

1967

Annual Report



OREGON STATE GAME COMMISSION

GAME DIVISION



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ANNUAL REPORT

GAME DIVISION



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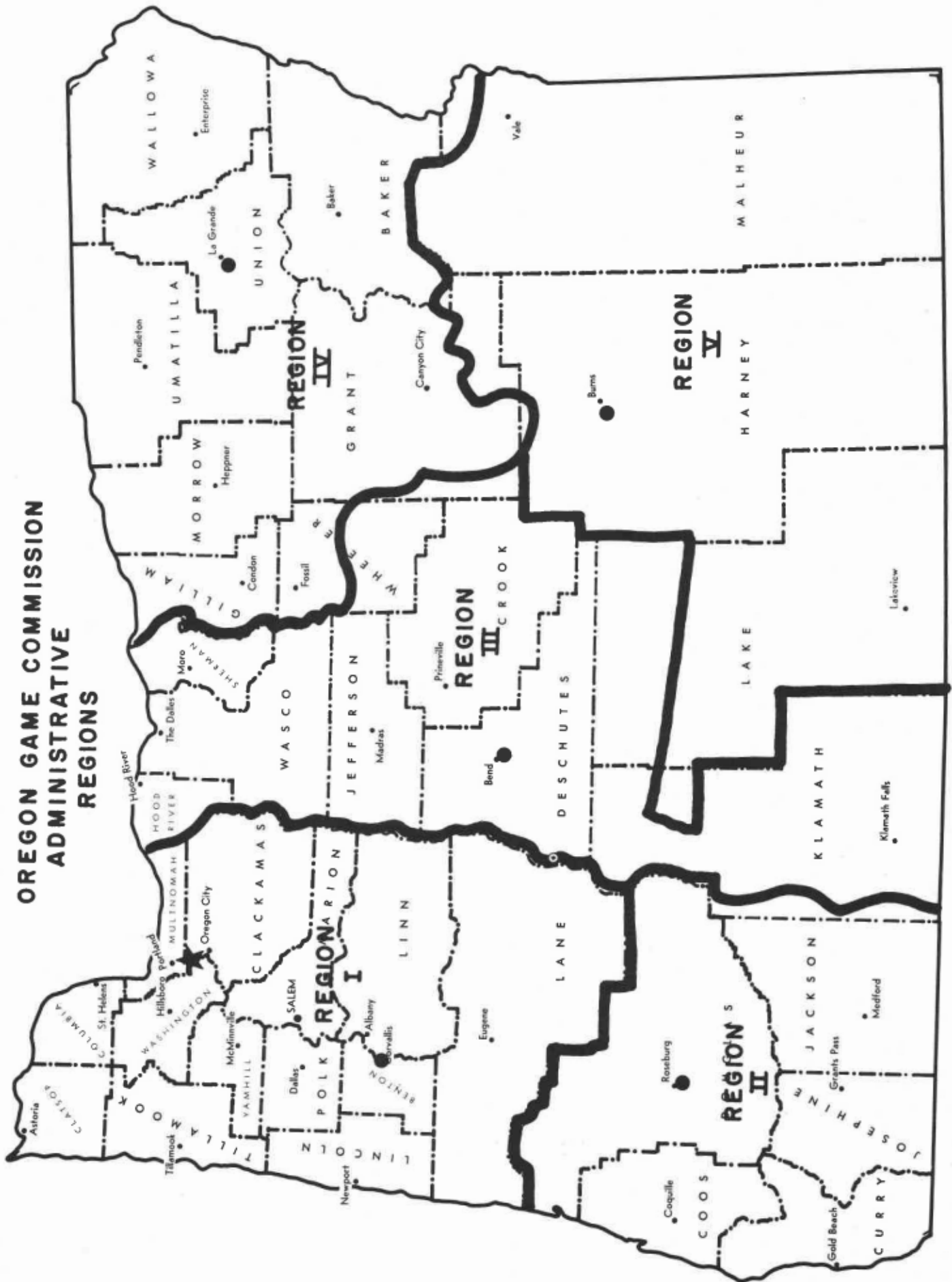
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OREGON GAME COMMISSION ADMINISTRATIVE REGIONS



INTRODUCTION

This report summarizes findings relating to Oregon's wildlife resources. Specific information for the period from July 1, 1966 through June 30, 1967 is presented, along with comparative data from previous years. A summary of service and development programs is included.

Since the report is designed primarily as a reference for use by those interested in game management, most of the data is presented in tabular form. Descriptive material and interpretations are limited.

Oregon supports a diversity of game with one or more forms present on nearly every portion of the state's 96,000 square miles of habitat. Big game species include three forms of deer, two forms of elk, pronghorn antelope, black bear, bighorn sheep, and mountain goat. Twelve species of resident upland game are present while migratory mourning doves, band-tailed pigeons, and a variety of ducks and geese are found seasonally throughout much of the state.

Hunting in Oregon is of interest to a great many people as indicated by the fact that 343,360 individuals purchased licenses in 1966. Big game hunters bagged 163,700 animals and enjoyed 1,997,000 days afield in the process. The harvest of birds totaled 1,362,000 for all species, and recreation from bird hunting amounted to 998,400 man-days.

A growing diversity of interests, more competitive demands for the use of land and water, and increasing population pressures continue to complicate the task of maintaining wildlife resources and recreational opportunities. Since most game management is practiced on land administered by others, cooperative programs are essential. Much progress has been made, particularly on public lands where administrative agencies have undertaken extensive wildlife habitat improvement projects. The need for expanding such cooperative programs is paramount.

The management program of the Game Division is planned and coordinated by a division chief assisted by four staff specialists. Twenty district biologists stationed in five administrative regions, and other specialized persons execute the program. Other agencies and groups share the management responsibility, including the Research Division of the Department which is charged with basic research, the Department of State Police which is responsible for game law enforcement, and the Fish and Wildlife Service, U. S. Department of the Interior, which has primary responsibility for migratory birds and also administers the cooperative predator and rodent control program.



B I G G A M E R E S O U R C E S

Oregon's big game resources provided approximately two million man-days of outdoor recreation and 18,000,000 pounds of game meat in 1966.

The number of licensed hunters totaled 343,360, an increase of 5 percent. Deer tag sales totaled 285,961, an increase of 3 percent. Elk hunters increased 4 percent, with a total of 69,880 tags issued.

The reported 1966 harvest included 148,000 deer, 11,400 elk, 445 antelope, 3,900 bear, 5 mountain goats, and 3 bighorn sheep.

Poor moisture supplies for the 1966 growing season resulted in an inadequate supply of food on eastern Oregon big game ranges. This condition made the animals more active and contributed to the high success of hunters in the fall of 1966.

The winter of 1966-67 was unusually mild. Fall rains provided a supply a green forage for the winter months and winter survival was high on most ranges.

1967 spring inventories indicated significant increases in mule deer and antelope but little change in the density of black-tailed deer or elk.

New programs initiated for big game during the year were a Roosevelt elk trapping and transplanting program, a mule deer feeding study, the utilization of computers for analyses of harvest data, an evaluation of deer hunting by area and time interval, and expansion of the winter range rehabilitation program.

The 1967 legislature assigned additional functions such as protection of cougar in specified areas.

BLACK-TAILED DEER

Winter sampling of black-tailed deer on 2,793 miles of census routes produced a count of 12,984 deer for an average of 4.6 per mile compared with 5.2 deer per mile in 1966. Most black-tailed deer units illustrated similar or slightly increased populations over 1966. Exceptions were the Hood River and Wasco Units, where blacktail populations have declined 30 to 50 percent. Blacktail census methods include foot and spotlight samples (Table 1). The use given census data indicates a need to standardize the method for western Oregon.

Classification of 5,498 deer indicated a herd composition ratio of 33 bucks and 72 fawns per 100 females, or 16 percent bucks, 49 percent does, and 35 percent fawns (Table 2). The 1965 ratios were 42 bucks and 66 fawns per 100 females, or 20 percent bucks, 48 percent does, and 32 percent fawns. This probably reflects the improved hunting success enjoyed during the 1966 season.

Deer winter loss was very mild in western Oregon, totaling 12 carcasses in 443 miles of travel. Losses observed in an overstocked population of deer in the Cedar Creek pen study gave cause to closely examine other winter ranges in western Oregon, but intensive search by biologists failed to show any appreciable loss of deer in western Oregon (Table 3).

Hunters reported taking 59,459 black-tailed deer of which 25 percent, or 14,700, were antlerless. Hunter success averaged 52 percent for the 114,000 black-tailed deer hunters compared with 44 percent in 1965 (Table 22). The black-tailed deer harvest contributed 40 percent of the total Oregon deer harvest. Table 25 shows a 15-year summary of deer harvest.

Early and extended deer seasons comprised 18 percent of the total blacktail kill, while controlled seasons provided only 4 percent of the total blacktail harvest.

General, early, extended, and controlled seasons are presented by unit in Table 22. Early and extended seasons are shown by area in Table 23, and controlled seasons are shown in Table 24.

Black-tailed deer damage complaints declined slightly from 1965. Chemical repellents and kill permits were utilized to relieve damage for the majority of complaints (Table 19). Fencing contracts were initiated and completed with 70 landowners for 6,422 rods of fencing at a cost to the Commission of \$17,299.00 (Table 20).

Table 1
BLACK-TAILED DEER POPULATION TRENDS

Units by Region	Herd Range	Miles Traveled	Deer Observed	Deer per Mile			
				1967	1966	1965	1964
Alsea		610	1,829	3.0	3.1	2.9	3.5
Clatsop		106	254	2.4	2.2	2.4	2.6
McKenzie		263	1,906	7.2	6.0	5.8	6.0
Nestucca		92	176	1.9	1.7	2.2	2.5
Polk		232	475	2.0	1.7	1.9	3.0
	Clackamas	170	484	2.8	3.3	4.3	7.2
	Marion	76	277	3.6	3.0	2.9	3.2
	S. Santiam	207	656	3.2	2.3	1.7	2.5
Santiam		453	1,417	3.1	2.7	2.4	4.0
Siuslaw		69	211	3.1	2.9	2.5	2.2
	E. Trask	79	240	3.0	3.7	2.0	4.5
	W. Trask	48	126	2.6	3.0	3.3	4.0
Trask		127	366	2.9	3.5	2.2	4.3
Wilson		39	89	2.3	2.7	3.1	3.2
NORTHWEST		1,991	6,723	3.4	3.4	3.1	3.9
Applegate		67	368	5.5	2.6	5.2	5.2
	E. Chetco	31	124	4.0	3.9	3.6	3.6
	W. Chetco	-	-	-	-	5.0	5.0
Chetco		31	124	4.0	3.9	4.5	4.4
Elkton		80	177	4.4	4.0	3.9	3.3
	N. Umpqua	20	87	4.4	4.6	3.1	4.0
	Foothills	40	247	6.2	2.8	4.9	9.9
	S. Umpqua	20	30	1.5	3.1	2.0	5.5
Dixon		80	364	4.6	3.2	3.2	6.5
	S. Evans Cr.	38	124	3.3	2.7	3.1	2.0
	N. Evans Cr.	20	152	7.6	8.1	6.6	9.3
Evans Creek		58	276	4.8	4.5	4.3	4.5

Table 1
BLACK-TAILED DEER POPULATION TRENDS
(continued)

Units by Region	Herd Range	Miles Traveled	Deer Observed	Deer per Mile			
				1967	1966	1965	1964
Melrose		120	728	6.1	4.0	3.8	4.3
Powers		63	150	2.4	1.1	6.8	11.1
	Little Butte	19	247	13.0	17.3	16.3	22.0
	Big Butte	48	408	8.5	5.8	5.9	6.2
	Jenny Creek	34	541	15.9	18.6	10.0	19.4
	Emigrant Cr.	9	225	25.0	16.8	8.1	22.1
	Prospect	26	47	1.8	1.5	-	-
Rogue		136	1,468	10.8	7.3	9.7	15.3
Sixes		27	357	13.2	8.8	4.6	8.0
	E. Tioga	20	41	2.0	3.9	1.7	0.4
	W. Tioga	39	-	-	0.4	0.7	1.8
Tioga		20	41	2.0	1.5	1.0	1.4
SOUTHWEST		682	4,053	5.9	5.2	4.6	7.2
Hood River		10	42	4.2	8.6	6.5	11.0
Keno	Pokegama	39	884	22.7	22.2	20.9	29.6
	Six Fingers	28	121	4.3	11.4	17.4	13.9
	Badger Creek	20	406	20.3	34.0	21.3	25.9
	White River	23	775	32.8	57.2	50.3	51.3
Wasco		71	1,282	18.1	31.1	28.2	28.3
CENTRAL		120	2,208	18.4	26.9	23.7	27.0
TOTALS AND AVERAGES		2,793	12,984	4.6	5.2	4.4	5.9

Table 2

BLACK-TAILED DEER HERD COMPOSITION

Units by Region	Deer Classified			Total	Average Number per 100 Does					
	Bucks	Does	Fawns		*1967		1966		1965	
					Bucks	Fawns	Bucks	Fawns	Bucks	Fawns
Alsea	56	165	131	352	34	79	71	82	48	76
Clatsop	16	27	24	67	59	89	75	74	72	74
McKenzie	85	214	147	446	40	69	64	55	46	51
Nestucca	7	17	15	39	41	88	38	71	56	75
Polk	19	62	53	134	31	85	46	71	53	98
Santiam	53	134	104	291	40	78	34	69	59	72
Siustlaw	10	29	24	63	34	83	31	61	18	97
Trask	27	79	65	171	34	82	34	69	51	76
Willamette	-	1	2	3	-	-	30	66	-	-
Wilson	18	35	30	83	51	86	58	70	71	77
NORTHWEST	291	763	595	1,649	38	78	52	70	53	71
Applegate	64	140	81	285	46	58	63	61	35	64
Chetco	13	31	21	65	42	68	-	-	13	47
Dixon	66	179	166	411	37	93	57	82	47	85
Elkton	15	57	44	116	26	77	31	55	23	51
Evans Creek	30	64	57	151	47	89	33	75	25	97
Melrose	52	246	235	533	21	96	26	96	28	60
Powers	25	99	75	199	25	76	32	72	33	66
Rogue	129	404	271	804	32	67	38	70	38	73
Sixes	18	98	61	177	18	62	30	73	43	77
Tioga	64	92	94	250	70	102	70	55	-	-
SOUTHWEST	476	1,410	1,105	2,991	34	78	39	74	35	69
Keno	59	340	134	533	17	39	17	29	25	47
Wasco	60	167	98	325	36	59	42	54	42	76
CENTRAL	119	507	232	858	23	46	33	45	35	64
TOTALS AND AVERAGES	886	2,680	1,932	5,498	33	72	42	66	40	69

*Fawn-doe ratios refer to the previous year's production as of December 31.

Table 3
BLACK-TAILED DEER WINTER LOSSES

Units by Region	Winter Losses				Total Carcasses	Miles Traveled	Carcasses per Mile				
	Sex		Age				1967	1966	1965	1964	1963
	Male	Female	Young	Adult							
Alsea	1		1		1	37	-	-	-	-	
Clatsop					0	47	-	-	0.2	-	
McKenzie					0	22	-	-	0.1	0.4	
Santiam					0	29	-	-	-	-	
Siuslaw					0	9	-	-	0.1	0.8	
Trask					0	35	-	-	0.2	-	
Wilson		1	1		1	32	-	-	0.2	-	
Nestucca					0	20	-	-	-	-	
Polk					2	14	0.1	-	-	-	
NORTHWEST	1	1	2	0	4	236	-	-	-	0.1	
Elkton		1	1		1	2	-	-	0.5	0.1	
Applegate	1			1	1	22	-	-	-	-	
Melrose	1		1		1	4	-	-	1.5	0.9	
Dixon	1		1		1	4	-	-	0.7	-	
Evans Creek					0	20	-	-	1.0	-	
Rogue	1	1	1	1	2	70	-	-	0.1	0.1	
Powers					0	2	-	-	0.3	-	
Tioga					0	2	-	-	1.5	0.2	
SOUTHWEST	4	2	4	2	6	126	-	0.1	0.3	0.2	
Hood River					0	10	-	-	0.4	-	
Wasco	1	1		2	2	71	-	-	0.1	-	
CENTRAL	1	1		2	2	81	-	-	0.1	-	
TOTALS AND AVERAGES	6	4	6	4	12	443	-	-	0.1	0.1	

Anything less than 0.1 deer per mile is indicated by (-).

MULE DEER

Spring inventory of mule deer on winter ranges produced a total of 50,442 deer observed along 3,667 miles of census routes. The trend index of 13.8 deer per mile represented a 10 percent increase over the 1966 index of 12.4 deer per mile. Increases in deer populations were reported from all of the three regions comprising eastern Oregon mule deer habitat. (Table 4.)

Classification of 23,739 mule deer indicated a herd composition of 17 bucks and 76 fawns per 100 females, or 9 percent bucks, 52 percent females, and 39 percent fawns. The 1965 averages were 20 bucks and 63 fawns per 100 does, or 11 percent bucks, 54 percent does, and 35 percent fawns. Fawn production improved 17 percent compared with 1965 and compared favorably with the 1964 average of 80 fawns per 100 females. The Southeast Region showed improved fawn production except for the Steens Mountain Unit, which averaged only 42 fawns per 100 females compared with 47 in 1965. Central Region averages show marked improvement in all units except Wasco County. The average for the Northeast Region remained the same, although individual units varied throughout the area. (Table 5.)

Mule deer antler class percentages are given in Table 6. Spike and two-point bucks comprised 46 percent of the total bucks classified compared with 48 percent in 1965.

Winter loss was practically non-existent on eastern Oregon ranges as noted in Table 7.

Bitterbrush utilization measurements indicate an average of 67 percent use in 1966 (Table 16). Leader growth was poor due to drought conditions last spring, and many desert ranges experienced heavy summer use before wintering deer use occurred. The mild winter experienced in 1966 precluded an expected heavy loss of animals from lack of adequate forage. Moisture conditions have been very good in eastern Oregon during early 1967 and browse production is expected to be good.

Range vegetative trends, presented in Table 17, show decreased in desirable vegetation and a decline in plant density on all of the four units sampled. The Lookout Mountain Unit shows a slight improvement in vegetation and litter compared with 10 years ago. This range is primarily a grass-sagebrush range, but soil conditions and topography lend themselves well to rehabilitation in the form of browse plantings.

Mule deer damage complaints totaled 193 in 1966 compared with 110 in 1965 and 196 in 1964. A summary of complaints and action taken is presented in Table 19.

Hunters reported taking 88,516 mule deer, which was the fourth highest kill on record. The 156,720 mule deer hunters averaged 56 percent success compared with 50 percent in 1965 (Table 22). The mule deer harvest made up 60 percent of the total deer harvest. (Table 25.)

The antlerless mule deer harvest consisted of 22,821 animals and contributed 26 percent to the total deer kill. Early and extended seasons comprised only one percent of the total kill, while controlled seasons contributed 4 percent to the total kill.

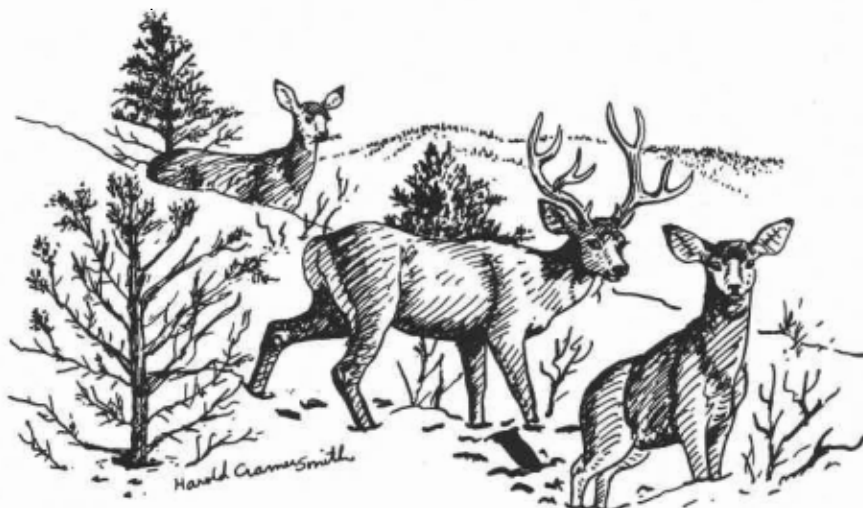
Tables 22, 23, and 24 present hunter harvest information for the general, controlled, and early and extended seasons.

A supplemental deer winter feeding study was initiated in the Keating Unit during the 1966-67 winter period. A high energy ration was designed and offered to deer in pellet and block form. The study was discontinued the middle of February 1967 because the winter was too mild to place stress on the animals and move them to low concentration areas. It was determined that deer would accept the non-inhibited pelleted ration without any detrimental effect. It also appears that the 9 percent salt inhibitor ration pellet may be too strong with salt. A more severe winter must be experienced in order to properly assess the value of the ration.

INTERSTATE DEER HERD

Animal inventories for the Interstate deer herd, which summers in Oregon and winters in California, are conducted jointly by the California and Oregon Game Departments, the Modoc and Fremont National Forests, and the Bureau of Land Management.

Information pertaining to this herd is included in the following table.



BASIC DATA OF THE DEVIL'S GARDEN-INTERSTATE DEER HERD

YEAR	TRACK COUNT	DEER HARVEST			HERD COMP.		*RAINFALL ALTURAS	GROWTH (IN.)	BITTERBRUSH UTILIZATION		
		BUCKS	ORE.	ANTLERLESS	BUCKS	100 DOES			LIVESTOCK	DEER	TOTAL %PLOTS OVER
		ORE. CALIF.	ORE.	CALIF.	TOTAL	FAWNS			% USE	% USE	60% USE
1948	9,665								18.4	16.2	36.3
1949	14,011	2,500	670	0	3,170	17	94	14.15	3.5	18.8	21.5 39.9
1950	13,256	2,440	310	688	1,319	19	77	11.59	3.2	10.3	29.5 48.3
1951	17,570	3,149	967	2,343	1,504	13	77	12.14	3.7	16.1	29.9 40.2 20
1952	10,547	1,898	98	1,399	0	3,395	12	55	19.69	5.4	18.2 34.3 17
1953	11,601	2,798	128	1,893	0	4,819	19	97	16.28	3.8	13.5 15.6 22.7 5
1954	17,615	3,821	361	1,850	0	6,032	18	88	12.31	3.2	8.5 19.1 32.6 11
1955	17,170	3,494	441	2,574	2,008	8,517	15	73	8.13	3.0	7.5 44.7 53.2 46
1956	12,240	4,659	899	3,931	1,885	11,374	20	85	14.31	4.5	12.0 30.3 37.8 20
1957	11,695	4,912	925	2,173	0	8,010	14	83	15.17	4.3	10.5 14.8 26.8 6
1958	12,819	3,168	662	981	285	5,096	15	80	17.40	4.8	9.0 28.7 39.2 15
1959	14,642	4,738	1,345	1,609	0	7,692	11	64	9.37	2.4	8.2 17.6 26.6 3
1960	14,203	4,658	646	2,394	554	8,252	11	58	10.28	2.1	7.0 31.2 39.4 4
1961	13,091	3,409	684	2,123	0	6,216	10	61	8.47	1.8	6.0 17.0 24.0 1
1962	12,112	2,589	212	1,302	0	4,103	11	76	10.87	2.6	4.4 18.2 24.2 10
1963	7,193	1,964	84	0	0	2,048	12	75	17.34	2.5	8.0 13.5 17.9 1
1964	16,513	3,188	152	591	0	3,931	16	60	12.95	3.5	9.0 30.0 38.0 10
1965	10,906	2,471	164	956	0	3,591	12	56	14.59	3.9	11.0 36.0 45.0 27
1966	11,249	2,854	350	1,742	0	4,946	14	63	11.20	2.7	16.0 21.9 37.9 10

*PRECIPITATION FOR 12-MONTH PERIOD ENDING JUNE 30 OF NAMED YEAR.

Table 4
MULE DEER POPULATION TRENDS

Units by Region	Herd Range	Miles Traveled	Deer Observed	Deer per Mile			
				1967	1966	1965	1964
Deschutes	Tumalo	50	157	3.1	2.2	2.1	1.9
	N. Ochoco	10	239	23.9	4.6	9.4	7.5
	Trout Creek	28	381	13.6	15.0	15.8	13.3
	McKay-Ochoco	37	518	14.0	8.7	8.6	6.5
Grizzly		75	1,138	15.1	10.6	11.7	9.6
	Swan Lake	59	1,217	20.6	15.7	11.2	19.6
	N. Goodlow	41	1,133	27.6	16.9	17.7	20.6
Klamath		100	2,350	23.5	16.2	13.9	20.1
Maupin	Maupin	89	414	4.7	2.6	3.9	5.9
Maury	Maury Mtn.	76	1,314	17.3	14.3	12.9	3.6
Metolius	Metolius	65	224	3.4	3.3	3.2	3.0
	McKay-Ochoco	23	456	19.8	13.0	9.3	12.1
	S. Ochoco	63	1,306	20.7	22.3	21.5	12.3
	S. Fk. John Day	55	861	15.6	15.1	16.3	17.6
	N. Ochoco	63	1,187	18.8	16.7	27.3	18.8
Ochoco		204	3,810	18.6	17.6	19.4	15.9
	N. Paulina	130	504	3.9	3.3	3.2	3.2
	Devil's Garden	95	735	7.7	5.9	7.8	7.7
	Hole-in-the Ground	55	292	5.3	2.7	2.7	2.5
Paulina		280	1,531	5.5	4.1	4.7	4.5
Sprague	Sprague	20	540	27.0	20.5	28.8	17.5
	Lower Deschutes	50	508	10.2	6.7	4.9	-
	Pine Hollow	77	563	7.3	4.9	6.9	-
Sherman		127	1,071	8.4	5.6	6.1	-
CENTRAL		1,086	12,549	11.6	10.5	10.4	8.8

Table 4
MULE DEER POPULATION TRENDS
(continued)

Units by Region	Herd Range	Miles Traveled	Deer Observed	1967	1966	1965	1964
	Sumpter	15	299	19.9	13.1	9.4	30.0
	Burnt River	64	917	14.3	8.0	10.9	9.8
Baker		79	1,216	15.4	8.9	10.5	13.5
Catherine Creek		22	1,071	48.7	29.0	30.5	32.0
Chesnimnus		117	460	3.9	4.7	4.8	5.7
Desolation	M. Fk. J. Day	94	406	4.3	5.2	5.2	5.0
	Heppner	42	927	22.1	17.0	17.1	16.1
	Monument	34	477	14.0	10.4	12.5	15.9
	W. Mid. Fk. J.D.	26	281	10.8	5.0	6.8	5.0
	N. Fk. J. Day	29	341	11.8	17.0	18.7	14.0
Heppner		131	202	15.5	13.6	14.0	13.1
Imnaha		56	905	16.2	19.6	16.1	17.3
Keating	Keating	71	1,893	26.7	21.2	21.6	26.8
Lookout Mtn.	Lookout Mtn.	32	1,028	32.1	29.1	17.8	24.4
Minam		76	1,759	23.2	22.9	23.6	19.6
	Murderer's Cr.	73	1,425	19.5	22.1	20.3	16.9
	S. Side J. Day	70	759	10.8	6.2	8.3	8.9
	E. S. Fk. J. Day	12	208	17.3	14.0	14.0	19.0
	N. Izee	14	473	33.8	18.6	21.7	22.4
Murderer's Creek		169	2,865	17.0	14.6	15.0	14.2
Northside	Northside	56	1,468	26.2	24.6	21.1	26.4
Sled Springs		57	1,032	18.1	17.4	9.6	9.1
	N. Snake Riv.	75	1,086	14.5	12.5	10.9	6.9
	S. Snake Riv.	31	793	25.6	22.8	13.8	8.0
Snake River		106	1,879	17.7	15.6	11.8	7.2

Table 4
MULE DEER POPULATION TRENDS
(continued)

Units by Region	Herd Range	Miles Traveled	Deer Observed	Deer per Mile			
				1967	1966	1965	1964
Starkey	Grande Ronde	90	494	5.5	5.5	3.4	6.0
	Shaw Mtn.	25	312	12.5	11.8	9.0	13.8
		115	806	7.0	7.3	6.7	4.1
	Bridge Creek	8	166	20.8	30.3	27.5	32.7
Ukiah	Birch Creek	22	468	21.3	14.9	19.0	28.6
	McKay Creek	21	298	14.2	29.3	24.8	17.0
		51	932	18.3	23.2	22.7	24.5
	Umatilla	20	273	13.7	15.5	10.4	22.6
Umatilla	Meacham Cr.	33	565	17.1	13.3	14.5	17.5
		53	838	15.8	14.2	13.0	19.5
	Walla Walla	41	445	10.9	9.0	8.6	11.0
		38	194	5.1	9.1	10.3	2.8
Wheeler	John Day Riv.	31	378	12.2	10.2	9.1	5.9
	Waterman	52	593	11.4	9.3	12.6	8.2
		83	971	11.7	9.6	11.5	7.3
NORTHEAST		1,447	22,194	15.3	14.0	13.3	13.0
Beulah	N. Side Malheur	45	1,130	25.1	19.1	21.7	24.9
	Ironside	26	185	7.1	18.3	7.7	6.7
	Cottonwood	50	146	2.9	2.7	3.6	4.4
		121	1,461	12.1	11.1	11.5	12.4
Fort Rock	North Lake	160	2,481	15.5	13.2	12.7	15.9
	Crooked Cr.	36	651	18.0	12.1	6.7	9.5
	W. Goose L.	22	168	7.6	9.0	9.0	4.5
	Gearhart	62	1,765	28.5	14.5	20.5	17.9
Interstate	S. Goodlow	22	706	32.1	25.3	19.6	29.5
		142	3,290	23.2	14.7	15.1	17.2

Table 4
MULE DEER POPULATION TRENDS
(continued)

Units by Region	Herd Range	Miles Traveled	Deer Observed	Deer per Mile			
				1967	1966	1965	1964
	S. Side Malheur	75	390	5.2	5.5	5.3	7.1
	Riverside	33	63	1.9	1.6	3.6	6.8
	Drewsey	21	272	12.9	11.0	15.0	24.4
	Stinkingwater	27	332	12.3	9.1	7.6	11.5
Malheur		156	1,057	6.8	6.1	6.6	10.1
Owyhee	Mahogany Mtn.	50	184	3.7	3.9	5.5	7.2
Silver Lake	Silver Lake	142	3,577	25.2	26.9	25.9	27.3
	Dry Mtn.	30	334	11.1	13.7	10.2	16.0
	Silvies River	47	167	3.6	2.9	3.7	5.3
	South Izee	24	247	10.0	9.0	7.3	11.6
Silvies		101	748	7.4	7.2	6.3	9.6
	Alvord	18	770	42.8	34.7	41.7	55.9
	Frenchglen	44	553	12.6	12.6	16.6	29.9
Steens Mountain		62	1,323	21.3	19.0	23.9	34.2
	Deep Creek	96	1,084	11.3	8.2	11.9	11.9
	Crooked Creek	44	421	9.5	5.3	6.9	6.7
	E. Goose Lake	-	-	-	-	8.5	0.0
Warner		140	1,505	10.8	7.4	10.1	9.2
Whitehorse	Whitehorse	60	73	1.2	0.8	1.3	1.3
SOUTHEAST		1,134	15,699	13.8	11.8	12.3	14.6
TOTALS AND AVERAGES		3,667	50,442	13.8	12.4	12.3	12.7



Table 5
MULE DEER HERD COMPOSITION

Units by Region	Deer Classified		Average Number per 100 Does							
	Bucks	Does	Fawns	Total	*1967		1966		1965	
					Bucks	Fawns	Bucks	Fawns	Bucks	Fawns
Deschutes	42	154	131	327	27	85	37	45	31	70
Fort Rock	174	318	288	780	55	91	39	65	40	90
Grizzly	64	394	356	814	16	90	13	52	18	76
Klamath	114	986	725	1,825	12	74	10	55	12	59
Maupin	7	97	72	176	7	74	20	84	12	95
Maury	21	231	188	440	9	81	14	66	20	70
Metolius	51	194	152	397	26	78	28	50	33	70
Ochoco	110	871	666	1,647	13	76	15	59	25	71
Paulina	254	1,005	833	2,092	25	83	28	50	24	70
Sprague	40	196	176	412	20	90	18	53	21	71
Sherman	11	67	55	133	16	82	27	54	5	105
CENTRAL	888	4,513	3,642	9,043	20	81	20	56	24	71
Baker	24	171	132	327	14	77	9	96	21	66
Catherine Cr.	45	273	196	514	16	72	26	76	26	62
Chesnimnus	25	271	185	481	9	68	14	80	13	69
Desolation	9	71	57	137	13	80	23	64	13	62
Heppner	64	597	465	1,126	11	78	15	87	13	78
Imnaha	24	217	172	413	11	79	24	75	15	73
Keating	39	498	413	950	8	85	11	65	17	67
Lookout Mtn.	33	252	167	452	13	66	7	90	9	70
Minam	76	253	217	546	30	86	36	73	19	72
Murderer's Cr.	106	658	415	1,179	16	63	17	60	17	70
Northside	91	320	239	650	28	75	33	60	25	71
Sled Springs	32	269	228	529	12	85	13	89	15	75
Snake River	69	329	256	654	21	78	21	83	7	40
Starkey	49	212	197	458	23	93	22	88	27	89
Ukiah	66	354	272	692	19	77	16	81	37	72
Umatilla	13	129	108	250	10	84	16	72	11	72
Walla Walla	18	90	64	172	20	71	36	82	25	69
Wenaha	39	134	78	251	29	60	17	84	19	64
Wheeler	24	215	171	410	11	80	10	73	15	89
NORTHEAST	846	5,313	4,032	10,196	16	76	20	76	17	73

Table 5
MULE DEER HERD COMPOSITION
(continued)

Units by Region	Deer Classified			Total	Average Number per 100 Does					
	Bucks	Does	Fawns		*1967		1966		1965	
					Bucks	Fawns	Bucks	Fawns	Bucks	Fawns
Beulah	29	184	135	348	16	73	17	68	19	60
Interstate	98	778	533	1,409	13	69	23	49	18	65
Malheur River	25	153	103	281	16	67	22	47	21	60
Owyhee	9	37	29	75	24	78	24	63	21	49
Silver Lake	91	480	435	1,006	19	91	23	65	21	95
Silvies	31	201	132	364	15	66	16	57	19	74
Steens Mtn.	94	412	175	681	23	42	20	47	25	48
Warner	23	177	104	304	13	59	11	57	19	52
Whitehorse	5	19	13	37	26	68	9	17	42	71
SOUTHEAST	405	2,441	1,659	4,505	17	68	20	54	20	67
TOTALS AND AVERAGES	2,139	12,267	9,333	23,739	17	76	20	63	20	71

*Fawn-doe ratios refer to the previous year's production as of December 31.



Table 6
MULE DEER ANTLER CLASS PERCENTAGES

Counties by Regions	Percent Spikes				Percent Two Points				Percent Three Points				Percent Four Points and Over			
	1967 1966 1965 1964				1967 1966 1965 1964				1967 1966 1965 1964				1967 1966 1965 1964			
	1967	1966	1965	1964	1967	1966	1965	1964	1967	1966	1965	1964	1967	1966	1965	1964
Crook	6	21	14	8	37	39	51	40	23	16	11	33	34	24	24	19
Deschutes	6	9	8	9	27	36	36	33	13	18	18	25	54	37	36	33
Jefferson	8	17	9	10	24	26	35	37	15	15	11	16	53	42	45	37
Klamath	22	26	14	21	32	30	38	40	17	24	20	18	29	20	28	21
CENTRAL	10	17	11	12	30	35	39	37	17	19	16	23	43	29	34	28
Baker	10	8	4	11	54	43	36	48	18	14	9	10	18	35	51	31
Grant	6	12	8	6	36	30	46	37	21	19	16	18	37	39	30	39
Morrow	6	9	16	10	37	34	40	42	27	25	24	26	30	32	20	22
Umatilla	7	8	5	2	47	47	33	49	11	13	31	18	35	31	30	30
Union	4	9	20	8	38	39	29	35	18	23	12	30	40	29	39	27
Wallowa	7	2	0	6	40	41	39	38	12	15	27	13	41	42	34	43
Wheeler	4	4	4	8	63	52	49	51	25	29	30	31	8	15	17	10
NORTHEAST	6	7	8	7	45	41	39	43	19	20	22	21	30	32	31	29
Harney	6	4	4	10	42	34	18	44	23	21	29	17	29	41	49	29
Lake	9	16	9	6	29	30	41	50	22	20	12	18	40	34	38	26
Malheur	-	4	6	13	52	57	39	35	16	11	11	12	32	28	44	40
SOUTHEAST	5	12	6	9	41	33	33	43	20	20	17	16	34	35	44	32
STATE AVERAGES	7	12	8	9	39	36	37	41	19	20	19	20	36	32	36	30



Table 7
MULE DEER WINTER LOSSES

Units by Regions	Winter Losses				Total Carcasses	Total Miles	Carcasses per Mile				
	Sex		Age				1967	1966	1965	1964	1963
	Male	Female	Young	Adult							
Interstate	3	8	9	3	12	84	0.1	-	-	-	-
Klamath	2	7	8	6	14	100	0.1	0.2	0.1	0.1	0.1
Ochoco		2	2	2	4	204	-	-	-	-	0.2
Sprague	1	1	1	2	3	20	0.1	-	0.2	-	-
CENTRAL	6	18	20	13	33	408	0.1	0.1	0.1	0.1	0.1
Baker					13	79	0.2	-	0.7	0.6	-
Catherine Cr.					0	22	-	-	0.1	0.3	-
Chesnimnus					0	117	-	-	-	0.2	-
Heppner		1	8	2	10	105	0.1	-	0.2	0.1	-
Imnaha		1	1	1	2	41	-	-	-	0.7	-
Keating					13	71	0.2	-	0.1	1.0	-
Lookout Mtn.					1	32	-	-	0.1	0.4	0.1
Minam	1		2	1	3	76	-	-	-	1.3	-
Murderer's Cr.					0	30	-	0.1	-	0.2	-
Northside					0	56	-	0.1	-	-	-
Sled Springs	3			3	3	57	-	-	-	1.9	-
Snake River			1		1	106	-	-	0.1	0.4	-
Starkey					0	125	-	-	-	0.1	-
Ukiah					0	51	-	-	-	-	-
Umatilla					0	53	-	-	-	0.4	-
Walla Walla					0	47	-	-	-	-	-
Wenaha					0	58	-	-	-	0.8	-
Wheeler			10	4	14	83	0.2	-	-	0.1	-
NORTHEAST	4	2	22	11	60	1,209	-	-	-	0.5	-

Table 7
MULE DEER WINTER LOSSES
(continued)

Units by Regions	Winter Losses				Total Carcasses	Total Miles	Carcasses per Mile				
	Sex		Age				1967	1966	1965	1964	1963
	Male	Female	Young	Adult							
Beulah					3	75	-	-	-	1.1	-
Fort Rock		3	7	3	10	160	-	-	0.1	-	-
Interstate			2		2	64	-	-	-	0.1	-
Malheur River					2	81	-	-	-	1.0	-
Silver Lake	1		4	1	5	142	-	-	-	-	-
Silvies					8	77	0.1	-	0.1	0.1	-
Steens Mtn.					8	62	0.1	-	0.1	0.1	-
Warner	1		1	2	3	153	-	-	0.2	0.1	-
SOUTHEAST	0	5	14	6	41	811	-	-	0.1	0.2	-
TOTALS AND AVERAGES	10	25	56	30	134	2,428	-	-	0.1	0.3	-

Anything less than 0.1 deer per mile is indicated by (-).



ROOSEVELT ELK

Western Oregon census samples, totaling 357 miles, indicated an average of 5.6 elk observed per mile of sample. This average indicates a very slight increase in elk observed during the past three years but is still below the 1964 average of 6.2 elk per mile. The 9.3 elk per mile average in northwestern Oregon is the highest number of elk per mile on record. (Table 8.)

Classification of 3,957 animals during 1966-67 averaged 4 bulls and 47 calves per 100 cows, or 2 percent bulls, 66 percent females, and 32 percent calves. Hunting pressure has reduced the number of bulls remaining after hunting season to a very low level. The 47 calves per 100 cows illustrates satisfactory production, indicating that breeding is still being accomplished regardless of the low carry-over of bulls. (Table 9.)

Winter loss of elk was very light last year in all areas due to the mild, open, snow-free winter experienced throughout western Oregon.

Elk damage complaints in western Oregon totaled 35 compared with 37 in 1965. Winter archery seasons have helped relieve complaints in both the north coastal and Coos County areas.

An elk capturing project was initiated on the Millicoma Tree Farm for the purpose of transplanting elk to areas of suitable habitat not presently inhabited by this animal. The animals were drugged by the use of a Cap-Chur gun, removed to a holding pen by means of a sling and winch, and later released when a number sufficient for hauling was obtained. Twenty-one animals including 15 cows, 3 bull calves, 2 female calves, and 1 spike bull were released in the area between Galice and the Illinois River. Eight animals including 6 cows, 1 female calf, and 1 spike bull were released on the South Fork of Elk River in Curry County. Nine elk were released inside the Millicoma research study enclosure, making a total of 38 animals captured and moved to other locations.

The tranquilizer gun has also been utilized to immobilize and tag almost 450 elk in the Millicoma Tree Farm study. A 460-acre enclosure was constructed on the area this year and will be utilized to study the effects of controlled elk densities on Douglas fir regeneration and biological studies of elk.

Elk hunters were again required to choose between hunting Roosevelt or Rocky Mountain elk by issuance of separate tags. Roosevelt elk hunters were further restricted by a delayed opening and shortened season of only sixteen days. Since 1964, this regulation has reduced the pressure on Roosevelt elk by an eight percent reduction in total Roosevelt elk hunters; however, the north

coastal area has experienced a 19 percent reduction in the same period.

The 1966 harvest included 2,500 bulls and 183 antlerless elk and contributed 23 percent of the total elk kill. A total of 18,674 persons reported hunting Roosevelt elk for a success ratio of 14 percent. Table 26 presents harvest by unit and region while Table 27 summarizes elk hunting trends since 1933.

General season information, gathered at the Millicoma Tree Farm gates in Coos County, is presented in the following table.



MILLICOMA TREE FARM ELK SEASONS
(From Checking Station Data)

First Day Cars	Year	Hunter Visits	Bull Harvest			Known Illegal Kill		
			Three Points	Spikes	Percent Spikes	Total	Spikes	Antlerless Total
159	1955	1,113	59	-	-	59	11	3 14
330	1956	2,479	64	-	-	64	19	4 23
593	*1957	4,151	83	56	40	139	-	16 16
486	*1958	4,190	54	77	59	131	-	13 15
670	*1959	4,998	77	83	52	160	-	5 5
861	*1960	5,500	44	99	70	143	-	6 6
668	*1961	6,317	60	102	63	163	-	7 7
769 ¹	*1962	4,802	22	67	75	89	-	9 9
707	*1963	6,000	79	74	48	153	-	10 10
856	*1964	8,170	62	92	60	154	-	18 18
930	*1965	7,317	17	114	87	131	-	6 6
1,497	*1966	8,041	55	95	63	150	-	8 8

*Spikes legal since 1957.

¹1 October 12 windstorm.

Table 8
ROOSEVELT ELK POPULATION TRENDS

Units by Region	Miles Traveled	Elk Observed	Elk per Mile			
			1967	1966	1965	1964
Clatsop	47	736	15.6	17.0	16.0	14.9
Nestucca	20	135	6.7	4.7	7.8	6.5
Trask	28	143	5.1	1.5	1.3	3.2
Wilson	29	420	14.4	12.5	13.0	9.5
McKenzie	40	90	2.3	4.0	3.5	3.0
NORTHWEST	164	1,524	9.3	8.4	7.4	8.4
Dixon	66	126	1.9	-	-	-
Rogue	-	-	-	-	0.9	-
Elkton	26	43	1.7	0.6	0.6	3.7
Melrose	28	70	2.5	3.1	2.8	3.4
Powers	40	49	1.2	2.1	0.9	0.0
Tioga	33	174	1.4	3.1	4.5	5.0
SOUTHWEST	193	462	2.4	2.2	2.5	3.7
TOTALS AND AVERAGES	357	1,986	5.6	5.5	5.2	6.2



Table 9
ROOSEVELT ELK HERD COMPOSITION

Units by Region	Elk Classified			Average Number per 100 Cows					
				1967		1966		1965	
	Bulls	Cows	Calves	Total	Bulls	Calves	Bulls	Calves	Calves
Clatsop	29	846	422	1,297	3	50	4	43	44
McKenzie	10	286	73	369	3	26	12	38	42
Nestucca	8	160	114	282	5	71	5	43	48
Trask	1	84	40	125	1	48	8	50	52
Wilson	18	728	406	1,152	2	56	3	45	49
NORTHWEST	66	2,104	1,055	3,225	3	50	5	44	46
Dixon	2	60	35	97	3	58	10	37	50
Elkton	2	12	7	21	17	58	14	56	21
Melrose	4	51	15	70	8	29	12	41	43
Powers	1	36	12	49	3	33	15	43	33
Tioga	21	362	112	495	6	31	7	29	42
SOUTHWEST	30	521	181	732	6	35	8	33	43
TOTALS AND AVERAGES	96	2,625	1,236	3,957	4	47	6	40	46

ROCKY MOUNTAIN ELK

Rocky Mountain elk census trends were changed to aerial census only instead of the combination ground-aerial routes used in past years. District biologists counted 15,339 elk on 2,054 miles of flight, averaging 7.5 elk per mile compared with 7.1 elk per mile in 1966. This is almost identical to the number observed in the spring of 1964. Information obtained by ground census methods is shown in Table 11.

Classification of 4,891 elk indicated a herd composition of 6 bulls and 53 calves per 100 cows compared with 9 bulls and 49 calves per 100 cows in 1966. These figures indicate 4 percent of the herd were bulls, 63 percent cows, and 33 percent were calves. (Table 12.) The steadily increasing hunting pressure on Rocky Mountain elk has been directly reflected in the continuing decline in the number of bulls remaining after the hunting season.

Field personnel received 30 elk damage complaints in 1966 compared with 28 in 1965. Table 19 includes a summary of damage complaints and action taken.

The Wenaha Game Management Area elk tagging study was completed and tag returns indicate approximately 60 percent of the elk wintering on Bartlett Bench summer in Washington, while 15 percent of the Eden wintering herd summer in Washington. Ninety-eight percent of the tag recoveries ranged less than 25 miles from the trap site. Hunters harvested 66 percent of the total male elk tagged and 19 percent of the total female animals tagged.

Rocky Mountain elk hunters reported taking 8,718 elk, including 5,529 bulls and 3,189 antlerless compared with 9,362 in 1965. Hunter success averaged 18 percent compared with 20 percent in 1965. The number of elk hunters increased by approximately 2,000 over 1965. (Tables 26 and 27.)



Table 10
ROCKY MOUNTAIN ELK POPULATION TRENDS
(Aerial Census)

Units by Region	Herd Range	Miles Traveled	Elk Observed	Elk per Mile			
				1967	1966	1965	1964
	Sumpter						2.1
	Burnt River						2.7
Baker		115	153	1.3	1.6	2.4	2.3
Catherine Creek		125	349	2.7	3.6	3.3	3.7
Chesnimnus		302	1,421	4.7	5.7	5.9	5.4
Desolation	E. Mid. Fk.J.D.	94	417	4.4	5.9	6.8	6.6
	Heppner	27	101	3.7	1.9	4.0	2.2
	Monument	40	121	3.0	3.7	2.8	4.2
	N. Fk. J. Day	20	261	13.0	0.0	0.8	0.2
	W. Mid. Fk.J.D.	26	3	0.1	0.1	0.0	0.2
Heppner		113	486	4.3	1.6	1.9	2.0
Imnaha		200	356	1.8	1.6	1.7	1.3
Minam		170	867	5.1	5.5	6.0	5.7
	Canyon Creek	40	44	1.1	1.2	1.9	0.3
	Strawberry Cr.	15	37	2.5	0.0	1.0	0.3
Murderer's Creek		55	81	1.5	0.9	1.6	0.3
	Beech Creek	8	7	0.9	1.9	0.7	1.2
	Camp Creek	20	0	0.0	0.2	1.0	0.1
	Grub Creek	40	12	0.3	0.2	0.4	0.1
Northside		68	19	0.3	0.4	0.6	0.2
Sled Springs		130	1,413	10.9	10.9	11.7	10.8
Snake River		200	1,477	7.4	5.9	5.6	5.6
Starkey	Grande Ronde	106	1,055	9.9	11.9	11.1	11.7
	Bridge Creek	14	1,039	74.2	28.9	68.5	108.7
	Birch Creek	22	281	12.8	9.5	21.8	21.5
	McKay Creek	33	114	3.4	3.2	15.6	16.0
Ukiah		69	1,434	20.8	10.4	28.3	36.4

Table 10
ROCKY MOUNTAIN ELK POPULATION TRENDS
(Aerial Census)
continued

Units by Region	Herd Range	Miles Traveled	Elk Observed	Elk per Mile			
				1967	1966	1965	1964
	Umatilla	35	694	19.8	17.0	7.6	10.4
	Meacham Creek	38	672	17.7	34.0	18.3	29.5
	Mt. Emily	20	61	3.0	-	-	-
Umatilla		93	1,427	15.3	22.7	12.9	20.3
Walla Walla	Walla Walla	55	1,253	22.8	22.1	21.3	21.0
	Wenaha Lookingglass						
Wenaha		159	3,131	19.7	15.6	12.3	12.1
NORTHEAST TOTALS		2,054	15,339	7.5	7.1	7.3	7.5



Table 11
ROCKY MOUNTAIN ELK POPULATION TRENDS
(Ground Census)

Units by Region	Herd Range	Miles Traveled	Elk Observed	Elk per Mile			
				1967	1966	1965	1964
Chesnimnus		109	619	5.7	9.8	10.7	10.8
	Heppner	27	101	3.7	1.9	4.0	2.2
	Monument	40	121	3.0	3.7	2.8	4.2
	N. Fk. J. Day	29	52	1.8	0.0	0.8	0.2
	W. Mid.F. J. Day	26	3	0.1	0.1	0.0	0.2
Heppner		122	277	2.3	1.6	1.9	2.0
Minam		58	487	8.4	5.9	8.0	6.9
Sled Springs		14	145	10.4	13.7	12.1	8.1
	Bridge Creek	8	198	24.7	2.9	35.4	39.3
	Birch Creek	22	0	0.0	0.5	9.5	2.0
	McKay Creek	21	22	1.1	0.5	0.0	14.8
Ukiah		51	220	4.3	0.8	9.6	13.2
	Umatilla	20	271	13.6	7.5	7.5	5.6
	Meacham Creek	33	385	11.7	14.0	9.0	13.3
	Mt. Emily	20	61	3.0	5.5	6.6	2.5
Umatilla		73	717	9.8	9.9	6.6	8.2
Walla Walla	Walla Walla	47	693	14.8	15.5	12.8	16.8
	Wenaha	38	647	17.0	14.0	12.6	8.0
	Lookingglass	60	366	6.1	11.0	3.4	7.5
Wenaha		98	1,013	10.3	12.2	7.0	7.7
NORTHEAST TOTALS		463	4,171	9.0	-	-	-

Table 12
ROCKY MOUNTAIN ELK HERD COMPOSITION

Unit	Elk Classified			Average Number Per 100 Cows					
				1967		1966		1965	
	Bulls	Cows	Calves	Total	Bulls	Calves	Bulls	Calves	Bulls
Baker	19	93	80	192	20	86	28	53	16
Catherine Cr.	4	122	65	191	3	53	5	47	11
Chesnimnus	5	196	95	296	3	48	1	55	2
Desolation	8	73	27	108	11	37	20	26	7
Heppner	11	109	66	186	10	61	9	43	9
Imnaha	11	237	95	343	5	40	14	48	4
Minam	31	241	115	387	13	47	21	50	15
Sled Springs	5	135	58	198	4	43	2	50	1
Snake River	14	154	92	260	9	60	15	45	20
Starkey	27	430	283	740	6	66	10	55	13
Ukiah	15	192	101	308	8	53	9	51	5
Umatilla	8	303	154	465	3	51	3	63	5
Walla Walla	1	217	114	332	-	53	3	51	4
Wenaha	30	576	279	885	5	48	9	37	7
TOTALS AND AVERAGES	189	3,078	1,624	4,891	6	53	9	49	8
									53



ANTELOPE

Aerial census covering 4,125 flight miles counted 7,593 antelope for an average of 1.8 antelope per mile of travel, indicating a slight increase in population trends. (Table 13.)

Classification of 1,763 antelope during August, just prior to the hunting season, indicated a herd composition of 31 bucks and 40 fawns per 100 does, or 17 percent bucks, 58 percent does, and 25 percent fawns. Tables 14 and 15 present herd composition by counties and a comparison since 1950.

Antelope populations have not shown an increase from the protection given the herds through regulations. A definite need for an extensive study to determine the cause for lack of production is needed.

Hunters reported taking 445 buck antelope on 775 tags issued, for a hunter success of 64 percent. Table 33 presents a summary of the 1966 season. Table 34 includes a 17-year comparison of antelope seasons.



Table 13
1967 AERIAL ANTELOPE INVENTORY

Unit by Area	Herd Range	Miles Traveled	Antelope Observed	Antelope per Mile				
				1967	1966	1965	1964	1963 1962
Silvies		125	144	1.2	1.3	-	-	-
Maury		325	615	1.9	0.6	1.4	2.8	3.8 2.5
Ochoco		125	195	1.6	1.4	-	-	-
AREA I TOTALS		575	954	1.7	1.1	1.4	2.8	3.8 2.5
Paulina		200	337	1.7	1.7	1.5	1.9	1.8 1.2
Silver Lake		225	159	0.7	0.3	0.5	0.6	0.7 0.7
Wagontire		320	417	1.3	1.1	1.2	0.2	0.2 0.0
AREA II TOTALS		745	913	1.2	1.0	1.0	0.9	1.2 1.1
Abert Rim		100	298	3.0	3.4	3.5	0.4	3.0 4.2
Warner		55	307	5.6	4.8	7.2	7.5	5.7 8.8
Interstate		75	108	1.4	1.2	1.6	1.2	1.8 1.0
Klamath		-	-	-	-	-	0.8	0.6 1.0
AREA III TOTALS		230	713	3.1	3.0	2.0	1.9	3.0 3.7
Hart Mountain	Hart Mountain	100	136	1.4	1.5	0.8	1.6	3.7 0.0
	Big Sprgs. Tbl.	240	1,913	8.0	3.2	7.7	7.0	1.5 4.7
	Catlow Valley	270	424	1.6	1.3	1.5	1.8	1.2 1.6
	Fields Basin	50	0	-	0.8	0.0	0.7	0.7 0.9
	Sagehen Flat	240	0	-	2.3	0.0	0.0	3.2 0.0
Subtotals Hart Mtn.		900	2,473	2.7	2.1	2.6	2.6	2.1 1.8
Juniper	Chain Lakes	160	110	0.7	0.6	0.6	0.2	0.7 0.3
	Foster Flat	80	145	1.8	1.5	1.0	1.2	1.4 0.4
Subtotals Juniper		240	255	1.1	0.9	0.8	0.5	1.0 0.4

1967 AERIAL ANTELOPE INVENTORY (continued)

Unit by Area	Herd Range	Miles Traveled	Antelope Observed	Antelope per Mile						
				1967	1966	1965	1964	1963	1962	
Steens	Alvord Desert	30	52	1.7	2.8	1.1	2.1	2.5	1.0	
	Blitzen Valley	90	70	0.8	0.1	0.0	0.0	0.0	0.1	
	Bridge Creek	40	30	0.8	0.4	0.6	0.8	1.0	0.8	
	Red "S" Field	60	16	0.3	0.2	0.0	0.6	0.1	0.0	
Subtotals Steens		220	168	0.8	0.5	0.3	0.6	0.6	0.3	
AREA IV TOTALS		1,360	2,896	2.1	1.6	1.9	1.9	1.6	1.3	
Beulah	Brogan	50	118	2.4	2.7	1.1	2.1	1.0	0.5	
	Harper	75	103	1.4	2.2	1.3	1.5	2.3	3.5	
Subtotals Beulah		125	221	1.8	2.4	1.2	1.8	1.6	2.1	
Malheur	Harney Valley	50	75	1.5	1.1	1.8	0.6	1.5	0.3	
	Coleman Mtn.	90	313	3.5	0.7	3.4	1.0	1.1	0.4	
	Juntura	150	168	1.1	0.8	0.7	1.2	1.1	0.6	
Subtotals Malheur		290	556	1.9	0.8	1.7	1.0	1.2	0.4	
Owyhee	Saddle Mtn.	150	655	4.4	3.5	3.4	3.2	2.3	1.8	
	Freezeout	50	13	0.3	1.1	0.4	0.6	0.4	0.3	
	Mahogany	150	149	1.0	1.0	1.3	1.1	0.9	1.6	
	Vale	25	35	1.4	1.5	-	-	-	-	
	Sucker Creek	25	37	1.5	2.0	-	-	-	-	
Subtotals Owyhee		400	889	2.2	2.0	2.1	1.5	1.4	1.2	
AREA V TOTALS		815	1,666	2.0	1.6	1.9	1.5	1.3	1.0	
Whitehorse	Bowden Hills	250	327	1.3	1.6	1.1	1.0	1.0	0.8	
	Sheephead	50	0	-	1.4	-	0.0	0.3	0.5	
	Whitehorse	75	23	0.3	2.1	0.0	0.6	0.6	0.4	
	Antelope Flat	-	-	-	0.0	0.0	0.0	2.8	-	
	Deer Flat	-	-	-	-	0.1	0.4	2.3	-	
	Antelope Res.	25	101	4.0	-	-	-	-	-	
AREA VI TOTALS		400	451	1.1	1.3	0.6	0.5	1.3	0.7	
GRAND TOTALS		4,125	7,593	1.8	1.5	1.6	1.4	1.6	1.3	

Table 14
1967 ANTELOPE HERD COMPOSITION

County	Antelope Classified				Average Number Per 100 Does					
					1967		1966		1965	
	Bucks	Does	Fawns	Total	Bucks	Fawns	Bucks	Fawns	Bucks	Fawns
Crook-										
Deschutes	82	236	94	412	35	40	30	42	74	43
Harney	53	222	64	339	24	29	30	32	26	32
Lake	97	246	70	413	39	28	38	38	47	75
Malheur	53	213	62	328	25	29	25	49	36	65
TOTALS	285	917	290	1,492						
AVERAGES					31	32	29	42	44	59

Table 15
ANTELOPE HERD COMPOSITION

Year	Bucks	Does	Fawns	Total	Per 100 Does	
					Bucks	Fawns
1967	285	917	290	1,492	31	32
1966	298	1,029	436	1,763	25	49
1965	269	879	343	1,491	31	39
1964	412	854	432	1,698	48	51
1963	355	887	581	1,823	40	66
1962	321	785	452	1,558	41	57
1961	214	770	347	1,331	28	45
1960	326	942	555	1,823	35	59
1959	393	806	361	1,560	50	45
1958	274	711	551	1,536	39	77
1957	203	608	493	1,304	33	81
1956	236	542	320	1,098	44	59
1955	194	455	268	917	43	59
1954	350	730	477	1,557	48	65
1953	417	950	589	1,956	44	62
1952	419	952	470	1,841	44	49
1951	334	694	417	1,445	48	60
1950	371	612	555	1,538	63	91

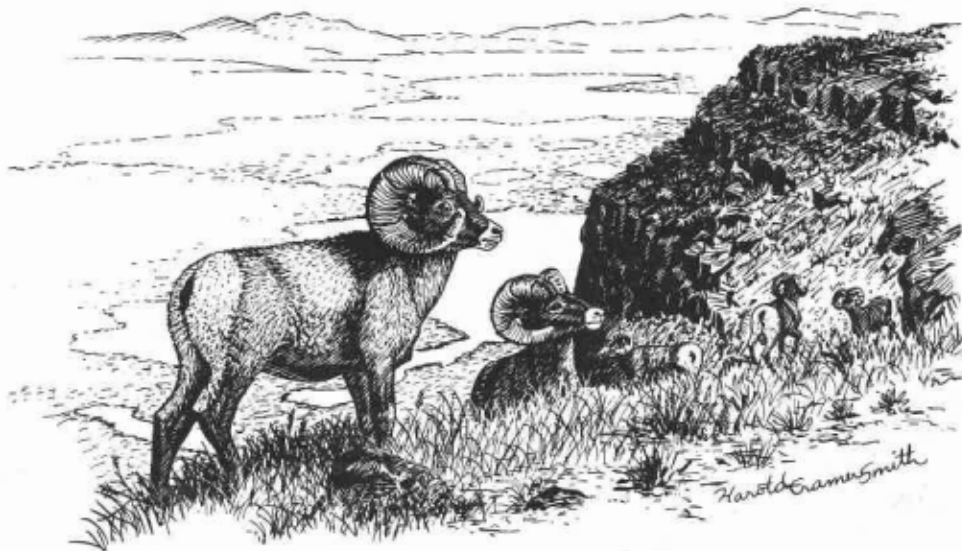
ROCKY MOUNTAIN GOAT

Aerial census in the Wallowa Mountains during the summer of 1966 revealed a total of 32 goats observed compared with 39 seen in 1964.

Five hunters were successful in bagging 3 males and 2 females during 1966. This was the second goat season in Oregon, following the initial season of 1965 in which 4 males and 1 female goat were harvested.

BIGHORN SHEEP

Three sheep tags were issued for a season beginning September 24 and extending through September 30 in portions of Hart Mountain. All three tag holders were able to bag a full 3/4-curl ram. This was the second sheep season held in Oregon during the past 40 years.



RANGE CONDITIONS

The cold, late spring in 1966 together with an extremely dry summer produced poor bitterbrush growth averaging only 3.7 inches. Utilization measurements showed that approximately 21 percent of the available plants had been consumed by November and that an additional 46 percent were eaten during the winter. The total use by all animals averaged 67 percent of the total production on winter ranges. Utilization would probably have been extreme this past year if the winter had not been an open, mild period, allowing some plant growth throughout the winter.

Table 16 includes a five-year comparison of growth and utilization.

The Parker condition and trend transects read this past year, as shown in Table 17, indicate a decline of desirable vegetation and plant density.

The reading schedule for Parker transects is given in Table 18.

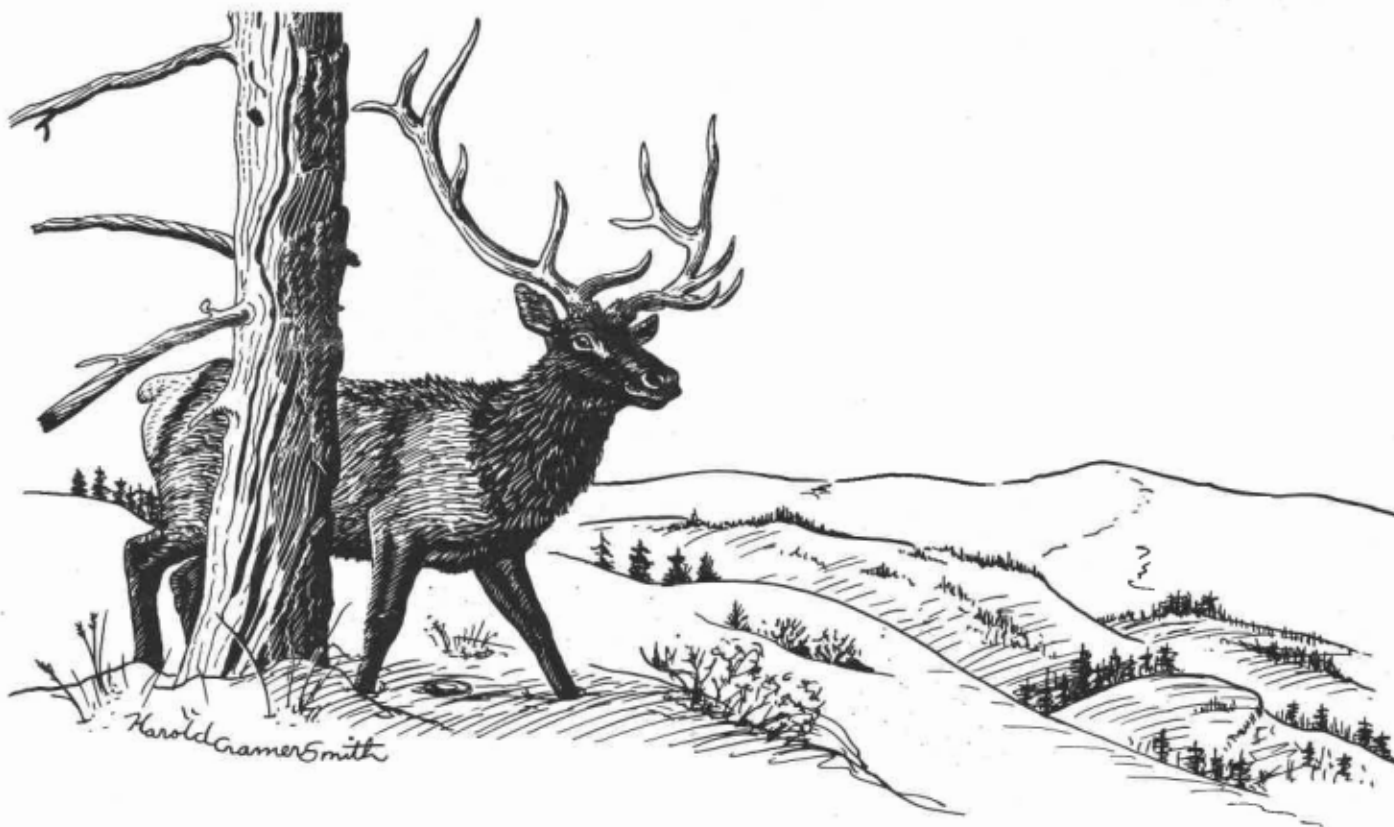


Table 16
BITTERBRUSH UTILIZATION

Units by Region	No. of Transects	Av. Twig Length	1966-67				1965	1964	1963	1962
			Summer	Winter	Total					
Deschutes	4	3.2	2	29	31	25	40	18	24	
Grizzly	6	3.4	42	36	78	57	-	-	-	
Klamath	11	3.2	44	30	74	70	70	58	68	
Maury	6	2.9	57	23	80	70	77	68	79	
Metolius	7	4.0	11	37	48	42	52	43	47	
Ochoco	9	3.2	30	34	64	54	63	57	76	
Paulina	26	3.3	7	50	57	35	32	47	49	
Sprague	2	2.9	18	54	72	71	69	54	62	
Wasco	21	2.1	7	10	17	42	53	36	42	
CENTRAL	92	3.1	24	34	58	51	58	48	58	
Heppper	2	3.8	32	40	72	59	64	61	71	
Murderer's Cr.	5	4.5	2	93	95	55	85	55	54	
Northside	6	6.7	0	80	80	30	70	30	74	
Wheeler	6	3.3	35	34	69	56	55	59	55	
NORTHEAST	19	4.6	17	62	79	50	65	48	62	
Fort Rock	9	3.5	3	67	70	66	66	50	70	
Interstate	7	2.9	55	18	73	63	64	38	70	
Malheur	7	3.5	30	35	65	37	61	15	49	
Silver Lake	7	4.4	3	72	75	58	69	50	68	
Silvies	9	3.4	25	25	50	40	45	25	63	
Warner	9	3.1	12	42	54	43	41	28	65	
SOUTHEAST	48	3.5	21	43	64	51	57	34	64	
TOTALS AND AVERAGES	159	3.7	21	46	67	51	61	43	62	

Table 17
RANGE VEGETATIVE TRENDS

UNIT	HERD RANGE	AVERAGE VEGETATIVE COMPOSITION				AVERAGE VEGETATIVE DENSITY				AVERAGE							
		LEAST DESIRABLE		INTERMEDIATE		LEAST DESIRABLE		INTERMEDIATE		LITTER	BARE SOIL						
		1956	1966	1956	1966	1956	1966	1956	1966								
LOOKOUT MTN.	LOOKOUT MTN.	12.3	13.7	55.2	57.8	32.4	28.6	1.9	2.9	8.9	10.3	5.5	2.1	18.9	33.0	52.2	42.1
	(3 Clusters)	+1.4		+2.6		-3.8		+1.0		+1.4		-3.4		+14.1		-10.1	
MURDERER'S CREEK	S. FORK JOHN DAY RIVER	0.1	0.0	75.9	83.3	23.9	16.7	0.0	0.0	10.1	6.3	8.3	7.0	31.6	45.9	46.9	37.1
	(3 Clusters)	-0.1		+7.4		-7.2		0.0		-3.8		-1.3		+14.3		-9.8	
MALHEUR RIVER	MALHEUR RIVER	1957	1966	1957	1966	1957	1966	1957	1966	1957	1966	1957	1966	1957	1966	1957	1966
		32.7	35.0	44.2	38.4	23.7	34.1	4.8	4.2	5.2	1.9	9.1	7.7	22.1	28.9	40.5	38.5
	(4 Clusters)	+2.3		-5.8		+10.4		-0.6		-3.3		-1.4		+6.8		-2.0	
OCHOCO	NORTH FORK CROOKED RIVER	25.7	18.0	50.0	55.9	24.2	20.7	6.5	5.3	6.5	6.3	8.8	6.8	26.3	36.2	42.9	39.8
	(5 Clusters)	+2.3		+5.9		-3.5		-1.2		-0.2		-2.0		+9.9		-3.1	

Table 18
CONDITION AND TREND READING SCHEDULE

Region	1967		1968		1969	
	Herd Range	No.	Herd Range	No.	Herd Range	No.
Central	N. Paulina	8FS	Maury Mtn.	3	Metolius	3
	Hole-in-Ground	4FS	Devil's Garden	2	Tumalo	2
	Gearhart Mtn.	3	Sprague River	2	Goodlow Mtn.	5
Northeast	M.Fk. John Day	1	Burnt River	4	Keating	3
	Minam	2	Chesnimnus	1	Snake River	1
	N. Ochoco	3	Heppner	1		
	Southside	2	Izee	4	N.Fk. Ukiah	4
	Walla Walla	4	N.Fk. John Day	7	Northside	8
			Umatilla	1	Waterman	3
Southeast	Crane Mtn.	3	Drewsey	3	Frenchglen	3
	Silvies River	3	Dry Mountain	4	Silver Lake	3
			Fort Rock	3	Whitehorse	3



BIG GAME DAMAGE

Big game damage complaints, listed in Table 19, show a total of 1,339 deer and 65 elk complaints processed in 1966. This is similar to the number handled in 1965 when 1,368 deer and 65 elk complaints were received.

The issuance of repellents was the primary method used for damage control, followed by permits to kill offending animals. In eastern Oregon, supplying panels for the protection of haystacks was the major method used.

Cooperative fencing agreements with landowners resulted in construction of 79 deer-proof fences which cost the Commission a total of \$24,310. This is twice the amount expended in 1965 when 5,065 rods of fence were built, costing the Commission \$12,579.63. A summary of fence contracts by unit and region is given in Table 20. A total of \$259,287 has been spent on 939 fencing contracts since the program was initiated in 1949, or an average of \$14,404 per year.

Haystacks in eastern Oregon are protected against big game use by the loaning of wooden panels. During 1966, 2,029 panels were supplied for the protection of 121 haystacks. Approximately 45,000 panels have been issued to protect 3,250 haystacks in eastern Oregon.

A summary of previous years' emergency hunts is included in Table 21.



Table 19
BIG GAME DAMAGE COMPLAINTS

Units by Regions	Number of Complaints		Kill Permits	Haze Permits	Fence Contracts	Tree Cages	Haystacks Paneled	Repel- lents	Hazing by	
	Deer	Elk							Employees	Other
Alsea	127	1	13		12	3		97		3
Clatsop	25	16	10	1	4			25	8	15
McKenzie	87		21		13	2		60		6
Nestucca	5	2	1		1			4		1
Polk	62		23		3	2		36		4
Santiam	164		57	2	6	1		97		7
Siuslaw	72		7	2	12	3		65		4
Trask	28		7	2				17		2
Willamette	151	4	50	4	2	2		104	3	11
Wilson	11	2	2					10	1	6
NORTHWEST	732	25	191	11	53	13		515	12	59
Applegate	56		11	8		2		34		2
Chetco	14				4			9		1
Dixon	30		4		1	2		19		4
Elkton	11	2	2	1	1	1		5		3
Evans Creek	19		6	2	2	2		5		2
Melrose	222		21	4	6	10		167		14
Powers	14		4			2		5		2
Rogue	6	2	3	2				2		1
Sixes	23		7		6			9		1
Tioga	19	6	3					12		10
SOUTHWEST	414	10	61	17	20	19		267		40
Deschutes	11			7				3		12
Grizzly	5				1		1	1	1	3
Hood River	12		3					12		1

Table 19 (continued)
BIG GAME DAMAGE COMPLAINTS

Units by Regions	Number of Complaints		Kill Permits	Haze Permits	Fence Contracts	Tree Cages	Haystacks Paneled	Repel- lents	Hazing by	
	Deer	Elk							Employees	Other
Maupin										
Metolius	1			1						2
Ochoco	1									1
Paulina	2			1				1		2
Klamath	15						8	6		1
Wasco	18		8			5		7		
Maury	2								1	
CENTRAL	67		11	9	1	5	9	30	2	22
Baker	9	12					41	3	1	
Catherine Cr.	4	2		1	1			4	2	
Chesnimnus	3	1						3	1	
Columbia Basin										
Desolation										
Heppner	20	1	2	4						13
Imnaha	4		1					2		
Keating	11				1			4	1	2
Lookout Mtn.	2			1	1					
Minam	16	4					20	1	5	2
Murderer's Cr.	1						2			
Northside	9		2		3				2	1
Sherman	2							1		
Sled Springs	12	4							3	1
Starkey	9	2			1		12	2		
Umatilla	5	1					9	6		
Walla Walla	1	3		1			1	4		1
Wenaha										4

Table 19 (continued)
BIG GAME DAMAGE COMPLAINTS

Units by Regions	Number of Complaints		Kill Permits	Haze Permits	Fence Contracts	Tree Cages	Haystacks Paneled	Repel- lents	Hazing by	
	Deer	Elk							Employees	Other
Wheeler	14		3		4		1	2	1	3
Snake River	2		1					1		
NORTHEAST	124	30	9	6	11		97	33	17	27
Beulah										
Interstate	2						1			1
Owyhee										
Malheur										
Silver Lake										
Silvies										
SOUTHEAST	2						1			
STATE TOTALS	1,339	65	272	43	85	37	107	845	31	149



Table 20
FENCES COMPLETED
May 1966 through June 1967

Units by Regions	Number of Fences	Rods Fenced	Money Expended
Alsea	10	767½	\$ 2,100.63
Clatsop	1	310	775.00
McKenzie	10	468	1,257.01
Polk	4	870	2,358.75
Santiam	9	1,649	4,383.00
Siuslaw	19	811½	1,849.52
Willamette	5	289	794.75
NORTHWEST	58	5,165	\$13,528.66
Applegate	1	45	\$ 135.00
Melrose	5	439	1,317.00
Dixon	1	134	402.00
Sixes	5	639	1,917.00
SOUTHWEST	12	1,257	\$ 3,771.00
Grizzly	1	40	\$ 110.00
Paulina	1	1,280	3,520.00
CENTRAL	2	1,320	\$ 3,630.00
Catherine Creek	1	40	\$ 110.00
Northside	1	312	858.00
Lookout Mtn.	1	344	1,032.00
Heppner	2	369	927.25
Wheeler	1	87	239.00
NORTHEAST	6	1,152	\$ 3,166.25
Warner	1	86	\$ 215.00
SOUTHEAST	1	86	\$ 215.00
STATE TOTALS	79	8,980	\$24,310.91

Table 21
SUMMARY OF EMERGENCY BIG GAME SEASONS

County	Area	Dates	Hunters	Kill					
				Elk		Deer			
				Bulls	Antlerless	Total	Bucks	Antlerless	Total
Wren		1/24/59	46				-	-	16
		2/7/59	46				-	-	16
		2/14/59	13				-	-	6
		2/21/59	17				-	-	8
Benton			122				-	-	46
Jewell Swenson Knappa Jewell		3/1/58	6			0			
		3/1/58	6		-	2			
		1/24/59	13	2	4	6			
		2/7/59	11			0			
		2/8/59	20	4	11	15			
		2/14/59	18	3	11	14			
		2/21/59	10	2	-	2			
	Clatsop		84	-	-	39			
Sitkum		2/1/58	6		3	3			
		2/21/59	6			0			
Coos			12		3	3			
Douglas	Tyee	9/6-7-13-14/58	20	-	-	23			
Nashville		1/31/59	19				-	-	8
		2/8/59	20				-	-	6
Lincoln			39				-	-	14

Table 21 (continued)

SUMMARY OF EMERGENCY BIG GAME SEASONS

County	Area	Dates	Hunters	Kill						
				Elk			Deer			
				Bulls	Antlerless	Total	Bucks	Antlerless	Total	
	Shaw Mtn.	2/1/58	15	2	4	6				
	Elgin	8/9-17/58	25	-	-	9				
Union			40	-	-	15				
Wallowa	Day Ridge	8/16-17/58	23	1	7	8				
Grant	Kimberly	8/19-20, 26-27/61	45				10	8	18	
Wallowa	Imnaha	8/19-20-21/61	73				32	23	55	
TOTALS	14		458	-	-	88	-	-	-	133



HUNTING SEASONS

The 1966 big game seasons provided 1,960,000 man-days of recreation and a harvest of more than 160,000 big game animals. The reported deer harvest of 147,975 deer by 270,769 deer hunters ranks third toward the highest kill on record. The reported elk harvest of 11,402 elk by 68,168 hunters ranks fifth toward the highest elk kill and was the largest number of hunters recorded.

General season dates for mule deer were October 1 through October 23. Black-tailed deer season was extended to October 30 to provide additional opportunities to harvest this species. Antlerless deer unit permits became valid October 15 and extended through the rest of the general season. A total of 106,850 antlerless deer unit permits was issued compared with 99,650 in 1965, 95,700 in 1964, and 135,000 in 1962. Thirteen controlled deer seasons with 8,750 tags resulted in a harvest of 5,547 deer. (Table 24.) Nine early or extended deer seasons resulted in the harvest of 11,419 deer. (Table 23.) Table 22 shows the results of all deer seasons held in 1966, while Table 25 summarizes all deer seasons since 1952.

Requests from several Oregon fire protective agencies for a two-week later opening of the general deer season prompted an investigation of hunter habits and preferences. A deer hunting survey questionnaire, a separate survey from the "annual hunting questionnaire," was mailed to 4,066 persons reporting deer hunting in 1965. Returns were received from 2,704 persons who had received the questionnaire.

Big game harvests were computed through analyses of a random survey questionnaire mailed to 17,369 Oregon hunters.

Fifteen percent of the persons hunting in 1965 did not hunt deer in 1966. This previously undefined turnover in the hunter population, together with a 3 percent annual increase of deer hunters, suggests at least 18 percent are beginning or intermittent deer hunters.

Figure I provides the region of residence of Oregon deer hunters, illustrating that 76 percent live in western Oregon. Figure II illustrates the distribution of deer hunting activity by regions. Figure III and Table 26 show hunting pressure and deer kill by time and type of hunting season. Table 27 includes a summary of habits of hunters by region.

The general elk season opened October 29 and extended through November 27 for eastern Oregon hunters. The western Oregon season opened November 12 and extended through November 27. The antlerless unit permit became valid November 12 through November 27 in

eastern Oregon. Five special elk seasons were authorized in 1966. Table 28 summarizes the 1966 general and permit elk seasons. Table 29 includes a sample of elk seasons since 1933.

The issuance of separate elk tags and a shortened Roosevelt elk season resulted in an 8 percent decline in western Oregon hunters. The total increase in elk hunters was noticeable in the south-eastern Oregon either-sex area.

Elk hunter success continues to decline in the face of an ever increasing elk hunter population.

The hunter questionnaire indicated that 10,693 persons hunted as archers and killed 880 deer and 111 elk.

Return cards from 686 of the 775 antelope tag holders reported a harvest of 445 bucks. Area V, of the six antelope areas open to hunting, reported the highest hunter success with 73 percent of the tag holders bagging a buck. The 1966 antelope season summary is shown in Table 30. Table 31 includes a 17-year summary of antelope seasons.

Three California bighorn sheep tag holders limited with full 3/4-curl rams. The season opened September 24 and extended through September 30.

Five mountain goat hunters bagged 3 male and 2 female goats during the Wallowa Mountain season which opened September 24 and extended through September 30.

Each hunting season has illustrated an increasing demand by more hunters for Oregon's big game resources. The 1966 season experienced a 2.8 percent increase in deer hunters and a 3.6 percent increase in elk hunters.



Table 22

SUMMARY OF 1966 DEER SEASONS

UNITS by REGIONS	GENERAL DEER SEASONS						EXTENDED SEASONS	CONTROLLED SEASONS	TOTAL DEER	DEER per Sq. Mile
	Hunters	Hunter Days	Bucks	Does	Total	%Hunter Success				
Alsea Clatsop McKenzie Nestucca Polk Santiam Siuslaw Trask Willamette Wilson	11,212	64,768	3,696	1,360	5,056	45	1,002	480	6,538	3.8
	4,358	30,302	1,203	372	1,575	36			1,575	1.8
	14,414	87,573	3,994	1,595	5,589	39	2,730		8,319	2.9
	1,415	7,677	341	282	623	44			623	2.1
	3,096	17,274	817	163	980	32	940		1,920	3.8
	15,742	85,863	3,072	1,572	4,644	30	2,289		6,933	2.3
	3,782	24,610	1,234	153	1,387	37	608		1,995	2.2
	6,839	35,341	1,760	948	2,708	40		370	3,078	3.6
	4,342	22,562	772	459	1,231	28	2,500		3,731	5.3
	4,409	23,883	936	784	1,720	39			1,720	2.9
NORTHWEST	69,609	399,853	17,825	7,688	25,513	37	10,069	850	36,432	3.0
Applegate Chetco Dixon Elkton Evans Creek Melrose Powers Rogue Sixes Tioga	3,210	22,232	1,313	94	1,407	44		250	1,657	1.5
	2,300	16,812	1,086	62	1,148	50		50	1,198	.8
	4,836	27,703	1,807	423	2,230	46		300	2,530	1.2
	1,466	8,324	662	0	662	45	359	53	1,074	1.2
	1,740	13,849	389	164	553	32		150	703	1.0
	4,703	31,080	2,053	451	2,504	53		300	2,804	4.0
	2,500	16,169	1,168	188	1,356	54		113	1,469	1.6
	8,927	57,595	3,198	423	3,621	41	191	250	4,062	3.9
	4,883	28,248	2,665	588	3,253	67			3,253	4.1
	2,634	13,924	1,070	317	1,387	53			1,387	1.5
SOUTHWEST	37,199	235,936	15,411	2,710	18,121	49	550	1,466	20,137	1.9
Deschutes Fort Rock Grizzly Hood River Keno Klamath Maupin Mauzy Metolius Ochoco Paulina Sherman Sprague Wasco	9,253	50,072	2,924	333	3,257	35	153		3,410	2.6
	5,753	31,066	2,320	658	2,978	52	478		3,456	2.0
	3,265	17,898	1,120	361	1,481	45			1,481	2.0
	533	2,794	114	0	114	21			114	.4
	2,171	13,430	662	333	995	46	21		1,016	1.3
	7,266	37,300	3,405	541	3,946	54		138	4,084	4.1
	780	3,347	263	0	263	34			263	1.1
	2,402	10,883	1,148	361	1,509	63			1,509	3.0
	2,622	12,451	902	325	1,227	47			1,227	2.0
	12,701	54,588	4,797	799	5,596	44			5,596	4.0
CENTRAL	6,513	33,382	2,775	376	3,151	48			3,151	2.2
	2,375	9,872	933	227	1,160	49			1,160	1.2
	4,460	22,016	1,932	513	2,445	55		227	2,672	3.0
	5,671	28,577	1,466	568	2,034	36	114	22	2,200	2.7
	65,765	327,676	24,761	5,395	30,156	46	766	417	31,339	2.4

Table 22

SUMMARY OF 1966 DEER SEASONS
(continued)

UNITS by REGIONS	GENERAL DEER SEASONS						EXTENDED SEASONS	CONTROLLED SEASONS	TOTAL DEER	DEER per Sq. Mile
	Hunters	Hunter Days	Bucks	Does	Total	%Hunter Success	%Yearling Bucks			
Baker	4,965	23,792	2,657	251	2,908	58	60	10	2,918	3.2
Catherine Cr.	2,136	10,989	1,066	341	1,407	66	57		1,407	4.7
Chesnimus	1,826	9,347	893	349	1,242	68	64		1,242	2.1
Columbia Basin	666	3,088	228	82	310	47	50		310	1.0
Desolation	1,748	8,551	1,016	226	1,242	71	44		1,242	1.9
Heppner	7,791	31,619	3,159	1,830	4,989	64	57		4,989	3.7
Imnaha	3,037	12,094	1,583	588	2,171	71	49		2,171	2.4
Keating	2,794	11,326	1,754	390	2,144	77	57	15	3,612	6.0
Lookout Mtn.	1,595	5,718	841	308	1,149	72	80		1,149	3.3
Minam	1,407	6,341	925	192	1,117	79	60	154	1,777	2.4
Murderer's Cr.	6,188	29,765	2,317	1,485	3,802	61	46	17	3,819	3.8
Northside	5,447	25,470	2,915	1,176	4,091	75	45		4,711	5.9
Sled Springs	3,174	14,485	1,795	419	2,214	70	52		2,214	3.2
Snake River	2,187	10,119	1,187	494	1,681	77	59		1,916	2.5
Starkey	1,983	10,260	847	329	1,176	59	60	10	1,186	.9
Ukiah	3,331	17,659	1,246	694	1,940	58	50		1,940	3.5
Umatilla	3,308	17,510	1,387	282	1,669	50	58	15	1,684	3.7
Walla Walla	545	2,285	204	55	259	48	36		259	1.3
Wenaha	1,023	5,173	380	212	592	58	80		592	1.5
Wheeler	6,235	25,450	2,798	1,148	3,946	63	56		3,946	3.9
NORTHEAST	61,386	281,041	29,198	10,851	40,049	65	56	221	43,084	3.2
Beulah	3,531	15,187	1,920	396	2,316	66	56		2,316	1.7
Hart Mountain	169	494	94	0	94	56	-	15	109	.1
Interstate	7,156	38,897	3,069	1,873	4,942	69	53		4,942	2.9
Juniper	341	1,481	204	0	204	60	27		204	.3
Malheur River	2,485	11,996	1,426	110	1,536	62	50		1,536	.8
Owyhee	494	1,525	286	0	286	58	29		286	.5
Silver Lake	5,738	30,059	1,968	1,093	3,061	53	66	251	3,312	4.1
Silvies	3,045	17,349	1,391	0	1,391	46	60		1,391	1.2
Steens Mtn.	1,297	6,118	631	0	631	49	52	23	654	.5
Wagontire	443	1,493	164	0	164	37	-		164	1.1
Warner	2,951	16,522	1,466	333	1,799	61	41		1,799	3.3
Whitehorse	459	3,049	270	0	270	59	38		270	.2
SOUTHEAST	28,109	144,170	12,889	3,805	16,694	59	52	289	16,983	1.4
Gen. Season Totals	262,068	1,388,676	100,084	30,449	130,533	50	50			2.1
Extended Seasons	31,136	112,316	5,933	5,962	11,895	38				
Cont. Seasons	8,495	23,956	1,740	3,807	5,547	65				
Grand Totals	270,769	1,524,948	107,757	40,218	147,975	55	50	11,895	147,975	2.4

285,961 - Total Deer Tags Issued

Table 23

1966 EARLY AND EXTENDED DEER SEASONS

Areas by Region	No. of Hunters	Harvest		Percent Success	Hunter Days
		Bucks	Antlerless		
Clackamas Watershed	74	-	-	-	133
High Cascades	2,745	713	-	26	8,207
McDonald Forest	287	21	41	22	1,067
McKenzie	6,118	1,474	1,568	50	22,126
Northwest Ag.	16,354	2,951	3,300	20	57,440
NORTHWEST	25,578	5,159	4,909	39	88,973
High Cascades	1,829	478	-	26	5,471
SOUTHWEST	1,829	478	-	26	5,471
Wallowa Pack	384	144	-	37	1,427
NORTHEAST	384	144	-	37	1,427
Fort Rock	537	-	478	89	1,074
Silver Lake	419	-	251	60	941
SOUTHEAST	956	-	729	76	2,015
TOTALS	28,747	5,781	5,638	40	97,886

Table 24
1966 CONTROLLED DEER SEASONS

Areas by Region	Available Tags	Harvest		Percent Success	Hunter Days
		Bucks	Antlerless		
Corvallis Watershed	400*	30	35	24	792
Harlan-Toledo	1,000**	196	219	69	1,727
Lower Trask	700	155	215	53	1,678
NORTHWEST	2,100	381	469	54	4,197
Douglas Ag.	1,000	392	261	65	3,139
Jacksor Ag.	600	286	175	77	2,415
Josephine Ag.	750	165	187	47	4,389
SOUTHWEST	2,350	843	623	62	9,943
Bryant Mountain	150	-	138	92	642
Sprague River	250	-	227	91	612
Pine Grove	100	-	52	52	320
CENTRAL	500	-	417	83	1,574
Lower Powder	1,500	-	1,435	96	7,638
Medical Springs	300	-	253	84	1,339
N. Side John Day	1,000	-	620	62	5,706
Wallowa Pack	1,000	344	162	51	9,273
NORTHEAST	3,800	344	2,470	74	23,956
TOTALS	8,750	1,568	3,979	66	39,670

*267 tags issued.

**620 tags issued.



Table 25

SUMMARY TOTAL DEER HARVEST

1952 - 1966

Year	Deer Tags Issued	Total Deer Harvested	MULE DEER				BLACK-TAILED DEER							
			*Hunters	Number Harvested	Percent Hunter Success	Antlerless Harvest	Percent Antlerless	*Hunters	Number Harvested	Percent Hunter Success	Antlerless Harvest	Percent Antlerless		
1952	188,250	77,897	126,719	53,030	41	61	20,570	39	61,531	24,867	40	32	5,210	21
1953	204,808	105,275	121,356	64,607	51	53	24,652	38	83,552	40,668	49	39	13,045	32
1954	215,047	112,622	134,617	76,877	52	68	22,410	29	80,430	35,745	44	32	8,043	22
1955	230,585	133,834	148,566	90,126	58	61	37,752	42	81,919	43,708	53	33	13,446	31
1956	233,842	146,568	146,568	85,394	54	68	37,978	44	87,274	40,277	46	32	13,340	33
1957	221,960	116,409	140,627	81,873	52	58	26,853	33	81,333	34,626	43	30	8,877	26
1958	233,885	116,251	139,183	71,250	50	51	19,308	27	94,702	45,001	47	39	15,251	34
1959	248,701	145,823	138,856	88,261	59	64	23,686	27	104,750	56,670	54	39	20,108	35
1960**	259,739	157,504	141,102	96,122	61	68	28,254	29	110,725	61,382	55	39	20,133	33
1961	265,326	163,939	147,597	97,951	62	66	30,538	31	101,971	65,988	65	40	24,529	37
1962	263,838	139,712	143,580	76,776	53	55	24,977	32	108,343	62,936	58	45	21,932	35
1963	258,375	117,619	136,676	64,678	45	47	15,403	24	105,603	52,941	50	45	16,754	32
1964	271,339	143,023	148,215	84,665	53	59	19,931	23	110,555	58,358	53	41	18,807	32
1965	277,857	119,369	143,618	71,637	43	50	19,242	27	108,281	47,732	44	40	13,348	27
1966	285,961	147,975	156,720	88,516	52	56	22,821	26	114,049	59,459	52	40	14,687	25

*General season hunters only.
**1960-64 estimates of hunting pressure revised.



FIGURE 1
DISTRIBUTION OF 1966 DEER HUNTERS
BY REGION OF RESIDENCE

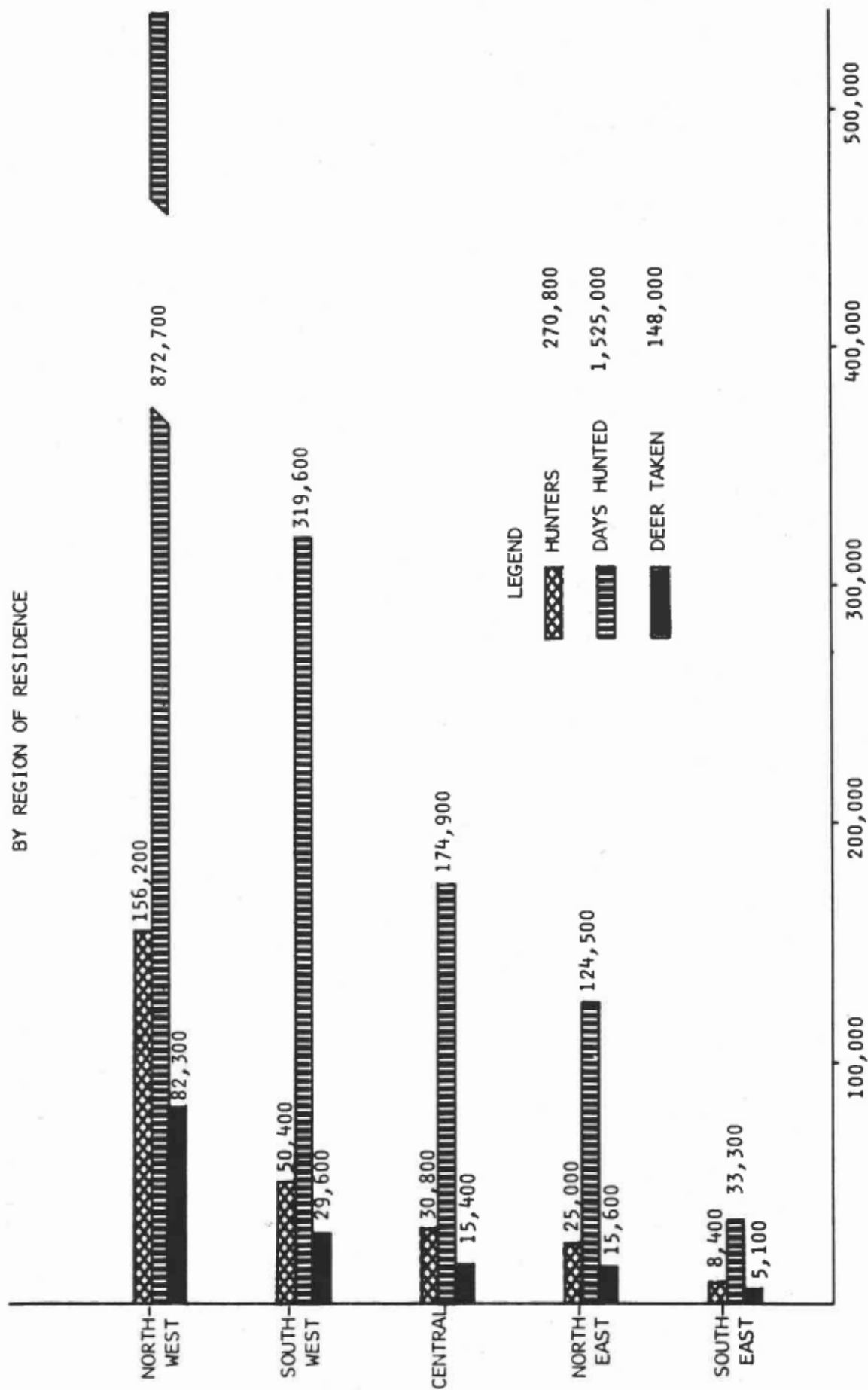


FIGURE 11
DISTRIBUTION OF 1966 DEER HUNTING BY REGIONS

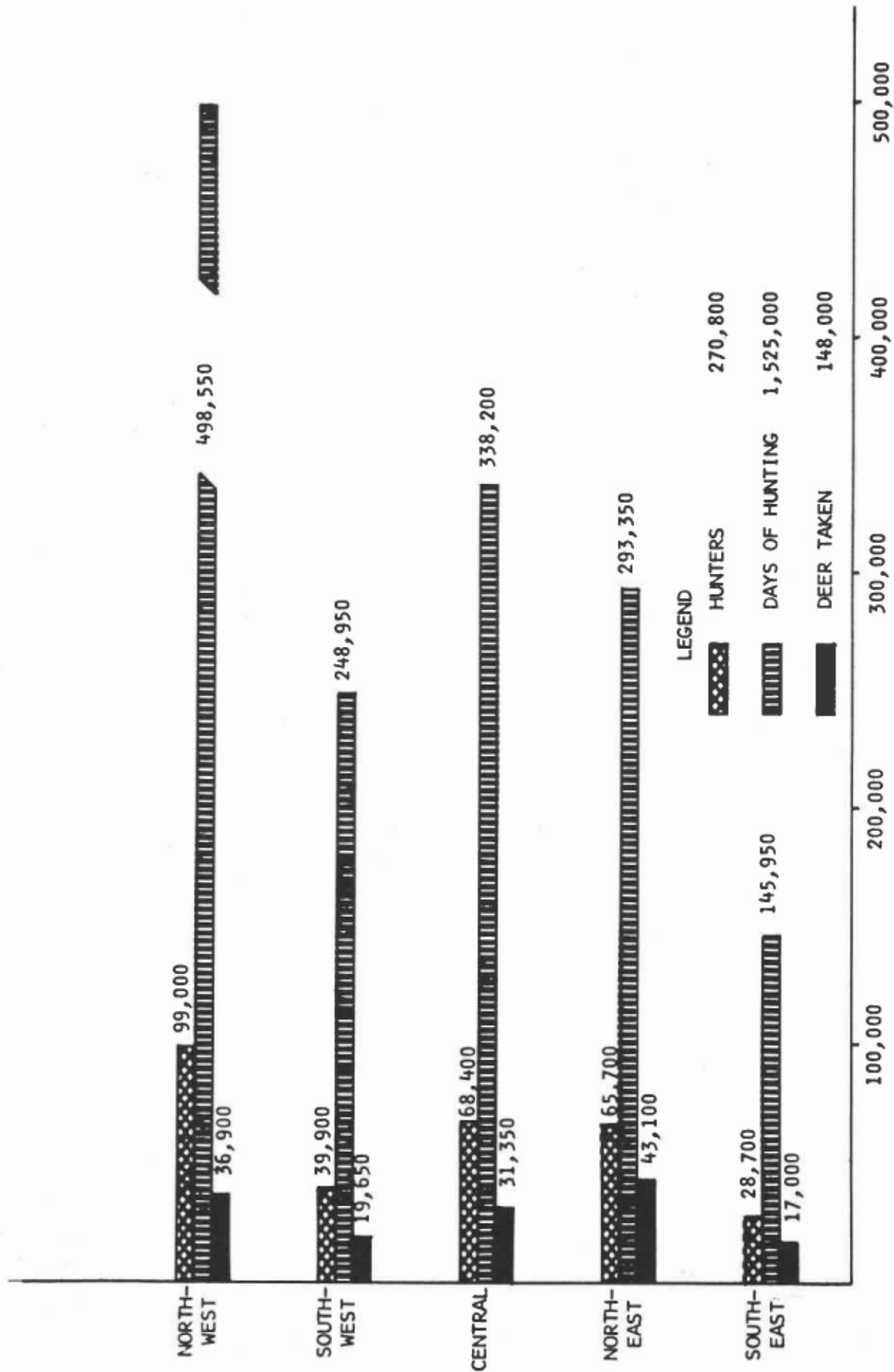


FIGURE III
1966 DEER HUNTING BY TIME INTERVAL

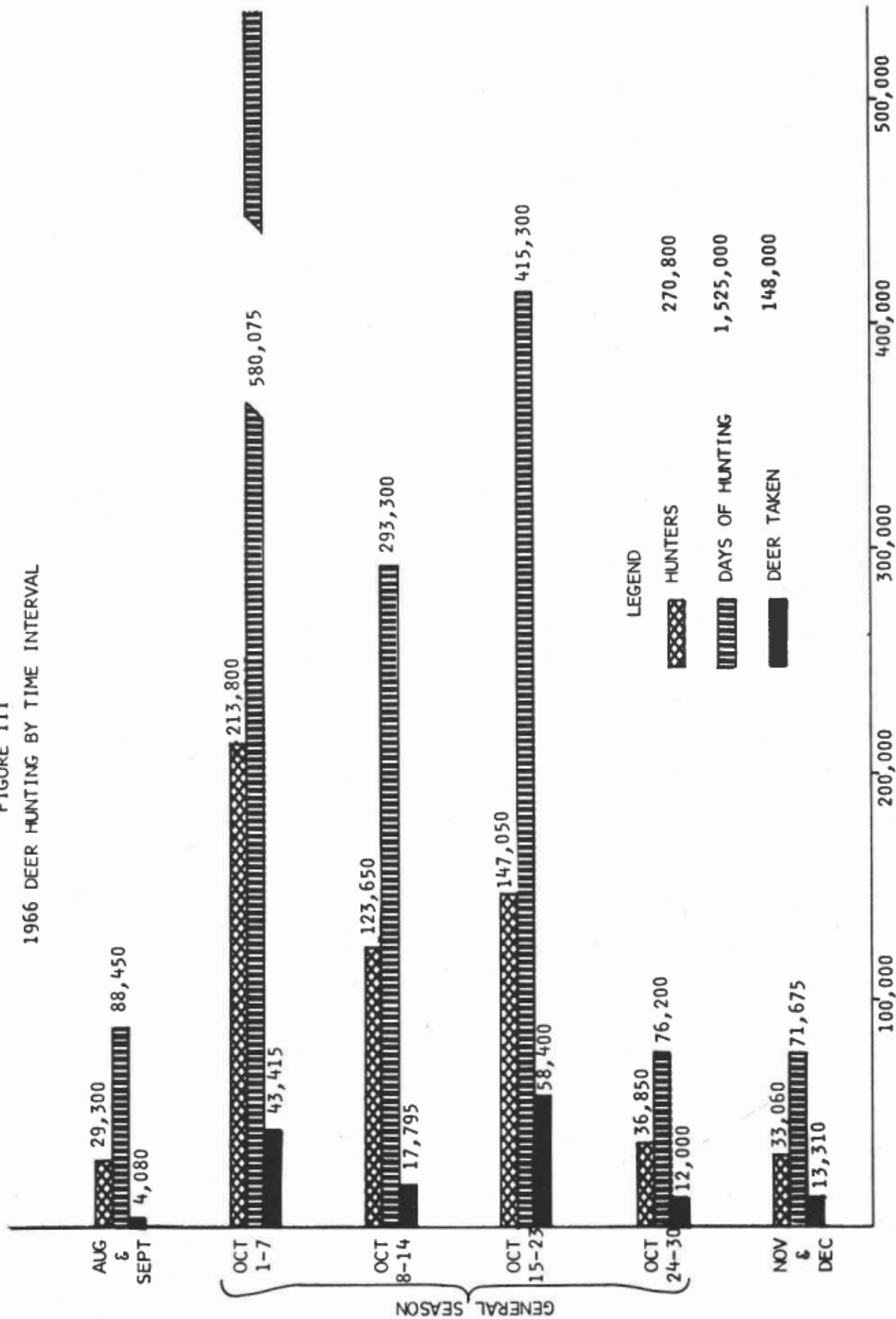


Table 26

DISTRIBUTION OF 1966 DEER HUNTING
BY TIME INTERVAL

Seasons	Hunters	Man-Days	Kill	Suc- cess	Days per Hunter	Days per Deer	Percent of Hunting
Early Archery Seasons (Aug. & Sept.)	8,550	36,600	405	5.0	4.3	90	2.4
Early Rifle Seasons (Aug. & Sept.)	20,750	51,850	3,675	18.0	2.5	14	3.4
General Deer Season	263,700	1,364,875	131,610	50.0	5.2	10	89.5
Oct. 1-7	213,800	580,075	43,415	20.0	2.7	13	38.0
Oct. 8-14	123,650	293,300	17,795	14.0	2.4	16	19.2
Oct. 15-23	147,050	415,300	58,400	40.0	2.8	7	27.3
Oct. 24-30	36,850	76,200	12,000	33.0	2.1	6	5.0
Late Archery Seasons (Nov. & Dec.)	1,750	4,575	215	12.0	2.7	21	.3
Late Rifle Seasons (Nov. & Dec.)	31,310	67,100	12,095	39.0	2.1	5.5	4.4
TOTALS	270,800	1,525,000	148,000	55.0	5.6	10.3	100

Table 27
REGIONAL VARIATIONS OF HUNTER HABITS

Subject	Region of Residence					Totals & Averages
	Northwest	Southwest	Central	Northeast	Southeast	
Total Deer Hunters	156,200	50,400	30,800	25,000	8,400	270,800
Percent of Population	11	18	23	25	21	13 %
Days per Hunter	5.6	6.3	5.7	5	4	5.6
Hunter Success %	53	59	50	62	61	55 %
Hunters Using Vacation Time %	33	28	17	14	17	27 %
Days per Hunter	7.5	8.0	8.7	6.1	5.8	7.5
Success %	66	74	54	82	75	68 %
Hunters Using Oct.1-7 Period %	79	82	85	86	85	80 %
Hunters Using Oct.15-23 Period %	56	53	61	56	50	54 %
Can Change Plans Aug.15 %	73	69	73	65	72	71 %
Can Change Plans Sept.15 %	42	43	55	48	53	44 %
Days Hunting From Home %	42	59	64	69	59	50 %
Days Hunting From Motel, etc. %	9	3	6	7	8	7 %
Days Hunting From Tent %	20	14	12	12	12	17 %
Days Hunting From Trailer %	26	19	16	9	15	22 %
Days With No Shelter %	4	4	2	2	5	4 %
Hunters Using Campgrounds %	15	15	7	5	5	13 %
Hunters Paid For Access %	1.3	.9	2.0	.9	.5	1.2%

Table 28

SUMMARY OF 1966 ELK SEASONS

REGIONS Units	No. of Hunters	HUNTER DAYS		HARVEST			HUNTER SUCCESS		SPIKE BULLS		HUNTERS		ELK Per Sq. Mi.*
		Total	Av.	Spikes	Bulls	Adult Antler- less	Total	Percent	Percent	Percent	Per Sq. Mi.	Per Sq. Mi.*	
Alsea	515	2,936	5.7	48	38	0	86	17	56		.30		.05
Clatsop	7,475	41,113	5.5	661	296	46	1,003	13	69		8.79		1.18
McKenzie	839	4,279	5.1	43	55	0	98	12	44		.29		.03
Santiam	123	701	5.7	3	7	0	10	8	-		.04		-
Siuslaw	89	409	4.6	9	12	0	21	23	43		.10		.02
Trask	400	2,000	5.0	73	17	0	90	23	81		.47		.11
Willamette	116	592	5.1	7	3	0	10	9	-		.17		.01
Wilson	2,079	10,811	5.2	282	77	4	363	17	78		3.47		.61
NORTHWEST	11,636	62,841	5.4	1,126	505	50	1,681	14	69				
Chetco	27	124	4.6	0	0	0	0	0	0		.02		-
Dixon	343	1,955	5.7	23	24	0	47	14	49		.16		.02
Elkton	643	3,729	4.8	98	53	5	156	24	65		.71		.17
Melrose	568	2,897	5.1	25	19	2	46	8	57		.81		.07
Powers	370	1,702	4.6	34	14	0	48	13	71		.41		.05
Rogue	247	1,235	5.0	16	12	0	28	11	57		.24		.03
Sixes	42	235	5.6	2	2	0	4	9	50		.05		.01
Tioga	3,956	22,549	5.7	289	183	124	596	15	61		4.39		.66
SOUTHWEST	6,196	34,426	5.6	487	307	131	925	15	61				
Deschutes	109	600	5.5	2	5	2	9	-	-		.08		.01
Grizzly	27	174	6.4	0	3	4	7	-	-		.04		.01
Hood River	34	136	4.0	0	2	0	2	-	-		.11		.01
Keno	96	528	5.5	0	7	0	7	-	-		.12		.01
Maury	14	36	2.0	0	0	0	0	-	-		.03		-
Ochocho	1,086	5,647	5.2	9	14	40	63	6	39		.78		.05
Wasco	603	3,678	6.1	18	42	0	60	10	30		.75		.08
CENTRAL	1,969	10,799	5.5	29	73	46	148	8	28				

*Square miles of habitat.

Table 28

SUMMARY OF 1966 ELK SEASONS
(continued)

REGIONS Units	No. of Hunters	HUNTER DAYS		HARVEST			HUNTER SUCCESS		SPIKE BULLS		HUNTERS		ELK	
		Total	Av.	Spikes	Bulls	Adult Antler- less	Total	Percent	Percent	Percent	Per Sq. Mi.	Per Sq. Mi.	Per Sq. Mi.	* Per Sq. Mi.
Beulah	1,248	8,112	6.5	13	52	168	233	18	20		.92		.17	
Malheur	584	3,562	6.1	9	39	33	81	14	19		.29		.04	
Silvies	239	1,243	5.2	5	10	15	30	13	33		-		.03	
SOUTHEAST	2,071	12,917	6.2	27	101	216	344	17	21					
Baker	2,850	20,520	7.2	125	169	124	418	15	43		3.17		.46	
Catherine Cr.	1,000	6,100	6.1	68	26	64	158	16	72		3.33		.53	
Chesnimnus	3,123	18,738	6.0	345	106	170	621	20	76		5.21		1.04	
Desolation	3,094	22,277	7.2	154	184	165	503	16	59		4.76		.77	
Heppner	2,659	18,613	7.0	102	92	128	322	12	52		1.97		.24	
Imnaha	1,373	8,787	6.4	134	113	115	362	26	54		3.43		.91	
Keating	682	4,637	6.8	34	29	71	134	19	54		1.14		.22	
Lookout Mtn.	170	765	4.5	7	2	50	59	35	-		.49		.17	
Minam	1,943	13,212	6.8	154	174	156	984	51	47		2.59		1.31	
Murderer's Cr.	798	4,150	5.2	23	38	55	116	14	38		.80		.12	
Northside	1,486	9,659	6.5	18	46	206	270	18	28		.83		.15	
Sled Springs	3,688	22,866	6.2	330	104	333	767	21	76		5.27		1.09	
Snake River	1,691	10,822	6.4	198	142	108	448	26	58		2.25		.59	
Starkey	6,600	48,840	7.4	323	227	335	885	13	59		5.28		.71	
Ukiah	3,876	29,458	7.6	223	155	137	515	13	59		7.05		.94	
Umatilla	4,651	31,162	6.7	454	111	204	769	16	80		10.34		1.71	
Walla Walla	1,909	11,072	5.8	130	63	188	381	20	67		9.55		1.91	
Wenaha	4,040	26,260	6.5	586	179	270	1,035	26	77		10.10		2.59	
Wheeler	673	4,442	6.6	1	6	50	57	8	-		.67		.06	
NORTHEAST	46,306	312,380	6.7	3,409	1,966	2,929	8,304	18	63					
STATE TOTALS	68,178	433,363	6.2	5,078	2,952	3,372	11,402	17	63					

*Square miles of habitat.

Table 29
SUMMARY OF ALL ELK SEASONS

Year	Hunters	Rocky Mountain Elk Harvest		Roosevelt Elk Harvest		Grand Total	Percent Success
		Bulls	Antlerless	Bulls	Antlerless		
1934	3,140	752				752	24
1935	2,743	692				692	25
1936	2,947	547				547	19
1937	3,064	634				634	21
1938	3,867	734		294		1,028	27
1939	3,878	842	379	227		1,488	37
1940	6,152	1,152	1,179	198		2,529	41
1941	9,203	1,169	2,388	184		3,741	41
1942	9,753	1,296	1,067			2,363	24
1943	13,471	1,375	882	696		2,953	22
1944	10,513	1,204	351	439		1,994	19
1945	12,625	2,176	67	222		2,465	19
1946	16,712	2,055	1,619	256		3,930	24
1947	16,689	1,519	243	356		2,118	13
1948	22,536	2,454	2,548	365	33	5,400	24
1949	28,110	2,614	6,071	449		9,134	32
1950	24,741	2,210	1,234	947	1,000	5,391	22
1951	28,772	2,502	1,361	620		4,483	16
1952	25,974	2,036	823	574		3,433	13
1953	27,085	2,820	531	742		4,145	15
1954	27,858	2,967	734	851		5,414	19
1955	29,309	3,361	1,749	867		6,083	21
1956	34,885	3,652	2,068	1,104		7,088	20
1957	37,995	4,698	1,066	1,669		7,502	20
1958	42,448	3,658	1,276	1,746		6,953	16
1959	44,217	5,307	1,524	1,920		8,975	20
1960	48,992	6,434	1,898	2,065		10,865	22
1961	51,349	7,098	1,863	2,609		12,091	24
1962	52,983	6,460	1,925	1,538		10,176	19
1963	54,724	6,959	3,606	3,123	0	13,688	24
1964	62,898	7,576	4,879	4,270	432	17,157	27
1965	67,387	5,766	3,582	2,300	618	12,266	18
1966	68,178	5,529	3,189	2,501	183	11,402	17

Table 30
1966 ANTELOPE SEASON
(90% Return)

Area	Units	Tags Issued	Reporting Hunters	Harvest	Percent Success	Hunter-Days
I	Ochoco, Maury, Silvies Murderer's Creek	100	91	50	55	220
II	Paulina, Wagontire, Fort Rock, Silver Lake	100	88	52	65	216
III	Warner	100	83	55	68	203
IV	Juniper, Hart Mtn, Steens	225	188	130	71	423
V	Beulah, Malheur River, Owyhee	150	123	95	73	283
VI	Whitehorse	100	92	63	72	219
TOTALS		775	686	445	64	1,564



Table 31
ANTELOPE HUNTING SEASONS
1950 - 1966

Year	Number of Hunters	Buck Kill	Percent Success
1966	775	445	64
1965	675	369	60
1964	597	378	63
1963	578	333	58
1962	516	277	54
1961	814	418	51
1960	845	459	54
1959	812	451	55
1958	554	314	57
1957	543	294	54
1956	560	318	57
1955	570	358	63
1954	589	334	57
1953	380	181	48
1952	1,076	448	42
1951	1,133	600	53
1950	1,422	679	47



SMALL GAME



PHEASANTS

The 1967 breeding population revealed an average density of 19.5 pheasants per 100 acres on the 14,025 acres of habitat sampled. This average was 12 percent below 1966. While 9 percent more breeders were found in western Oregon, approximately 15 percent fewer were tallied east of the Cascades. The most substantial declines were recorded in Umatilla, Morrow, and Baker Counties. Ratios of cocks per 100 hens compared with 1966 averages. Breeding population data is summarized in Tables 1 and 2.

Pheasants wintering on the E. E. Wilson Game Management Area declined 10 percent from 1966. The breeding population was the lowest recorded to date, as shown in Table 3.

Crowing counts were made on 53 sample routes. The state-wide index of roosters heard per mile declined 4 percent from 1966. Approximately 10 percent more birds were heard in western Oregon, while the index dropped 21 percent in eastern Oregon. A four-year comparison is shown in Table 4.

Production measurements the first two weeks in August are summarized in Table 5. A total of 3,600 pheasants was counted on 2,621 miles sampled during the survey, representing a 7 percent decrease from 1966. Most of the decrease was due to substantial declines in Lane and Baker Counties. Elsewhere, some increase was evident with 60 percent more birds being counted in Wasco and Sherman Counties, 10 percent more in Malheur County, 4 percent more in Umatilla County, and 17 percent more in Jackson County.

A total of 309 broods was classified and 88 percent of the hens had broods compared with 81 percent in 1966. Individual broods averaged 2 percent more chicks and the average number of chicks per hen increased 11 percent over last year. Increased productivity was fairly uniform in all regions. Approximately 94 percent of all broods observed were at least one month old by August 1 compared with 90 percent in 1966.

Table 6 summarizes Malheur County damage complaints for the past ten years. The number received in 1967 was 30 percent below 1966 and 11 percent below the ten-year average.

VALLEY QUAIL

Quadrat sampling indicated a 22 percent decline in the state-wide breeding population compared with 1966. A 10 percent increase in western Oregon was offset by a 28 percent decline east of the Cascades. The drop was most apparent in Jackson, Wasco, Morrow, Umatilla, and Grant Counties.

A total of 6,059 birds was recorded on 4,066 miles sampled during the production survey, indicating a 25 percent increase over 1966. Approximately 75 percent more quail were counted in western Oregon and 15 percent more in eastern Oregon. The increase was fairly uniform except in Klamath, Deschutes, and Lake Counties. Table 7 presents the production data.

Number of chicks per brood averaged 13 percent above 1966, while the average ratio of chicks per adult compared with the high ratio recorded last year, indicating good production. Hatching was delayed, as only 80 percent of the broods were one month or older by August 1 compared with 85 percent in 1966.

BOBWHITE QUAIL

No bobwhites were observed on the quadrat samples this year.

Thirty-eight birds were tallied in the north end of the Willamette Valley during the production survey, with 10 in Umatilla County and 7 in Malheur County. Three broods were observed, averaging 12 chicks per brood. No broods were seen in 1966.

MOUNTAIN QUAIL

More mountain quail were observed on the big game sample routes, as revealed in Tables 12 and 13. The increase averaged 9 percent state-wide, 175 percent in the Central Region and 47 percent in

the Northwest Region. In the Southwest Region, 22 percent fewer birds were observed.

Production data is summarized in Table 8. Approximately one-third more birds were counted on 2,160 miles sampled compared with 1966. All of the increase was recorded in western Oregon while the eastern Oregon population remained stable. Average numbers of chicks per brood increased slightly while the ratio of chicks per adult increased 18 percent above last year. Half of the broods observed were less than a month old on August 1.

CHUKAR PARTRIDGE

Chukar numbers observed on 1,636 miles of big game routes last winter declined 53 percent from the previous year. Table 9 presents the information and indicates the lowest breeding population recorded in the past four years.

Total numbers observed on 1,733 miles sampled during the production survey declined 15 percent from 1966 as shown in Table 10. A direct comparison cannot be made, however, as nearly half of the 1966 total was recorded in Malheur County where dry conditions concentrated the birds. Comparisons by area indicate one-third more chukars on the Lower Deschutes and Upper John Day drainages, and two-thirds more on the Lower John Day. Numbers along the Snake River in Baker County and in Malheur County declined almost 60 percent from last year, while no change was apparent in Harney County. Individual broods averaged the same number of chicks as in 1966 with substantial increases apparent in Morrow, Grant, and Harney Counties. The ratio of chicks per adult increased one-third, indicating improved production in all areas. Only 80 percent of the broods were at least a month old by August 1 compared with 90 percent last year.

HUNGARIAN PARTRIDGE

Numbers of Hungarian partridge observed on big game samples declined 39 percent from 1966 as shown in Table 9, but one-third more were counted on the upland game quadrats.

Production data is presented in Table 11. Only 301 birds were counted on 1,888 miles sampled due to the widespread distribution of the species. The average density compared with 1966, although some decline was evident in Baker and Morrow Counties. Average numbers of chicks per brood increased 29 percent while the ratio of chicks per adult increased 53 percent, indicating improved production.

FOREST GROUSE

Tables 12 and 13 summarize the numbers of blue and ruffed grouse observed on big game samples. Over twice as many blue grouse were observed in western Oregon compared with last year, but only one-third as many in eastern Oregon. This decline was most pronounced in Wallowa County. Similar numbers of ruffed grouse were counted both years. Substantially more birds were heard on the spring hooting and drumming counts as shown in Table 14.

The production survey indicated one-third more blue grouse than in 1966. Some decline was apparent in Douglas and Union Counties and in the north end of the Cascades, while increases were fairly uniform elsewhere. Individual broods averaged 7 percent more chicks and the ratio of chicks per adult increased 14 percent. Improved production was most apparent in Wallowa County. Table 15 summarizes the production information.

Although few ruffed grouse were observed on the production survey, the limited data in Table 16 indicates an 11 percent reduction in average brood size and a 14 percent decline in the ratio of chicks per adult compared with last year.

All but 6 percent of the broods observed were at least one month old by August 1.

SAGE GROUSE

Sage grouse males counted on 21 strutting grounds last spring declined 10 percent from 1966 and 4 percent from the average for the past eight years. A comparison of counts is presented in Table 17.

Table 18 summarizes the production data. Only one-third as many birds were counted on the 716 miles of sample compared with 1966. Brood size increased 9 percent while the ratio of chicks per adult improved 50 percent. Despite the increase, the ratio of 1.2 chicks per adult remained low and indicates poor production.

TURKEYS

No information is available on turkey population trends. Field observations on the east slopes of Mt. Hood reveal widespread distribution throughout the mixed conifer and hardwood habitat. More broods have been observed this year in the White River Management Area, indicating good production.

Sporadic reports of turkeys continue to be received from the vicinity of release sites elsewhere in eastern Oregon, but no

substantial buildup in numbers is apparent.

Mild weather conditions last winter assured an ample supply of natural foods and no trapping was attempted.

SILVER GRAY SQUIRRELS

Squirrel numbers remained high in Jackson and Josephine Counties, the only areas where information is gathered. Girdling of pine trees and damage to fir cone production were reported, indicating peak populations. The following tables compare squirrel numbers observed throughout the year during routine field work and also the animals counted on big game samples.

RANDOM GRAY SQUIRREL TALLY Jackson and Josephine Counties

Year	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958
No. Seen	73	70	84	36	35	36	36	68	69	67

GRAY SQUIRREL TRENDS ON BIG GAME SAMPLES Jackson and Josephine Counties

Miles Traveled	Squirrels Seen	Squirrels per Mile					
		1967	1966	1965	1964	1963	1962
111	23	.21	.18	.27	.05	.03	.03



MOURNING DOVES

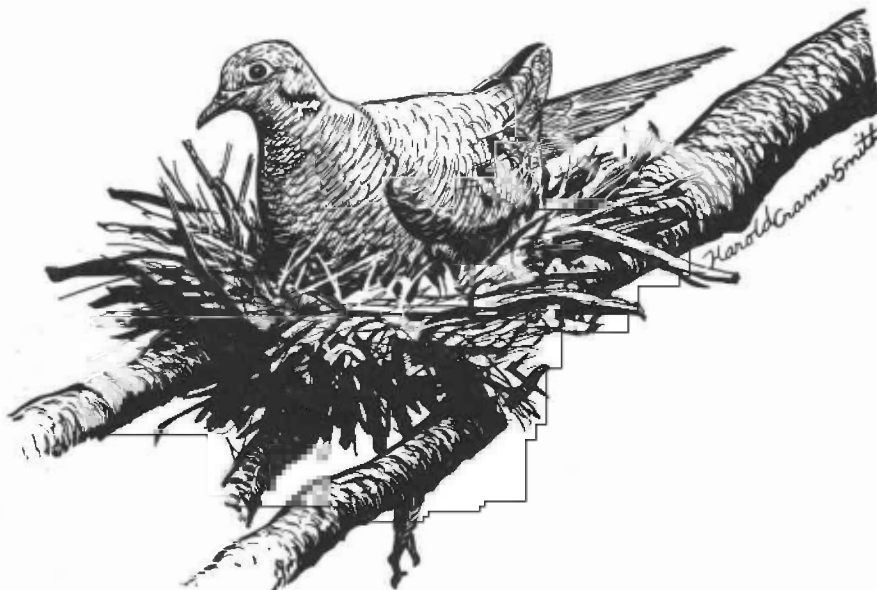
Roadside counts during mid-August are summarized in Table 19.

More doves wintered in western Oregon, according to results of the quadrat survey. The 1967 average of 22.4 doves per 100 acres of habitat in the Willamette Valley almost equaled the high year of 1965. Wintering populations in the Rogue River Valley increased 38 percent over 1966. Comparisons are presented in Table 20.

The annual call count survey was conducted between May 20 and June 10. Results are shown in Table 21. Similar numbers of doves were seen and heard the past two years on the 18 routes sampled.

BAND-TAILED PIGEONS

The preseason inventory at mineral springs and tideflat concentration areas is presented in Table 22.



HUNTING SEASONS

The following table displays 1966 season dates and bag limits.

	Open Season (all dates inclusive)	Open Area	Daily Bag Limit	Possession Limit
UPLAND GAME:				
Mourning Dove	Sept. 1-30	Entire State	12	24
Band-tailed Pigeon	Sept. 1-30	Entire State	8	8
Silver Gray Squirrel	Oct. 1-Oct. 31	Hood River and Wasco Counties		
		*Southwest Area	5	5
	Entire Year	*Northwest Area	No Limit	No Limit
Blue and Ruffed Grouse	Oct. 1-23	Entire State	3	6
Sage Grouse	Sept. 24-25	Deschutes, Crook, Lake, Harney and that part of Malheur Co. south of U. S. Highway 20	2	2
Chukar and Hungarian Partridge	Oct. 1-Jan. 15	*Eastern Oregon	8	16
Cock Pheasants	8:00 a.m. Oct. 22-Nov. 27	Eastern Oregon except Klamath Co.	3 (a)	12 (a)
		Western Oregon and Klamath Co.	2	8
Valley and Mountain Quail	8:00 a.m. Oct. 22-Nov. 27	*Western Oregon		
	8:00 a.m. Oct. 22-Jan. 15	*Eastern Oregon	10	20

(a) One hen pheasant may be included in the daily bag or possession limit in Malheur County from November 19 through November 27.

Questionnaire sampling was conducted following the season. Of the 16,741 questionnaires mailed, 14,687 (88 percent) were returned. Upland game species were hunted by 26 percent of the respondents. Projections of the results indicated that 90,194 hunters bagged 871,512 birds and spent 666,824 days afield. Table 23 summarizes 1966 seasons while Table 24 compares results with past years.

Tables 25 through 33 present the kill by species. Estimates of available habitat by geographic area are provided to arrive at indices of kill per square mile for comparative purposes.

Hunting by juveniles on the E. E. Wilson Game Management Area resulted in the kill of 104 pheasants and 9 quail by 384 participants. The average of 0.3 birds per hunter equals the low success experienced in 1965. A comparison with past years is presented in Table 34.

Results of Oregon's second turkey season are summarized in Table 35. A total of 954 tags was issued for the fall season which authorized taking one turkey. Of the total tag holders, 291 were permitted to hunt for toms only during the spring if unsuccessful during the fall. The average success of 4 percent was low compared with the 16 percent success experienced in 1965 when 290 hunters participated.

Trends in land posting are recorded in Table 36. There has been little change from past years in land access, and less than one-third of the ownerships along 765 miles sampled were posted against hunting during the 1966 season.

GAME FARM OPERATIONS

Game bird production during the 1966 season is summarized in Table 37.

All pheasant hatches except the first were sexed, and cocks only were retained for rearing. The sexing technique proved to be 92 percent accurate. Hatching success averaged 80 percent compared with 70 percent in 1965. Approximately 94 percent of the birds hatched were reared.

The limited chukar production was utilized for release during the hunting season on the Ladd Marsh Management Area. Hatching and rearing success were high, averaging 87 and 97 percent, respectively.

Hatching success for Hungarian partridge improved from 37 percent in 1965 to 63 percent in 1966.

Bamboo partridge egg production improved substantially over 1965 but hatching success remained a low 31 percent. More of the birds were raised, however, with rearing success averaging 55 percent compared with 43 percent in 1965.

Low egg fertility and cannibalism continue to hamper the Kalij pheasant program. Only 27 percent of the eggs hatched but 79 percent of the birds were raised, resulting in some increase available for breeding stock.

Pheasant liberations are recorded in Table 38. The 1966 releases totaled 13,128 in western Oregon and 10,412 in eastern Oregon. Of these totals, 3,157 were liberated as adults in the spring, 8,142 as young during the summer, and 12,241 as adult cocks during the hunting season. Holding pens were operated on the Denman, Klamath, Summer Lake, and Ladd Marsh Management Areas to rear a total of 2,500 cocks from eight weeks of age until released during the season.

Miscellaneous releases included: 505 chukars on the Ladd Marsh Management Area, 70 in Lake County, and 58 in Wasco County; 68 Hungarian partridge in Klamath County, and 24 in Crook County; 198 bamboo partridge in Coos County; and 9 Kalij pheasants in Benton County.

Table 1

UPLAND GAME POPULATION TRENDS

REGION	HABITAT AREA	PHEASANTS					VALLEY QUAIL PER 100 ACRES					HUNGARIAN PARTRIDGE PER 100 ACRES				
		PER 100 ACRES		COCKS PER 100 HENS		1967	PER 100 ACRES		PER 100 ACRES		1967	PER 100 ACRES		PER 100 ACRES		1967
		1967	1966	1965	1964	1967	1967	1966	1965	1964	1967	1966	1965	1964	1967	1965
NORTHWEST	NO. WILLANETTE	9.6	11.5	22.8	19.6	53	5.1	7.0	7.1	11.3	-	-	-	-	-	-
	SO. WILLANETTE	12.9	8.5	30.0	36.8	62	5.1	2.8	3.4	2.5	-	-	-	-	-	-
SOUTHWEST	ROGUE-UMPUQUA	11.1	11.3	14.7	17.3	55	24.0	23.4	28.2	16.9	-	-	-	-	-	-
WESTERN OREGON		11.2	10.3	23.1	25.3	57	10.7	9.7	11.5	9.7	-	-	-	-	-	-
CENTRAL	COLUMBIA	22.1	17.8	21.8	35.4	25	17.1	27.0	16.1	41.0	-	0.4	0.1	0.4	-	-
	UPPER DESCHUTES	7.5	9.1	9.7	4.8	26	16.2	14.3	13.0	6.5	0.1	0.1	0.1	-	-	-
NORTHEAST	BLUE MTN. VALLEY	5.2	15.6	16.6	18.6	49	4.4	7.8	11.1	20.0	0.5	0.2	1.0	0.2	-	-
	UMATILLA-MORROW	38.2	52.0	49.6	54.8	19	31.5	51.2	30.9	38.5	0.5	0.2	1.5	1.4	-	-
SOUTHEAST	GREAT BASIN	10.7	9.7	8.7	14.8	26	6.2	19.3	16.4	23.9	-	-	-	-	-	-
	MAHEUR	71.0	69.1	69.8	76.0	15	25.9	22.5	42.7	44.4	0.3	-	0.5	1.2	-	-
EASTERN OREGON		23.8	27.9	27.3	33.2	21	16.5	23.0	19.0	28.6	0.3	0.2	0.6	0.6	-	-
STATE TOTALS		19.5	22.3	25.9	30.7	28	14.5	18.7	16.6	22.6	0.3	0.2	0.6	0.6	-	-

Table 2

SUMMARY 1967 UPLAND GAME SPRING POPULATION INVENTORY

Region	District	Samples		PHEASANTS			VALLEY QUAIL		BOBWHITE QUAIL		HUNGARIAN PARTRIDGE		CHUKAR PARTRIDGE	
		No.	Acres	Cocks	Hens	Uncl.	Total	Per 100 Acres	No.	Acres	Per 100 Acres	No.	Acres	Per 100 Acres
Northwest	NW Willamette	9	534	14	24	12	50	9.4	23	4.3				
	No. Willamette	21	1,206	33	65	21	119	9.9	66	5.5				
	Mid-Willamette	17	1,116	53	98	13	164	14.7	87	7.8				
	Lane	9	576	25	28	2	55	9.5						
	Douglas	14	840	31	40		71	8.5	241	28.7				
Southwest	Southwest	10	600	25	63	1	89	14.8	105	17.5				
WESTERN OREGON		80	4,872	181	318	49	548	11.2	522	10.7				
Central	Columbia	13	1,522	60	246	30	336	22.1	260	17.1				
	Ochoco	12	952	18	76		94	9.9	200	21.0	2	0.2		
	Deschutes	7	420	3	6		9	2.1	22	5.2				
Northeast	Heppner	12	995	21	81	24	126	12.7	254	25.5	6	0.6	8	0.8
	Umatilla	13	780	64	356	132	552	70.8	305	39.1	2	0.3	2	0.3
	Wallowa	8	600	7	6		13	2.2						
	Northeast	25	1,740	31	74		105	6.0	28	1.6	13	0.7		
Southeast	Grant	5	335	8	13		21	6.3	89	26.6				
	Lake	5	375	7	50	1	58	15.5						
	Harney	4	222	6			6	2.7	37	16.7				
	Malheur	20	1,212	81	534	245	860	71.0	314	25.9	4	0.3		
EASTERN OREGON		124	9,153	306	1,442	432	2,180	23.8	1,509	16.5	27	0.3	10	0.1
STATE TOTALS		204	14,025	487	1,760	481	2,728	19.5	2,031	14.5	27	0.3	10	0.2

Table 3

E. E. WILSON UPLAND GAME POPULATION TRENDS

Year	Pheasants		Valley Quail	Bobwhite Quail
	Per 100 Acres	Cock-Hen Ratio	Per 100 Acres	Per 100 Acres
1953	173.7	133:100	19.5	48.5
1954	142.0	70:100	7.7	34.0
1955	169.0	80:100	21.2	22.0
1956	70.3	40:100	-	-
1957	70.0	71:100	5.0	3.7
1958	129.0	90:100	3.2	3.5
1959	148.5	99:100	8.2	4.7
1960	98.9	91:100	5.3	0.0
1961	148.9	57:100	22.8	2.1
1962	103.0	74:100	4.3	0.0
1963	136.7	43:100	6.9	0.0
1964	69.7	44:100	0.0	0.0
1965	73.4	34:100	13.8	0.0
1966	47.8	59:100	0.0	0.0
1967	43.1	29:100	0.0	0.0

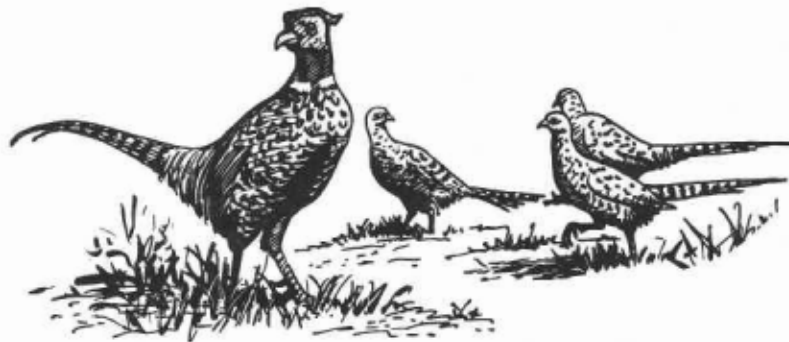


Table 4
PHEASANT CROWING COUNTS

Habitat Area	County	No. of Samples	Av. Calls Heard per Stop			
			1967	1966	1965	1964
NO. WILLAMETTE	Clackamas	2	11.8	11.1	-	-
	Marion	2	6.3	8.2	16.3	13.1
	Polk	2	17.6	10.8	8.4	12.9
	Yamhill	2	15.4	16.6	15.3	20.9
SO. WILLAMETTE	Benton	1	14.2	7.2	15.4	17.4
	Lane	1	13.2	14.1	13.5	12.5
	Linn	2	6.3	5.5	11.6	10.9
ROGUE-UMPQUA	Douglas	8	3.4	3.1	3.2	2.9
	Jackson	2	15.6	18.1	16.4	19.1
	Josephine	1	5.2	3.8	3.6	5.2
WESTERN OREGON		23	8.9	8.1	8.6	8.2
COLUMBIA	Hood River	1	2.7	2.4	2.7	3.0
	Jefferson	1	1.6	2.6	2.4	1.7
	Sherman	1	3.2	2.0	2.4	3.9
	Wasco	2	4.1	2.8	3.7	5.7
UPPER DESCHUTES	Crook	1	2.0	3.5	3.5	5.7
	Deschutes	1	0.4	1.2	1.2	1.4
KLAMATH	Klamath	1	1.0	2.1	3.4	5.9
BLUE MTN. VALLEY	Baker	5	5.0	9.5	12.7	9.6
	Grant	1	7.0	6.1	10.6	12.3
	Union	4	11.1	18.3	16.6	14.3
	Wallowa	3	2.9	3.2	2.1	2.6
UMATILLA-MORROW	Morrow	1	3.3	3.1	3.7	3.4
	Umatilla	1	11.0	6.5	10.5	10.9
GREAT BASIN	Harney	1	0.4	0.8	0.5	0.5
	Lake	3	2.0	2.0	1.8	3.2
MALHEUR	Malheur	3	6.5	5.3	7.6	10.3
EASTERN OREGON		30	4.8	6.1	7.0	6.7
STATE AVERAGES		53	6.6	6.9	7.6	7.4

Table 5
1967 PHEASANT PRODUCTION INVENTORY

District	Miles Traveled	Total Birds Observed	Birds per Mile		Hens		Chicks per Brood	Chicks per Hen	
			1967	1966	Number Observed	% With Broods		1967	1966
NW Willamette	62	113	1.8	1.9	13	92	6.9	6.3	6.7
N. Willamette	331	399	1.2	1.3	42	95	6.6	6.3	5.6
Mid-Willamette	225	267	1.2	0.9	24	92	8.0	7.4	5.3
Lane	180	37	0.2	1.6	3	67	8.5	5.7	5.3
NORTHWEST	798	816	1.0	1.3	82	93	7.1	6.6	5.5
Umpqua	200	71	0.4	0.7	10	80	6.8	5.4	5.6
Rogue	195	411	2.1	1.8	48	75	5.5	4.1	3.1
SOUTHWEST	395	482	1.2	1.2	58	76	5.8	4.4	3.8
WESTERN OREGON	1,193	1,298	1.1	1.3	140	86	6.5	5.6	4.8
Columbia	235	381	1.6	1.0	45	89	6.0	5.3	5.1
Ochoco	146	88	0.6	0.9	21	86	4.4	3.8	4.1
Klamath	120	1	-	0.1	-	-	-	-	6.5
CENTRAL	501	470	0.9	0.7	66	88	5.5	4.8	4.6
Umatilla	256	746	2.9	2.8	146	93	4.9	4.6	4.4
Morrow	113	72	0.6	0.5	11	91	6.1	5.6	4.0
Union	87	276	3.2	2.9	40	95	6.4	6.1	4.5
Baker	132	79	0.6	2.1	13	69	5.8	4.0	3.3
Grant	70	48	0.7	0.8	4	100	7.0	7.0	3.6
NORTHEAST	658	1,221	1.9	2.0	214	92	5.8	5.3	4.1
Lake	103	83	0.8	0.9	14	86	5.4	4.6	3.9
Malheur	166	528	3.2	2.9	93	83	6.5	5.4	6.2
SOUTHEAST	269	611	2.3	2.2	107	83	6.3	5.2	5.9
EASTERN OREGON	1,428	2,302	1.6	1.6	387	89	5.8	5.2	4.6
STATE TOTALS	2,621	3,600	1.4	1.5	527	88	6.1	5.4	4.7

Table 6
MALHEUR COUNTY PHEASANT DAMAGE

Year	Damage Complaints				Total
	Corn	Grain	Beets	Other	
1958	31		13		44
1959	45	8	14		67
1960	18	3	6		27
1961	10	3	2		15
1962	14	1	2		17
1963	24	11	9		44
1964	28	2	7	2	39
1965	23	8	2		33
1966	34	6	5	2	47
1967	20	6	5	2	33



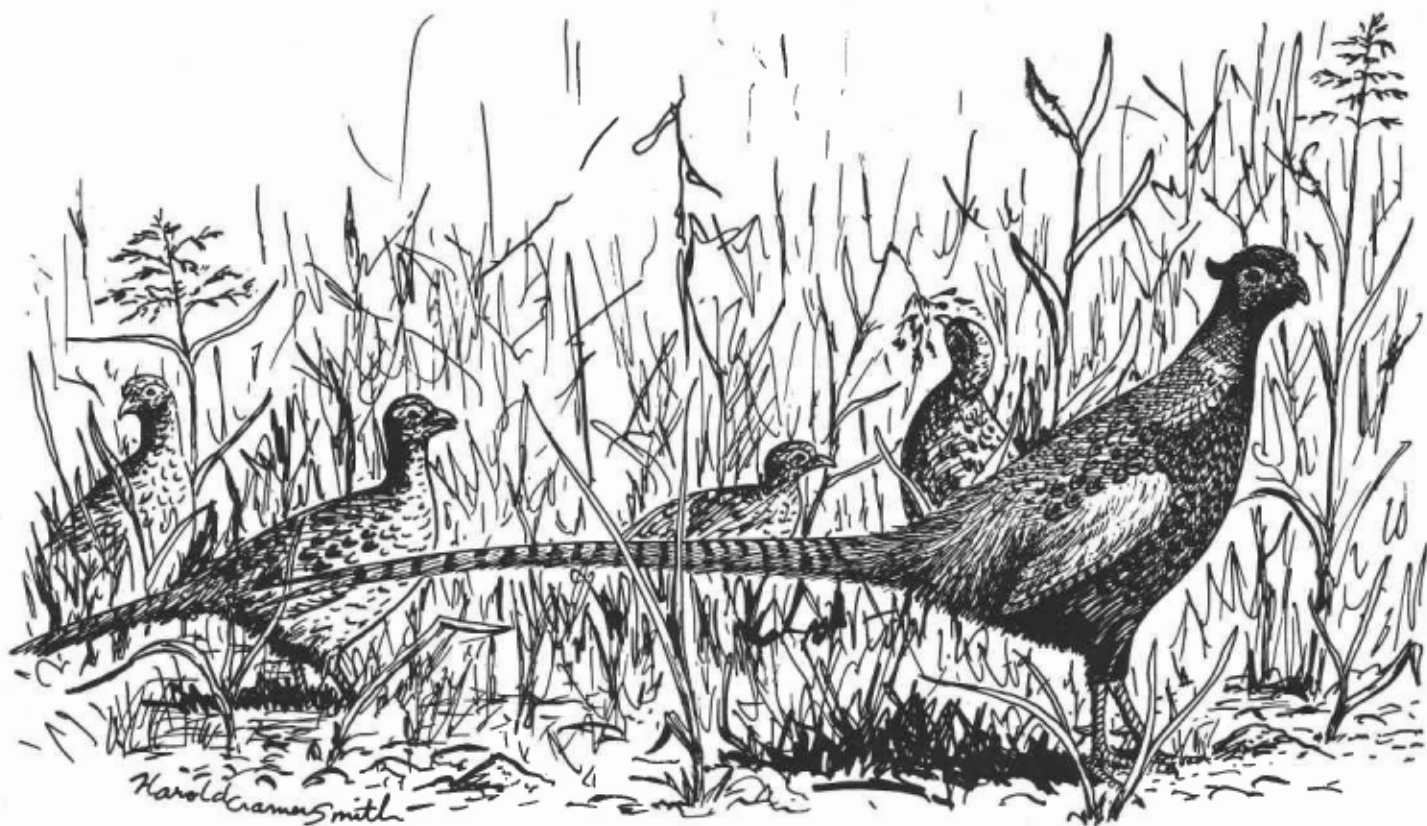


Table 7
1967 VALLEY QUAIL PRODUCTION INVENTORY

District	Miles Traveled	Total Birds Observed	Birds per Mile		Birds Classified		Chicks per Brood		Chicks per Adult	
			1967	1966	Adults	Chicks	1967	1966	1967	1966
NW Willamette	62	131	2.1	0.1	16	101	12.6	6.3	-	2.9
North Willamette	331	467	1.4	0.6	144	303	11.3	2.1	4.0	6.5
Mid-Willamette	225	560	2.5	1.3	67	329	12.9	4.9	4.0	0.7
Lane	180	114	0.6	0.3	38	60	7.5	1.6	2.1	0.5
NORTHWEST	798	1,272	1.6	0.7	265	793	11.8	3.0	3.1	1.5
Umpqua	200	301	1.5	0.9	50	245	11.1	4.9	6.2	7.3
Rogue	195	130	0.7	1.0	42	57	8.1	1.4	1.5	0.5
SOUTHWEST	395	431	1.1	1.0	92	302	10.3	3.3	2.9	3.2
WESTERN OREGON	1,193	1,703	1.4	0.8	357	1,095	11.3	3.1	3.0	2.3
Columbia	364	737	2.0	1.4	123	486	12.1	4.0	3.1	3.3
Ochoco	209	690	3.3	2.9	109	542	9.4	5.0	5.2	3.4
Deschutes	133	173	1.3	1.8	42	131	10.9	3.1	3.3	2.8
Klamath	120	20	0.2	0.6	5	15	15.0	3.0	2.4	-
CENTRAL	826	1,620	2.0	1.7	279	1,174	10.8	4.2	3.8	3.2

Table 7
1967 VALLEY QUAIL PRODUCTION INVENTORY
(continued)

District	Miles Traveled	Total Birds Observed	Birds per Mile		Birds Classified		Chicks per Brood	Chicks per Adult	
			1967	1966	Adults	Chicks		1967	1966
Umatilla	256	323	1.3	0.8	73	241	7.6	3.3	3.7
Morrow	131	230	1.8	1.5	46	170	7.7	3.7	1.7
Wallowa	393	211	0.5	0.4	22	137	12.1	6.2	3.3
Union	87	48	0.6	0.6	6	34	11.3	5.7	7.4
Baker	232	30	0.1	1.1	9	21	10.5	2.3	2.4
Grant	209	607	2.9	1.6	138	422	9.6	3.1	3.6
NORTHEAST	1,308	1,449	1.1	0.9	294	1,025	9.3	3.5	3.4
Lake	97	264	2.7	5.8	56	208	12.2	3.7	4.7
Harney	375	109	0.3	0.1	14	95	13.6	6.8	6.4
Malheur	267	914	3.4	2.6	144	770	13.6	5.3	4.8
SOUTHEAST	739	1,287	1.7	1.8	214	1,073	13.2	5.0	4.8
EASTERN OREGON	2,873	4,356	1.5	1.3	787	3,272	10.9	4.2	4.0
STATE TOTALS	4,066	6,059	1.5	1.2	1,144	4,367	11.0	3.8	3.8

Table 8
1967 MOUNTAIN QUAIL PRODUCTION INVENTORY

District	Miles Traveled	Total Birds Observed	Birds per Mile		Birds Classified		Chicks per Brood	Chicks per Adult	
			1967	1966	Adults	Chicks		1967	1966
			1965	1965	Total	Total	1965	1965	1965
N. Coast	659	206	0.3	0.2	37	169	206	9.9	4.6
NW Will.	51	25	0.5	0.4	5	17	22	5.7	3.4
N. Will.	368	72	0.2	-	11	61	72	-	5.0
Mid-Will.	124	22	0.2	0.1	5	18	23	6.0	4.0
Lane	57	16	0.3	0.0	3	9	12	9.0	3.0
S. Coast	69	62	0.9	0.5	8	36	44	12.0	4.5
Umpqua	100	83	0.8	0.9	12	71	83	10.1	5.9
Rogue	114	64	0.6	0.1	12	46	58	9.2	3.8
WESTERN	1,542	550	0.4	0.2	93	427	520	9.4	4.6
Columbia	129	0	0.0	0.2	-	-	-	-	5.0
Ochoco	63	26	0.4	0.4	3	23	26	11.5	7.7
Klamath	23	27	1.2	1.8	7	20	27	6.7	2.9
Wallowa	393	53	0.1	0.1	2	14	16	14.0	7.0
Grant	10	24	2.4	-	4	20	25	10.0	5.0
EASTERN	618	130	0.2	0.2	16	77	94	9.6	4.8
STATE TOTALS	2,160	680	0.3	0.2	109	504	613	9.4	4.6
								3.9	4.1

Table 9

CHUKAR AND HUNGARIAN PARTRIDGE OBSERVED ON BIG GAME SAMPLES

District	Miles Traveled	CHUKAR PARTRIDGE				HUNGARIAN PARTRIDGE			
		No.	Birds per Mile			No.	Birds per Mile		
			1967	1966	1965	1964	1967	1966	1965
Morrow	159	41	.26	.37	.21	.27	20	.13	.26
Umatilla	180	5	.03	.09	.15	.35	54	.30	.06
Wallowa	279	70	.25	.62	.83	.89	19	.07	.10
Blue Mtn.	360	166	.46	.77	.62	.64	10	.03	.26
Grant	112	2	.02	.04	.13	.18	2	.02	.00
Harney	207	6	.03	.06	.48	7.01	0	.00	.00
Malheur	339	3	.09	.84	1.28	2.30	0	.00	.00
TOTALS	1,636	293	.18	.41	.55	1.47	105	.06	.11
								.12	.13

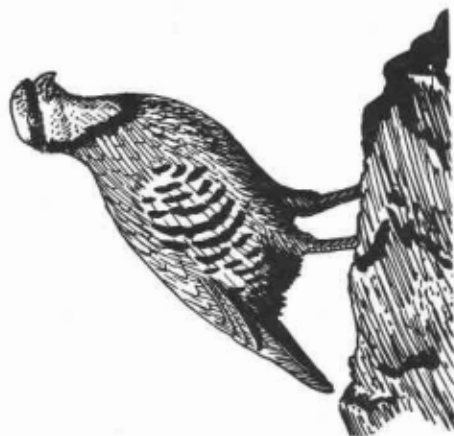


Table 10
1967 CHUKAR PARTRIDGE PRODUCTION INVENTORY

District	Miles Traveled	Total Birds Observed	Birds per Mile		Birds Classified		Chicks per Brood		Chicks per Adult	
			1967	1966	Adults	Chicks	Total	Brood	1967	1966
Columbia	129	484	3.8	2.9	89	317	406	9.6	3.6	2.9
Ochoco	63	241	3.8	2.0	58	172	230	6.3	3.0	2.0
CENTRAL	192	725	3.8	2.6	147	489	636	8.6	3.3	2.6
Umatilla	182	370	2.0	1.1	48	322	370	-	6.7	3.4
Morrow	131	266	2.0	1.2	45	220	265	10.3	4.9	1.9
Wallowa	193	475	2.5	1.1	49	311	360	11.0	6.3	4.7
Baker	100	370	3.7	8.7	64	157	221	11.2	2.5	3.9
Grant	195	291	1.5	1.1	38	238	276	14.0	6.3	3.9
NORTHEAST	801	1,772	2.2	1.7	244	1,248	1,492	11.6	5.1	3.7
Lake	264	0	0.0	0.0	0	0	0	-	-	1.7
Harney	375	137	0.4	0.4	15	122	137	15.3	8.1	1.5
Malheur	101	754	7.5	17.9	119	635	754	12.7	5.3	4.1
SOUTHEAST	740	891	1.2	3.2	134	757	891	13.2	5.6	3.8
STATE TOTALS	1,733	3,388	2.0	2.3	525	2,494	3,019	11.2	4.8	3.6

Table 11
1967 HUNGARIAN PARTRIDGE PRODUCTION INVENTORY

District	Miles Traveled	Total Birds Observed	Birds per Mile		Birds Classified		Chicks per Brood	Chicks per Adult	
			1967	1966	Adults	Chicks		1967	1966
			1965	1965	Total	Total	1965	1965	1965
Columbia	364	6	-	-	-	-	-	1.0	4.8
Ochoco	167	28	0.2	-	4	24	8.0	6.0	5.5
Umatilla	256	16	-	0.2	5	11	8.0	2.2	3.9
Morrow	113	30	0.3	0.4	4	26	13.0	6.5	3.4
Wallowa	193	29	0.2	-	3	25	12.5	8.3	4.7
Union	87	96	1.1	1.1	10	65	13.0	6.5	5.8
Baker	232	35	0.2	0.7	4	31	15.5	7.8	4.2
Grant	209	8	-	0.1	2	6	6.0	3.0	4.5
Malheur	267	53	0.2	0.1	4	49	16.3	12.3	7.2
STATE TOTALS	1,888	301	0.2	0.2	0.1	36	237	12.3	6.6
								4.3	4.1

Table 12

GROUSE AND MOUNTAIN QUAIL TRENDS IN EASTERN OREGON

District	Miles Traveled	BLUE GROUSE		RUFFED GROUSE		MOUNTAIN QUAIL	
		No. 1967	Birds per Mile 1966 1965	No. 1967	Birds per Mile 1966 1965	No. 1967	Birds per Mile 1966 1965
Lower Deschutes	65	0	.00 .02 .02	2	.03 .00 .00	2	.03 .09 .00
Klamath	139	0	.00 .00 .00	0	.00 .00 .00	64	.46 .49 1.62
CENTRAL	204	0	.00 .01 .01	2	.01 .00 .00	66	.32 .25 .74
Morrow	159	0	.00 .01 .02	0	.00 .00 .00	0	.00 .00 .00
Umatilla	180	9	.05 .17 .31	9	.05 .03 .03	0	.00 .00 .00
Wallowa	272	21	.08 .46 .29	5	.02 .03 .03	0	.00 .00 .00
Blue Mountain	360	39	.11 .12 .08	0	.00 .01 .01	0	.00 .00 .00
Grant	21	1	.05 .00 .05	0	.00 .00 .00	0	.00 .00 .00
NORTHEAST	992	70	.71 .20 .18	14	.01 .02 .02	0	.00 .00 .00
TOTALS AND AVERAGES	1,196	70	.06 .19 .17	16	.01 .02 .02	66	.06 .02 .06

Table 13

GROUSE AND MOUNTAIN QUAIL TRENDS IN WESTERN OREGON

District	Miles Traveled	BLUE GROUSE		RUFFED GROUSE		MOUNTAIN QUAIL	
		No.	Birds per Mile 1967 1966 1965	No.	Birds per Mile 1967 1966 1965	No.	Birds per Mile 1967 1966 1965
No. Coast	124	35	.28 .15 .13	17	.14 .14 .10	23	.19 .06 .17
NW Willamette	10	0	.00 .09 .00	1	.10 .09 .05	4	.40 .00 .32
No. Willamette	19	0	.00 .13 .27	0	.00 .00 .09	2	.11 .00 .00
Mid-Willamette	60	10	.17 .05 .07	3	.05 .08 .01	22	.37 .43 .23
Lane	30	27	.90 .18 .43	8	.27 .09 .00	21	.70 .36 .95
NORTHWEST	243	72	.30 .12 .14	29	.12 .10 .06	72	.30 .18 .25
So. Coast	53	10	.19 .04 .36	0	.00 .00 .03	19	.36 .23 .30
Rogue	111	3	.03 .01 .05	0	.00 .00 .00	27	.24 .39 .35
SOUTHWEST	164	13	.08 .02 .21	0	.00 .00 .01	46	.28 .32 .33
TOTALS AND AVERAGES	407	85	.21 .08 .17	29	.07 .06 .04	118	.29 .24 .28

Table 14
GROUSE HOOTING AND DRUMMING COUNTS

District	Miles Traveled	BLUE GROUSE				RUFFED GROUSE			
		Total Heard	Average Heard per Mile			Total Heard	Average Heard per Mile		
			1967	1966	1965	1967	1966	1965	1964
No. Coast	40	32	.80	.55	.45	.83	.48	.40	.33
N. W. Willamette	36	9	.25	.73	.94	-	.33	.11	.21
No. Willamette	42	11	.26	.28	.73	1.00	.00	.00	.00
Mid-Willamette	80	11	.14	.05	.02	-	.05	.02	.02
Umpqua	80	83	1.04	.00	1.30	.10	.00	.00	.00
TOTALS	278	146	.53	.23	.48	.44	.13	.08	.09



Table 15
1967 BLUE GROUSE PRODUCTION INVENTORY

District	Miles Traveled	Total Birds Observed	Birds per Mile		Birds Classified		Chicks per Brood	Chicks per Adult				
			1967	1966	1965	Adults		Chicks	Total	1967	1966	1965
N. Coast	659	163	0.2	0.2	0.1	48	115	163	5.2	2.4	2.4	1.9
NW Will.	51	11	0.2	0.3	0.1	3	7	10	2.3	2.3	3.0	1.2
N. Will.	368	49	0.1	-	-	12	33	45	5.8	2.8	5.0	5.0
Mid-Will.	124	59	0.5	-	-	17	35	52	3.9	2.1	0.5	0.4
Lane	57	40	0.7	0.5	0.0	14	26	40	5.2	1.9	1.8	-
S. Coast	69	15	0.2	0.1	0.7	5	10	15	3.3	2.0	3.5	5.0
Umpqua	100	41	0.4	1.0	0.4	8	33	41	6.6	4.1	7.9	3.5
WESTERN	1,428	378	0.3	0.2	0.1	107	259	366	4.9	2.4	2.7	2.1
Umatilla	17	25	1.5	1.0	-	8	17	25	-	2.1	1.0	-
Union	55	15	0.3	0.5	0.1	-	-	-	-	-	1.6	-
Wallowa	319	92	0.3	0.2	0.1	21	60	81	3.9	2.9	1.9	1.9
Grant	50	8	0.2	-	-	-	-	-	-	-	-	-
EASTERN	441	140	0.3	0.2	0.1	29	77	106	3.9	2.7	1.7	1.7
STATE TOTALS	1,869	518	0.3	0.2	0.1	136	336	472	4.7	2.5	2.2	1.9

Table 16
1967 RUFFED GROUSE PRODUCTION INVENTORY

District	Miles Traveled	Total Birds Observed	Birds per Mile		Birds Classified		Chicks per Brood		Chicks per Adult	
			1967	1966	Adults	Chicks	Total	1967	1966	1965
N. Coast	659	117	0.2	0.2	0.1	31	86	117	4.8	2.8
N.W. Will.	51	0	0.0	-	0.0	-	-	-	4.2	3.8
N. Will.	368	2	-	-	0.0	-	-	-	-	-
Mid-Will.	124	0	0.0	0.0	0.0	-	-	-	-	-
Lane	57	7	0.1	0.0	0.0	1	6	7	6.0	-
S. Coast	69	0	-	-	-	-	-	-	-	-
Umpqua	100	0	-	0.4	-	-	-	-	5.0	3.0
WESTERN	1,428	126	-	-	-	32	92	124	4.8	2.9
Union	55	0	0.0	-	0.1	-	-	-	-	-
Wallowa	319	16	-	0.1	-	4	12	16	4.0	3.0
Grant	20	7	0.4	-	-	1	6	7	6.0	6.0
EASTERN	394	23	-	0.1	-	5	18	23	4.5	3.6
STATE TOTALS	1,822	149	-	-	-	37	110	147	4.8	3.0

Table 17
SAGE GROUSE STRUTTING GROUND COUNTS

County	Number of Areas	Male Grouse Counted									
		1967	1966	1965	1964	1963	1962	1961	1960		
Deschutes	7	180	237	222	170	94	87	115	135		
Harney	9	124	159	142	156	115	109	140	241		
Lake	5	91	49	55	119	150	128	123	172		
TOTALS	21	395	437	419	445	359	324	378	548		



Table 18
1967 SAGE GROUSE PRODUCTION INVENTORY

District	Miles Traveled	Total Birds Observed	Birds per Mile		Birds Classified		Chicks per Brood	Chicks per Adult				
			1967	1966	Adults	Chicks		1967	1966			
Crook	15	81	5.4	5.9	0.4	28	53	81	4.4	1.9	0.6	2.4
Deschutes	50	37	0.7	0.3	0.4	17	20	37	3.3	1.2	1.2	1.0
Lake	153	66	0.4	1.1	0.9	37	29	66	4.5	0.8	0.7	1.2
Harney	375	102	0.3	0.6	0.3	66	36	102	3.3	0.5	0.3	0.3
Malheur	123	289	2.3	8.2	0.1	58	110	168	5.1	1.9	1.1	-
STATE TOTALS	716	575	0.8	2.0	0.5	206	248	454	3.6	1.2	0.8	0.9



Table 19
AUGUST MOURNING DOVE ROADSIDE COUNT TRENDS

Habitat Area	Miles Traveled	Doves Seen	Doves per Mile			
			1967	1966	1965	1964
North Willamette	393	625	1.6	1.9	1.0	3.0
South Willamette	270	549	2.0	2.2	2.0	2.8
Rogue	195	1,072	5.5	3.8	2.6	3.5
Lower Deschutes	364	619	1.7	2.4	2.4	6.6
Upper Deschutes	160	753	4.7	7.6	10.2	9.0
Klamath	120	17	0.1	0.7	0.6	1.0
Columbia Basin	113	271	2.4	3.0	3.1	2.8
Blue Mtn. Valley	112	139	1.2	0.8	0.9	2.0
Great Basin	225	449	2.0	3.7	3.0	1.0
TOTALS	1,952	4,494	2.3	2.7	2.8	3.2

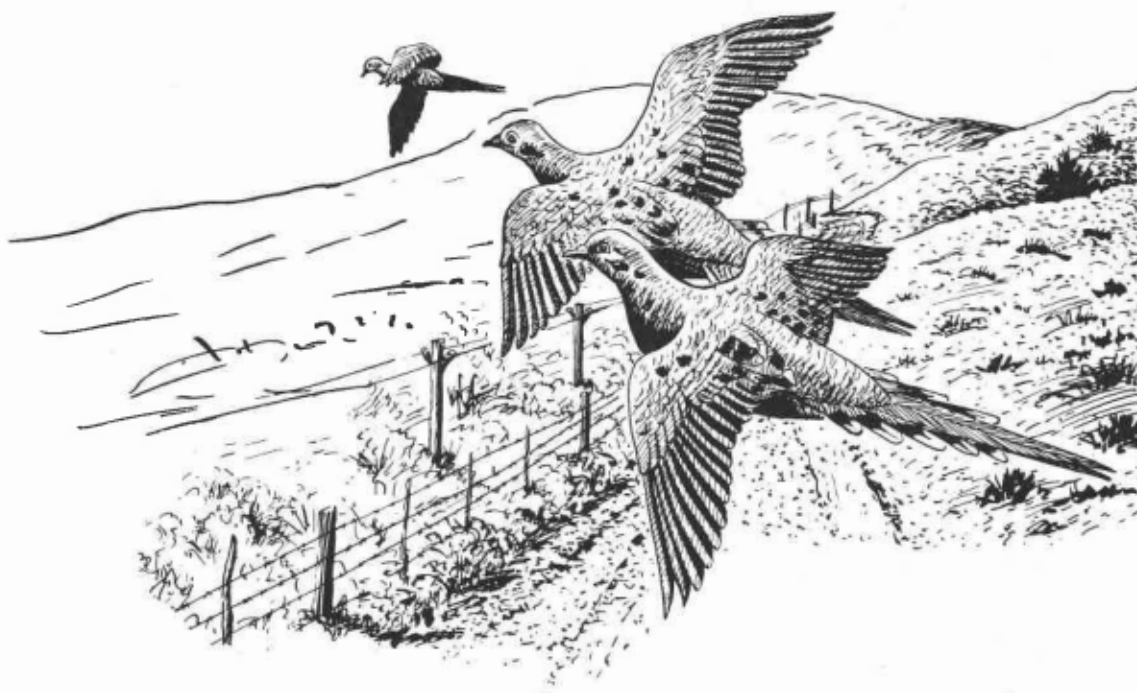


Table 20
MOURNING DOVE SPRING QUADRAT COUNT TRENDS

Region	Doves per 100 Acres							
	1967	1966	1965	1964	1963	1962	1961	1960
Willamette Valley	22.4	3.8	23.3	12.5	5.0	10.5	8.0	3.5
Rogue Riv. Valley	27.8	20.2	15.5	32.0	4.3	10.7	22.2	28.1

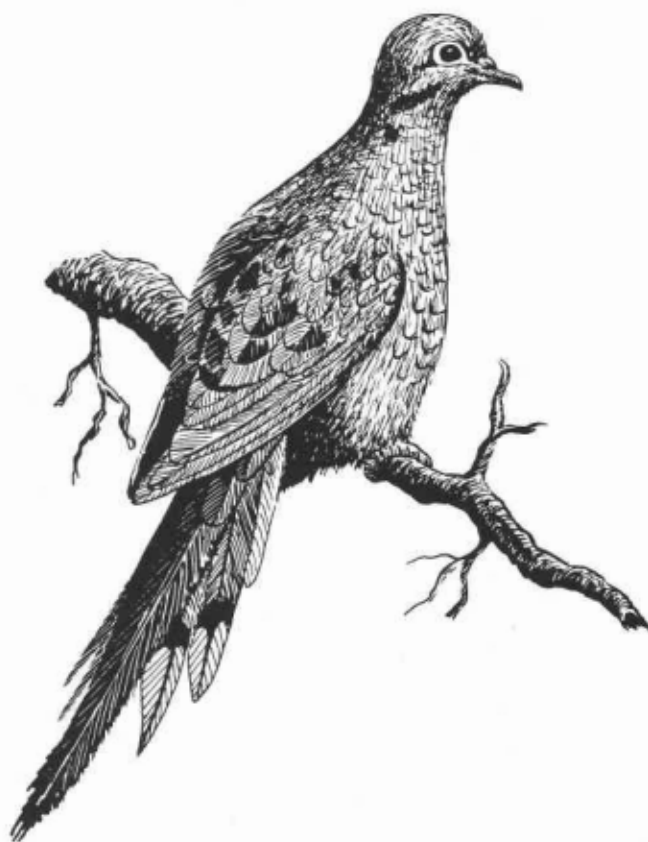


Table 21
MOURNING DOVE CALL COUNT TRENDS

Year	No. of Routes	Miles Traveled	Doves Heard Per Mile	Doves Seen Per Mile
1953	7	140	1.65	0.93
1954	14	280	1.40	1.06
1955	15	300	1.57	1.55
1956	17	340	1.46	1.69
1957	17	340	1.67	0.87
1958	17	340	1.47	1.39
1959	18	360	1.98	2.16
1960	18	360	1.87	1.47
1961	18	360	2.07	1.37
1962	18	360	1.76	1.16
1963	16	320	1.68	1.44
1964*	18	360	0.89	1.45
1965	20	400	0.61	0.46
1966	18	360	0.84	0.71
1967	18	360	0.84	0.69

*Randomized routes established in 1964.

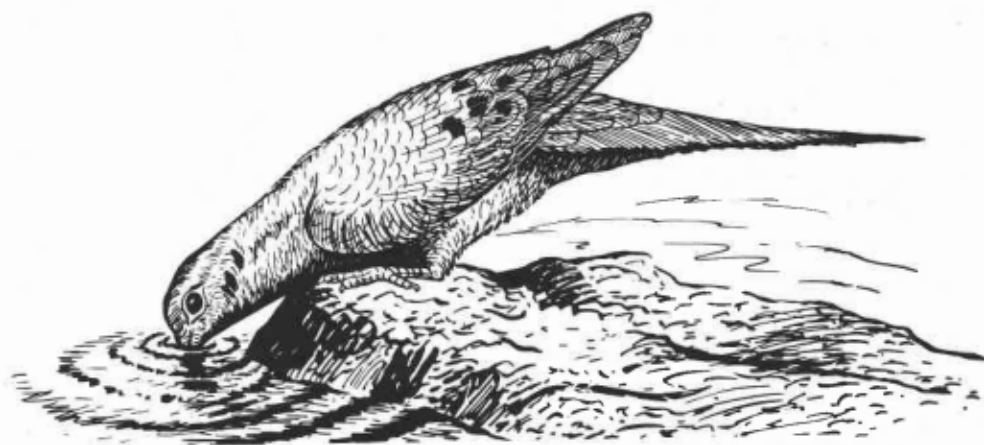


Table 22
BAND-TAILED PIGEON TRENDS

County	Area	Pigeons Counted			
		1967	1966	1965	1964
Benton	Pigeon Butte	44	150	502	369
	Long Tom	92	-	-	-
Columbia	Dutch Canyon	632	374	257	500
	St. Helens	485	-	-	-
Coos	Isthmus Slough	172	315	454	310
Douglas	Hudson Slough	870	-	949	566
	Canton Creek	368	285	507	-
Lane	Cushman	405	678	573	472
	Cheshire	131	-	-	-
Lincoln	Drift Creek	1,412	-	-	-
Linn	Crawfordsville	274	746	708	-
Marion	Aurora	106	179	376	305
Polk	Grande Ronde	104	113	300	-
Tillamook	Nehalem	752	712	617	576
Yamhill	Silver Springs	144	208	262	233
	Fairdale	105	102	-	-
TOTALS		6,096	3,862	5,581	3,410



Table 23
1966 UPLAND GAME SEASONS

Species	Hunters	Kill	Days Hunted	Birds per Hunter	Birds per Times Afield	Av. Times Afield
Pheasants	72,133	243,436	317,000	3.4	0.8	4.4
Quail	26,171	158,585	119,823	6.1	1.3	4.6
Chukar Partridge	16,554	115,151	60,195	7.0	1.9	3.6
Hungarian Partridge	5,122	15,907	22,201	3.1	0.7	4.3
Blue & Ruffed Grouse	7,725	16,836	19,952	2.2	0.8	2.6
Sage Grouse	2,234	3,731	3,931	1.7	0.9	1.8
Doves	16,370	196,797	69,578	12.0	2.8	4.3
Pigeons	12,415	121,069	54,144	9.8	2.2	4.4

Table 24

SUMMARY OF UPLAND GAME SEASONS

YEAR	PHEASANTS		QUAIL		CHUKAR PARTRIDGE		HUNGARIAN PARTRIDGE		FOREST GROUSE		SAGE GROUSE		MOURNING DOVES		BAND-TAILED PIGEONS	
	HUNTERS	KILL	HUNTERS	KILL	HUNTERS	KILL	HUNTERS	KILL	HUNTERS	KILL	HUNTERS	KILL	HUNTERS	KILL	HUNTERS	KILL
1951	83,920	237,037	12,777	75,373												
1952	82,145	244,791	21,903	107,105					24,400	40,504		18,788				
1953	90,441	274,940	28,340	147,651					22,812	36,043		11,406				
1954	94,699	292,527	29,950	149,352			24,858		19,120	32,886						
1955	92,741	278,223	25,545	149,740			12,006		19,536	31,923						
1956	83,206	226,320	25,472	115,643		3,820	12,226		21,636	36,780						
1957	88,691	310,096	21,930	124,431	5,321	10,319	5,321	11,609	18,813	38,916			13,169	117,875	14,621	93,853
1958	102,789	477,075	38,470	280,345	15,809	91,558	11,172	45,190	27,315	73,510	7,374	21,284	16,870	158,474	20,278	122,226
1959	97,474	375,641	32,588	224,123	11,373	36,326	6,016	16,818	15,332	32,770	7,127	17,304	17,557	194,189	13,143	86,019
1960	94,599	351,656	30,670	190,873	9,442	37,683	5,543	16,765	17,208	36,586			14,893	173,108	13,096	86,956
1961	91,117	375,755	35,088	242,040	15,033	75,268	5,205	15,581	17,819	45,180	2,725	6,659	18,340	202,082	15,003	121,032
1962	82,430	329,481	29,037	129,894	19,029	124,727	5,604	16,552	14,380	29,194	3,541	10,571	16,566	164,116	14,133	121,446
1963	84,024	374,243	31,460	265,491	28,299	295,243	8,885	36,535	13,944	34,553	1,913	4,117	16,542	184,030	11,997	90,505
1964	81,722	336,846	31,213	230,875	25,572	194,530	7,744	26,334	12,351	27,313	3,718	8,669	17,320	208,513	12,460	103,885
1965	75,373	254,575	26,383	168,274	19,653	130,132	6,021	17,288					16,205	163,064	12,597	105,173
1966	72,133	243,436	26,171	158,585	16,554	115,151	5,122	15,907	7,725	16,836	2,234	3,731	16,370	196,797	12,415	121,069

Table 25
1966 PHEASANT KILL

Habitat Area	Hunters	Kill	Days Hunted	Square Miles of Habitat	Birds Killed per Square Mile
North Willamette	23,321	57,501	101,251	1,525	37.7
South Willamette	10,921	21,520	48,185	909	23.7
NORTHWEST	34,242	79,021	149,436	2,434	32.5
Umpqua	1,276	2,288	5,168	331	6.9
Rogue	4,840	10,833	21,302	236	45.9
SOUTHWEST	6,116	13,121	26,470	567	23.1
Lower Deschutes	3,232	7,376	12,332	859	8.6
Upper Deschutes	2,352	7,668	8,622	344	22.3
Klamath	2,647	6,548	10,049	289	22.7
CENTRAL	8,231	21,592	31,003	1,492	14.5
Columbia Basin	7,408	31,501	35,598	1,999	15.8
Blue Mountain	5,835	23,613	22,602	739	32.0
NORTHEAST	13,243	55,114	58,200	2,738	20.1
Malheur	9,183	70,596	47,833	330	213.9
Great Basin	1,118	3,992	4,058	537	7.4
SOUTHEAST	10,301	74,588	51,891	867	86.0
STATE TOTALS	72,133	243,436	317,000	8,098	30.1

Table 26
1966 QUAIL KILL

Habitat Area	Hunters	Kill	Days Hunted	Square Miles of Habitat	Birds Killed per Square Mile
North Coast	95	253	575	1,623	0.2
North Willamette	6,446	30,862	32,353	4,296	7.2
South Willamette	3,486	16,682	16,956	4,562	3.7
NORTHWEST	10,027	47,797	49,884	10,481	4.6
South Coast	236	1,713	599	1,814	0.9
Umpqua	521	2,284	2,109	2,862	0.8
Rogue	1,991	8,357	8,603	2,543	3.3
SOUTHWEST	2,748	12,354	11,311	7,219	1.7
Lower Deschutes	1,683	12,639	7,824	3,140	4.0
Upper Deschutes	2,183	14,986	8,806	5,665	2.6
Klamath	712	3,854	2,229	3,900	1.0
CENTRAL	4,578	31,479	18,859	12,705	2.5
Columbia Basin	2,153	12,433	10,078	5,915	2.1
Blue Mountain	2,417	17,825	10,677	10,769	1.7
NORTHEAST	4,570	30,258	20,755	16,684	1.8
Malheur	3,537	30,924	15,995	9,918	3.1
Great Basin	711	5,773	3,019	16,994	0.3
SOUTHEAST	4,248	36,697	19,014	26,912	1.4
STATE TOTALS	26,171	158,585	119,823	74,001	2.1

Table 27
1966 CHUKAR PARTRIDGE KILL

Habitat Area	Hunters	Kill	Days Hunted	Square Miles of Habitat	Birds Killed per Square Mile
Lower Deschutes	2,300	13,265	8,728	1,609	8.2
Upper Deschutes	743	3,778	2,697	3,150	1.2
CENTRAL	3,043	17,043	11,425	4,759	3.6
Columbia Basin	1,582	6,874	5,760	2,472	2.8
Lower Snake	4,816	44,034	18,631	3,619	12.2
Upper John Day	384	1,048	1,077	1,600	0.7
Lower John Day	1,676	12,574	5,863	1,877	6.7
NORTHEAST	8,458	64,530	31,331	9,568	6.7
Malheur	4,408	31,862	15,796	3,194	10.0
Great Basin	645	1,716	1,643	3,745	0.5
SOUTHEAST	5,053	33,578	17,439	6,939	4.8
STATE TOTALS	16,554	115,151	60,195	21,266	5.4

Table 28
1966 HUNGARIAN PARTRIDGE KILL

Habitat Area	Hunters	Kill	Days Hunted	Square Miles of Habitat	Birds Killed per Square Mile
Lower Deschutes	356	953	2,422	2,517	0.4
Upper Deschutes	305	552	1,061	3,494	0.2
CENTRAL	661	1,505	3,483	6,011	0.3
Columbia Basin	989	2,734	4,314	5,305	0.5
Blue Mountain	2,231	8,030	9,310	7,001	1.1
NORTHEAST	3,220	10,764	13,624	12,306	0.9
Malheur	1,215	3,512	5,019	5,156	0.7
Great Basin	26	126	75	1,552	-
SOUTHEAST	1,241	3,638	5,094	6,708	0.5
STATE TOTALS	5,122	15,907	22,201	25,025	0.6

Table 29
1966 BLUE AND RUFFED GROUSE KILL

Habitat Area	Hunters	Kill	Days Hunted	Square Miles of Habitat	Birds Killed per Square Mile
North Coast	796	1,932	1,905	1,333	1.4
North Willamette	1,864	3,792	4,856	2,043	1.9
South Willamette	1,409	3,707	3,922	3,013	1.2
NORTHWEST	4,069	9,431	10,683	6,389	1.5
South Coast	273	818	674	1,442	0.6
Umpqua	591	1,295	1,417	2,228	0.6
Rogue	295	408	629	1,894	0.2
SOUTHWEST	1,159	2,521	2,720	5,564	0.5
Lower Deschutes	159	158	371	623	0.3
Upper Deschutes	46	45	70	2,172	-
Klamath	91	113	162	2,251	-
CENTRAL	296	316	603	5,046	-
Columbia Basin	432	613	1,091	610	1.0
Blue Mountain	1,725	3,911	4,807	3,769	1.0
NORTHEAST	2,157	4,524	5,898	4,379	1.0
Great Basin	44	44	48	1,486	-
SOUTHEAST	44	44	48	1,486	-
STATE TOTALS	7,725	16,836	19,952	22,864	0.7

Table 30
1966 SAGE GROUSE KILL

Habitat Area	Hunters	Kill	Days Hunted	Square Miles of Habitat	Birds Killed per Square Mile
Crook-Deschutes	600	718	973	2,093	0.3
Lake	700	1,164	1,284	5,912	0.2
Harney	567	1,027	1,012	9,066	0.1
Malheur	367	822	662	9,581	0.1
STATE TOTALS	2,234	3,731	3,931	26,652	0.1



Table 31
1966 MOURNING DOVE KILL

Habitat Area	Hunters	Kill	Days Hunted	Square Miles of Habitat	Birds Killed per Square Mile
North Willamette	4,489	48,373	20,504	2,254	21.5
South Willamette	3,721	42,920	17,827	1,548	27.7
NORTHWEST	8,210	91,293	38,331	3,802	24.0
Umpqua	467	5,116	1,663	634	8.1
Rogue	1,801	33,142	9,679	649	51.1
SOUTHWEST	2,268	38,258	11,342	1,283	29.8
Lower Deschutes	889	12,103	3,680	2,517	4.8
Upper Deschutes	1,475	17,122	3,673	3,494	4.9
Klamath	959	10,647	3,257	1,649	6.5
CENTRAL	3,323	39,872	10,610	7,660	5.2
Columbia Basin	911	8,620	3,611	5,305	1.6
Blue Mountain	701	7,754	2,616	7,001	1.1
NORTHEAST	1,612	16,374	6,227	12,306	1.3
Malheur	491	4,703	1,593	9,911	0.5
Great Basin	466	6,297	1,475	15,515	0.4
SOUTHEAST	957	11,000	3,068	25,426	0.4
STATE TOTALS	16,370	196,797	69,578	50,477	3.9

Table 32
1966 BAND-TAILED PIGEON KILL

Habitat Area	Hunters	Kill	Days Hunted	Square Miles of Habitat	Birds Killed per Square Mile
North Coast	2,164	20,921	9,540	1,333	15.7
North Willamette	3,287	22,991	13,449	2,043	11.3
South Willamette	3,183	30,364	12,838	3,013	10.1
NORTHWEST	8,634	74,276	35,827	6,389	11.6
South Coast	2,040	28,378	10,412	1,442	19.7
Umpqua	746	11,054	3,844	2,228	5.0
Rogue	871	6,805	3,600	1,894	3.6
SOUTHWEST	3,657	46,237	17,856	5,564	8.3
Lower Deschutes	124	556	461	221	2.5
CENTRAL	124	556	461	221	2.5
STATE TOTALS	12,415	121,069	54,144	12,174	9.9

Table 33
1966 SILVER GRAY SQUIRREL KILL

Habitat Area	Hunters	Kill	Days Hunted	Square Miles of Habitat	Animals Taken per Square Mile
North Willamette	364	1,712	3,756	2,043	0.8
South Willamette	859	3,716	2,616	3,013	1.2
NORTHWEST	1,223	5,428	6,372	5,056	1.1
South Coast	286	1,085	610	1,442	0.8
Umpqua	677	5,348	2,893	2,228	2.4
Rogue	2,031	9,466	8,066	1,894	5.0
SOUTHWEST	2,994	15,899	11,569	5,564	2.9
Lower Deschutes	208	229	529	623	0.4
Klamath	156	229	501	2,251	0.1
CENTRAL	364	458	1,030	2,874	0.2
STATE TOTALS	4,581	21,785	18,971	13,494	1.6

Table 34
E. E. WILSON JUVENILE PHEASANT SEASON

Year	Total Hunters	Pheasants			Quail Killed
		Pheasants Killed	Birds per Hunter	Highest Daily Kill	Lowest Daily Kill
1951	272	299	0.8	-	-
1952	255	276	1.1	-	-
1953	302	200	0.7	35	6
1954	314	268	0.8	37	10
1955	188	67	0.4	26	11
1956	252	172	0.7	41	6
1957	261	226	0.8	73	5
1958	184	185	1.0	40	26
1959	178	199	1.1	49	15
1960	269	289	1.1	73	28
1961	573	468	0.8	106	15
1962	584	546	0.9	114	4
1963	593	307	0.5	57	8
1964	559	319	0.6	65	9
1965	440	115	0.3	29	3
1966	384	104	0.3	30	2



Table 35
1966-67 TURKEY SEASON

Season Dates	Tags Issued*	Birds Harvested					Percent of Tag Holders Successful
		Adult		Young		Total	
		Male	Female	Male	Female		
11/19-11/27, 1966	954	7	6	9	9	31	3.2%
4/29-5/7, 1967	291	7				7	2.4%
TOTALS	954	14	6	9	9	38	4.0%

*954 tags valid for fall season only, and 291 of this total valid for fall and spring seasons.



Table 36
1966 LAND ACCESS SURVEY

County	Miles Sampled	Not Posted (Percent)	No Hunting (Percent)	Hunting by Permission (Percent)
Benton	36	61	39	0
Crook	56	65	32	3
Deschutes	50	81	18	1
Douglas	70	74	26	0
Hood River	21	92	8	0
Jackson	30	64	35	1
Jefferson	48	66	33	1
Klamath	46	75	22	3
Linn	54	82	18	0
Marion	20	88	12	0
Polk	22	52	46	2
Sherman	80	70	27	3
Wasco	180	46	46	8
Washington	32	52	38	10
Yamhill	20	89	11	0
TOTALS	765	70	27	2



Table 37
1966 GAME BIRD PRODUCTION

	Pheasants	Chukar Partridge	Hungarian Partridge	Bamboo Partridge	Kalij Pheasants
January 1 Inventory	3,275	126	94	311	57
Losses	118	1	2	35	17
Spring Liberations	3,157	125	92	198	12
Eggs Gathered	91,246	2,403	561	2,089	218
Eggs to Individuals	15,823	312	0	0	0
Eggs Set	51,201	950	506	2,084	212
Birds Hatched	40,926	826	319	640	58
Percent Hatched	79.9	86.9	63.0	30.7	27.4
Birds Raised	23,544*	799	200	351	46
Percent Raised	94.4	96.7	62.7	54.8	79.3
Birds Liberated	23,540**	633	92	198	12
Spring	3,157	125	68	198	0
Summer	8,142	508	24	0	12
Fall	12,241	0	0	0	0
December 31 Inventory	3,161	294	200	429	74

* Based on 24,940 birds liberated and kept as breeders.

**Includes 184 birds sold for dog trials.

Table 38
1966 PHEASANT LIBERATIONS

Counties by Regions	Spring Adult	Summer Young	Fall Adult	Total Released
Benton	614	285	998	1,897
Clackamas	320		290	610
Clatsop	48		384	432
Columbia			1,150	1,150
Lane		75	1,530	1,605
Linn	144	402		546
Marion	168	360	574	1,102
Multnomah			560	560
Polk	560	90	507	1,157
Washington	663			663
Yamhill	208	270	768	1,246
NORTHWEST	2,725	1,482	6,761	10,968
Douglas	384		776	1,160
Jackson			880	880
Josephine			120	120
SOUTHWEST	384		1,776	2,160
WESTERN OREGON TOTALS	3,109	1,482	8,537	13,128
Crook	48	405		453
Deschutes		315		315
Jefferson			768	768
Klamath		1,440	884	2,324
Wasco		720		720
CENTRAL	48	2,880	1,652	4,580
Baker		720		720
Gilliam		315		315
Grant		720		720
Morrow		720		720
Umatilla			384	384
Union			1,168	1,168
Wheeler		405		405
NORTHEAST		2,880	1,552	4,432
Harney		500		500
Lake		400	500	900
SOUTHEAST		900	500	1,400
EASTERN OREGON TOTALS	48	6,660	3,704	10,412
STATE TOTALS	3,157	8,142	12,241	23,540



Administration

The waterfowl management program carried out by the Oregon State Game Commission is coordinated with similar programs throughout the Pacific Flyway. Even though management of migratory birds is the direct responsibility of the Bureau of Sport Fisheries and Wildlife, Oregon has a direct obligation of supplying the Service with factual data on the birds while they are in the state. The coordinated program includes periodic census of key areas, a state-wide winter inventory, hunting season results, natural mortality, production surveys, breeding ground conditions, banding, maintenance of waterfowl areas, and habitat improvement.

Weather and Habitat Conditions

The mild winter of 1966-67 was followed by a cool, wet spring which slowed evaporation and preserved water in the major marshes at near normal levels. As a result, heavy stands of vegetation emerged and provided good nesting cover and excellent habitat for rearing broods.

Evaporation losses were light, and by mid-August most marshes and potholes still contained sufficient water to last through the production period.

Production

Excellent goose production resulted throughout the eastern Oregon breeding range. The number of broods and young recorded on established transects indicate an increase in production of 7

Table 1
GOOSE PRODUCTION TRENDS 1964-1967

Transect	Total Broods			Total Young		
	1967	1966	1965	1967	1966	1965
Klamath River	250	252	210	1,132	1,137	945
Sprague River	-	15	21	-	67	95
Spring Lake	5	5	4	24	24	18
Nuss Lake	22	14	42	97	65	188
Agency Lake	70	57	48	323	255	218
Wocus Bay	13	42	74	58	189	331
Howard Bay	18	29	13	79	122	60
Summer Lake	21	34	21	93	136	98
N. Lake County	50	58	25	211	252	114
Columbia River	11	5	12	49	30	66
Wickiup Reservoir	10	0	7	38	0	21
G. I. Ranch	12	16	19	56	68	73
Jefferson County	2	4	-	9	17	-
S. Lake County	27	22	9	109	101	53
Ladd Marsh	5	5	5	20	29	33
Hanks Marsh	24	5	-	108	20	-
Malheur Refuge	444	355	222	2,000	1,800	1,000
Klamath Forest Refuge	67	33	-	300	150	-
TOTALS	1,051	951	732	4,706	4,462	3,313
Production in 1967 up 7.0 percent from 1966						
						4,148

percent from 1966 and 18 percent from the previous three-year average. (Table 1.)

Since 1956, goose production trends on 24 islands in the impoundment area of the John Day Dam have been measured through annual nest counts conducted by the Washington Department of Game with the assistance of the Bureau of Sport Fisheries and Wildlife and the Oregon State Game Commission. These islands will be inundated with the filling of the impoundment in 1968. Results obtained during this 12-year period are presented in Table 2.

Table 2
COLUMBIA RIVER GOOSE NEST SURVEY

Year	No. Nests	Year	No. Nests
1967	197	1961	183
1966	87*	1960	163
1965	200	1959	178
1964	140	1958	115
1963	200	1957	177
1962	151	1956	81*

*Incomplete survey.

Good water conditions in all production areas caused a wide dispersal of ducks from permanent water areas to adjacent lakes and marshes. A decrease of 16.1 percent was recorded, with dabblers up 43 percent but divers down 68 percent. (Tables 3, 4, and 5.) Fair to good production of divers is expected, however, as the late spring caused delayed nesting, and the heavy marsh vegetation made an accurate census impossible.

Production estimates by the Bureau of Sport Fisheries and Wildlife for the Malheur National Wildlife Refuge, the major production area in Oregon, was 18,000 ducklings. This is an increase of 38 percent from the 13,000 production in 1966 but 18 percent below the average of the previous five years when habitat conditions were ideal.

Table 3

DUCK PRODUCTION TRENDS 1964-1967

Transect	Square Miles	Total Broods				Total Young		
		1967	1966	1965	1964	1967	1966	1965
Klamath Basin	26	59	236	172	233	313	1,374	959
Klamath Mgt. Area	2	43	89	-	-	327	608	-
Summer Lake	1	105	85	53	113	758	573	364
N. Lake County	4	19	11	4	42	132	76	37
Umatilla County	4	7	6	3	17	39	36	20
Wallowa County	1	7	-	-	-	38	-	-
Jefferson County	1	6	8	7	4	53	71	53
Wasco County	1	32	15	19	12	227	79	114
Malheur County	45	81	45	91	76	531	317	555
Columbia County	3	23	20	21	46	138	152	131
Crook County	1	15	12	12	5	124	101	89
Deschutes County	6	41	8	12	-	294	58	73
Jackson County	11	31	15	36	-	213	71	259
Douglas County	1	3	-	-	-	28	-	-
TOTALS	107	472	550	430	548	3,215	3,516	2,654
Production in 1967 down 16.1 percent from 1966. (Dabblers up 43 percent, divers down 68 percent.)								
							3,678	

Table 4

DUCK PRODUCTION BY TRANSECT, 1967

TRANSECT	Klamath Basin	Klamath Management Area	Summer Lake	North Lake County	Umatilla County	Jefferson County	Wasco County	Malheur County	Wallowa County	Crook County	Deschutes County	Jackson County	Douglas County	Columbia County	TOTAL
SPECIES															
B - Broods	B	25	9	7	5	4	21	39	5	8	28	23	2	8	199
Y - Young	Y	132	58	44	28	32	165	257	30	64	213	162	17	47	1,352
Mallard															
Gadwall	B	3	42	5		1		8		3					71
	Y	26	264	42		10		53		27					498
Widgeon	B			2				10							12
	Y			17				65							82
B.W./Cinn. Teal	B	2	33	3		1	9	10	1	2	2	1		3	76
	Y	7	307	17		11	57	57	6	18	12	6		28	589
G. W. Teal	B						2								3
							5								5
Shoveler	B		4						1						6
	Y		33						2						43
Pintail	B			1				11		1					14
	Y			4				76		8					98
Wood Duck	B				1							7	1	12	22
	Y				4							45	11	63	129
Redhead	B	24	8		1			3							44
	Y	129	48		7			23							274
Canvasback	B	2		1											3
	Y	12		8											20
Bufflehead	B														4
	Y										4				26
Ruddy Duck	B	2	9							1					12
	Y	5	48							7					60
H. Merganser	B														4
	Y										4				24
Goldeneye	B														2
	Y										2				13
Unidentified	B	1													1
	Y	2													2
TOTAL	B	59	105	19	7	6	32	81	7	15	41	31	3	23	472
	Y	313	758	132	39	53	227	531	38	124	294	213	28	138	3,215

Table 5

DUCK PRODUCTION BY SPECIES 1964-1967

Species	Number of Broods			Number of Young		
	1967	1966	1965	1967	1966	1965
Dabblers:						
Mallard	199	161	167	1,352	1,108	1,071
Pintail	14	11	23	98	73	159
Gadwall	71	49	25	498	345	186
B.W./Cinn. Teal	76	76	48	589	526	316
G. W. Teal	2	2	3	5	12	15
Widgeon	12	3	12	82	24	85
Shoveler	6	4	0	43	30	0
Wood Duck	22	13	20	129	84	111
Subtotals	402	319	298	2,796	2,202	1,943
						2,683
Divers:						
Redhead	44	180	114	274	1,101	643
Canvasback	3	18	2	20	93	9
Scaup	0	0	3	0	0	16
Bufflehead	4	1	3	26	6	16
Goldeneye	2	0	1	13	0	5
Ruddy	12	33	13	60	173	69
Subtotals	65	232	136	393	1,373	758
						1,480
Miscellaneous:						
A. Merganser	0	0	0	0	0	0
H. Merganser	4	2	1	24	11	6
Unid. Ducks	1	13	15	2	76	79
Subtotals	5	15	16	26	87	85
						66
TOTALS	472	566	450	3,215	3,662	2,786
						4,229

Fall Migrations

Weekly tabulations of waterfowl populations during the fall migration period are presented in Tables 6 through 14.

1. Southeastern Oregon

Early duck flights to the marshes in the high desert areas were down 50 percent from similar flights in 1965. No large concentrations were observed but periodic flights were recorded passing through the area until the last week of November.

Northern migrant geese arrived on normal dates and in numbers comparable with previous years. Snow geese, however, arrived at Summer Lake in much larger numbers than in 1965. A good percentage of each flight was composed of young birds while a year ago very few immatures were present.

2. Northeastern Oregon

The first large movement of mallards to the Columbia Basin wintering area in Oregon did not occur until mid-November, a week later than in 1965. The population has been declining in size annually since peak numbers were reached in 1962.

Canada goose flights also show a similar decline. They, too, apparently are wintering in the Columbia Basin project area in eastern Washington.

3. Western Oregon

Waterfowl numbers reached a peak during the first week of November and remained static in numbers throughout the winter. Mallards from the prairie provinces apparently dropped off in the upper Columbia Basin, as they did not arrive on their traditional wintering areas along the lower Columbia River and in the Willamette Valley in numbers comparable with prior years.

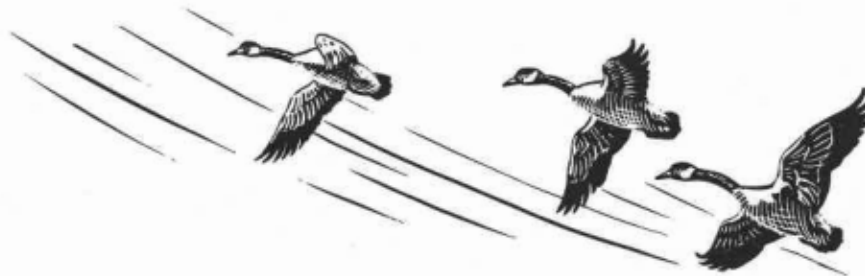


Table 6
WATERFOWL POPULATIONS
Sauvie Island
October 13, 1966 through March 14, 1967

Date	Whistling Swan	Canada Goose	Lesser Canada	Cackling Goose	Mallard	Pintail	Widgeon	G.W. Teal	Shoveler	*Diving Ducks	**Other Water-fowl	Coot	Total
Oct. 13	-	205	1,650	-	2,580	2,920	6,535	1,140	-	10	30	5	15,075
Oct. 27	-	170	600	4,565	12,060	27,250	13,260	3,645	-	99	6	-	61,655
Nov. 8	22	1,105	5,045	100	27,000	35,060	21,600	6,450	50	-	70	5	96,507
Nov. 16	13	700	4,820	1,450	22,685	29,500	16,160	1,050	-	17	17	30	76,442
Nov. 28	200	610	1,605	675	32,250	46,850	10,955	700	-	25	15	30	93,915
Dec. 13	10	85	2,010	800	25,400	45,950	19,220	-	-	-	55	40	93,570
Dec. 28	389	6,920	2,710	-	36,680	18,560	16,570	-	-	-	265	20	82,114
Jan. 5	214	450	5,350	-	22,200	34,310	20,500	-	-	25	-	30	83,079
Jan. 24	48	-	1,565	1,860	5,034	1,130	14,526	20	20	75	117	55	24,450
Feb. 13	31	1,014	400	12	6,500	8,370	14,350	770	50	24	15	115	31,651
Feb. 28	-	3,950	1,340	-	5,350	820	10,940	480	40	130	260	185	23,495
March 14	-	1,475	1,880	-	2,339	52	20,625	335	55	90	107	10	26,998

* Peak of 5 redheads, 5 ringnecks, 2 scoters, 7 buffleheads, and 40 scaup on Oct. 27; 265 common mergansers on Dec. 28; 80 ruddy ducks and 50 canvasbacks on Feb. 28.

**Peak of 35 snow geese on December 13; 250 white-fronted geese on Feb. 28; 12 wood ducks on March 14.

Sandhill cranes: 470 on Oct. 27; 522 on Oct. 13.

Table 7
WATERFOWL POPULATIONS
Malheur National Refuge
September 1, 1966 through December 31, 1966

Date	Swan	Canada Goose	Snow Goose	Mallard	Gadwall	Widgeon	Pintail	G.W. Teal	Shoveler	Hedhead	Canvasback	Ruddy Duck	*Other Species	Cont	Total
Sept. 1	45	4,500	-	20,000	18,000	50,000	60,000	5,000	100,000	3,000	4,000	1,000	3,450	110,000	378,995
Sept. 8	45	4,000	-	15,000	12,000	70,000	60,000	6,500	90,000	3,000	4,000	1,000	2,850	80,000	348,395
Sept. 15	45	4,000	10	10,000	8,000	60,000	50,000	5,000	80,000	2,500	4,000	1,000	3,100	80,000	307,655
Sept. 23	45	4,000	-	15,000	6,000	50,000	25,000	4,000	75,000	2,000	5,000	2,000	2,300	35,000	225,345
Oct. 6	45	4,500	-	15,000	6,000	50,000	30,000	8,000	70,000	2,000	5,000	2,000	2,300	30,000	224,845
Oct. 11	95	4,200	1,500	11,500	10,600	40,400	12,550	4,950	25,000	1,150	6,500	500	2,300	29,700	150,945
Oct. 19	245	5,300	4,000	10,000	8,000	45,000	9,000	4,000	30,000	1,000	7,000	2,000	2,700	25,000	153,245
Oct. 24	445	5,500	5,000	5,000	5,000	45,000	6,000	3,000	18,000	1,000	3,100	1,500	2,700	20,000	121,245
Nov. 3	6,945	5,600	3,200	3,250	2,500	34,500	7,700	3,900	10,700	500	750	500	2,050	23,000	105,095
Nov. 10	7,045	5,500	3,200	4,000	1,000	25,000	10,000	3,900	10,700	500	1,000	500	1,950	23,000	97,295
Nov. 18	8,045	5,500	500	15,000	500	20,000	15,000	4,000	5,000	500	1,000	400	2,000	10,000	87,445
Nov. 25	2,045	5,000	100	5,000	-	5,000	1,000	500	1,000	100	100	100	850	10,000	30,795
Dec. 1	2,045	7,500	-	5,000	100	4,000	1,000	200	500	100	100	50	950	5,000	26,545
Dec. 6	1,045	6,000	20	4,000	50	3,000	500	100	500	100	100	50	1,100	3,000	19,565
Dec. 14	3,345	5,000	-	6,700	2,800	2,900	100	900	1,000	-	50	50	950	1,000	24,795
Dec. 20	2,545	4,500	-	6,000	2,000	3,000	100	800	1,000	-	50	50	950	800	21,795
Dec. 28	2,045	4,000	-	5,000	1,000	3,000	100	800	1,000	-	50	50	950	800	18,795
Dec. 31	245	4,000	-	5,000	500	3,000	300	500	500	-	50	50	600	500	15,245

*Peak of 500 white-fronted geese on Oct. 19; 500 blue-winged teal and 2,500 cinnamon teal on Sept. 1; 350 wood ducks on Sept. 23; 200 ring-necked ducks and 800 lesser scaups on Oct. 19; 500 buffleheads and 100 hooded mergansers on Oct. 24; 400 goldeneyes and 500 common mergansers on Nov. 18.

Table 8

WATERFOWL POPULATIONS
Columbia River from The Dalles Dam to Mouth of John Day River
October 10, 1966 through January 16, 1967

Date	Canada Goose	Mallard	Pintail	Widgeon	Canvas- back	Scaup	*Other Waterfowl	Coot	Total
Oct. 10	1,010	193	245	15	2	21	2	124	1,612
Oct. 17	1,379	327	294	28	-	15	2	333	2,378
Oct. 26	1,682	722	490	500	1	48	4	424	3,871
Oct. 31	4,286	1,529	1,661	1,260	15	74	-	373	9,198
Nov. 8	3,817	1,339	889	1,231	-	228	9	262	7,775
Nov. 22	3,258	3,812	1,675	3,155	9	151	2	116	12,178
Nov. 28	2,622	4,955	2,145	3,417	9	197	3	69	13,417
Dec. 7	4,035	2,311	262	1,488	7	165	15	41	8,324
Dec. 14	3,030	1,496	630	917	10	199	30	117	6,429
Dec. 22	1,516	761	200	450	10	214	55	38	3,244
Dec. 28	2,002	412	111	339	10	261	18	73	3,226
Jan. 3	2,399	469	21	590	18	203	15	57	3,772
Jan. 9	27	833	50	187	13	319	30	41	1,500
Jan. 16	231	565	59	216	14	243	11	14	1,353

*Peak of 1 snow goose and 1 ruddy duck on Oct. 10; 2 white-fronted geese and 1 redhead on Oct. 26; 8 Goldeneyes on Nov. 18; 5 scoters on Dec. 14; 54 common mergansers on Dec. 22.

Table 9
WATERFOWL POPULATIONS
Summer Lake
August 31, 1966 through February 28, 1967

Date	Whistling Swan	Canada Goose	W. F. Goose	Snow Goose	Mallard	Pintail	Widgeon	Gadwall	G.W. Teal	Diving* Ducks	Other** Ducks	Unid. Ducks	Coots	Total
Aug. 31	-	143	60	-	536	935	4	36	-	39	323	5,255	2,516	9,847
Sept. 11	-	191	294	4	435	533	1,160	95	8	36	1,185	9,000	1,610	14,551
Sept. 19	-	386	626	-	509	839	766	125	-	40	888	9,360	1,846	15,385
Sept. 23	-	290	611	1	205	235	853	60	5	57	89	11,150	2,060	15,616
Oct. 13	-	516	11	22,800	51	867	12	22	20	364	6	13,615	1,642	39,926
Oct. 24	8	288	4	275,000	35	17	-	2	20	169	3	37,823	984	314,353
Nov. 1	23	455	5	149,000	-	-	-	-	-	-	-	14,000	510	163,993
Nov. 8	308	631	-	88,000	68	111	40	-	79	176	18	15,370	194	104,995
Nov. 16	480	613	-	65,000	63	133	44	1	-	52	22	18,750	234	85,392
Nov. 22	782	747	-	39,000	176	515	-	-	-	181	28	17,650	247	59,326
Nov. 29	869	970	-	10,200	263	260	285	-	-	57	30	7,000	84	20,018
Dec. 6	706	1,045	-	5,500	280	30	16	3	57	18	17	3,850	133	11,655
Dec. 12	599	963	-	4,519	478	1,000	555	8	12	8	51	2,411	109	10,713
Dec. 21	679	1,215	10	1,000	579	798	41	2	146	74	52	2,706	59	7,361
Dec. 29	581	1,124	-	1,000	850	506	300	8	150	56	5	750	18	5,348
Jan. 3	891	2,759	-	10	1,764	686	270	61	281	187	9	1,008	24	7,950
Feb. 28	119	255	-	100,000	265	2,870	2	6	124	152	97	3,425	16	107,331

* Peak of 118 ruddy ducks, 56 redheads, and 183 canvasbacks on Oct. 13; 55 buffleheads on Nov. 22; 10 scaup and 2 goldeneyes on Dec. 29; 97 common mergansers on Feb. 28.

**Peak of 1,160 cinnamon teal on Sept. 11; 284 shovelers on Sept. 19.



Table 10

WATERFOWL POPULATIONS
Cold Springs National Refuge
September 9, 1966 through January 12, 1967

Date	Canada			Widgeon	G. W. Teal	*Other and		Total
	Goose	Mallard	Pintail			Unidentified	Coot	
Sept. 9	700	400	500	100	-	-	-	1,700
Sept. 12	800	460	500	100	-	-	25	1,885
Sept. 20	700	200	150	100	-	-	50	1,200
Oct. 7	1,650	500	700	150	-	10	25	3,035
Oct. 12	1,900	3,000	1,000	400	150	40	25	6,515
Oct. 19	8,640	5,000	2,000	500	50	74	25	16,289
Oct. 24	16,500	7,900	3,050	-	-	56	25	27,531
Nov. 2	11,200	12,100	2,000	450	600	63	20	26,433
Nov. 10	12,000	15,000	3,000	2,500	200	41	-	32,741
Nov. 16	10,755	34,500	3,000	2,000	-	55	-	50,310
Nov. 22	6,450	62,350	2,300	850	-	69	-	72,019
Nov. 30	3,500	75,000	3,000	2,000	-	-	-	83,500
Dec. 15	5	40,700	800	1,000	2,500	-	-	45,005
Dec. 23	3,500	42,000	1,000	1,000	500	15	-	48,015
Dec. 29	600	25,000	500	1,000	-	10	-	27,110
Jan. 3	800	23,600	-	1,000	250	50	-	25,700
Jan. 12	500	22,000	200	3,500	200	69	-	26,469

*Peak of 10 canvasbacks on Oct. 7; 65 white-fronted geese on October 19; 50 snow geese on Oct. 24; and 60 whistling swans on Nov. 30.

Table 11

WATERFOWL POPULATIONS
McKay Creek National Refuge
September 9, 1966 through January 12, 1967

Date	Canada Goose	Mallard	Pintail	Widgeon	G. W. Teal	*Other and Unidentified	Coot	Total
Sept. 9	25	200	300	-	-	40	-	565
Sept. 12	25	250	550	150	50	-	-	1,025
Sept. 20	5	500	800	150	-	10	-	1,465
Oct. 5	-	200	750	200	-	20	-	1,170
Oct. 12	-	650	1,400	150	-	-	-	2,200
Oct. 19	-	2,000	3,000	300	-	-	-	5,300
Oct. 24	1,000	2,850	7,665	500	-	11	25	12,051
Nov. 2	1,510	11,200	6,500	600	-	5	-	19,815
Nov. 10	5,725	14,500	9,250	2,500	-	7	-	31,982
Nov. 16	3,350	16,500	5,500	2,500	300	-	-	28,150
Nov. 23	6,600	20,000	2,000	1,500	-	-	-	30,100
Nov. 30	500	12,000	3,000	15,000	-	-	-	30,500
Dec. 15	920	5,000	4,000	3,500	-	-	-	13,420
Dec. 22	3,800	5,000	5,000	3,000	-	-	-	16,800
Dec. 29	1,210	4,000	1,100	4,000	-	-	-	10,310
Jan. 4	35	6,000	1,000	5,000	-	5	-	12,040
Jan. 12	2,000	5,025	2,000	4,250	-	25	25	13,325

*Peak of 40 cinnamon teal on Sept. 9; 10 white-fronted geese on Oct. 5; 5 snow geese on Nov. 2; 7 whistling swans on Nov. 10; 100 lesser scaups and 5 goldeneyes on Nov. 23; 20 ruddy ducks and 5 common mergansers on Jan. 12.

Table 12
WATERFOWL POPULATIONS
William L. Finley National Refuge
September 13, 1966 through December 30, 1966

Date	Canada Goose	Mallard	Pintail	Widgeon	G.W.Teal	Wood Duck	*Other & Unidenti- fied	Coot	Total
Sept. 13	8	6	15	-	-	30	8	-	67
Sept. 20	8	20	15	-	-	30	16	-	89
Sept. 30	9	15	-	60	20	-	15	-	119
Oct. 7	12	15	10	50	40	20	18	-	165
Oct. 12	65	20	5	20	45	80	8	-	243
Oct. 21	60	4	-	-	35	150	1	-	250
Oct. 24	125	15	10	-	30	120	-	-	300
Oct. 31	170	30	15	20	35	120	34	-	424
Nov. 10	390	140	340	-	40	120	20	10	1,060
Nov. 17	1,500	2,510	1,500	4,010	230	30	16	60	9,856
Nov. 29	4,200	8,050	2,000	-	1,000	200	8	200	15,658
Dec. 6	4,400	3,800	2,000	1,500	2,000	200	4	500	14,404
Dec. 12	5,050	4,770	1,500	13,040	5,000	300	-	800	30,460
Dec. 23	6,000	3,100	700	1,100	9,200	100	-	500	20,700
Dec. 30	11,050	2,400	2,000	500	4,000	100	2	200	20,252

*Peak of 15 shovelers on Sept. 30; 8 white-fronted geese on Oct. 10; 8 buffleheads and 20 common mergansers on Oct. 31; 10 hooded mergansers on Nov. 10; 15 whistling swans on Nov. 17; 5 snow geese on Dec. 12.

Table 13

WATERFOWL POPULATIONS
Basketett Slough National Refuge
September 23, 1966 through December 30, 1966

Date	Canada Goose	Mallard	Pintail	Widgeon	G.W.Teal	Wood Duck	*Other & Unidenti- fied	Coot	Total
Sept. 23	7	115	40	125	-	-	3	8	298
Sept. 27	7	50	25	150	10	10	8	25	285
Oct. 10	140	200	100	200	50	-	23	30	743
Oct. 21	600	100	700	200	200	-	21	200	2,021
Oct. 25	1,500	200	1,000	150	300	-	15	50	3,215
Oct. 31	1,700	300	3,500	150	500	-	15	50	6,215
Nov. 11	1,200	400	3,000	100	800	-	-	100	5,600
Nov. 17	200	800	3,000	-	1,000	-	50	150	5,200
Nov. 23	300	1,000	2,500	-	800	100	-	200	4,900
Nov. 29	400	1,500	2,000	1,500	800	100	-	200	6,500
Dec. 7	1,045	1,900	2,700	1,150	500	10	75	350	7,730
Dec. 12	1,600	1,100	1,000	1,000	6,000	-	70	350	11,120
Dec. 23	3,000	1,000	1,000	2,000	4,000	-	-	300	11,300
Dec. 30	500	1,100	2,000	-	2,000	-	-	200	5,800

*Peak of 3 white-fronted geese on Sept. 23; 5 gadwalls on Sept. 27; 20 shovelers on Oct. 10; 1 snow goose on Oct. 21; 15 buffleheads on Oct. 31; 75 lesser scaups and 25 blue-winged teal on Dec. 17.

Banding

During the year waterfowl banding operations were conducted at six sites by the Game Commission and at three sites by the Bureau of Sport Fisheries and Wildlife. Banding was carried on primarily during the preseason and postseason periods to mark samples of predominate species for determination of hunting mortality distribution and migration patterns.

A total of 4,688 ducks, 96 geese, and 111 coots was banded in the state. All ducks and coots banded at Summer Lake, Sauvie Island, Denman Area, Cold Springs Refuge, and Malheur Refuge were taken in bait traps. Geese were captured by drive-trapping, while wood ducks and hooded mergansers in Benton, Klamath, and Jackson Counties were incubating females caught in nest boxes. The number and species of waterfowl banded at each site is tabulated in Table 15.

Recoveries from these bandings and bandings of previous years are shown in Table 16. Oregon-banded waterfowl were recovered in 15 states, 7 Canadian provinces or districts, and in Mexico.

During the 1966 season Oregon hunters reported recovering the following number of banded waterfowl: 882 ducks, 196 geese, 3 brant, and 1 coot. These birds were banded in 12 states, 5 Canadian provinces or districts, and on Wrangel Island, U.S.S.R. The returns by state or area of banding are given in Table 17.

A summary of the direct returns of preseason banded waterfowl is presented in Table 18. Hunting pressure on the mallard remains high, especially on public hunting areas. Approximately 20 percent of those banded on state areas were reported killed during the season, while only 5.6 of those banded on Malheur National Refuge and 7.2 on Cold Springs National Refuge were bagged.

Recovery rates are relatively high at Summer Lake and Sauvie Island as bands are collected at check stations. Recovery rates at each management area, however, are comparable with returns of previous years.

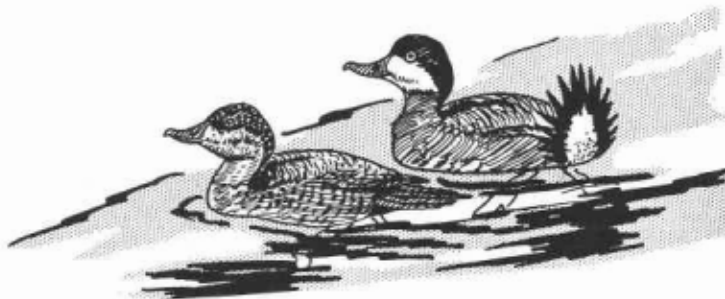


Table 14
 WATERFOWL POPULATIONS
 Ankeny National Refuge
 December 12, 1966 through December 30, 1966

Date	Canada Goose	Mallard	Pintail	Widgeon	G.W.Teal	Wood Duck	Other & Unidenti- fied	Coot	Total
Dec. 12	-	800	-	-	-	-	-	-	800
Dec. 23	-	4,000	-	500	-	-	-	-	4,500
Dec. 30	-	6,000	1,500	-	800	-	-	-	8,300



Table 15
WATERFOWL BANDING
May 1, 1966 through April 30, 1967

Species	BANDING STATION										Total
	Sauvie Island	Summer Lake	Denman Mgt. Area	*Malheur Refuge	*Cold Spr. Refuge	*Finley Refuge	Klamath County	Jackson County	Malheur County		
Mallard	1,000	391	147	994	69	-	-	-	-	2,601	
Gadwall	1	13	-	9	-	-	-	-	-	23	
Am. Widgeon	22	16	27	212	-	11	-	-	-	288	
G. W. Teal	7	3	2	55	1	-	-	-	-	68	
B.W./Cinn. Teal	12	19	-	-	-	-	-	-	-	31	
Shoveler	1	1	-	-	-	-	-	-	-	2	
Pintail	838	106	3	257	251	-	-	-	-	1,455	
Wood Duck	43	-	115	5	-	16	10	8	-	197	
Redhead	-	10	-	-	-	-	-	-	-	10	
Ring-necked Duck	1	-	-	-	-	-	-	-	-	1	
Hooded Merganser	-	-	-	-	-	12	-	-	-	12	
TOTAL DUCKS	1,925	559	294	1,532	321	39	10	8	-	4,688	
Canada Goose	-	-	-	-	-	4	-	21	71	96	
Coot	3	105	-	-	3	-	-	-	-	111	
TOTAL WATERFOWL	1,928	664	294	1,532	324	43	10	29	71	4,895	

*Banded by Bureau of Sport Fisheries and Wildlife.



Table 6

RECOVERY OF OREGON-BANDED WATERFOWL
1966 Hunting Season

Species	State of Recovery										Total		
	Oregon	Calif.	Wash.	Idaho	Mont.	Nevada	Alaska	*Other States	B. C.	Alta.		Sask.	Mexico
Canada Goose	26	13	1	1	1			1		13		57	
Mallard	397	115	131	28	5	6	2	12	24	27	2	749	
Gadwall	2	7				1					2	12	
American Widgeon	73	29	27	2	2	1		2	4	1		141	
Green-winged Teal	2	7	2					1				12	
B.W./Cinn. Teal	1	3									1	5	
Shoveler	1											1	
Pintail	86	87	34	2	2		2	3	3	3	1	224	
Wood Duck	12	13							1			26	
Redhead	2	3						1				6	
Lesser Scaup		1	1									2	
Ring-necked Duck		1										1	
Whistling Swan						1						1	
Coot	1			1								2	
TOTALS	603	279	197	34	10	9	4	20	32	44	3	4	1,239

*Utah - 2 mallards, 1 pintail, 1 redhead

Arizona - 1 green-winged teal

Arkansas - 1 mallard

Tennessee - 1 mallard

Minnesota - 1 mallard

Nebraska - 2 mallards

Illinois - 2 mallards

Louisiana - 2 pintails

Ontario - 1 Canada goose

Manitoba - 2 mallards

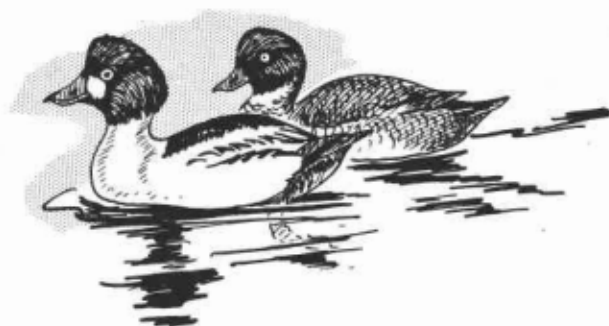
Yukon Territory - 1 mallard

McKenzie Territory - 2 widgeons



Table 17
BANDED WATERFOWL RECOVERED IN OREGON

State or Province Where Banded	Ducks	Geese	Brant	Coots
Oregon	576	26	-	1
Washington	104	23	-	-
California	64	35	-	-
Idaho	39	4	-	-
Nevada	4	1	-	-
Montana	35	3	-	-
South Dakota	1	-	-	-
Wyoming	1	-	-	-
Nebraska	1	-	-	-
New Mexico	1	-	-	-
Oklahoma	1	-	-	-
Alaska	20	84	2	-
Alberta	23	2	-	-
British Columbia	4	-	-	-
Saskatchewan	7	1	-	-
McKenzie District	1	4	1	-
Franklin District	-	1	-	-
U.S.S.R.	-	12	-	-
TOTALS	882	196	3	1





DIRECT RETURNS FROM PRESEASON BANDED WATERFOWL Oregon, 1966

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Table 18
DIRECT RETURNS FROM PRESEASON BANDED WATERFOWL
Oregon, 1966
(continued)

Species	Banding Area	Number Banded		Direct Returns		% Direct Returns	
		AD.	IM.	AD.	IM.	AD.	IM.
B.W./Cinn. Teal	Sauvie Island	0	12	-	1	-	8.3
	Summer Lake	0	18	-	1	-	5.6
Total B.W./Cinn. Teal		0	30	-	2	-	6.7
Shoveler	Sauvie Island	0	1	-	1	-	100.0
	Summer Lake	0	1	-	0	-	0.0
Total Shovelers		0	2	-	1	-	50.0
Pintail	Sauvie Island	110	213	323	34	40	12.4
	Summer Lake	54	25	79	5	6	7.6
	Denman Mgt. Area	1	2	3	0	0	0.0
	Malheur Refuge	127	130	257	3	7	2.7
	Cold Sprs. Ref.	150	101	251	8	19	7.6
Total Pintails		442	471	913	54	72	7.9
Wood Duck	Sauvie Island	2	41	43	1	6	14.0
	Klamath County	10	0	10	0	0	0.0
	Jackson County	68	55	123	6	8	6.5
	Malheur Refuge	4	1	5	1	1	20.0
	Finley Refuge	40	0	40	1	1	2.5
Total Wood Ducks		124	97	221	9	16	7.2
Redhead	Summer Lake	0	10	10	-	3	30.0
Ring-necked Duck	Sauvie Island	1	0	1	0	0	0.0

Table 18
DIRECT RETURNS FROM PRESEASON BANDED WATERFOWL
Oregon, 1966
(continued)

Species	Banding Area	Number Banded		Direct Returns		% Direct Returns	
		AD.	IM.	AD.	IM.	AD.	IM.
Hooded Merganser	Finley Refuge	4	0	4	0	0.0	-
Canada Goose	Malheur County	32	84	116	1	3.1	0.0
	Malheur Refuge	56	120	176	1	1.8	6.7
	Jackson County	2	19	21	0	0.0	10.5
	Warner Valley	6	2	8	0	0.0	0.0
Total Canada Geese		96	225	321	2	2.1	4.4
Coot	Sauvie Island	1	0	1	0	0.0	-
	Summer Lake	21	57	78	1	4.8	1.8
	Cold Sprs. Ref.	3	0	3	0	0.0	-
Total Coots		25	57	82	1	4.0	1.8
							2.4



Hunting Season

The 90-day waterfowl season opened on October 8, 1966 and terminated January 5, 1967 except in the Columbia Basin counties of Baker, Gilliam, Malheur, Morrow, Sherman, Umatilla, Union, Wallowa, and Wasco, where the season was extended on ducks and coots through January 15. In these nine northeastern Oregon counties shooting was permitted until one-half hour after sunset.

The brant season extended from November 28 through February 15 and the snipe season from October 22 through December 10.

The bag limit was increased from 4 ducks per day and 8 in possession in 1965 to 5 and 10 for the 1966-67 season. Except for 2 wood ducks and 1 hooded merganser per day, no other species restrictions were in effect. In the nine Columbia Basin counties the daily bag limit was 6 ducks and the possession limit 12.

Goose bag limits remained the same as in prior years. Six geese were permitted daily or in possession providing at least 3 in the daily bag were snow geese. One Ross' goose could be part of the daily bag or possession limit.

The brant bag limit was 3 daily or in possession; coot, 25 daily or in possession; and snipe, 8 daily with a possession limit of 16.

Harvest

In spite of the reduced fall and winter waterfowl populations, Oregon hunters enjoyed the most successful season since 1959. Duck hunting was good on migrants through October and November but dropped off sharply in December and January when hunting was confined to a relatively small population of wintering birds. Goose hunting remained good throughout the season on both migrant and wintering flocks.

Results of the annual random mail survey indicate that hunting success was up nearly 25 percent, with 435,995 ducks and 54,615 geese taken compared with 348,997 ducks and 43,654 geese bagged in 1965. The number of waterfowl hunters also increased from 44,470 to 49,790, the first indicated increase in waterfowl hunting since 1958 when the downward trend started. Daily success also improved with hunters averaging 1.3 ducks and 0.17 geese per day. See Table 19.

Very few hunters took advantage of the extended season and larger bag limits in the nine Columbia Basin Counties. Success remained low due to lack of hunting sites, low population of wintering birds, and relatively mild weather.

Hunting success and hunting pressure on five public hunting areas also increased over the previous season. Summaries of the results are presented in Tables 20 and 21.

Age classification of 2,979 snow geese shot at Summer Lake showed 508 adults to 2,471 birds of the year, a harvest rate of one adult to each six young. This is only an indication of an excellent production year in the Arctic and not a true age classification. General field observations revealed an age ratio of 2 adults to 3 juveniles.

Winter Inventory

The annual mid-winter inventory was conducted during the first week of January and revealed the smallest number of waterfowl wintering in the state since 1952. Only 252,753 ducks and 47,984 geese were counted as compared with 417,563 ducks and 68,039 geese in 1966. See Table 22.

Much of the decrease occurred among mallards, widgeons, and pintails in wintering areas along the Columbia River and in western Oregon.

Overall, the waterfowl population was down 34 percent, with ducks down 39 percent and geese down 29 percent. Brant were up 91 percent, swans up 33 percent, and coots up 1 percent.

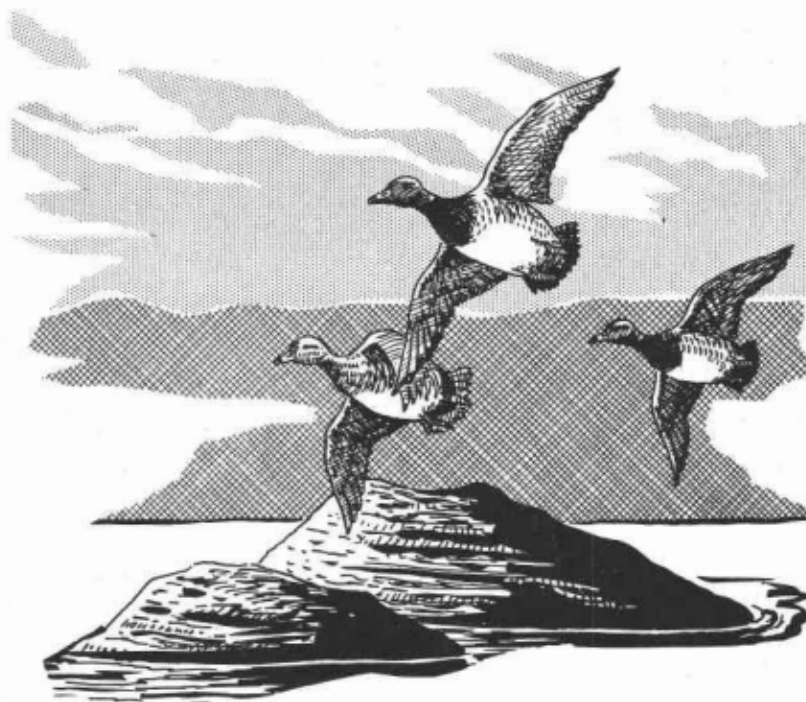


Table 19
WATERFOWL HARVEST

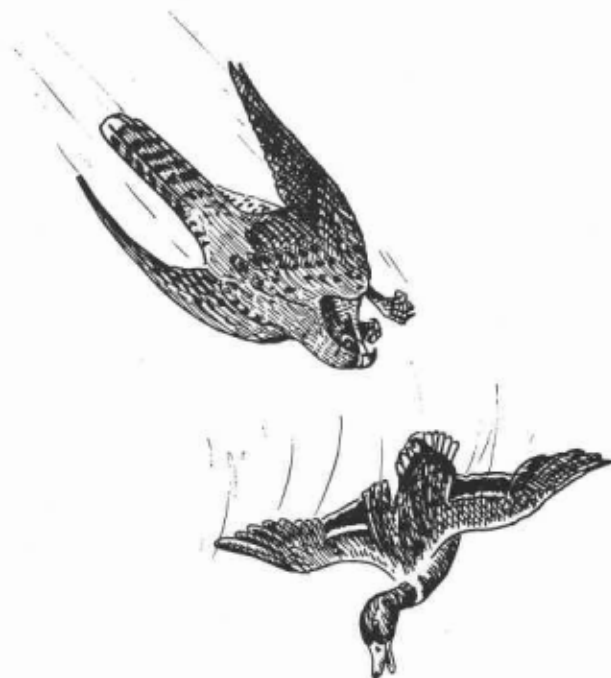
	1966	1965	1964
Size of sample	14,687	14,827	17,604
Percent of license holders hunting waterfowl	14.5%	13.6%	14.4%
Number of waterfowl hunters	49,790	44,470	46,121
Average times afield	6.66	6.53	6.38
Ducks killed per day	1.30	1.20	1.30
Geese killed per day	0.17	0.15	0.18
Total ducks killed	435,995	348,997	382,187
Total geese killed	54,615	43,654	51,761
TOTAL WATERFOWL KILLED	490,610	392,651	433,948
Change from preceding year	+24.9%	-9.5%	+1.9%



Table 20

SUMMARY OF SHOOTING GROUNDS SUCCESS

Area	Days of Season	Hunter Days	HARVEST			Total	Success Ratio	
			Ducks	Geese	Coots		1966	1965
Summer Lake	72	7,014	7,002	8,637	305	5	15,949	2.27 1.28
Sauvie Island	46	10,626	17,362	314	79	0	17,555	1.67 1.72
Gov't. Island	15	222	830	2	8	0	840	3.78 2.53
Warner Valley	44	293	430	131	0	0	561	1.91 1.54
Camas Swale	16	272	304	0	0	0	304	1.12 0.73
TOTALS		18,427	25,928	9,084	392	5	35,209	1.91 1.57



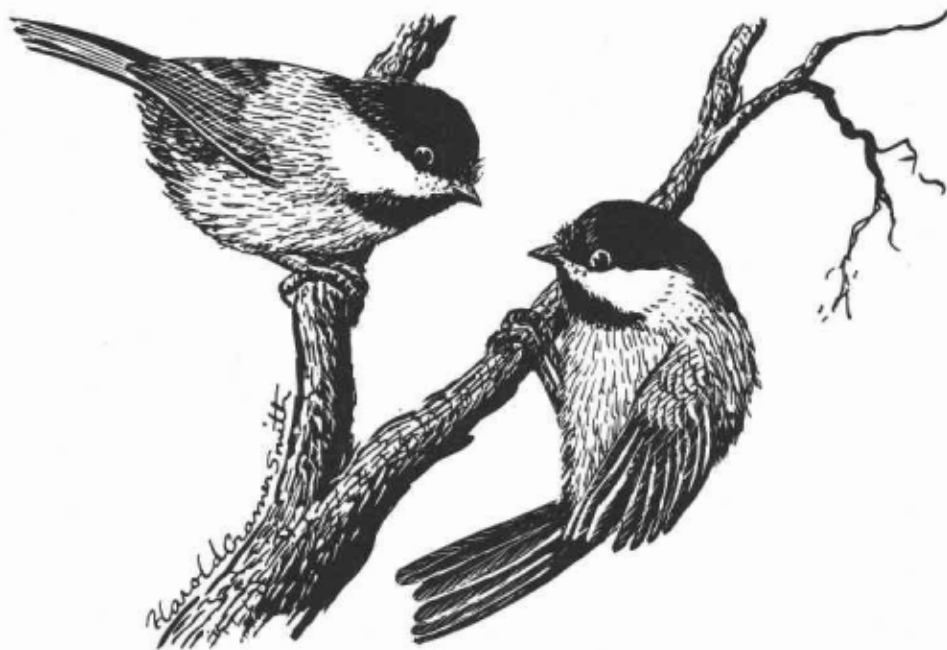


Table 21

SPECIES TAKEN ON PUBLIC SHOOTING GROUNDS
1966 and 1965 Seasons

Species	Summer Lake		Sauvie Island		Government Island		Warner Valley		Camas Swale		Total	
	1966	1965	1966	1965	1966	1965	1966	1965	1966	1965	1966	1965
Mallard	2,255	1,700	5,646	5,937	42	42	308	188	95	129	8,346	7,996
Am. Widgeon	1,257	840	5,012	2,958	468	81	20	23	50	11	6,807	3,913
Eur. Widgeon	-	1	-	-	-	-	-	-	-	-	-	1
G. W. Teal	394	390	3,253	3,071	249	44	9	1	67	53	3,972	3,559
Pintail	1,397	1,081	2,866	2,918	64	11	87	97	43	41	4,457	4,148
Shoveler	581	208	220	268	1	-	-	-	32	10	834	486
Gadwall	396	474	59	52	5	5	2	13	-	-	462	544
Cinn. Teal	40	62	-	-	-	-	-	-	-	-	40	62
B. W. Teal	-	-	2	2	-	-	-	-	-	-	2	2
Wood Duck	4	7	20	17	-	-	-	-	-	-	24	24
Ruddy	52	9	40	12	-	-	-	-	-	2	92	23
Goldeneye	37	15	9	6	-	-	-	1	-	-	46	22
Bufflehead	156	21	20	18	-	1	-	-	-	-	176	40
R. N. Duck	9	5	20	17	-	-	-	2	-	-	29	24
Les. Scaup	67	19	91	78	-	1	-	-	-	-	158	98
Gr. Scaup	8	-	-	-	-	-	-	-	-	-	8	-
Canvasback	137	11	49	7	-	-	4	-	-	-	191	18
Redhead	201	80	2	5	-	-	-	9	-	-	203	94
Hooded Merg.	2	1	23	23	-	-	-	-	1	-	26	24
Common Merg.	8	5	22	16	-	-	-	-	-	-	30	21
W. W. Scoter	-	-	2	1	-	-	-	-	-	-	2	1
Surf Scoter	1	1	1	-	-	-	-	-	-	-	2	1
Scoter (Unid.)	-	-	3	-	-	-	-	-	-	-	3	-
Old Squaw	-	-	1	-	-	-	-	-	-	-	1	-
Hybrid	-	-	1	-	-	-	-	-	-	-	1	-
TOTAL DUCKS	7,062	4,930	17,362	15,406	830	185	430	334	288	246	25,912	21,101

Table 21
SPECIES TAKEN ON PUBLIC SHOOTING GROUNDS
1966 and 1965 Seasons
(continued)

Species	Summer Lake		Sauvie Island		Government Island		Warner Valley		Camas Swale		Total	
	1966	1965	1966	1965	1966	1965	1966	1965	1966	1965	1966	1965
Snow Goose	8,323	836	6	4	-	1	44	30	-	-	8,373	871
Canada Goose	163	110	80	50	-	1	65	78	-	1	308	240
Lesser Canada	2	2	146	81	1	-	-	-	-	-	149	83
Cackler	65	19	76	18	1	-	12	53	6	-	160	90
White-front	75	49	6	5	-	-	13	15	-	-	94	69
Ross' Goose	8	9	-	-	-	-	-	-	-	-	8	9
Black Brant	1	-	-	-	-	-	-	-	-	-	1	-
TOTAL GEESE	8,637	1,025	314	158	2	2	134	176	6	1	9,093	1,362
Coot	305	234	79	33	8	-	-	11	10	2	402	280
Snipe	5	3	-	7	-	-	-	-	-	-	5	10



Table 22
WINTER INVENTORY TRENDS IN OREGON

Species	1967	1966	1965	1964	1963
Mallard	103,253	211,992	229,350	168,795	221,441
Gadwall	1,222	1,050	566	2,686	1,207
Amer. Widgeon	38,263	63,674	72,255	45,544	100,996
Eur. Widgeon	-	-	-	3	2
G. W. Teal	19,166	7,276	8,317	8,390	7,484
B.W./Cinn. Teal	1	1	-	25	5
Shoveler	9,040	1,020	370	1,014	18,217
Pintail	40,103	77,901	53,557	83,091	89,483
Wood Duck	113	67	57	60	69
Redhead	109	328	143	174	34
Canvasback	2,439	2,712	2,509	4,676	2,922
Scaup	5,925	4,144	6,635	19,033	7,470
Ring-necked Duck	1,032	2,542	1,403	1,471	887
Harlequin	11	14	11	17	14
Goldeneye	1,648	1,501	1,201	3,639	2,119
Bufflehead	4,786	3,853	3,670	2,707	3,138
Ruddy Duck	8,689	7,764	8,381	4,634	11,959
Merganser	3,469	2,467	1,431	3,316	2,657
Scoter	1,253	817	946	627	948
Unid. Ducks	12,231	28,440	5,796	12,726	16,676
TOTAL DUCKS	252,753	417,563	396,598	362,628	487,728
Coot	44,844	44,391	80,828	53,300	26,718
Snow Goose	18	57	427	3	700
Cackling Goose	826	4,435	930	1,948	5,794
White-fronted Goose	-	4	16	1	93
Canada Goose	47,104	63,543	37,623	47,689	51,426
Black Brant	1,523	798	1,325	1,626	1,155
TOTAL GEESE	49,471	68,837	40,321	51,267	59,348
Swan	5,853	4,389	4,265	6,873	4,396
TOTAL WATERFOWL	352,921	535,180	522,012	474,068	578,190
Percent change from previous year	-34.1%	+2.5%	+10.1%	-18.0%	-20.8%

Black Brant

During the 1966-67 brant season, which extended for 80 days between November 28, 1966 and February 15, 1967, only 1,523 brant were wintering in Oregon. Two hundred twenty-seven stayed on Yaquina Bay and 1,296 on Tillamook and Netarts Bays.

Because of the small local populations and the need for special decoys and equipment, few hunters participated in this specialized type of hunting. Only 23 hunters were checked during the season. They had bagged 14 brant in 78 hours of hunting for a success of .60 birds per man-day.

Snipe

In western Oregon, trends in the number of migrant snipe are measured in conjunction with the upland game census. Results obtained are expressed in birds per 100 acres of habitat and are tabulated with the censuses of the previous four years in Table 23.

On the breeding grounds of northeastern and southeastern Oregon where 20-mile pheasant crow count samples traverse snipe habitat, the number of snipe seen and heard is also recorded. On 280 miles of established transects, 245 snipe were observed as compared with 136 in 1966. (Table 24.)

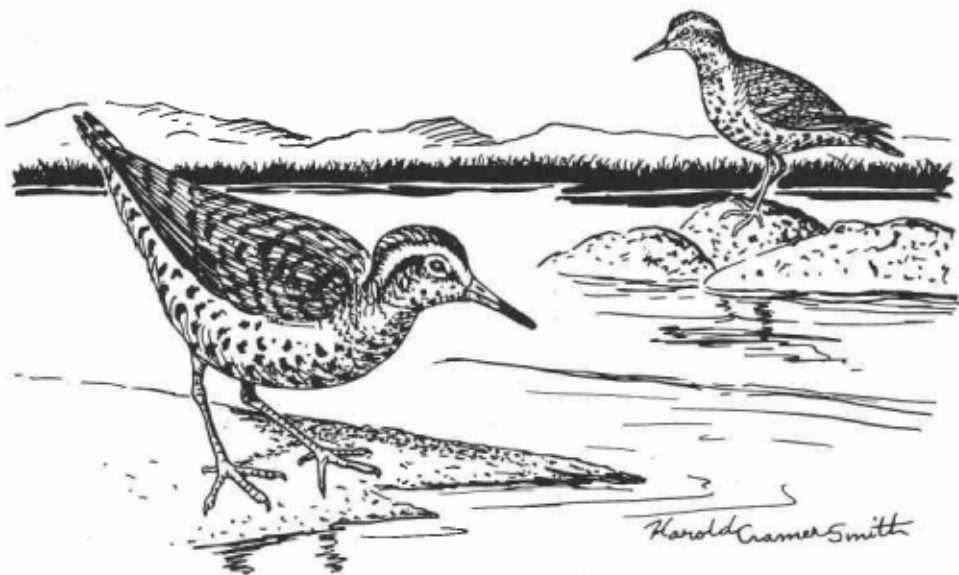


Table 23
SNIPE CENSUS
(Western Oregon)

Region	Birds per 100 Acres					1967	1967
	1967	1966	1965	1964	1963	No. Birds Observed	Acres Censused
Northwest	6.40	9.49	5.15	5.10	5.81	179	2,832
Southwest	2.00	0.17	0.30	0.17	0.67	12	600

Table 24
SNIPE CENSUS
(Eastern Oregon)

County	No. Samples	Mileage	Snipe		
			1967	1966	1965
Baker	5	100	166	46	33
Union	4	80	28	20	19
Wallowa	3	60	13	28	40
Lake	1	20	22	21	11
Harney	1	20	16	21	14
TOTALS	14	280	245	136	117



A drastic decrease in all raw fur prices since the period immediately following World War II has resulted in fewer trappers taking to the fields and marshes each winter. During the 1966-67 trapping season only 879 residents obtained trapping licenses. This included the landowner, who obtained a free license, as well as the general trapper. The rate of decline has been steady from the peak total of 2,681 in the 1946-47 season.

The 1967 legislature added the wolverine to the list of animals classified as furbearers, with the Game Commission promptly providing complete protection throughout the year. Nine animals are now classified as furbearers with seasons provided for the taking of seven. Fishers are the other species provided with year-around protection.

Seventeen animals, however, produce fur of commercial value, with most of the trapping effort directed toward the taking of beaver, otter, mink, and muskrat.

BEAVER AND OTTER

The season for the trapping of beaver and otter extended from November 15, 1966 through February 15, 1967 in all counties except Grant, Lake, Malheur, and Harney. In these four counties a November 1 opening was authorized to permit trapping of high country before snow and cold weather prohibited entry or made operation of a trap line difficult.

During the season, trappers purchased 12,021 beaver seals at \$1.00 each. They reported using 9,878 on beaver and submitted most of the balance for refund.

The catch of beaver, otter, and other fur-producing species is presented by county in Table 1.

Census

A census of 12 one-mile samples on 12 streams in Douglas County indicate a significant increase in beaver. Eighty-three slides, 15 dams, and 32 dens were tallied as compared with 69 slides, 7 dams, and 27 dens in 1966.

Damage

During the year, 210 complaints of beaver damage were received and acted upon. Some dead-trapping and live-trapping was conducted by Commission personnel to remove nuisance animals, but most of the complainants remedied their own problems through use of repellents or kill permits. Many deferred action until the trapping season opened when a private trapper trapped the sites for fur.

Table 2 shows the number and disposition of beaver complaints by region for the last three years.



Table 1
1966-67 FUR CATCH

County	No. Trappers' Reports	Beaver	Otter	Mink	Muskrat	Raccoon	Marten	Skunk	Civet Cat	Weasel	Opossum	Badger	Gray Fox	Red Fox	Wildcat	Coyote	Nutria
Baker	16	212	1	37	257	18	-	-	2	3	-	5	-	-	14	5	-
Benton	27	386	2	12	81	67	-	10	1	1	-	-	5	33	21	2	397
Clackamas	25	374	14	24	157	16	-	-	5	1	60	-	24	3	-	1	127
Clatsop	41	381	17	107	1,207	74	-	1	2	14	77	-	-	-	11	-	-
Columbia	30	386	5	27	281	54	-	3	2	3	157	-	-	2	11	7	69
Coos	33	647	37	35	631	45	-	3	21	-	-	-	-	-	36	6	-
Crook	11	158	-	2	27	4	-	-	-	-	-	1	-	-	14	3	-
Curry	6	95	9	2	238	9	1	-	-	-	-	-	-	-	1	-	-
Deschutes	22	87	4	111	461	2	27	-	-	1	-	1	1	-	26	10	-
Douglas	70	1,139	17	65	313	116	1	14	13	3	-	-	2	1	2	11	1
Gilliam	3	26	-	14	83	6	-	1	2	-	-	-	-	-	7	3	-
Grant	18	321	1	93	620	42	-	-	-	1	-	2	-	-	12	12	-
Harney	13	144	-	17	48	13	-	-	-	1	-	15	-	-	80	189	-
Hood River	5	51	5	10	124	44	-	2	-	5	-	-	-	-	21	15	-
Jackson	36	174	4	23	935	77	1	18	10	1	-	-	22	-	34	58	-
Jefferson	1	38	3	10	-	-	-	-	-	-	-	-	-	-	-	-	-
Josephine	15	95	13	58	734	81	-	1	8	-	-	-	21	-	3	2	-
Josephine	48	271	31	107	14,229	91	1	13	10	1	-	1	1	-	33	8	-
Klamath	3	161	-	7	26	4	-	-	1	-	-	1	-	-	13	7	-
Lake	99	1,418	47	131	2,389	201	-	15	83	6	-	-	18	11	49	20	304
Lane	49	628	24	75	224	188	-	-	29	-	-	-	1	2	107	28	20
Lincoln	32	561	6	41	111	89	-	21	10	-	11	-	30	25	7	2	465
Linn	37	117	51	10	4,183	42	-	-	-	1	-	26	-	1	153	403	-
Malheur	22	331	5	34	427	117	-	19	1	3	52	-	20	6	1	1	735
Marion	4	27	-	2	125	-	-	-	-	-	-	-	-	-	1	-	-
Morrow	22	140	5	10	1,183	14	-	1	-	2	55	-	3	2	-	-	28
Multnomah	13	334	2	14	32	25	-	-	-	-	-	-	1	14	-	6	209
Polk	1	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sherman	30	221	39	106	310	60	-	4	1	1	2	-	-	-	17	2	7
Tillamook	19	182	-	38	1,274	25	-	5	-	1	-	-	-	-	7	8	-
Umatilla	21	130	-	21	849	37	1	2	-	14	-	-	-	-	15	5	-
Union	21	64	10	59	829	140	-	12	2	2	-	5	-	-	77	11	-
Wallowa	6	110	1	11	1	4	-	-	-	-	-	-	-	-	19	-	-
Wasco	25	259	9	22	305	82	-	6	77	-	18	-	28	1	6	1	369
Washington	2	78	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-
Wheeler	13	114	7	4	42	21	-	-	-	-	3	-	-	-	3	4	147
Yamhill	879	9,878	369	1,300	32,740	1,808	32	151	280	65	435	57	177	101	801	827	2,878

TOTALS
Kingtail Cat: Josephine, 1

Table 2
BEAVER COMPLAINT DISPOSITION

Region	Complaints		Beaver Dead-trapped		Beaver Live-trapped and Transplanted		Kill Permits Issued	
	1966	1965	1966	1965	1966	1965	1966	1965
Northwest	96	68	3	0	3	6	2	0
Southwest	34	24	2	0	0	0	0	0
Central	21	8	10	1	14	3	0	5
Northeast	56	62	47	55	53	13	0	2
Southeast	15	14	10	11	5	6	0	0
TOTALS	210	176	174	47	57	75	28	2
							7	83
								31
								33



OTHER FURBEARERS

Fur Catch

Eight hundred thirty-nine (86 percent) of the 879 licensed trappers submitted reports of their fur catch. They reported catching a total of 51,900 fur animals of 17 species whose pelts sold for \$174,597.98. Some additional animals were taken by the non-reporting group and children under 14 years of age who were not required to obtain a license or file a report of their catch.

Nutria and opossum, two illegally introduced species, continued to increase and spread through western Oregon. Some trapping effort was directed toward these species, however, when a market developed for the largest and best quality pelts. But in general the animals trapped were accidentally taken in sets made for other species.

Fur Values

Trappers received 33 percent less for their furs during the 1966-67 season than they realized the previous winter. All species of fur were down in value, with the long-haired furs showing the greatest decline. Mink and muskrat values are now comparable to depression day prices.

The average prices received for all furs, as compiled from trappers' report cards, are presented in Table 3.

Table 3
AVERAGE PELT PRICES

Species	1966-67	1965-66	1964-65	1963-64	1962-63
Mink	\$ 5.62	\$ 7.33	\$ 7.64	\$ 8.31	\$ 7.68
Muskrat	.85	1.24	.98	1.11	.95
Marten	6.07	6.40	9.42	6.83	5.89
Otter	19.57	24.48	21.71	20.89	19.63
Beaver	11.60	11.90	7.94	10.55	10.24
Wildcat	8.92	14.08	5.78	5.25	4.57
Coyote	3.15	6.42	4.37	3.08	2.63
Badger	2.05	3.01	1.47	1.88	1.31
Raccoon	1.85	2.31	1.45	1.62	2.08
Gray Fox	1.30	1.83	1.16	.70	.80
Red Fox	3.07	3.97	1.51	3.34	3.69
Skunk	1.07	1.10	.86	.72	.77
Civet Cat	1.31	1.71	1.44	1.13	.83
Weasel	.55	.41	.49	.25	.52
Opossum	.45	.47	.30	.39	.29
Ring-tailed Cat	1.25	1.50	1.25	-	.88
Nutria	1.15	2.00	1.22	1.26	.85

Muskrats (Summer Lake)

With a stable water level in the Summer Lake Marsh for the past two summers the muskrat population showed a rapid recovery. The population was still too low, however, to supply a surplus for harvest. No muskrats have been cropped from the area in the last three winters.

Comparative house counts and harvest data for the last 10 years are presented in Table 4.

Table 4
SUMMER LAKE MUSKRAT CENSUS AND HARVEST

Year	Number of Houses	Muskrats Harvested	No. of Trap Nights	Av. No. Trap Sets per Catch
1958	1,033	1,652	3,994	2.4
1959	1,342	1,543	3,344	2.1
1960	1,228	1,602	3,920	2.4
1961	568	0	-	-
1962	588	550	1,238	2.2
1963	627	438	972	2.2
1964	712	417	1,271	3.0
1965	324	0	-	-
1966	68	0	-	-
1967	368	0	-	-
TOTALS	6,858	6,202	14,739	

Predators

The control of predatory and nuisance animals in Oregon is a co-operative effort participated in by several private, county, state, and federal agencies. The program is administered by the Division of Wildlife Services of the U. S. Fish and Wildlife

Service and operates on funds supplied by these agencies.

Control work is confined to those counties which appropriate funds to the program. Eight counties (Clatsop, Hood River, Jackson, Lake, Multnomah, Polk, Sherman, and Tillamook) did not participate.

Since repeal of the state bounty law in 1961 many of the counties have also discontinued payment. Only 15 of the 36 counties continue the bounty system of predator control. (Table 5.)

Table 5
ANIMALS BOUNTIED BY COUNTIES

County	Coyote	Bobcat	Wolf	Other
Benton	\$ 7.50 5.00 (pups)			Red Fox Adult \$3.00 Red Fox Pup \$1.00
Clackamas	3.00	\$2.50		Fox \$1.00
Columbia	3.00	2.50	\$2.50	Bear \$10.00 Fox \$2.00 Seal \$2.50
Coos	6.00	4.00		
Curry	25.00	2.50		
Douglas	10.00	2.50		
Gilliam	3.00	3.00		
Jackson	7.50	5.00	7.50	Fox \$3.50 Porcupine \$.50
Josephine	3.00	2.50	2.50	
Klamath				Porcupine \$.50
Lake	3.00	3.00		
Lincoln	15.00	3.00		Fox \$5.00
Linn	4.50	3.00	3.75	
Wheeler	3.50	2.50		
Yamhill				Gopher \$.15 Mole \$.15



A recent change in federal predator control policies shifted the emphasis from a general control program to a control of specific nuisance or destructive animals. Since this change in policy, no figures on the total predator take have been released.

An accelerated program of predator control on problem game ranges was continued, however, with emphasis on the removal of coyotes and bobcats from antelope kidding grounds, bighorn sheep areas, turkey release sites, and deer winter areas.

Coyote populations remain high throughout the state, with the heaviest concentrations located in northeastern and northwestern Oregon. Numbers of predators observed on big game census routes are recorded and shown in Table 6, with the number of coyotes also expressed in animals per thousand miles of travel.

Table 6
PREDATOR POPULATIONS

Region	Miles of Census	Coyotes	Bobcats	Foxes	Coyotes per 1,000 Miles
Northwest	2,095	39	11	5	18.6
Southwest	2,042	8	2	4	3.9
Central	1,299	14	0	0	10.8
Northeast	1,825	43	3	0	23.6
Southeast	1,802	16	0	0	8.8
TOTAL	9,054	120	16	8	13.3

A check of Jackson County bounty records revealed the following number of animals bountied during the last five years.

PREDATORS BOUNTIED
(Jackson County)

Species	1966	1965	1964	1963	1962
Coyote	778	707	728*	538	504
Bobcat	433	318	426	332	259
Fox	100	76**	-	-	-
Cougar	1	0	0	0	0

* Coyote bounty raised to \$7.50 from \$5.00. Government hunters discontinued.

**First year bounty paid on fox; \$3.50.

Habitat Improvement

Harold Crane Smith



The objective of this program is to increase or enhance game habitat. This is accomplished by providing food, water, and cover where one or more of these essential items is missing. Big game and waterfowl developments are initiated primarily on public lands. Upland game bird habitat improvements are made primarily on private lands. Public access to these lands is obtained by written agreement with the landowners. The developments made to improve wildlife habitat are cover plantings, herbaceous and browse seedings, upland game cistern installation, big game water hole and cistern developments, waterfowl nesting site and dike erection, and fencing to protect new developments or existing prime habitat.

Cover Plantings

Thirty-seven acres of block shrub and tree plantings were made on 22 sites in the Columbia Basin. Tree and shrub plantings were substantially reduced by unavailability of planting stock. New plantings were additionally reduced by the need for replacement of young plants lost due to drought in plantings made in 1966. Of the 40,975 trees and shrubs planted, 21,085 were replacements. Four thousand two hundred fifty multiflora roses were utilized in making replacements on eight sites in Wasco, Jefferson, and Crook Counties.

By autumn, plant survival was extremely poor in Union and Baker Counties. Three-leaved sumac had only 5 percent survival. American plum and black locust had 20 percent survival. Honey-suckle and wood rose exhibited 70 percent survival, but plants were stunted. In contrast, growing conditions in the spring of 1967 were very favorable, and until July 1 only a few scattered plants had been lost.

Tables 1 and 2 list details of plantings.

Table 1

TREE AND SHRUB PLANTINGS BY SPECIES AND COUNTY

Species	COUNTIES						
	Baker	Crook	Jefferson	Lane	Morrow	Umatilla	Union
American Plum					1,300	1,085	2,125
Black Locust					1,860	1,060	3,500
Blue Elderberry						20	65
Cascara				100			
Chokecherry					1,510	1,550	
Douglas Fir				100			
Honeysuckle	550	2,100	300		2,750	2,010	4,595
Multiflora Rose							
Russian Olive					2,035	865	1,850
Three-leaved Sumac					2,950	1,020	
Wood Rose	750				1,750	375	2,800
Total Shrubs & Trees	1,300	2,100	300	200	14,155	7,985	13,085
							1,850
							40,975

Table 2

SITES AND ACRES OF NEW BLOCK SHRUB AND TREE PLANTINGS

County	Number of Sites	Acres	Number of Plants
Morrow	7	23	11,630
Umatilla	7	10	4,635
Union	8	4	3,425
Totals	22	37	19,690

Five new ten-year cooperative agreements were signed for habitat improvement developments on private land. These agreements provide access to over 17,500 additional acres for hunting.

Habitat developments were also made, or are in progress, under memorandums of understanding and other agreements on lands of the State of Oregon, Bureau of Land Management, U. S. Forest Service, Bureau of Reclamation, Weyerhaeuser Timber Company, and Pacific Power and Light Company.

Annual agreements were signed with 17 cooperators in the Willamette Valley for the planting of Sudan grass in rye grass fields... opening 467 acres on 55 fields to upland game and waterfowl hunting.

Table 3
TEN-YEAR AGREEMENTS WITH PRIVATE LANDOWNERS

County	New Agreements	Agreements in Effect	**Sites Completed		Acres Newly Opened to Hunting
			66-67	Total	
Baker		3	3	6	
Benton		1			*1,560
Crook		8		11	
Deschutes		2		3	
Gilliam		19		46	
Grant		2		19	
Jefferson		4		36	
Klamath		7			
Lane		1			
Morrow	3	56	7	150	15,000
Polk		1		18	
Sherman	8 ^{/1}	51		216	
Umatilla	1	104	7	424	2,500
Union	1	23		41	*7,903
Wasco		7		19	
Totals	5	288	17	989	17,500+

* Total acreage open.

**Completed sites require no further cultivation and have permanent grass cover sown between shrub rows.

^{/1} Renewals.

In Sherman County, which has extensive upland game bird cover

developments, maintenance and evaluation checks were made in the summer of 1966 on all habitat projects. Little maintenance was required; however, annual checks for maintenance are necessary to protect investments. Increases in wheat allotments could mean the loss of some developments in Sherman County. However, no losses have yet occurred as a direct result of this change in the wheat program.

Evaluation trend counts were made for the 11th year on six samples totaling 18 miles, and for the 10th year on twelve samples totaling 33.5 miles. No counts were made in 1964 and 1965. The following table represents the game observed on these samples by year from 1954 through 1966.

Table 4
SHERMAN COUNTY UPLAND GAME BIRD
TREND COUNTS ON DEVELOPED LANDS.

Year	No. Sam- ples	No. Miles	Phea- sants	Valley Quail	Huns	Chu- kars	Lepus	Sylv.	Doves	Deer
1954	6	18.0	38	8	31	0	8	1	0	0
1955	12	33.5	151	160	90	0	39	17	78	8
1956	12	33.5	167	73	127	0	25	1	48	14
1957	12	33.5	169	197	95	0	13	11	28	8
1958	12	33.5	416	298	339	40	24	23	40	6
1959	12	33.5	139	187	37	0	7	4	80	12
1960	12	33.5	196	137	40	0	6	14	120	6
1961	12	33.5	237	80	52	0	8	2	33	13
1962	12	33.5	288	371	71	0	1	11	63	1
1963	12	33.5	448	248	199	38	15	13	120	10
1966	12	33.5	425	463	22	0	20	36	163	26



Herbaceous and Browse Seedings

One hundred forty-seven sites totaling 2,819 acres were seeded during the past year. Upland game and waterfowl food and cover plantings totaling over 880 acres were made on 100 areas.

The most extensive food plantings for pheasants and waterfowl were made at Fern Ridge Reservoir where cooperators seeded 150 acres of Sudan grass and 18 acres of corn. Thirty acres of Sudan, 7 acres of barley, and 4 acres of corn were planted there by habitat personnel. In the Willamette Valley, 17 cooperators also contract-planted 467 acres of Sudan grass on 55 sites for upland game and waterfowl use. On the fresh water areas in the coastal sand dunes south of Florence, 60 acres were seeded co-operatively with both the U. S. Forest Service and the Bureau of Land Management to grain, grass, and legumes for waterfowl, pheasants, and black-tailed deer. On Commission-owned Patch and Porter Islands in Malheur County, 60 and 25 acres, respectively, were seeded to barley and wheat for waterfowl and pheasant use. At Prineville Reservoir, 26 acres of the exposed lake bottom were fall seeded to wheat for green feed for waterfowl. With Forest Service cooperation, Wickiup Reservoir was fall seeded to grain for fall goose use. At Sauvie Island, trial plantings of self-perpetuating aquatic food plants were disked to reduce the number of plants, and the millets were sprayed to eliminate weeds.

Grass seedings were made in 23 established shrub plantings in Morrow, Umatilla, and Union Counties to provide permanent nesting cover for upland game birds.

Utilization of food plantings is excellent. Last fall, waterfowl consumed 90 percent of the barley planted at Florence. At Fern Ridge Reservoir, waterfowl use was substantial. Over 7,000 ducks were observed at one time in Sudan and corn plantings. At Patch and Porter Islands, geese kept spring planted grain mowed to ground level well into early summer.

More emphasis is continuously being placed on big game range seeding. Trial seedings are established at every opportunity to obtain valid information for large-scale plantings. Over 20 of the seedings made for big game were of this nature. The most extensive trials were on the Deschutes National Forest. Various combinations of four wing saltbush, bitterbrush, wheat grasses, alfalfa, and Sainfoin were planted on 19 sites. At Tumalo Reservoir, a 12-acre trial was established for the 900-acre abandoned reservoir site. The trial area was sprayed with 2,4-D in June 1966, drilled to crested Siberian and pubescent wheat grasses in September, and broadcast seeded with nomad alfalfa in March 1967. In Lake County, eight acres of a brush beating eradication trial at Hole-in-the-Ground were seeded with four wing

saltbush and Sainfoin. In Klamath County, a 10-acre juniper chaining and seeding trial was made on the Goodlow deer winter range. Junipers were dozed to simulate chaining. Trial species planted included bitterbrush broadcast in juniper root cavities; bitterbrush, wedge-leaf Ceanothus, and wheat grass drilled before and after dozing; and saltbush and nomad alfalfa broadcast seeded in April 1967. At Palomino Buttes on the Dry Mountain deer winter range, two one-acre trials were made of saltbush and Sainfoin. The Bear Ridge trial in Tillamook County consisted of aerial broadcast seeding of winter-active Harding grass, and white and sub clovers on burned portions of cutover timber lands. At Summer Lake in Lake County, a two-acre trial planting of saltbush and Sainfoin was established. A two-acre saltbush trial seeding was also made on Bureau of Land Management lands on North Myrtle Creek in Douglas County. Near Prineville Reservoir, wheat grass seed was added to a five-acre trial of saltbush and alfalfa. On the Ochoco National Forest, wedge-leaf Ceanothus seed was broadcast on 2.5 acres of disturbed soil near logging slash, and one acre on a sprayed silver sage stand was drilled to Sainfoin and saltbush seed.

Many extensive big game seedings were also made. One thousand acres of the Barnes pasture juniper chaining area on the Camp Creek deer winter range were drilled with bitterbrush seed. Also in Crook County, 50 acres were drilled to saltbush and Sainfoin at Steens and Dagus Lake. On the Ochoco National Forest, bitterbrush seed was broadcast seeded with an erosion control grass mixture on 274 acres in three ranger districts. A portion of each of the three seeding sites was also seeded to bitterbrush with the Hansen browse seeder to determine the feasibility of broadcast seeding disturbed areas in this manner. The 200-acre Plainview burn in Deschutes County, which was sprayed with 2,4-D in the spring of 1966, was drilled to wheat grass in November and broadcast seeded with alfalfa in March 1967. At Prineville Reservoir, seven sites totaling 45 acres were drilled with various combinations of wheat grasses, alfalfa, saltbush, and Sainfoin. One hundred acres of newly burned soil on Winter Rim in Lake County was cooperatively seeded with the Fremont National Forest to Dutch white clover on moist sites and to nomad alfalfa on the drier sites. Fifty acres of skid roads and disturbed areas in the Tool Box burn, also on the Fremont Forest, were cooperatively seeded with bitterbrush. Table 5 lists all big game seedings.

Other practices undertaken to stimulate browse and herbaceous growth for big game included fertilizer application and bulldozing. In Douglas County, five tons of 16-20-0 fertilizer was applied cooperatively with the Bureau of Land Management to 20 acres of big game winter range on Upper Hubbard Creek. On Bear Ridge in Tillamook County, 30 acres of clear-cut land were

similarly fertilized. On Upper Mountain Meadow, a deer and elk winter range in the Umpqua National Forest, high skirted willows and serviceberry were cut off two feet above ground level to promote basal sprouting and 20 acres of 50-foot-wide strips were bulldozed through dense brush stands in preparation for fall seeding. In Grant and Lake Counties, mahogany regeneration and rehabilitation projects were undertaken. In the Canyon Creek drainage of Grant County, ground cover was removed from soil adjacent to mahogany with good seed crops to allow seed to reach mineral soil. Mahogany in thick stands was opened to allow sunlight and moisture to penetrate the closed canopy and some mahogany was pushed over to stimulate sprouting. Approximately 60 acres of mahogany were treated on this project. In Lake County, several hundred yards of narrow lanes were dozed through heavy old growth stands on the Crooked Creek deer winter range.

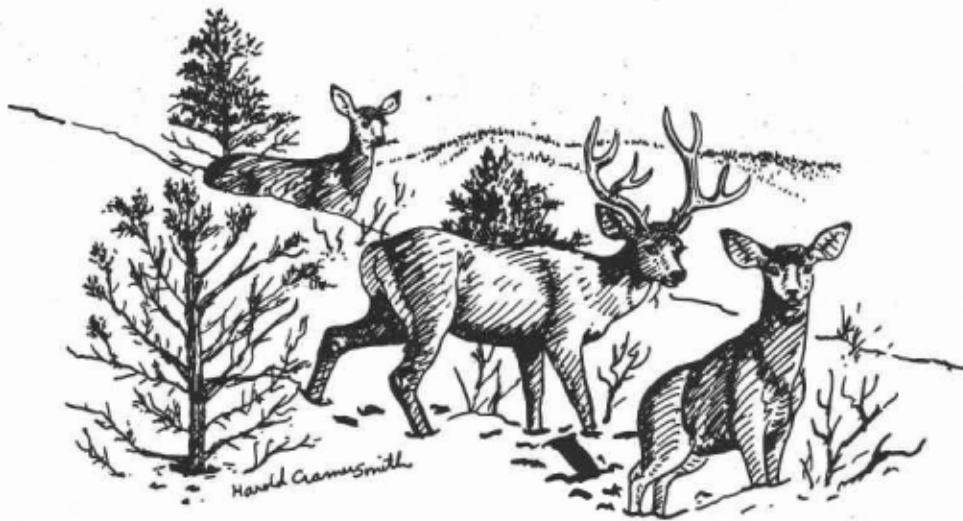


Table 5
BIG GAME HERBACEOUS AND BROWSE SEEDINGS

County	Area	Sites	Acres	Varieties
Clatsop & Tillamook Crook	Coast Range - newly logged lands	4	200	Lotus major
	BLM Lands - Camp Creek	4	1,000.5	Browse
	Ochoco N. F. - logged lands	3	278	Browse
	Prineville Reservoir	7	45	Grass, legumes, browse
Deschutes	Private Land - Prineville Reservoir	1	12	Grass
	Deschutes Forest - forest-wide trails	19	7.5	Grass, legumes, browse
	Deschutes Forest - Plainview Burn	1	200	Grass, legumes
	Tumalo Reservoir	1	12	Grass, legumes
Harney	Palomino Buttes	2	2	Sainfoin, four-wing s.
Klamath Lake	Goodlow Deer Winter Range	1	10	Grass, legumes
	Deschutes Forest - Hole-in-the-Ground	1	8	Grass, legumes, browse
	Summer Lake	1	2	Saltbush, Sainfoin
	Tool Box Fire		50	Browse
Tillamook	Winter Rim Fire	1	100	Legumes, browse
	Nestucca River - Bear Ridge	1	10	Grass, legumes

HERBACEOUS SEEDINGS FOR GAME BIRDS

County	Area	Sites	Acres	Varieties	Species Benefited
Benton	Rye Grass Fields	4	143	Sudan grass	Pheasants, waterfowl
Columbia	Sauvie Island	1	5	Aquatics	Pheasants, ducks
Crook	Prineville Reservoir	2	41	Grain, wheat grass	Waterfowl, upland b.
Deschutes Lane	Wickiup Reservoir	1	10	Wheat	Geese
	Fern Ridge Reservoir	11	215	Grain, corn Sudan grass	Pheasants, waterfowl
	Florence Sand Dunes	2	60	Grain, grass, legumes	Waterfowl, pheasants
	Rye Grass Fields	10	91	Sudan grass	Pheasants, waterfowl
Linn	Rye Grass Fields	36	205	Sudan grass	Pheasants, waterfowl
Malheur	Patch & Porter Islands	4	85	Barley, wheat	Pheasants, waterfowl
Morrow	Shrub Plantings	7		Perennial grass	Upland birds
Polk	Rye Grass Fields	5	28	Sudan grass	Pheasants, waterfowl
Umatilla	Shrub Plantings	7		Perennial grass	Upland birds
Union	Shrub plantings	9		Perennial grass	Upland birds

Seedlings are visited frequently to evaluate their success. At Prineville Reservoir, browse and herbaceous seedlings are being utilized extensively by local deer. Four-wing saltbush seeded there this spring looks promising. Extensive trial seedings of Sainfoin, a legume used extensively in Europe, were made throughout eastern Oregon. Very encouraging observations were made in Deschutes, Harney, Crook, Lake, Klamath, Grant, and Wallowa Counties. Sainfoin greens up as early as crested wheatgrass and is winter active during mild winters and is used extensively by mule deer where it has been planted in Idaho. On the Ochoco National Forest, observations were made on several seedings. Wedge-leaf Ceanothus in and around slash piles made an excellent emergence; however, there appeared to be no evidence of the influence on this germination by the burning of the slash. The drilling of bitterbrush and Ponderosa pine in the clear-cuts resulted in an excellent emergence of bitterbrush and a fair emergence of pine. An inspection of the broadcast erosion seedings on logging disturbance where bitterbrush was included revealed encouraging results. Numerous plants were observed, and broadcasting on sites of severe logging disturbance at this time appears most practical.

Cooperation by the Prineville District of the Bureau of Land Management gave the Game Commission its first opportunity to make large-scale bitterbrush seedings on the Camp Creek deer winter range. This was also the first opportunity to evaluate the effects of juniper chaining and revegetation on deer winter ranges. Seedings of grass and bitterbrush are making very noticeable improvement in growth. The drilling of 1,000 acres with 700 pounds of bitterbrush in January and February of 1967 in the Barnes pasture chaining exhibits nearly phenomenal emergence for this species.

Deer are still attracted to the chainings in large numbers during January, February, and March. The downed junipers still living are providing much deer forage. Cattle and deer are feeding on seeded grass, bitterbrush, and released native grasses, forbs, and shrubs. The following table gives the results of 20 one-tenth-acre deer pellet group transects read in the spring of 1965, 1966, and 1967. The transects designated controls are in adjacent standing juniper nearly identical to the chained areas prior to chaining.



Table 6
CAMP CREEK PELLET GROUP TRANSECTS

Year	CHAINED AREA			CONTROL AREA	
	No. Samples	No. Deer Pellet Groups	% of Total Use	No. Samples	No. Deer Pellet Groups
1965	10	316	75	10	105
1966	10	816	70	10	351
1967	10	690	82	10	153

An inspection was made after two growing seasons of bitterbrush drilled with crested wheatgrass on the Cold Springs brush spraying and seeding. Bitterbrush was drilled from two openings of the rangeland drills seeding wheatgrass. This planting procedure seeded bitterbrush on 380 acres of the 2,000-acre spray project. A fair stand of bitterbrush with plants up to six inches tall can be found on most of the seeded area. The first and most critical spring after seeding was one of the worst for several years.

In Lake County, brush beating and seeding practice in the vicinity of Cabin Lakes Guard Station has thus far exhibited poor results. Also in Lake County, high desert tract counts on 109 one-mile samples and controls to evaluate BLM range rehabilitation practices were again read at Hampton. No significant changes in wildlife numbers are yet apparent. Seedings are being utilized extensively by jack rabbits. Caged alfalfa plants average 15 inches high, whereas uncaged plants average only 5 inches in height.

In Klamath County, the seeding trial in the Pokegama, to test the adaptability of plants for use in that area, was evaluated after two growing seasons. Topar pubescent wheatgrass, greenar intermediate wheatgrass, Sainfoin, and nomad alfalfa were the species demonstrating the greatest potential for use in that area. Plans are to drill 1,000 acres in the fall of 1967 using pubescent, intermediate, and Siberian wheatgrass and nomad alfalfa and Sainfoin.

The South Goodlow juniper chaining and revegetation trial in Klamath County demonstrates high potential for this practice. Excellent initial stands of wheatgrasses and bitterbrush have been obtained. Some emergence was observed also on four-wing

saltbush and wedge-leaf Ceanothus. In June of 1966, seven one-tenth acre deer pellet group transects to measure deer trends in relation to this practice were established and read. Transect #1 is located within the trial area, and the other six transects are located in juniper stands where this practice is anticipated. The transects were again read in June of 1967 after the chaining trial. Pellet group numbers indicate a substantial increase in deer use on the chained area.

Table 7
GOODLOW PELLET GROUP TRANSECTS

Transect Number	Pellet Groups	
	1966	1967
1*	19	77
2	58	54
3	33	37
4	16	20
5	38	37
6	32	51
7	43	68

*Transect located in the chained area.



Upland Game Bird Cisterns

Twenty-seven self-filling cisterns were installed at new locations in the Columbia Basin, Baker, and Harney Counties. Aluminum roofing water collecting aprons and Fiber-glas water holding and drinking troughs were made by habitat personnel. Seventeen cisterns placed in Morrow and Umatilla Counties are primarily for pheasant use. Two cisterns placed near Brownlee in Baker County and eight installed in the Alvord area of Harney County are for chukar utilization.

Four old inoperative concrete cisterns in Umatilla County were buried and replaced with Fiber-glas cisterns. Five Fiber-glas cisterns were removed from Alkali Lake, Lake County, where no use developed. These units were issued to the Lakeview District BLM for installation in the North Warner area. In Sherman County, one cistern was moved to a new location and one unused cistern in Crook County was removed for future use. All cisterns were inspected and maintenance performed where necessary.

Table 8
UPLAND BIRD CISTERNS IN OPERATION

County	Installed	Removed	Total in Operation
Baker	2		2
Crook		1	1
Deschutes			2
Gilliam			32
Grant			12
Harney	8		8
Jefferson			45
Lake		5	26
Morrow	10		131
Sherman	1	1	160
Umatilla	7		214
Wasco			5
TOTALS	28	7	638

Big Game Water Holes and Cisterns

Water developments are made on public lands cooperatively with the U. S. Forest Service and Bureau of Land Management. Materials were supplied to BLM for the development of 10 springs on BLM lands. Development consists of installing water collecting pipes, boxing, piping to watering troughs, fencing the water source and seeding permanent grasses in the fenced areas. Four springs were developed in Catlow Valley in Harney County and six in the Warner and Juniper Mountain areas of Lake County. One of the Lake County units involves the use of a 4,000-gallon storage tank for a spring that dries up in late summer. The tank will store excess water for dispersal during the period of no flow to insure a season-long water supply.

Three new excavated water holes were constructed by habitat personnel on the Deschutes Forest; one on the Crescent District and two on the Sisters District. Three other existing water holes north of Sisters were enlarged and deepened. Five tons of bentonite, supplied by the Forest Service were applied to the eight water holes in this locality to reduce seepage loss.

Eight catchment-type big game cisterns were installed cooperatively with the Ochoco and Deschutes National Forests; five on the Snow Mountain District and three on the Crescent District. All big game cisterns are maintained annually. Float valves are removed in the fall before the freeze-up and re-installed in the spring. Extensive repairs were made to the three water collecting aprons crushed by snow on the Snow Mountain District.

Table 9
1966 BIG GAME WATER DEVELOPMENTS

County	Cooperating Agency	Type of Development	Number	Total in Use
Deschutes	USFS	Cistern	3	23
Deschutes	USFS	Water Holes	3	8+
Harney	USFS	Cistern	5	7
Harney	BLM	Spring	4	35*
Lake	BLM	Spring	6	40*
TOTALS			21	113+

*Includes developed water holes.

Waterfowl Nesting Sites and Dikes

Placement of wood duck nest boxes was continued. Boxes deteriorate and are destroyed by vandals. Trees on which they are placed blow down, and are cut down by beaver and cottonwood loggers. Consequently, at least every five years it is necessary to place new boxes on old sites. This year 205 boxes were erected in eleven counties as shown in Table 10.

Table 10
WOOD DUCK NEST BOX PLACEMENT

County	Number Erected	Total Erected to Date
Benton	48	440
Clackamas		109
Clatsop	20	195
Columbia	20	135
Coos		43
Deschutes		2
Douglas		104
Hood River	1	1
Jackson		103
Josephine		23
Klamath		60
Lane	8	329
Lincoln		38
Linn	39	619
Marion		235
Polk	15	209
Tillamook	20	84
Union	10	18
Wasco	7	17
Washington		110
Yamhill	17	169
TOTALS	205	3,068

Five bulldozer-built nesting islands were constructed on Howard Prairie Reservoir in Jackson County. Vegetation planted for erosion control was kept grazed off by waterfowl and it was necessary to install log booms around the islands to decrease erosion from wave action.

One replacement and six new goose nesting platforms were constructed at Prineville Reservoir. Nine of the twelve platforms on the reservoir were used by nesting Canada geese in 1967. Waterfowl utilization of Prineville Reservoir has steadily increased since the initiation of food and nesting developments on this area. The following table represents the duck and goose days of use recorded in the month of June on the reservoir since 1963.

Table 11
PRINEVILLE RESERVOIR WATERFOWL USE DURING JUNE

Year	Duck Days of Use	Goose Days of Use
1964	420	780
1965	1,500	1,200
1966	1,500	1,800
1967	4,250	4,650

At Fern Ridge Reservoir in Lane County, two hundred fifty yards of small dozer-built dike were constructed to impound winter runoff water. One new small pond was constructed, and on three existing nesting ponds the canary grass and cattails smothering the ponds were removed.

Fencing

Erection of fencing is necessary in many areas to protect shrub plantings and upland bird cisterns from livestock use. Over 700 rods of fencing were used to protect 10 shrub planting sites in Union and Umatilla Counties. In Umatilla County four fence stiles were constructed to provide better hunter access and to protect fences.

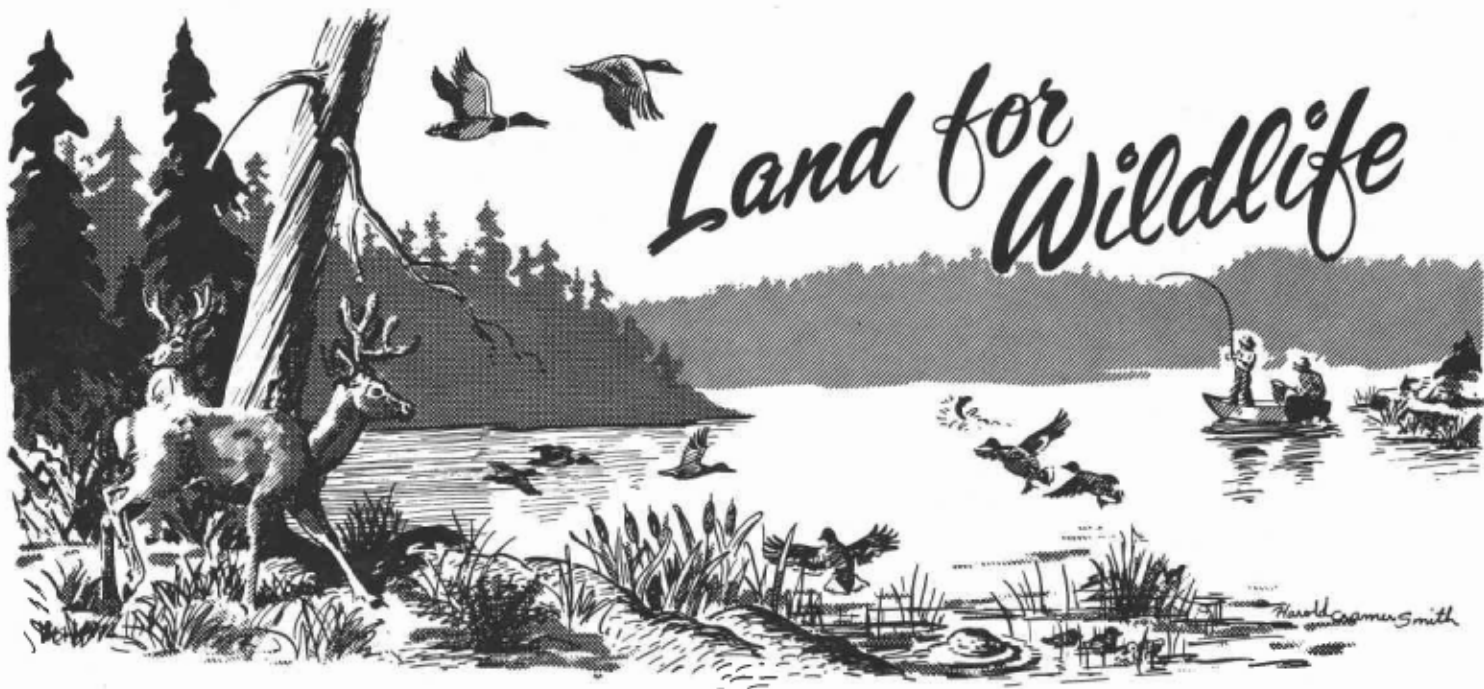
Fencing is also necessary to regulate livestock grazing on range

rehabilitation projects. Eleven hundred seventy-eight rods of fencing (3.7 miles) were constructed for this purpose. Trespass cattle made necessary the cooperative construction of 880 rods of fence around the 200-acre Plainview burn seeding in Deschutes County. One hundred ninety-three rods of three-strand barbed wire suspension type fence were constructed around the Goodlow Mountain and Tumalo Reservoir seedings. Thirty-five rods of deer-proof fence were also erected on the Goodlow area to determine the effect of deer browsing on new seedings. The right-of-way flagging for the 5½-mile livestock fence on the Pokegama deer winter range was completed and fence construction was initiated.

Fencing to control summer and fall livestock use on big game browse winter ranges increases substantially the amount of browse available for deer winter use. During the year, cooperative fencing plans have been made with the Bureau of Land Management, U. S. Forest Service, and Weyerhaeuser Timber Company for fencing, within the next year, portions of the Silver Lake, Gearhart, Eastside Steens, Pokegama, Goodlow, and Murderer's Creek deer winter ranges.

At Prineville Reservoir, fluctuating water levels and human use make fence maintenance to exclude livestock a routine task. However, results are beginning to show. Once bare shore lines now have considerable growth of native willows and other vegetation. Several older fences surrounding shrub plantings in Sherman, Umatilla, and Morrow Counties received major repairs.





Wildlife Lands in Management Areas

Seventeen land acquisition and development projects have been initiated since 1942. Most projects have received federal assistance through the Pittman-Robertson Act and Public Law 537.

Three of the project areas are being developed primarily for big game, five for waterfowl, three for upland game, and the remainder for a combination of waterfowl and upland game use. Project areas total 109,650 acres of which 60,112 acres have been purchased to date, while 26,668 acres are controlled under lease or agreement. The remainder remains in private ownership, making it difficult to exercise efficient control and management.

During the period from July 1, 1966 through June 30, 1967, 250 acres in the Klamath Management Area were purchased at a cost of \$124,000. Also during this same period, an exchange in the Summer Lake Management Area with an adjacent private owner resulted in an increase of 12 acres for that area at no cost. In addition, 67 acres in the E. E. Wilson Management Area were turned over to the U. S. Air Force. Expenditures for all land purchased to date total \$2,895,041, while the cost for lands leased totals \$2,660 annually.

ORS 496.340 specifies that certain real properties, exclusive of improvements, administered by the Game Commission are subject to county taxes. These include most of the project areas listed with the exception of military lands. Taxes and assessments during the year totaled \$50,461.10

Table 1 summarizes the status of land management projects, followed by a detailed account of activities on the respective areas.

Table 1

WILDLIFE LANDS

Area	Date Initiated	Project Area		Purchased to Date		Lease or Agreement		1966-67 Taxes & Assessments
		Acres	Acres	Acres	Cost	Acres	Annual Cost	
Bridge Creek	1962	15,375	7,311	\$	143,713	-	-	\$ 2,172.00
Camas Swale	1942	2,700	2,522		100,000	-	-	7,227.77
Kenneth Denman	1953	1,920	160		48,000	2,037 ¹ / ₁	-	1,160.35
Fern Ridge	1949	3,972	-		-	3,936 ¹ / ₁	-	79.19
Fort Stevens	1950	1,447	-		-	36 ¹ / ₁	-	-
Government Island	1949	2,565	2,093		158,878	1 ¹ / ₂	-	5,070.60
Henderson Marsh	1960	700	-		-	700	-	-
Klamath	1949	7,656	3,761		395,300	2,410	-	1,348.99
Ladd Marsh	1949	3,747	2,224		336,780	-	-	3,739.92
McNary	1953	100	-		-	100	-	-
Prineville Res.	1962	3,360	-		-	3,360	-	-
Sauvie Island	1946	12,129	7,578		877,337	3,495	\$1,500	15,320.95
Snake Riv. Islands	1959	219	219		-	-	-	-
Summer Lake	1944	17,400	11,865		244,000	1,505 ¹ / ₃	-	4,704.72
Wenaha	1953	17,719	9,290		201,758	3,963 ¹ / ₄	1,150	-
White River	1953	17,016	14,104		339,275	1,285 ¹ / ₄	10	2,648.96
E. E. Wilson	1950	1,625	85		50,000	880 ¹ / ₁	-	6,347.65
TOTALS		109,649	60,112	\$2,895,041	26,668	\$2,660	\$50,461.10	

¹/₁ Conveyed by U.S.A. to State with restrictions under Public Law 537.

²/₂ Public domain withdrawn from disposal and reserved for wildlife and recreational use.

³/₃ Executive order reserving land for wildlife use.

⁴/₄ Management agreement with B.L.M. making lands available primarily for wildlife use.

SAUVIE ISLAND

In 1947 the Game Commission initiated acquisition of the northern half of Sauvie Island in order to preserve and develop wintering grounds for waterfowl and to provide an area for public hunting. The project area encompasses 12,129 acres, of which 11,073 acres have now been purchased or are under long-term lease from the State Land Board. No additional land purchases were made during the year.

Development and Maintenance

A 15 c.f.s. propeller pump was installed at the northwest corner of the Columbia Drainage District dike to provide early fall water for normally dry lake beds within the diked area. Water was brought to the pump site by excavating an 850-foot-long ditch from Little McNary Lake. A power line to the site was constructed by P.G.E.

The McNary water control in the A-1 canal, which was damaged by high water, was reconstructed. Three large culverts were also installed in the ditch to provide sites for vehicle crossings.

Three and one-half miles of fence were constructed around the Lyons tract to exclude cattle from wildlife croplands. An additional 1,000 rods of fencing around various tracts on Sauvie Island were replaced, and 140 rods replaced on Government Island. Eight hundred forty additional rods of fencing was repaired.

The legislative refuge around Mouse Island Lake and Little Sturgeon Lake was re-surveyed and permanently posted.

A total of 544 acres was planted to wildlife food crops and left standing for winter waterfowl use. Acreages were as follows: Buckwheat, 246; corn, 100; proso millet, 80; Jap millet, 20; spring barley, 36; and fall barley, 62. No crops were planted on Government Island due to a prolonged spring freshet which kept the island inundated through the spring months.

Recreation

A survey was conducted to assess the total annual recreational activity on the Sauvie Island Management Area. It shows the importance of the area as a multiple use recreational site.

The number of recreational man-days for the one-year survey totaled 201,208. Sightseeing was the major activity, with

nearly 31 percent of the total use. Angling accounted for more than 43 percent of the use and was equally divided between river fishing for anadromous species and lake fishing for warm-water fish.

Public hunting, one of the primary purposes of the area, ranked fifth among the recorded activities with only 5 percent of the total use.

Hunting

A total of 11,310 hunters checked through the checking stations and bagged 17,362 ducks, 314 geese, 79 coots, 801 pheasants, and 1 quail. Hunting success by unit is presented in the following table.

SAUVIE ISLAND
HUNTING SUCCESS BY UNIT

Unit	Waterfowl & Pheasants	No. of Hunters	Birds per Hunter-Day		
			1966-67	1965-66	1964-65
McNary	5,259	3,608	1.46	1.49	1.59
Sturgeon	5,102	3,116	1.64	1.69	1.66
West	7,153	3,781	1.89	1.93	1.69
Racetrack Blinds	730	509	1.43	2.10	1.56
Oak Island Blinds	313	296	1.06	1.19	1.29
TOTALS	18,557	11,310	1.64	1.69	1.63

On Government Island, waterfowl hunting was permitted for 20 hunters on Wednesdays and Sundays from November 14 to January 5. Two hundred twenty-two hunters obtained permits and bagged 830 ducks, 2 geese, and 8 coots, for a success of 3.8 birds per man.

Tables showing waterfowl populations, banding results, and hunting success are presented in the waterfowl section of this report.

SUMMER LAKE

In 1944 the Game Commission initiated purchase of land for the Summer Lake Management Area with primary objectives of developing and maintaining habitat for waterfowl and providing an area for public hunting. The area now controlled totals 17,321 acres, with 11,865 acres purchased, 1,505 acres leased, and 3,963 acres withdrawn for wildlife use. Twelve acres were added to the project during the year through a land exchange with a private landowner.

Development and Maintenance

Two 10,000-gallon water tanks which furnish domestic water for the headquarters area were razed and replaced with a 30,000-gallon metal standpipe.

The majority of buildings on the area were painted during the summer months.

Wind and water caused considerable erosion to some of the unprotected dikes and necessitated a great deal of maintenance work. One thousand yards of rock and gravel were used to repair the damage.

Twelve nesting islands were constructed in the marshy areas on the Delameter tract.

Three hundred acres were seeded to cereal crops for wildlife use. Three acres were planted to pubescent wheat and 73 acres of established alfalfa were maintained.

Strip farming was continued on the larger fields to control wind erosion and facilitate the control of weeds on the fallowed strips.

The cereal crops received only light use by waterfowl during the past year because of the open winter, light yield, and heavy predation by blackbirds.

Two cuttings of alfalfa, totaling 172 tons, and 92 tons of wild hay were harvested and sold to local ranchers.

Biological

Much of the biological work conducted on the area during the year is summarized and presented in the waterfowl and furbearer sections of this report. Included are periodic waterfowl

inventories, production success, hunter success, species composition of waterfowl bagged, results of banding programs, and muskrat inventory and harvest.

KLAMATH

In 1949 the Game Commission initiated action to acquire 7,656 acres of land in the Miller Island area, six miles southwest of Klamath Falls, for a waterfowl management area. To date, 2,761 acres have been purchased and an additional 2,410 acres are under long-term lease. The remaining land within the project boundaries is in private ownership and remains to be acquired. Six hundred three acres were purchased in two tracts and added to the management unit in 1966.

Development and Maintenance

A new 750-gallon concrete septic tank was installed at headquarters to replace the 650-gallon metal tank which disintegrated and collapsed.

The foundation under the back porch of the Gregory house was rebuilt, the Delameter barn painted, and the irrigation pump-house re-roofed.

One-half mile of dike along the Klamath River was riprapped with 850 tons of 12-inch minus rock, and one-half mile of dike on the Delameter tract reconstructed. Three-eighths mile of dike on the B. B. Hooper tract was rebuilt.

A new 12-inch irrigation pump was purchased to replace the broken down 10-inch pump on the Delameter tract.

Four hundred ten acres were seeded to spring wheat and barley and 65 acres were planted to common rye and winter wheat last fall. Intensive grazing by spring migrant geese resulted in over 50 percent of the fall seedings.

Eighty acres of alfalfa were fertilized, irrigated, and harvested. The hay produced was sharecropped, and fertilizer purchased with the revenue. An additional 300 acres of alfalfa and pasture lands have been acquired with the purchase of the Hooper and Largent tracts.

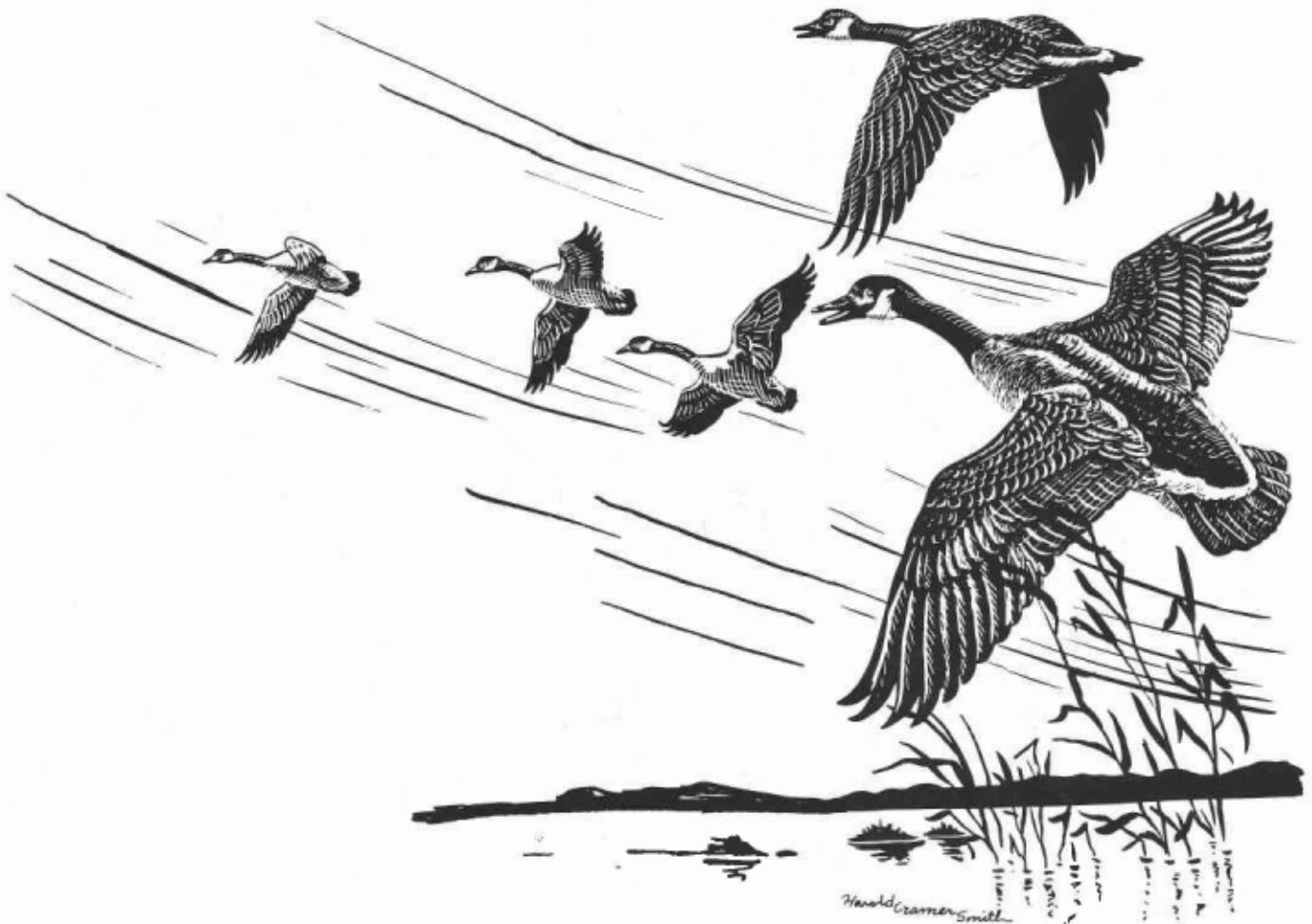
Biological

Early fall utilization of standing grain by ducks and geese was heavier in the fall of 1966 than it has been since 1958. Over half the grain remained, however, for the spring migrants.

The peak number of spring migrant waterfowl occurred around March 1, when 140,000 snow geese, 50,000 white-fronts, 14,000 cacklers, and 800 honkers were using the area. Only 3,000 to 4,000 ducks used the fields during this period.

A total of 91 duck broods of eight species was counted on a two-square-mile section of the area in mid-July.

During the hunting season, 8,908 hunters were counted on the area, with 1,681 checked for hunting success. They had bagged 2,264 ducks, 41 geese, and 394 pheasants for an average success of 1.6 birds per man.



CAMAS SWALE

Land acquisition for the Camas Swale Management Area was initiated in 1942. To date, 2,522 acres of the 2,700 acres in the project area have been acquired. No new tracts were added to the project during the year.

Development and Maintenance

Three one-half-acre ponds were excavated in the southwest corner of the project. They will be filled by surface runoff or by pumping.

All ten ponds on the area were cleaned and water levels maintained during the fall and winter months by surface runoff or pumping.

The pump at the main irrigation well was lifted and 15 feet of pipe added to the column. The additional depth should provide ample water for irrigation of wildlife food crops and filling of impoundments.

Three hundred seventy acres of wildlife food crops were planted and left standing for waterfowl use. Included were 65 acres of corn, 30⁴ acres of Sudan grass, and 1 acre of buckwheat and millet. An additional 15 acres of corn which was not utilized last winter was left for use during the coming year.

Biological

Waterfowl hunting was permitted on Wednesdays and Sundays from November 16 through January 5 for a limited number of hunters. Although 10,000 ducks wintered on the area, the 272 hunters had relatively poor success, bagging 30⁴ ducks for an average of 1.12 birds per day.

LADD MARSH

Acquisition of land for the Ladd Marsh Management Area was initiated in 1949 and now totals 2,252 acres of the 3,747 acres in the project area. No new land holdings were acquired during the year.

Development and Maintenance

The Powell house was sold and moved from the area. The south Evans house, six outbuildings, and the Powell barn were razed and burned.

Eight and one-half acres of open water were created in the marsh unit by constructing 2.3 miles of 30-foot-wide canals through dense stands of cattails. The spoil banks and pushups made excellent nesting and loafing sites for waterfowl.

Three ponds were excavated in seep areas on the Peebler tract and three on the Frank Counsell tract. One-half mile of ditch was constructed to divert water to impoundment sites, and two miles of existing ditch were cleaned.

One mile of old fencing was removed from recently acquired tracts and one-fourth mile of new rail fence was constructed. Five fence stiles were erected to provide hunter access.

Seven sites were worked and planted to 2,830 trees and shrubs for wildlife food and cover.

One hundred eight acres of wheat and 50 acres of barley were planted by sharecroppers and left standing for wildlife use.

Many additional small acreages throughout the area were planted to rye, grasses, clover, sunflowers, millet, vetch, and alfalfa.

Biological

Forty valley quail were transplanted from the John Day Valley.

Eight goose nesting platforms were constructed in the marsh unit, bringing the total on the area to 20.

Sixty-four adult geese were observed during the nesting season but only five broods were located.

Waterfowl populations and hunter use remained high through the extended waterfowl season. In March an estimated 3,350 ducks resided on the area and completely utilized all of the unharvested grain.

As in previous years, pen-raised pheasants and chukars were released periodically through the open hunting season. A total of 1,092 pheasants and 493 chukars was released, with bag checks indicating an excellent harvest of birds.

WHITE RIVER

The White River project was initiated in 1953 to provide winter range for a migratory herd of black-tailed deer and to alleviate a serious damage problem on winter wheat. Approximately 17,000 acres of land adjacent to the east boundary of the Mt. Hood National Forest is involved in the project, of which about 14,000 acres have been acquired to date. An eight-foot-high fence is being constructed to hold both deer and elk off private lands and irrigated and dry land pastures are being improved for game use.

Acquisition

No additional land was acquired during the year.

Development

Two hundred acres of cultivated land were seeded including 40 acres of irrigated pasture planted to alfalfa, clover, and grass, and 160 acres of dry land planted to intermediate wheatgrass and dry land alfalfa. Included in the seedings were five-acre trial plantings of lava vetch and Sainfoin.

Three hundred Vinca plants were hand planted along irrigation ditches on the Cody tract. Old skid roads, and disturbed areas on 1,200 acres of logged and burned lands were hand seeded to bitterbrush and orchard grass, and 300 acres on Happy Ridge were drilled to bitterbrush.

Some thinning of yellow pine was done by personnel from the Wasco County Boys' Camp.

Wildlife

No trapping or tagging was accomplished as mild weather made it impossible to capture either deer or turkeys.



BRIDGE CREEK

The Bridge Creek project was initiated in 1962, and 7,300 acres have been acquired of the 15,375 proposed for purchase. Elk and mule deer are the primary species to benefit from rehabilitation and management of the benchlands involved.

Acquisition

No additional land was acquired during the year.

Development

Nine new ponds were constructed and one pond was enlarged.

One three-way study exclosure was constructed.

Eighty acres of land were prepared for seeding and 1,700 lodgepole pine and 25 hawthorn seedlings were planted.

Wildlife

An elk trap was constructed and operated but mild weather precluded success.

WENAHU

The Wenaha project was initiated in 1953 to provide winter range for deer and elk. This area is located near Troy in northern Wallowa County and consists of steep slopes and benchlands at the confluence of the Wallowa and Grande Ronde Rivers. Approximately 10,510 acres have been acquired to date of the 17,652 proposed for purchase.

Acquisition

No additional land was acquired during the year.

Development

Thirty acres on the Cummings tract were plowed and seeded to

grass and legumes. Seven acres on the headquarters tract were seeded to rye.

Wildlife

Some hay was fed to elk on Eden Bench as a damage control measure.



E. E. WILSON

The E. E. Wilson Area consists of approximately 1,600 acres obtained under conditional title through the General Service Administration, In addition to its main function as a game farm, the area also is used for juvenile hunting, dog training, and field trials.

Game Bird Production

Bird production in 1966 totaled 23,544 pheasants, 799 chukars, 200 Hungarian partridge, 351 bamboo partridge, and 46 Kalij pheasants. Details are presented in Table 37 of the Small Game section.

Construction and Maintenance

1. Covered runs for the brooder house were replaced.
2. A drain tile was installed along the north side of the brooder house to carry off surplus water.
3. A small shed originally used as a sexing room was moved to the holding pens for use as a storage building.
4. The remaining bridge on the area was removed and replaced with a steel culvert.
5. All wooden lids on the sewer system manholes were replaced with concrete covers.
6. The conference hall was insulated.
7. All buildings were maintained as necessary.

Farming and Habitat Development

1. Approximately 28 acres of corn and 42 acres of Sudan grass were planted in 17 plots and left standing for upland game and waterfowl use. Farming was done through land use agreements. The Sudan crop was normal but corn production was poor. Utilization of the food crops was estimated to be 70 percent.
2. Two adjacent landowners farmed the larger fields on a share-crop basis and, in addition, seeded the food plots to corn and Sudan grass. The Commission received 75 tons of wheat under the share program.
3. Noxious weeds were sprayed in compliance with county law and all poison oak was sprayed on the north half of the area.

4. Local Boy Scouts constructed several trails to each of the two newest concrete guzzlers in order to provide access for birds. Soil sterilant was applied to keep the trails free of vegetation.

Recreational Use

Juvenile hunters utilized the area four days while juveniles and accompanying adults hunted an additional four days. A total of 384 hunters bagged 104 pheasants and 9 quail. The pheasant kill was the lowest on record.

Approximately 200 persons used the area for dog training purposes and 200 more attended field trials on the area. Five clubs held ten trials on the area.

HERMISTON GAME FARM

The Hermiston Game Farm, consisting of 182.7 acres, has been sold. The Highway Department acquired 4.87 acres for \$14,750 in November 1965 for right-of-way purposes. Another 5 acres, including a dwelling, were sold to a private party for \$11,250 in February 1966. The remaining 172.83 acres were exchanged for property on Crooked River in April 1967. The value in exchange was \$100,000.

KENNETH DENMAN

The 1,920-acre Denman Area is used primarily for upland game and waterfowl production. Other uses include hunting, angling, dog trials, and dog training.

Game Production

Two holding pens were used for rearing 1,000 cock pheasants from 8 weeks of age until released during the hunting season.

Construction and Maintenance

1. The house and shop were re-roofed and the carport roof was re-tarred.

2. Fifteen yards of granite were placed on the headquarters driveway.
3. Vegetation was removed from the tops of nine quonset huts.
4. Twenty-six yards of large rock were placed in three pond spillways.
5. A parking lot, 80' x 85' was constructed at Whetstone Pond #2 and access provided from the county road.
6. The cattle guard on Agate Road was widened to 15 feet. The steel gate on the quonset hut road was replaced with a cattle guard and the gate was moved to the Military Slough Road.
7. Approximately 1,875 feet of dike below Whetstone Pond #1 were widened to flood six acres.
8. The 3,200-foot Military Slough ditch was sterilized to control vegetation.
9. All ditches on the area, 14 miles of fence, 4 miles of fire-breaks, and toilets, parking lots, and other public use facilities were maintained as necessary.

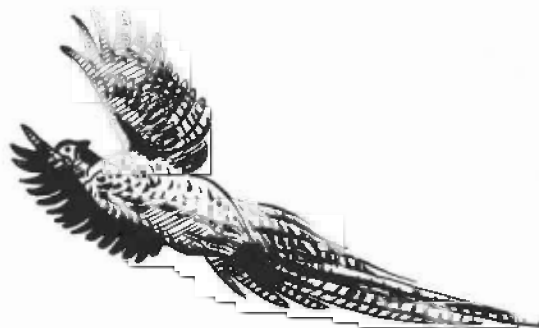
Farming and Habitat Development

1. Two shrub plantings totaling one-half acre were hand cultivated, mulched with 24 yards of sawdust, and fertilized.
2. Thirteen plots, each one-half acre in size, were planted with grass mixtures.
3. Six acres of grass seedings, the headquarters site, and Military Slough ditch banks were sprayed to control weeds.

Recreational Use

The area was utilized nearly every day for spiny ray fishing. Daily hunting occurred from September 1 through the waterfowl season, which ended January 5.

Other recreational uses included field trials, dog training, and picnicking.



SUMMARY OF 1966-67 GAME INVENTORIES

Species	Miles of Census	Number Observed	Average Density ¹				Sex/ Ratio	Pro- duction	1966 Hunting		Recreation ²
			1967	1966	1965	1964			Hunters	Kill	
Mule Deer	3,667	50,442	13.8	12.4	12.3	12.7	17	76	156,720	88,516	855,800
Black-tailed Deer	2,793	12,984	4.6	5.2	4.4	5.9	33	72	114,049	59,459	669,200
Subtotal Deer									270,769	147,975	1,525,000
Rocky Mountain Elk	2,054	15,339	7.5	7.1	7.3	7.5	6	53	49,504	8,718	336,100
Roosevelt Elk	357	1,986	5.6	5.5	5.2	6.2	4	47	18,674	2,684	97,300
Subtotal Elk									68,178	11,402	433,400
Antelope	4,125	7,593	1.8	1.5	1.6	1.4	31	40	775	445	1,600
Bear									8,000	3,880	37,000
TOTAL BIG GAME	12,996	88,344							300,000	163,702	1,997,000
Pheasants	2,621	3,600	11.4	1.5	1.1	1.6	28	540	72,133	243,436	317,000
Valley Quail	4,066	6,059	1.5	1.2	0.9	1.3		760	26,171	158,585	119,800
Mountain Quail	2,160	680	0.3	0.2	0.2	0.4		920			
Hungarian Partridge	1,888	301	0.2	0.2	0.1	0.1		1,320	5,122	15,907	22,200
Chukar Partridge	1,733	3,388	2.0	2.3	1.4	2.4		960	16,554	115,151	60,200
Turkeys									954	38	1,200
Forest Grouse	1,869	667	0.4	0.3	0.1	0.2		560	7,725	16,836	20,000
Sage Grouse	716	575	0.8	2.0	0.5	2.0		240	2,234	3,731	3,900
Pigeons		6,096							12,415	121,069	54,100
Doves	1,952	4,494	2.3	2.7	2.8	3.2			16,370	196,797	69,600
Ducks		252,753	253M	418M	397M	363M		681		435,995	331,600
Geese		49,471	49M	69M	40M	51M		448	49,790	54,615	
TOTAL GAME BIRDS	17,005	328,084							90,200	1,362,160	999,600
GRAND TOTALS	30,001	416,428							343,360	1,525,862	2,996,600

¹ Density Indexes: Big game and upland game - per mile of sample route.
Waterfowl - January inventory. (Thousands.)

² Per 100 females

³ Man-days

⁴ Total hunting license sales