21         30         21         64         31         160         73         1,695           58         16         156         36         21         60         21         86         13         1,600           58         16         156         19         18         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19         19	1987	1,939	202	172	37	987	50	1,114	124	195	18	3,706	434
65         108         360         56         46         19         587         61         167         24         1,595           73         444         89         90         42         244         30         70         7         1,023           82         36         36         32         -         -         -         65         3         130         23         1,000           82         36         32         -         -         -         65         3         130         23         1,000           38         16         156         18         204         23         8         4,13           39         16         16         13         10         65         3         130         130         130           39         16         16         13         14         156         14         130         14         130         14         130         14         130         14         14         14         14         14         14         14         14         14         14         14         14         14         14         14         14         14         14         14	8861	2,092	171	879	108	315	99	069	16	;	:	3,775	44
75         75         444         89         90         42         244         30         70         7         1,023           54         10         21         26         21         30         21         60         21         86         13         1,000           7         126         96         24         265         30         13         130         23         150           8         16         155         18         26         32         26         32         150           88         16         155         18         26         32         23         130         133         140           16         155         18         27         136         136         140         351         413         413           27         1287         160         275         140         150         99         147         761         72         3,530           27         128         150         275         140         150         99         147         761         178         408         413           28         132         142         241         140         152         142	1989	465	108	360	<b>2</b> 6	94	19	. 557	19	167	24	1,595	268
54         210         270         21         30         21         60         21         86         13         1,000            126         96         44         265         50         193         18         204         23         788           86         16         15         26         49         26         40         27         193         194         23         788           86         16         155         18          65         3         194         23         783         783           77         157         162         266         429         1346         140         351         670         351         4712           77         157         266         429         1346         140         351         4712         358         4712         358           81         152         264         429         1494         147         461         461         461         461           81         152         264         429         147         414         461         472         144         461         472         472         144         472         144<	1990	175	73	4	8	<b>9</b> 6	4	42	39	70	7	1,023	241
126         96         44         265         50         193         18         204         23         758           8         16         156         36         3           65         3         130         23         231           8         16         155         18           65         3         130         231         231           37         15         18           135         10         65         8         413           37         212         184         103         214         260         1,346         140         351         8,08         4,13         4,13         4,13         4,13         4,13         4,13         4,13         4,13         4,13         4,13         4,13         4,13         4,13         4,13         4,13         4,13         4,13         4,14         4,612         3,14         4,14         4,612         3,14         4,14         4,13         4,14         4,14         4,13         4,14         4,14         4,14         4,14         4,14         4,14         4,14         4,14         4,14         4,14         4,14	1991	554	210	270	21	39	21	8	21	<b>%</b>	13	1,000	286
8         36         32         —         65         3         130         23         231           86         16         155         18         —         —         135         10         65         8         413           370         212         804         103         214         260         1,346         140         351         82         4,085           27         127         917         105         296         429         949         147         761         72         3,530           27         127         107         106         296         429         949         147         761         72         3,530           27         122         127         160         173         629         144         151         172         4,012           194         195         157         461         1,090         99         1,574         133         4,712         134         4,012         144         4,012         140         1,274         135         140         1,274         134         4,012         140         1,274         134         4,012         140         1,274         134         140	1992	ı	126	<b>%</b>	4	265	20	193	18	204	23	758	261
39         16         155         18         -         -         135         10         65         8         413           370         212         804         103         214         260         1,346         140         351         82         4,085           27         127         917         105         296         429         949         147         761         72         3,580           67         152         924         157         160         429         949         147         761         72         4,085           516         152         924         157         160         775         629         1,476         136         1,476         133         4,712           516         326         429         1,474         136         1,476         135         6,206         136         1,474         136         1,476         135         6,206         136         1,474         136         1,475         136         1,475         136         1,475         136         1,475         136         1,475         136         1,475         136         1,475         136         1,476         136         1,476         136	1993	:	8	36	32	ı	;	99	3	130	23	231	140
370         212         804         103         214         260         1,346         140         351         82         4,085           67         122         917         105         296         429         949         147         761         72         3,550           67         122         917         165         296         429         949         147         761         72         3,550           194         199         1,287         160         775         629         1,474         136         1,476         133         4,712           516         351         1,537         160         775         629         1,474         136         1,476         137         4,712           37         1,22         1,60         775         629         1,474         136         134         4,712         134         4,712         134         4,712         134         4,712         134         4,712         134         4,712         134         4,712         134         4,712         134         4,712         134         4,712         134         4,712         134         4,712         134         4,712         144         4,612	1994	28	16	155	81	;	ŀ	135	91	<b>9</b>	<b>\$</b> 0	413	51
370         212         804         103         214         260         1,346         140         351         82         4,085           27         127         127         161         1,090         99         1,574         133         4,712           194         195         1,274         167         167         461         1,090         99         1,574         133         4,712           194         199         1,287         160         775         629         1,474         136         1,476         135         6,206           516         351         1,573         160         775         629         1,474         136         1,476         136         6,206           340         1,371         160         775         271         1,474         136         1,475         134         4,712         134         4,712         134         4,712         134         4,712         134         4,712         134         4,712         134         4,712         134         4,712         134         4,712         134         4,712         134         4,712         134         4,712         134         4,712         134         4,712	į												
1,7,10         2,11         304         103         124         109         1,340         140         551         36         408           627         127         917         105         296         429         147         761         72         3,530           967         152         924         157         157         461         1,990         99         1,574         133         4,712         1           1,194         199         1,287         160         775         629         1,474         136         137         4,712         1         2         1,476         133         4,712         1         1         1,476         135         6,206         1         4,712         1         1         2         1,474         136         147         714         1         1         4,712         1         1         4,712         1         1         4,712         1         1         4         4         7         1         4         7         1         4         7         1         4         7         1         4         7         4         1         4         7         4         4         7         3		a oute	•	8		į	,	,,,,,	,	į	8	100	tot
967         157         971         105         296         429         1474         133         4712         1350           1,194         195         1574         157         461         1,090         99         1,574         133         5200           1,196         351         1,287         166         477         271         1,090         199         1,574         133         5200           1,516         351         160         277         271         1,090         135         1,476         134         5610           1,300         297         1,171         129         432         219         1,049         135         1,079         128         4,785           1,300         297         1,171         129         432         219         1,049         1,179         128         4,785           506         374         275         219         1,049         1,179         427         393         427         393         427         393         427         393         427         393         428         393         393         428         393         393         427         393         427         393         428	716	1,570	717		3 5	<b>517</b>	007	945.1	1 ;	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3 6	4,000,	<u> </u>
967         152         924         157         157         461         1,090         99         1,574         133         4,712           1,194         199         1,287         160         775         629         1,474         136         1,476         135         6,206           1,196         236         1,287         271         1,108         136         1,476         134         5,681           737         132         1,471         129         432         219         1,408         147         626         114         4,612           1,306         297         1,471         129         432         219         1,083         147         626         39         2,783           688         147         258         147         275         729         107         435         42         3936           506         74         1,488         157         -         236         74         266         39         2,765           688         147         575         225         835         129         184         29         2,765           688         218         1,488         157         -         236 <td>27.5</td> <td>/70</td> <td>171</td> <td>) I</td> <td>SOT !</td> <td>967</td> <td>674</td> <td>6</td> <td>/#1</td> <td>10/</td> <td>7 1</td> <td>055,5</td> <td>000</td>	27.5	/70	171	) I	SOT !	967	674	6	/#1	10/	7 1	055,5	000
1,94         199         1,287         160         775         629         1,474         136         1,476         135         6,206           1,516         351         1,503         216         477         271         1,108         140         1,127         134         5,681           1,736         235         1,51         1,503         216         477         271         1,109         1,127         134         5,681           1,300         237         1,51         1,29         432         219         1,049         1,079         128         4,783           1,300         1,31         1,71         714         275         729         147         666         19         2,786           688         147         528         147         275         729         147         566         39         2,765           688         147         528         147         526         39         2,765         39         2,765           688         147         528         142         111          2,765         39         2,765           615         157          354         742         111	1974	200	152	22	157	157	461	1,0 <del>9</del> 0	<b>\$</b>	1,574	133	4,712	1,002
1,516         351         1,503         216         427         271         1,108         140         1,127         134         5,681           737         132         1,317         162         610         286         1,040         135         1,079         128         4,783           1,306         297         1,171         129         432         219         1,049         135         144         4,612           746         344         1,312         177         714         275         729         107         435         42         3,936           688         147         575         295         835         120         184         29         3,936           506         74         1,488         157         -         354         742         111         -         -         2,736           618         147         575         295         835         120         184         29         3,736           618         157         364         30         230         73         -         -         -         2,736           858         202         364         30         23         543         4 </td <td>1975</td> <td>1,194</td> <td>198</td> <td>1,287</td> <td>160</td> <td>775</td> <td>629</td> <td>1,474</td> <td>136</td> <td>1,476</td> <td>135</td> <td>6,206</td> <td>1,259</td>	1975	1,194	198	1,287	160	775	629	1,474	136	1,476	135	6,206	1,259
737         132         1,317         162         610         286         1,040         135         1,079         128         4,783           1,300         297         1,171         129         432         219         1,083         147         626         114         4,612           746         344         1,312         177         714         275         729         107         435         42         3,936           688         147         958         160         230         502         74         266         39         2,765           688         147         958         160         230         835         120         184         29         3,240           506         74         1,488         157         -         354         742         111         -         -         2,736           615         1,48         1,58         36         459         80         636         93         -         2         2,736           615         1,68         30         23         45         36         3         2         3         2,734           858         202         43         53         <	1976	1,516	351	1,503	216	427	271	1,108	<del>1</del>	1,127	134	5,681	1,112
1,300         297         1,171         129         432         219         1,083         147         626         114         4,612           746         344         1,312         177         714         275         729         107         435         42         3,936           688         147         578         296         835         120         184         29         2,768           506         74         1,488         157         -         354         742         111         -         -         2,736           506         74         1,488         157         -         354         742         111         -         -         2,736           1,049         218         1,48         157         -         354         72         11         -         2,736           615         157         20         636         93         -         20         3,244           858         202         448         58         -         -         -         2,043           1,148         147         254         51         62         12         2         2         3,243           997	1977	737	132	1,317	162	610	286	1,040	135	1,079	128	4,783	843
746         344         1,312         177         714         275         729         107         435         42         3,936           688         147         578         296         835         120         164         29         2,765           506         74         1,260         158         160         230         835         120         184         29         2,765           506         74         1,488         157         -         354         742         111         -         -         2,736           1,049         218         1,48         157         -         354         72         111         -         2,736           615         1,59         30         230         78         20         20         2,736           858         202         436         80         -         -         -         20         3,243           997         127         306         51         412         61         -         -         2,043           1,148         147         365         6         160         63         73         -         -         2,043           1,148	8261	1,300	297	1,171	129	432	219	1,083	147	626	114	4,612	<b>3</b>
577         201         1,260         158         160         230         502         74         266         39         2,765           688         147         575         295         835         120         184         29         3,240           506         74         148         157         -         354         742         111         -         -         2,736           1,049         218         1,180         93         459         80         636         93         -         0         2,736           615         157         364         30         230         78         -         -         40         1,209           858         202         436         51         61         61         61         61         61         61         1,209           997         127         380         41         412         61         61         62         61         61         62         61         61         63         63         63         63         64         64         64         64         64         64         64         64         64         64         64         64         64	979	746	<del>2</del> 4	1,312	177	714	275	729	107	435	42	3,936	945
688         147         958         147         575         295         835         120         184         29         3,240           506         74         1,488         157         —         354         742         111         —         —         2,736           1,049         218         1,488         157         —         354         72         111         —         —         2,736           615         157         364         30         230         78         —         —         40         1,209           858         202         436         52         564         90         —         —         40         1,209           997         127         380         41         254         51         61         61         —         2,041           1,148         147         305         77         200         65         438         58         71         —         2,043           1,118         144         55         6         160         53         573         75         286         33         2,334           1,118         149         63         45         3         185<	1980	577	201	1,260	158	160	230	502	75	266	39	2,765	702
506         74         1,488         157         -         354         742         111         -         -         2,736           1,049         218         1,180         93         459         80         636         93         -         20         3,324           615         157         364         30         230         78         -         -         40         1,209           858         202         436         52         564         90         -         -         40         1,209           997         127         380         41         254         51         412         61         -         -         2,043           1,148         147         305         77         200         65         438         58         -         -         2,043           1,118         144         55         6         160         53         58         71         -         -         2,091           1,795         109         63         45         3         573         75         286         33         2,334           1,71         150         70         1         1         1	1981	889	147	958	147	575	295	835	120	184	29	3,240	738
1,049         218         1,180         93         459         80         636         93         -         20         3,324           615         157         364         30         230         78         -         -         40         1,209           858         202         436         52         564         90         -         -         40         1,209           997         127         380         41         254         51         412         61         -         -         40         1,209           1,118         147         305         77         200         65         438         58         -         -         2,091           1,118         144         55         6         160         53         58         71         -         -         2,091           795         109         63         45         3         573         75         286         33         2,334           171         150         70         1         185         91         -         566	1982	206	7.	1,488	157	ı	354	742	111	1	1	2,736	969
615         157         364         30         230         78            40         1,209           858         202         436         52         564         90           40         1,209           997         127         380         41         254         51         412         61           40         1,858           1,148         147         305         77         200         65         438         58            2,001           1,118         144         55         6         160         53         558         71           1,891           795         109         63         45         3         573         75         286         33         2,334           171         150         70         1185         91          1,687            178         536         5         0         0          2         564           362         104         167         5         0         0          10         644	1983	1,049	218	1,180	83	459	<b>9</b> 8	636	æ	1	20	3,324	504
858         202         436         52         564         90            40         1,858           997         127         380         41         254         51         412         61           2,043           1,148         147         305         77         200         65         438         58           2,091           1,118         144         55         6         160         53         558         71          1,891           795         109         635         69         45         3         573         75         286         33         2,334           171         150         701         113         30         3         185         91          1,087            178         536         54         30         2         0         0          2         566           362         104         167         52         0         0         10         5         105         574           290         34	1984	615	157	364	30	230	82	;	1	ı	4	1,209	305
997         127         380         41         254         51         412         61         -         -         2,043           1,148         147         305         77         200         65         438         58         -         -         2,091           1,118         144         55         6         160         53         558         71         -         2,091           795         109         635         69         45         3         573         75         286         33         2,334           171         150         701         113         30         2         0         0         -         2         566            178         536         54         30         2         0         0         -         2         566           362         104         167         52         0         0         10         5         105         0         644           290         34                574                 -	1985	828	202	436	23	564	26	1	1	1	<del>\$</del>	1,858	388
1,148         147         305         77         200         65         438         58           2,091           1,118         144         55         6         160         53         558         71          1,891           795         109         635         69         45         3         573         75         286         33         2,334           171         150         701         113         30         3         185         91          1,087            178         536         54         30         2         0         0          2         566           362         104         167         52         0         0         10         5         105         0         644           290         34          28          -         41         3         243         45         574                  35	1986	766	127	380	41	254	51	412	19	1	ı	2,043	280
1,118         144         55         6         160         53         558         71           1,891           795         109         635         69         45         3         573         75         286         33         2,334           171         150         701         113         30         2         0         0          2         566            178         536         54         30         2         0         0          2         566           362         104         167         52         0         0         10         5         105         0         644           290         34          28          41         3         243         45         574               10           35	1987	1,148	147	305	11	200	65	438	28	ŀ	1	2,091	347
795         109         635         69         45         3         573         75         286         33         2,334           171         150         701         113         30         3         185         91         1,087            178         536         54         30         2         0         0          2         566           362         104         167         52         0         0         10         5         105         20         644           290         34          28          -         41         3         243         45         574                 35           35	1988	1,118	4	55	9	160	53	558	71	1	ŧ	1,891	274
171         150         701         113         30         3         185         91          2         66            178         536         54         30         2         0         0          2         566           362         104         167         52         0         0         10         5         105         20         644           290         34          28          41         3         243         45         574                   35	1989	795	109	635	9	45	es	573	75	786	33	2,334	580
178         536         54         30         2         0         0          2         566           362         104         167         52         0         0         10         5         105         20         644           290         34           41         3         243         45         574                 35          35	1990	171	150	701	113	30	60	185	16			1,087	357
362         104         167         52         0         0         10         5         105         20         644           290         34          28           41         3         243         45         574                  35	1991	;	178	536	54	30	7	•	•	1	7	566	236
290 34 28 41 3 243 45 574 10 35 35	1992	362	104	167	25	•	•	10	s	105	20	449	181
35 - 10 10 - 35	1993	290	34	ŀ	87	ŀ	1	41	6	243	\$	574	110
	1994	1	;	;	ł	:	}	ł	93	;	ŀ	35	16

						REGION						!
l	Northern		Central	_	Southern	P	Northeastern	Ĕ	Southeastern	E	STATE TOTALS	ALS
Species —	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Miles Hours	Miles	Hours
Quail												
1972	<del>2</del>	6	342	<del>8</del>	575	33	870	63	120	œ	1,953	149
1973	8	10	264	35	32	<b>9</b> 5	538	38	25	17	939	801
1974	24	4	43	27	853	33	227	87	214	21	1,361	146
1975	22	œ	107	23	841	Z	594	43	230	12	1,799	150
926	81	9	206	53	503	29	597	4	75	9	1,462	155
1977	77	4	351	39	445	42	341	97	09	97	1,219	127
1978	:	ı	239	18	563	61	541	46	88	71	1,431	142
1979	89	11	8	7	478	4	346	32	15	9	1,002	76
1980	36	6	265	23	240	36	410	34	•	•	156	102
1981	28	11	180	12	329	63	366	31	•	6	933	199
1982	•	0	151	14	304	4	475	4	•	•	930	102
1983	l/s	s,	<b>E</b>	6	292	19	295	92	•	•	955	105
1984	1	ŀ	83	œ	566	<del>2</del>	•	:	ŀ	1	348	84
1985	ı	7	83	٩n	252	33	ŀ	:	ŀ	:	334	5
1986	i	:	10	7	306	28	1	:	,	;	316	30
1987	;	1	20	7	257	53	i	:	;	:	77.2	32
1988	0	ĸ	:	ł	277	37	96	12	ł	;	373	8
1989	ı	ŀ	ì	;	145	9.	27	7	1	;	217	17
1990	ı	ł	1	ŀ	5	œ	1	6	1	;	26	11
1991	0	•	·	1	<b>•</b>	•	59	4	•	•	S	٧n
1992	0	•	0	Ф	÷	0	1	1	50	7	20	643
1993	;	;	;	1	:	œ	35	ĸ	:	:	35	13
1994	1	ŀ	i	ı	;	6	i	i	ì	ŀ	:	œ
	Hungarien Destaides											
1972	1 255	361	;	;	:	1	ļ	i	;	;	5	126
1973	1,643	156	12	4	1	ı	ı	:	1	;	1.655	160
1974	1,035	176	14	7	ı	1	ı	:	1	;	1,049	178
1975	34	3	0	0	ı	1	I	:	;	ı	345	3
1976	940	\$	113	21	t	1	1	:	ŀ	:	1,053	104
1977	1,145	156	125	v,	;	1	ı		ŀ	ı	1,270	161
1978	1,065	8	161	17	ı	ı	1	:	ŀ	:	1,262	107
1979	<del>4</del>	22	37	ю	ı	ł	ı	:	1	;	477	30
1980	250	55	20	9	ı	1	ı	:	:	;	300	19
1981	270	23	9	e	ı	;	1	:	;	:	335	56
1982	324	36	;	1	1	:	1	:	ı	ŀ	324	39
1983	0	8	;		1	:	ı	:	1	;	•	99
1984	815	221	;	:	ŀ	:	ı	:	1	:	815	221
1985	114	38	;	;	;		1		t	:	114	38
9861	213	4	i	ï	;	:	1	;	:	;	213	4
1987	300	<del>5</del>	ì	;	1	;	ı		1		300	<del>6</del>
1988	316	30	91	1	1	;	ı		1	,	326	31
1989	0	•	;	ı	1	;	1	;	1	;	•	<b>•</b>
1990	393	30	ı	ı	ı		1	:	ı	1	393	30
1991	i	4	0	0	:	ŀ	i	ł	ı	ı	•	41
1992	ı	æ	<del>\$</del>	7	:	:	1	1	1	1	9	88
1993	1	5	;	ı	ı	;	ı	0.2	1	:	ı	4
1992	i	90	;	!	:	;	:	:	1	ı	:	<b>9</b> 0

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Species Wild Turkey 1972	~I I	Miles Hours	Central		Southern		Northeastern	E	Continent	E	STAILLIOIALS	4
Wild Turker	- 1	TIOUTS			A.C.I.	Danne	Yellar	Hame	Melan	Melas Hann	Miles	Harrison
1972	*		Whies mours	rionis	ivilles mours	nours	Miles	Miles Hours	iwilles	Hours	Miles	nour
	۱	;	,	;	73	62	;	ł	290	7	363	116
1973	,	. 1		1	143	! =	;	;	} ;	; ;	143	=
201					; •	; •			90	: 3	, F	: 3
1/61	:	:	1	:	• ;	<b>&gt;</b> ;	;	ŧ	661	1 (	66.	3 ;
1975	ł	ŀ	;	ï	215	2	:	;	792	9	1,047	118
1976	;	i	;	:	125	16	:	ŀ	362	45	487	19
1977	;	;	ı	ŀ	193	50	:	:	421	28	614	£
1978	•	;	;	;	t	1	:	:	204	88	204	22
1979	:	ì	1	ı	:	ı	;	;	130 061	4	190	14
1980	;	;	;	1	:	;	:	1	ı	;	1	;
1981	:	;	1	1	ı	1	:	;	;		;	;
1982	ŧ	;	;	;	,	;	ŀ	ł	;	ı	1	;
1083	:	1	1	:	;	1				,	ı	;
2021	:	1	:	:	;	ŀ	;	t	;	ı	ı	;
1981	:	ì	:	ı	·	ı	ŀ	ŀ	ŀ	ŀ	ı	1
1985		;	ı	ı	ı	1	ł	;	1	ı	1	1
1986	;	ł	ı	1	:	;	!	ŀ	41	15	14	15
1987	;	:	ı	1	1	1	ł	ŀ	1	•	1	ı
1988	1	ì	ı	1	ı	1	;	1	;	:	;	ł
1989	ı	;	1	:	!	1	:	:	;	:	1	ı
1990	;	1	ı	:	ı	;	!	ŀ	;	:	1	ı
1991	1	:	155	89	1	1	ı	ı	150	5	305	8
1992	;	ı	100	16	1	;	:	;	35	۰	135	22
1993	1	ı	1	1	1	;	27	65	117	•	174	12
1994	1	ŀ	1	ı	1	1	:	:	;	ı	:	ı
Cottontail Rabbit	labbit											
1972	210	i	279	ı	939	:	360	;	555	ı	2,643	ı
1973	337	ı	242	ŀ	879	ı	270	;	270	ı	1,998	ı
1974	270	1	188	ı	1,040	ı	370	1	542	1	2,402	,
1975	330	ı	231	ı	1,237	ı	340	;	712	:	2,850	١
1976	510	:	260	1	1,382	ı	300	ŀ	969	:	3,088	1
1977	360	1	797	1	1,329	1	400	ŀ	556	:	2,907	:
1978	382	ı	264	1	1,038	1	360	ŀ	761	ı	2,745	:
1979	270	ı	270	ı	903	:	400	;	580	:	2,423	:
1980	\$	J,	265	ŀ	922	ı	359	;	540		1,909	:
1981	270	1	270	1	903	1	400	:	580	:	2,423	1
1982	240	ı	240	ı	727	1	298	;	602	;	2,102	ı
1983	8	ı	8	;	822	;	340	ŀ	590	ŀ	1,932	ı
1984	ı	i	ı	;	171	·	356	ł	340	;	196	ı
1985	;	ŀ	1	;	175	ı	631	;	400	1	450	ı
1986	240	1	148	1	534	1	358	:	330	,	1,610	1
1987	150	ŀ	120	1	699		373	ì	240	·	1,552	ŀ
1988	;	;	1	;	129	,	604	t	379		360	1
1989	æ	1	99	:	8	;	266	;	360	ı	872	1
1990	150	1	62	;	76	;	210	;	360	:	628	I
1991	S.	;	33		:	;	105	;	330	;	558	1
1992	8	;	143	:	\$	;	204	1	360	:	857	1
1993	·	·	183	ŀ	ı	1	207	ì	360	ı	750	;
1994		;	;	:	:	١	148	:	1	1	148	;

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

	1994.		····	
Species		ily Bag I Limit	Possession Limit	Areas Open
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 Utal 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 coutnies; that part of Sevier County south and west of I-70 and U.S89; that part of Duchesne County north and east of the Duchesne River; that part of Box
	Sept 11-13	2	4	Elder County west of I-15. Beaver, Garfield, Iron,

Species	Season Dates	Daily Bag Limit	Possession Limit	Areas Open
Forest Grouse	Sept.10-Nov.30		8	Kane, Piute and Wayne counties. Statewide.
Quail	Nov.5-Nov.20	5	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.
	Nov.5-Dec. 31	5	10	Washington County.
Hungarian Partridge	Sept.10-Nov.30	5	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.
	Sept 10, 1994 Jan. 31, 1995	5	10	Tooele County; that part of Box Elder and Jual counties west of I-15.
Rio Grande Hunt #10		Season I Male Tu: 20 Perm	ckey	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 #10	1B April 22- May 21, 1995	Season l Male Tur 20 Perm	ckey	
*Hunt #102	2 April 8- May 21, 1995	Season l Male Tur 5 Permit	ckey	All of Duchesne County.
*Hunt #103	3 April 8- May 21, 1995	Season 1 Male Tur 5 Permit	ckey	All of Emery County.
*Hunt #104	April 8- May 21, 1995	Season 1 Male Tu 5 Permit	key	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

, ,			Daily Bag	Possession	
pecies		<u>Season Dates</u>	Limit	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 L: Male Turk 5 Permits	rey	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 Li Male Tur) 5 Permits	ey	All of Morgan and Summit counties.
*Hunt	#1071	A April 8- May 20, 1995	Season Li Male Turk 20 Permit	cey	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-1 to SR-56.
*Hunt	#1071	B April 22- May 21, 1995	Season Li Male Turk 20 Permit	cey	
*Hunt	#108	April 15- May 21, 1995	Season Li Male Turk 5 <b>Permit</b> s	cey	All of Uintah County.
Hunt	#1091	A April 8- May 20, 1995	Season Lin Male Turke 10 Permits	e <b>y</b>	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	#109E	3 April 22- May 21, 1995	Season Lim Male Turke 10 Permits	e <b>y</b>	
	#110	April 8- May 21, 1995	Season Lim Male Turke 10 Permits	Ϋ́	All of Weber County.
Merriam Hunt	's #201 <i>1</i>	April 29- May 9, 1995	Season Li Male Turk 75 Permit	ey	Boulder Mountain - Boundary begins at the junction of SR-62 and SR- 89 near Kingston, Utah; then southerly on SR-89 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

ocios			Possession	7
<u>ecies</u>	Season Dates	<u>Limit</u>	<u>Limit</u>	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 Li Male Turk 75 Permit	ey	
*Hunt	#202 April 29- May 31, 1995	Season Li Male Turk 35 Permit	ey	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; then easterly on SR-10 SR-19 to the Zion National Park's east boundary; then northerly along the east boundary; then northerly along the park's north boundary to Deep Creek; then northerly on 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 Li Male Turk 75 Permit	еу	Boundary begins at the junction of I-15 and SR-20; then southerly on I-to the Cedar Mountain Road; then southerly on the Cedar Mountain Road Crystal Creek; then southerly on Crystal Creek; then southerly on Deep Creek; then southerly on Deep Creek; then southerly on Deep Creek the Zion National Park boundary; then easterly 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 Lim Male Turke 75 Permits	У	
Hunt	#204 April 29- May 31, 1995	Season Lim Male Turke 10 Permits		Boundary begins at the junction of Highway SR-128 and Highway US-191; then south on this highway

		Daily Bag	Possession	
Species	Season Dates	Limit	<u>Limit</u>	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.

	Questionnaires	Total		Useable		Licensees Who
Year	Mailed	Returns	Percent	Returns	Percent	Did Not Hunt
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	<b>52.3</b>		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