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# SANDHILL CRANE HARVEST AND HUNTER ACTIVITY IN THE CENTRAL FLYWAY DURING THE 2005-2006 HUNTING SEASON

*July 2006*



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**ABSTRACT:** A mail questionnaire survey was conducted in nine Central Flyway States to monitor the harvest of Sandhill Cranes (*Grus canadensis*) during the 2005-2006 hunting season. Permits were issued to 67,554 hunters (+ 1.0% from 2004) and an estimated 10,079 individuals (14.9%) actively hunted Sandhill Cranes, up 9.9% from last year. Active hunters bagged an estimated 18,263 birds (+ 25.6%) in 33,471 days (+ 4.9%). Reports indicated an additional 1,800 birds were downed but lost for a total kill estimate of 20,063, up 26.8% from the 2004 season and within about 100 birds of the 2003 level.

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This report should be cited as: U.S. Fish and Wildlife Service, 2006. Sandhill Crane harvest and hunter activity in the Central Flyway during the 2005-2006 hunting season. U.S. Department of the Interior, Washington, D.C. U.S.A.

The primary purpose of this report is to facilitate the prompt distribution of timely information. Results are preliminary and may change with the inclusion of additional data.

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## INTRODUCTION

The 2005-06 season was the 31st for which a Federal permit or similar registration has been required for hunting cranes during the regular Sandhill Crane season in the Central Flyway. About 17% of the permit holders were contacted by questionnaire and asked to report their hunting activity and success. This report gives the results of this survey and includes a summary of previous survey estimates by season since 1975. Details of data collection and analysis are given in Division of Migratory Bird Management Administrative Report "Sandhill Crane Harvest and Hunter Activity in the Central Flyway during the 1975-76 Hunting Season" (9 July 1976) with occasional refinements outlined in annual updates. After several years of comparison, as summarized in the 2003-2004 report (DMBM Administrative Report "Sandhill Crane Harvest and Hunter Activity in the Central Flyway during the 2003-2004 Hunting Season" (August 2004), we switched entirely from a card form to a letter-type questionnaire similar to that used in our Harvest Information Program (HIP) surveys. Up to two follow-up questionnaires were mailed to nonrespondents. The HIP conducts a similar survey of crane hunting in Alaska (see U.S. Fish and Wildlife Service, 2006. Migratory bird harvest information, 2006: preliminary estimates. U.S. Department of the Interior, Washington, D.C.).

Several years ago when first Texas and then Colorado changed their permit issuing systems, many hunters in both states who never hunt cranes unknowingly became classed as crane hunters, a result of the way these systems were designed and used. Questionnaire response rates from such hunters were found to be below those of hunters who plan to hunt cranes, and adjustment factors based on these differences were calculated and used on the state level estimates those years. Initial indications from the HIP surveys are that response rates have increased in a manner that may have corrected this problem, so no adjustments have been made in the results of these HIP surveys.

## RESULTS

A total of 67,554 "permits" was issued (1% more than in 2004), and almost 15% of those obtaining permits hunted cranes (10% more than the previous year; Table 1). Crane hunting activity (days hunted) increased 5% from 2004 while total success (cranes bagged) increased almost 26%. Overall, those permittees hunting one or more days (active hunters) averaged 3.32 days afield with an average seasonal bag of 1.81 cranes (Table 2). Estimates of successful hunters are not currently available from the HIP survey. The total estimated retrieved crane kill was 18,263 while unretrieved kill was 1,800 for a total of 20,063 birds killed, 27% more than last year. Comparisons with last year appear in Table 1. Tables 2A through 2I list the 2005-06 estimates for each county hunted as reported by respondents together with state totals. The HIP survey form more efficiently eliminates out-of-state hunting so such hunting is no longer shown in these tables. Selected figures are summarized by season since 1975 in Table 3.

### ACKNOWLEDGEMENTS

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Lyn Stevens, Colorado Div. of Wildlife; Karen Beard and Rosann Holmes, Kansas Dept. of Wildlife & Parks; Laura Juvan-George, Montana Dept. of Fish, Wildlife & Parks; Tim Mitchusson, New Mexico Dept. of Game & Fish; Mike Szymanski, North Dakota Game & Fish Dept.; Mike O'Meilia and Mike Liddiard, Oklahoma Dept. of Wildlife Conservation; Sandra Hoerner, South Dakota Dept. of Game, Fish & Parks; Jay Roberson, Texas Parks & Wildlife Dept.; and Jean Cole, Wyoming Game & Fish. Dept.

TABLE 1. NUMBERS OF SANDHILL CRANE PERMITS ISSUED, HIP QUESTIONNAIRE SAMPLE SIZES, AND RESPONSE RATES PLUS ESTIMATED TOTAL ACTIVE HUNTERS, CRANES BAGGED, AND CRANES LOST DURING THE 2004-05 AND 2005-06 SEASONS.

SEASON	COLORADO		MONTANA		NEW MEXICO		NORTH DAKOTA		SOUTH DAKOTA		TEXAS		WYOMING	
	2004-05	2005-06	2004-05	2005-06	2004-05	2005-06	2004-05	2005-06	2004-05	2005-06	2004-05	2005-06	2004-05	2005-06
PERMITS ISSUED	5,784 *	5,766 *	1,180	805	308	281	548	494	5,788	780	780	698	307	52,161 *
% change	-0.3%	-31.8%	-8.8%	-8.8%	-9.9%	28.6%	-10.5%	59.6%	-1.2%	11.5%	1.0%	11.5%	11.5%	1.0%
NUMBER CONTACTED	1,068	1,055	290	266	247	230	1,429	1,472	454	661	300	233	6,468	7,041
% change	-1.2%	-31.8%	-8.3%	-8.3%	-6.9%	3.0%	45.6%	-22.3%	8.9%	8.2%	4.8%	8.2%	8.2%	4.8%
NUMBER RESPONDING	807	762	260	233	165	159	1,169	1,148	326	485	260	214	3,873	4,325
% change	-5.6%	-29.0%	-10.4%	-10.4%	-3.6%	-1.8%	48.8%	-17.7%	11.7%	12.5%	4.7%	12.5%	11.7%	4.7%
RESPONSE RATE	75.6%	72.2%	75.3%	87.6%	66.8%	69.1%	81.8%	78.0%	71.8%	73.4%	86.7%	91.8%	59.9%	61.4%
% change	-4.4%	4.1%	-2.3%	-2.3%	3.5%	-4.7%	2.2%	6.0%	2.6%	4.0%	-0.1%	4.0%	2.6%	-0.1%
TOTAL ACTIVE HUNTERS	315	280	93	90	252	233	2,491	3,370	265	259	79	165	5,121	5,383
% change	-11.1%	-49.2%	-2.7%	-2.7%	-7.5%	35.3%	-2.2%	108.7%	5.1%	49.5%	9.9%	49.5%	5.1%	9.9%
TOTAL DAYS HUNTED	1,464	1,445	2,218	264	833	668	9,642	12,088	754	570	272	579	16,389	16,698
% change	-1.3%	-52.1%	-12.8%	-12.8%	-19.8%	25.4%	-24.4%	113.0%	1.9%	181.5%	4.9%	181.5%	1.9%	4.9%
TOTAL CRANES BAGGED	92	265	856	471	54	65	3,967	3,721	441	511	67	190	8,715	12,446
% change	187.9%	-45.0%	20.6%	65.1%	-6.2%	15.9%	183.7%	42.8%	309.3%	25.6%	309.3%	25.6%	42.8%	25.6%
TOTAL CRANES LOST	14	30	59	42	1	2	406	480	46	23	17	27	686	1,096
% change	116.2%	-28.7%	141.2%	136.7%	18.1%	-49.9%	61.6%	59.7%	0.0%	41.6%	0.0%	41.6%	59.7%	41.6%

\* Colorado and Texas now use permit systems for identifying crane hunters which greatly inflates the numbers of apparent crane hunters there. See discussion in text.

**TABLE 2A. SANDHILL CRANE HARVEST AND HUNTER ACTIVITY IN COLORADO DURING THE 2005-06 HUNTING SEASON**

GENERAL INFORMATION	COUNTY OF HARVEST	TOTAL ACTIVE HUNTERS*	ACTIVE HUNTER MEANS				EXPANDED TOTALS			
			DAYS AFIELD	CRANE BAG	CRANES LOST	HUNTER -DAYS	CRANE			
							BAG	LOSS	KILL	
# OF PERMITS	5,766	BENT	3	5.16	0.00	0.00	15	0	0	0
# CONTACTED	1,055	KIOWA	7	5.16	1.03	1.03	38	8	8	15
# RESPONDING	762	LAS ANIMAS	1	5.16	0.00	0.00	8	0	0	0
% RESPONDING	72.2	LOGAN	1	5.16	0.00	0.00	8	0	0	0
% ACTIVE	4.86	MORGAN	12	5.16	0.00	0.00	61	0	0	0
		PROWERS	7	5.16	7.23	1.03	38	53	8	61
		RIO GRANDE	3	5.16	0.00	0.00	15	0	0	0
		WASHINGTON	3	5.16	0.00	0.00	15	0	0	0
		WELD	1	5.16	0.00	0.00	8	0	0	0
		YUMA	6	5.16	0.00	0.00	30	0	0	0
		UNKOWN	235	5.16	0.87	0.06	1211	204	15	219
		STATE TOTALS	280	5.162	0.946	0.108	1,445	265	30	295

\* HIP survey county-level active hunter estimates are preliminary, based on the distribution of days hunted among counties, and thus not completely comparable to county estimates of previous years.

**TABLE 2B. SANDHILL CRANE HARVEST AND HUNTER ACTIVITY IN KANSAS DURING THE 2005-06 HUNTING SEASON.**

GENERAL INFORMATION	COUNTY OF HARVEST	TOTAL ACTIVE HUNTERS*	ACTIVE HUNTER MEANS				EXPANDED TOTALS			
			DAYS AFIELD	CRANE BAG	CRANES LOST	HUNTER -DAYS	CRANE			
							BAG	LOSS	KILL	
# OF PERMITS	805	BARBER	12	3.88	5.48	0.00	45	63	0	63
# CONTACTED	390	BARTON	32	3.88	0.91	0.25	124	29	8	37
# RESPONDING	306	HARPER	1	3.88	0.00	0.00	3	0	0	0
% RESPONDING	78.5	MEADE	1	3.88	0.00	0.00	5	0	0	0
% ACTIVE	34.0	PAWNEE	2	3.88	2.59	0.00	8	5	0	5
		PRATT	1	3.88	0.00	0.00	3	0	0	0
		RENO	1	3.88	0.00	0.00	5	0	0	0
		RICE	2	3.88	0.00	1.29	8	0	3	3
		SCOTT	1	3.88	0.00	0.00	3	0	0	0
		STAFFORD	55	3.88	1.87	0.00	213	103	0	103
		UNKNOWN	167	3.88	1.63	0.19	647	271	32	303
		STATE TOTALS	274	3.885	1.721	0.154	1,063	471	42	513

\* HIP survey county-level active hunter estimates are preliminary, based on the distribution of days hunted among counties, and thus not completely comparable to county estimates of previous years.

**TABLE 2C. SANDHILL CRANE HARVEST AND HUNTER ACTIVITY IN MONTANA DURING THE 2005-06 HUNTING SEASON.**

GENERAL INFORMATION	COUNTY OF HARVEST	TOTAL ACTIVE HUNTERS*	ACTIVE HUNTER MEANS				EXPANDED TOTALS			
			DAYS AFIELD	CRANE BAG	CRANES LOST	HUNTER -DAYS	CRANE			
							BAG	LOSS	KILL	
# OF PERMITS	281	CUSTER	3	2.92	0.37	0.00	10	1	0	1
# CONTACTED	266	DANIELS	0	2.92	0.00	0.00	1	0	0	0
# RESPONDING	233	FALLON	1	2.92	0.00	0.00	2	0	0	0
% RESPONDING	87.6	GARFIELD	5	2.92	0.00	0.00	13	0	0	0
% ACTIVE	32.2	JUDITH BASIN	8	2.92	1.84	0.15	23	14	1	16
		MADISON	1	2.92	1.46	0.00	2	1	0	1
		PHILLIPS	7	2.92	0.00	0.00	19	0	0	0
		PRAIRIE	2	2.92	0.00	0.00	5	0	0	0
		ROOSEVELT	5	2.92	0.97	0.00	14	5	0	5
		ROSEBUD	0	2.92	0.00	0.00	1	0	0	0
		SHERIDAN	14	2.92	1.46	0.00	41	21	0	21
		STILLWATER	0	2.92	0.00	0.00	1	0	0	0
		SWEET GRASS	0	2.92	0.00	0.00	1	0	0	0
		TREASURE	1	2.92	0.00	0.00	2	0	0	0
		VALLEY	2	2.92	1.46	0.49	7	4	1	5
		WHEATLAND	0	2.92	2.92	0.00	1	1	0	1
		YELLOWSTONE	4	2.92	0.97	0.00	11	4	0	4
		UNKNOWN	37	2.92	0.39	0.00	107	14	0	14
		STATE TOTALS	90	2.920	0.720	0.027	264	65	2	68

\* HIP survey county-level active hunter estimates are preliminary, based on the distribution of days hunted among counties, and thus not completely comparable to county estimates of previous years.

TABLE 2D. SANDHILL CRANE HARVEST AND HUNTER ACTIVITY IN NEW MEXICO DURING THE 2005-06 HUNTING SEAS

GENERAL INFORMATION	COUNTY OF HARVEST	TOTAL ACTIVE HUNTERS*	ACTIVE HUNTER MEANS			HUNTER -DAYS	EXPANDED TOTALS		
			DAYS AFIELD	CRANE BAG	CRANES LOST		CRANE		
						BAG	LOSS	KILL	
# OF PERMITS	494 CHAVES	126	2.87	2.57	0.62	360	323	78	401
# CONTACTED	230 CURRY	2	2.87	0.00	0.00	6	0	0	0
# RESPONDING	159 EDDY	17	2.87	0.00	0.00	50	0	0	0
% RESPONDING	69.1 ROOSEVELT	17	2.87	4.48	0.54	50	78	9	87
% ACTIVE	47.2 SOCORRO	3	2.87	5.73	0.00	9	19	0	19
	VALENCIA	2	2.87	1.43	1.43	6	3	3	6
	UNKNOWN	65	2.87	2.48	0.14	186	155	9	165
	STATE TOTALS	233	2.867	2.480	0.427	668	578	99	677

\* HIP survey county-level active hunter estimates are preliminary, based on the distribution of days hunted among counties, and thus not completely comparable to county estimates of previous years.

TABLE 2E. SANDHILL CRANE HARVEST AND HUNTER ACTIVITY IN NORTH DAKOTA DURING THE 2005-06 HUNTING SEAS

GENERAL INFORMATION	COUNTY OF HARVEST	TOTAL ACTIVE HUNTERS*	ACTIVE HUNTER MEANS			HUNTER -DAYS	EXPANDED TOTALS		
			DAYS AFIELD	CRANE BAG	CRANES LOST		CRANE		
						BAG	LOSS	KILL	
# OF PERMITS	7,441 BENSON	103	3.59	2.01	0.31	369	207	32	240
# CONTACTED	1,472 BOTTINEAU	96	3.59	0.81	0.14	344	78	13	91
# RESPONDING	1,148 BOWMAN	2	3.59	0.00	0.00	6	0	0	0
% RESPONDING	78.0 BURKE	40	3.59	1.30	0.00	143	52	0	52
% ACTIVE	45.3 BURLEIGH	54	3.59	2.39	0.48	194	130	26	156
	CAVALIER	4	3.59	0.00	0.00	13	0	0	0
	DAWSON	5	3.59	0.00	0.00	19	0	0	0
	DICKEY	5	3.59	0.00	0.00	19	0	0	0
	DIVIDE	58	3.59	1.23	0.11	207	71	6	78
	EDDY	72	3.59	1.52	0.18	259	110	13	123
	EMMONS	25	3.59	1.79	0.26	91	45	6	52
	FOSTER	25	3.59	0.00	0.00	91	0	0	0
	GRIGGS	5	3.59	0.00	0.00	19	0	0	0
	HARVEY	11	3.59	0.00	0.00	39	0	0	0
	KIDDER	224	3.59	1.85	0.20	804	415	45	460
	KRAMER	5	3.59	0.00	0.00	19	0	0	0
	LA MOURE	11	3.59	0.00	0.00	39	0	0	0
	LOGAN	89	3.59	0.07	0.00	318	6	0	6
	MCHENRY	72	3.59	1.61	0.81	259	117	58	175
	MCINTOSH	9	3.59	1.43	0.00	32	13	0	13
	MCLEAN	94	3.59	3.59	0.21	337	337	19	356
	MERCER	7	3.59	3.59	0.00	26	26	0	26
	MOUNTRAIL	29	3.59	0.67	0.00	104	19	0	19
	NELSON	9	3.59	0.00	0.00	32	0	0	0
	PIERCE	89	3.59	0.88	0.15	318	78	13	91
	RAMSEY	67	3.59	0.58	0.10	240	39	6	45
	RENVILLE	14	3.59	0.00	0.00	52	0	0	0
	ROLETTE	20	3.59	0.98	0.00	71	19	0	19
	SARGENT	5	3.59	0.00	0.00	19	0	0	0
	SHERIDAN	228	3.59	1.65	0.14	817	376	32	408
	STUTSMAN	159	3.59	0.69	0.04	570	110	6	117
	TOWNER	49	3.59	0.93	0.00	175	45	0	45
	WARD	60	3.59	2.06	0.00	214	123	0	123
	WELLS	119	3.59	1.20	0.11	428	143	13	156
	WILLIAMS	2	3.59	0.00	0.00	6	0	0	0
	UNKNOWN	1,504	3.59	0.77	0.13	5,393	1,160	188	1,348
	STATE TOTALS	3,370	3.587	1.104	0.142	12,088	3,721	480	4,200

\* HIP survey county-level active hunter estimates are preliminary, based on the distribution of days hunted among counties, and thus not completely comparable to county estimates of previous years.

**TABLE 2F. SANDHILL CRANE HARVEST AND HUNTER ACTIVITY IN OKLAHOMA DURING THE 2005-06 HUNTING SEASON**

GENERAL INFORMATION	COUNTY OF HARVEST	TOTAL ACTIVE HUNTERS*	ACTIVE HUNTER MEANS				EXPANDED TOTALS			
			DAYS AFIELD	CRANE BAG	CRANES LOST	HUNTER -DAYS	CRANE			
							BAG	LOSS	KILL	
# OF PERMITS	698	ALFALFA	18	2.20	2.20	0.16	40	40	3	43
# CONTACTED	661	BEAVER	3	2.20	0.00	0.00	7	0	0	0
# RESPONDING	485	CADDO	1	2.20	0.00	0.00	1	0	0	0
% RESPONDING	73.4	COMANCHE	8	2.20	4.03	0.00	17	32	0	32
% ACTIVE	37.1	COTTON	1	2.20	2.20	0.00	1	1	0	1
		CUSTER	20	2.20	0.35	0.07	45	7	1	9
		ELLIS	1	2.20	2.20	0.00	1	1	0	1
		GARFIELD	4	2.20	2.20	0.00	9	9	0	9
		GRANT	6	2.20	1.96	0.00	13	12	0	12
		GREER	7	2.20	2.40	0.00	16	17	0	17
		HARMON	1	2.20	0.00	0.00	1	0	0	0
		JACKSON	24	2.20	3.86	0.12	53	94	3	96
		MAJOR	3	2.20	6.60	0.00	6	17	0	17
		OKLAHOMA	1	2.20	0.00	0.00	1	0	0	0
		ROGER MILLS	1	2.20	0.00	0.00	1	0	0	0
		KIOWA	1	2.20	0.00	0.00	3	0	0	0
		SNYDER	3	2.20	0.00	0.00	6	0	0	0
		STEPHENS	2	2.20	4.40	0.00	4	9	0	9
		TEXAS	1	2.20	2.20	0.00	1	1	0	1
		TILLMAN	31	2.20	3.44	0.05	69	108	1	109
		WASHITA	4	2.20	0.00	0.00	9	0	0	0
		WOODS	5	2.20	3.30	0.00	12	17	0	17
		WOODWARD	1	2.20	0.00	0.00	1	0	0	0
		UNKNOWN	114	2.20	1.28	0.13	250	145	14	160
		STATE TOTALS	259	2.200	1.972	0.089	570	511	23	534

\* HIP survey county-level active hunter estimates are preliminary, based on the distribution of days hunted among counties, and thus not completely comparable to county estimates of previous years.

**TABLE 2G. SANDHILL CRANE HARVEST AND HUNTER ACTIVITY IN SOUTH DAKOTA DURING THE 2005-06 HUNTING SE**

GENERAL INFORMATION	COUNTY OF HARVEST	TOTAL ACTIVE HUNTERS*	ACTIVE HUNTER MEANS				EXPANDED TOTALS			
			DAYS AFIELD	CRANE BAG	CRANES LOST	HUNTER -DAYS	CRANE			
							BAG	LOSS	KILL	
# OF PERMITS	490	AURORA	7	3.51	2.81	0.70	23	18	5	23
# CONTACTED	233	BENNETT	1	3.51	0.00	0.00	2	0	0	0
# RESPONDING	214	BROWN	3	3.51	2.11	0.00	11	7	0	7
% RESPONDING	91.8	BRULE	13	3.51	2.81	0.35	46	37	5	41
% ACTIVE	33.6	BUTTE	3	3.51	1.41	0.00	11	5	0	5
		CAMPBELL	5	3.51	3.01	0.00	16	14	0	14
		CHARLES MIX	7	3.51	0.64	0.00	25	5	0	5
		CLARK	5	3.51	0.00	0.00	18	0	0	0
		DEWEY	1	3.51	0.00	0.00	5	0	0	0
		EDMUNDS	9	3.51	3.26	0.75	32	30	7	37
		FAULK	1	3.51	0.00	1.76	5	0	2	2
		HAND	6	3.51	1.17	0.39	21	7	2	9
		HUGHES	9	3.51	0.00	0.00	32	0	0	0
		HYDE	3	3.51	1.76	0.00	9	5	0	5
		LYMAN	2	3.51	0.00	0.00	7	0	0	0
		MCPHERSON	8	3.51	1.17	0.00	27	9	0	9
		POTTER	9	3.51	1.00	0.00	32	9	0	9
		SPINK	3	3.51	0.88	0.88	9	2	2	5
		SULLY	12	3.51	1.11	0.00	44	14	0	14
		WALWORTH	5	3.51	0.00	0.00	18	0	0	0
		UNKNOWN	53	3.51	0.56	0.09	185	30	5	34
		STATE TOTALS	165	3.514	1.153	0.167	579	190	27	218

\* HIP survey county-level active hunter estimates are preliminary, based on the distribution of days hunted among counties, and thus not completely comparable to county estimates of previous years.

TABLE 2H. SANDHILL CRANE HARVEST AND HUNTER ACTIVITY IN TEXAS DURING THE 2005-06 HUNTING SEASON

GENERAL INFORMATION	COUNTY OF HARVEST	TOTAL ACTIVE HUNTERS*	ACTIVE HUNTER MEANS			EXPANDED TOTALS				
			DAYS AFIELD	CRANE BAG	CRANES LOST	HUNTER -DAYS	CRANE BAG	CRANE LOSS	CRANE KILL	
# OF PERMITS	51,511	8	3.10	0.00	0.00	24	0	0	0	
# CONTACTED	7,041	4	3.10	3.10	0.00	12	12	0	12	
# RESPONDING	4,325	42	3.10	1.97	0.00	131	83	0	83	
% RESPONDING	61.4	4	3.10	0.00	0.00	12	0	0	0	
% ACTIVE	10.4	42	3.10	6.77	0.56	131	286	24	310	
		BEE	8	3.10	0.00	0.00	24	0	0	0
		BORDEN	8	3.10	7.75	0.00	24	60	0	60
		BRAZORIA	184	3.10	3.75	0.13	572	691	24	715
		BRAZOS	8	3.10	0.00	0.00	24	0	0	0
		BRISCOE	31	3.10	8.53	0.78	95	262	24	286
		CALHOUN	12	3.10	1.03	0.00	36	12	0	12
		CASTRO	15	3.10	5.43	0.78	48	83	12	95
		COCHRAN	19	3.10	6.20	0.62	60	119	12	131
		COLORADO	261	3.10	1.28	0.14	810	333	36	369
		COLUMBIA	12	3.10	0.00	0.00	36	0	0	0
		DALHART	15	3.10	2.33	0.00	48	36	0	36
		DAWSON	61	3.10	4.26	0.39	191	262	24	286
		DEAF SMITH	8	3.10	10.86	0.00	24	83	0	83
		DONLEY	8	3.10	6.20	0.00	24	48	0	48
		ERATH	4	3.10	0.00	0.00	12	0	0	0
		FLOYD	54	3.10	6.20	0.00	167	333	0	333
		FORT BEND	35	3.10	2.41	0.00	107	83	0	83
		GAINES	8	3.10	4.65	1.55	24	36	12	48
		GALVESTON	31	3.10	0.00	0.00	95	0	0	0
		GARZA	8	3.10	3.10	0.00	24	24	0	24
		GLASSCOCK	12	3.10	0.00	0.00	36	0	0	0
		GOLIAD	15	3.10	5.43	0.00	48	83	0	83
		GONZALES	8	3.10	4.65	0.00	24	36	0	36
		GRAY	4	3.10	0.00	0.00	12	0	0	0
		GUADALUPE	8	3.10	15.51	1.55	24	119	12	131
		HALE	23	3.10	4.65	0.00	71	107	0	107
		HANSFORD	15	3.10	8.53	0.00	48	131	0	131
		HARRIS	38	3.10	0.93	0.00	119	36	0	36
		HASKELL	19	3.10	1.24	0.62	60	24	12	36
		HEMPHILL	8	3.10	0.00	0.00	24	0	0	0
		HONDO	8	3.10	1.55	1.55	24	12	12	24
		HOWARD	61	3.10	7.56	0.58	191	464	36	500
		JACKSON	42	3.10	1.97	0.00	131	83	0	83
		JIM WELLS	8	3.10	0.00	0.00	24	0	0	0
		JONES	35	3.10	1.72	0.00	107	60	0	60
		KENEDY	12	3.10	0.00	0.00	36	0	0	0
		KLEBERG	23	3.10	0.00	0.00	71	0	0	0
		KNOX	42	3.10	4.79	0.00	131	202	0	202
		LAMB	69	3.10	6.72	0.86	214	464	60	524
		LIVE OAK	19	3.10	3.10	0.62	60	60	12	71
		LUBBOCK	88	3.10	4.72	0.27	274	417	24	441
		LYNN	35	3.10	5.86	0.34	107	202	12	214
		MATAGORDA	227	3.10	2.68	0.16	703	607	36	643
		MCMULLEN	46	3.10	2.07	0.26	143	95	12	107
		MIDLAND	4	3.10	9.31	0.00	12	36	0	36
		MITCHELL	23	3.10	0.52	0.00	71	12	0	12
		MOORE	8	3.10	0.00	0.00	24	0	0	0
		MOTLEY	8	3.10	3.10	0.00	24	24	0	24
		OLDHAM	35	3.10	1.72	0.69	107	60	24	83
		PECOS	4	3.10	0.00	0.00	12	0	0	0
		POTTER	23	3.10	5.17	0.00	71	119	0	119

\* HIP survey county-level active hunter estimates are preliminary, based on the distribution of days hunted among counties, and thus not completely comparable to county estimates of previous years.



TABLE 2H. SANDHILL CRANE HARVEST AND HUNTER ACTIVITY IN TEXAS DURING THE 2005-06 HUNTING SEASON (con

GENERAL INFORMATION	COUNTY OF HARVEST	TOTAL ACTIVE HUNTERS*	ACTIVE HUNTER MEANS			EXPANDED TOTALS			
			DAYS AFIELD	CRANE BAG	CRANES LOST	HUNTER -DAYS	CRANE		
						BAG	LOSS	KILL	
	RANDALL	12	3.10	9.31	0.00	36	107	0	107
	REFUGIO	4	3.10	3.10	0.00	12	12	0	12
	ROCHESTER	8	3.10	0.00	0.00	24	0	0	0
	RUNNELS	12	3.10	0.00	0.00	36	0	0	0
	SAN PATRICIO	15	3.10	1.55	0.78	48	24	12	36
	SCURRY	54	3.10	4.65	1.11	167	250	60	310
	SWISHER	12	3.10	9.31	0.00	36	107	0	107
	TAYLOR	38	3.10	4.03	0.00	119	155	0	155
	TERRY	123	3.10	6.20	0.48	381	762	60	822
	THROCKMORTON	15	3.10	5.43	0.00	48	83	0	83
	TOM GREEN	4	3.10	0.00	0.00	12	0	0	0
	TRAVIS	4	3.10	0.00	0.00	12	0	0	0
	VICTORIA	4	3.10	0.00	0.00	12	0	0	0
	WALLER	15	3.10	1.55	0.00	48	24	0	24
	WEBB	4	3.10	3.10	0.00	12	12	0	12
	WHARTON	296	3.10	2.05	0.08	917	607	24	631
	WHEELER	4	3.10	0.00	0.00	12	0	0	0
	WILSON	4	3.10	6.20	0.00	12	24	0	24
	YOUNG	46	3.10	1.03	0.00	143	48	0	48
	ZAVALA	35	3.10	1.72	0.00	107	60	0	60
	UNKNOWN	2,822	3.10	1.37	0.19	8,754	3871	524	4,395
	STATE TOTALS	5,383	3.102	2.312	0.204	16,698	12,446	1,096	13,542

\* HIP survey county-level active hunter estimates are preliminary, based on the distribution of days hunted among counties, and thus not completely comparable to county estimates of previous years.

TABLE 2I. SANDHILL CRANE HARVEST AND HUNTER ACTIVITY IN WYOMING DURING THE 2005-06 HUNTING SEASON

GENERAL INFORMATION	COUNTY OF HARVEST	TOTAL ACTIVE HUNTERS*	ACTIVE HUNTER MEANS			EXPANDED TOTALS				
			DAYS AFIELD	CRANE BAG	CRANES LOST	HUNTER -DAYS	CRANE			
						BAG	LOSS	KILL		
# OF PERMITS	68	CAMPBELL	1	4.00	0.00	0.00	5	0	0	0
# CONTACTED	66	GOSHEN	7	4.00	1.64	0.00	28	11	0	11
# RESPONDING	54	LARAMIE	1	4.00	1.00	0.00	5	1	0	1
% RESPONDING	81.8	PLATTE	2	4.00	0.00	0.00	8	0	0	0
% ACTIVE	35.2	UNKNOWN	13	4.00	0.30	0.00	50	4	0	0
		STATE TOTALS	24	4.000	0.684	0.000	96	16	0	16

\* HIP survey county-level active hunter estimates are preliminary, based on the distribution of days hunted among counties, and thus not completely comparable to county estimates of previous years.

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 COMBINED TOTALS 10,079 3.321 1.812 0.179 33,471 18,263 1,800 20,063

TOTAL PERMITS ISSUED 67,554 NUMBER CONTACTED = 11,414 NUMBER RESPONDING = 7,686 (67.3%)

TABLE 3. SUMMARY OF SELECTED SANDHILL CRANE HUNTING ACTIVITY AND HARVEST DATA FOR THE CENTRAL FLYWAY BY SEASON SINCE 1975.

Season	TOTAL PERMITS ISSUED	PERCENT HUNTING CRANES	NUMBER HUNTING CRANES	NUMBER OF DAYS HUNTED	NO. OF CRANES BAGGED*	BAG PER ACTIVE HUNTER	NO. OF CRANES LOST*
1975-76	11,863	58.6	6,949	23,646	9,497	1.37	1,885
1976-77	11,352	44.9	5,092	18,780	7,393	1.45	1,384
1977-78	13,800	58.3	8,048	25,412	12,151	1.51	2,013
1978-79	13,659	56.2	7,683	22,992	10,146	1.32	1,860
1979-80	12,598	55.7	7,011	21,351	10,379	1.48	1,650
1980-81	13,413	53.4	7,164	21,951	10,152	1.42	1,737
1981-82	13,258	53.4	7,077	21,888	10,134	1.43	1,777
1982-83	12,370	41.8	5,172	14,559	7,916	1.53	1,397
1983-84	18,306	39.0	7,143	21,874	12,959	1.81	2,224
1984-85	17,420	39.2	6,821	20,281	11,271	1.65	1,889
1985-86	17,444	34.3	5,988	17,855	12,776	2.13	1,864
1986-87	19,298	30.3	5,840	15,959	12,487	2.14	1,867
1987-88	18,067	28.9	5,229	14,453	12,770	2.44	1,714
1988-89	16,368	32.0	5,232	14,169	12,772	2.44	1,628
1989-90	17,496	32.9	5,752	15,126	13,639	2.37	2,081
1990-91	22,720	33.6	7,631	20,423	18,041	2.36	2,519
1991-92	18,147	32.3	5,859	15,147	13,079	2.23	1,768
1992-93	17,127	30.9	5,284	14,833	12,433	2.35	1,459
1993-94	18,864 **	37.2	7,023	20,049	18,005	2.56	2,251
1994-95	19,412	36.8	7,141	20,392	16,201	2.27	1,676
1995-96	20,209	36.9	7,455	23,266	20,616	2.77	2,236
1996-97	21,330	34.5	7,354	22,291	17,111	2.33	2,011
1997-98	46,843 **	17.2	8,064	21,877	19,766	2.45	2,279
1998-99	47,734	17.1	8,173	24,242	19,831	2.43	2,143
1999-00	48,607	13.6	6,629	19,593	17,149	2.59	1,717
2000-01	61,311	11.3	6,950	19,112	15,504	2.23	1,430
2001-02	67,560	11.9	8,039	22,428	15,000	1.87	1,516
2002-03	55,384	15.1	8,358	27,931	15,008	1.80	1,351
2003-04	58,646	14.2	8,315	24,847	18,335	2.21	1,628
2004-05	66,917	13.7	9,171	31,909	14,546	1.59	1,271
2005-06	67,554	14.9	10,079	33,471	18,263	1.81	1,800

\* "Bagged" and "lost" refer to retrieved and unretrieved kill respectively.

\*\* Kansas began hunting cranes in 1993; see text for explanation of increases since 1996.