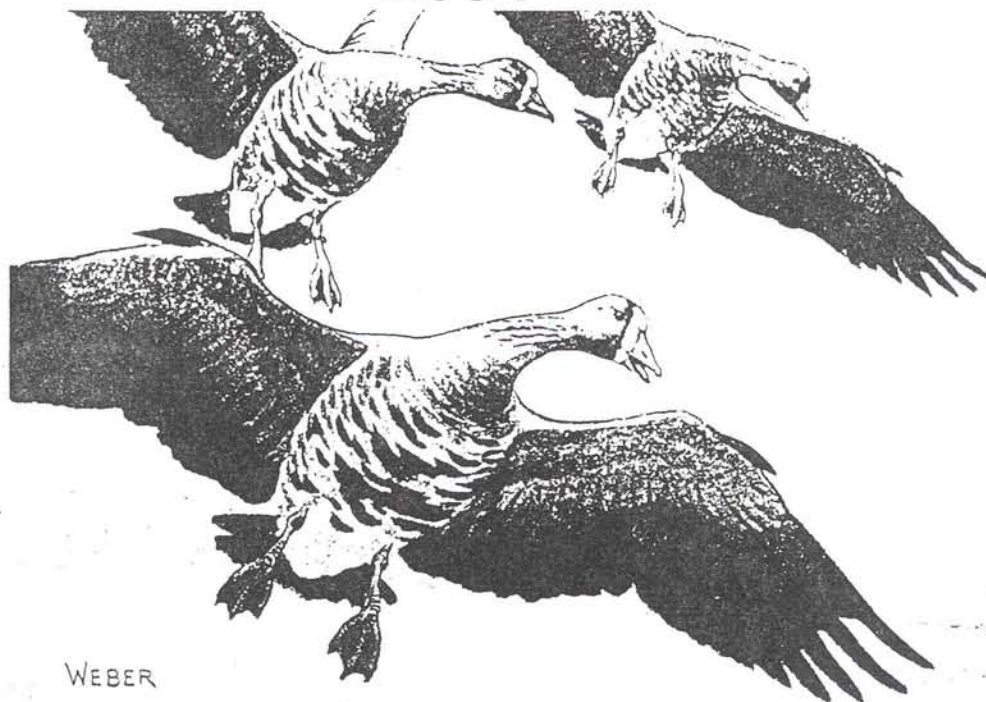


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# CENTRAL FLYWAY

## HARVEST AND POPULATION SURVEY DATA BOOK

2004

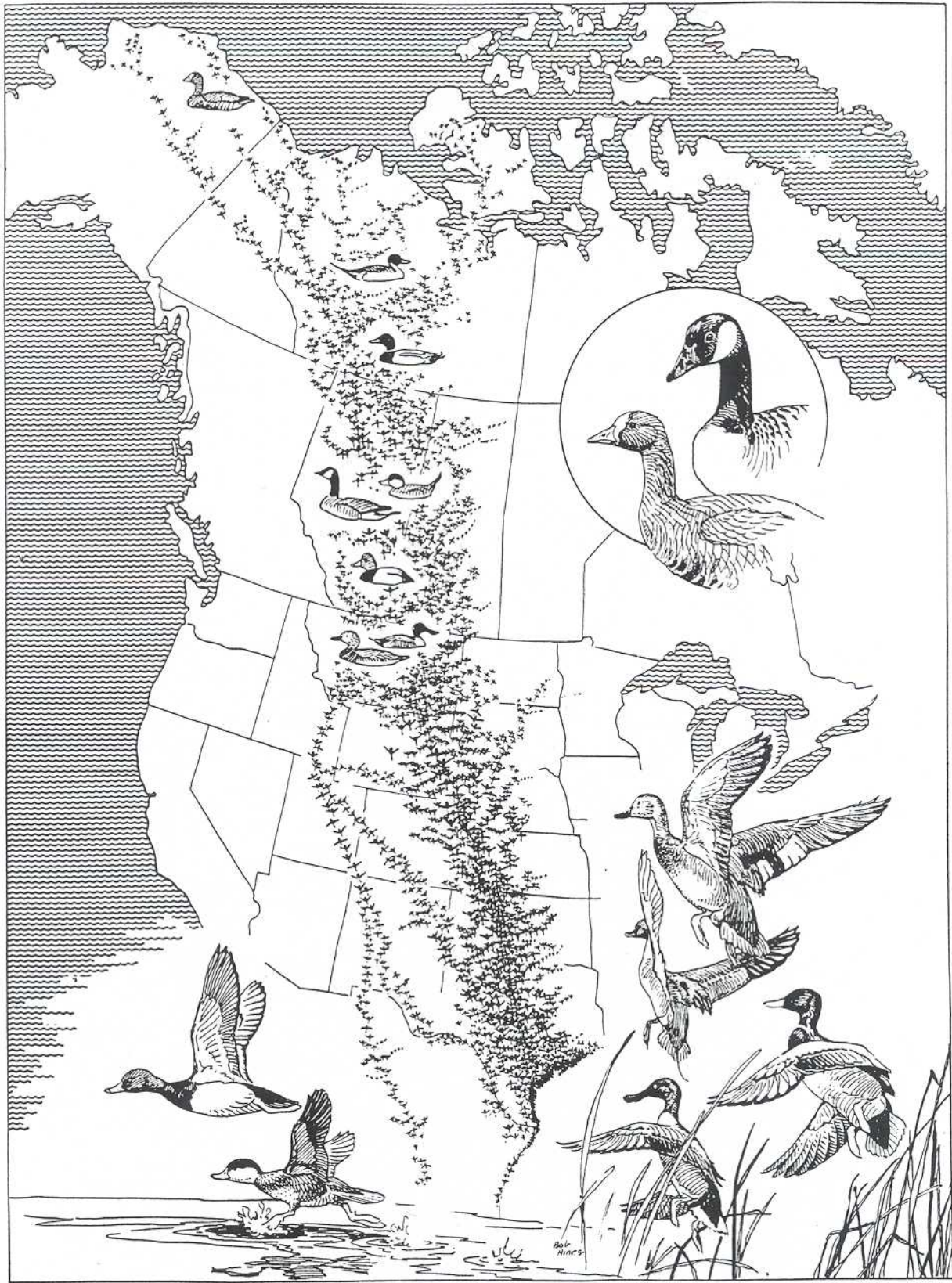


WEBER

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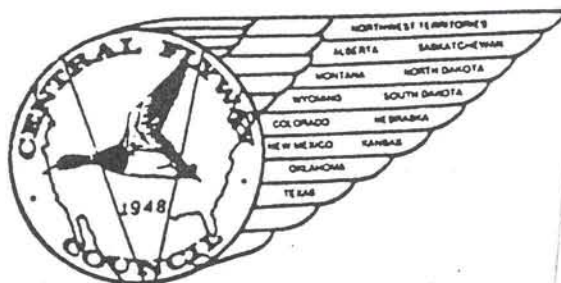
# CENTRAL FLYWAY



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# CENTRAL FLYWAY

## HARVEST AND POPULATION SURVEY DATA BOOK 2004



compiled by:

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### **Important Note to Users:**

From 1961-2001, estimates of waterfowl harvest, waterfowl hunter participation, and waterfowl hunter success in the United States were derived from a combination of several sources: 1) sales of migratory bird conservation stamps (Duck Stamps), 2) a Mail Questionnaire Survey of individuals who purchased ducks stamps for hunting purposes, and 3) the Waterfowl Parts Collection Survey (PCS). This survey, which was based on duck stamp sales was discontinued after the 2001 hunting season.

Beginning in 1999, new survey methods were implemented that obtained estimates of waterfowl harvest, hunter participation, and hunter success from: 1) States' lists of migratory bird hunters identified through the Harvest Information Program (HIP), 2) a questionnaire (HIP Survey) sent to a sample of those hunters, and 3) the Waterfowl PCS. The basic difference is that during 1961 - 2001 waterfowl hunter activity and harvest estimates were derived from a Mail Questionnaire Survey (MQS) of duck stamp purchasers, whereas from 1999 to the present those estimates were derived from HIP surveys of people identified as migratory bird hunters by the States. Both survey systems relied on the Waterfowl PCS for species composition data.

During 1989-2002, migratory game bird harvest and population survey information in the Central Flyway was presented in annually updated Data Books. Because of the recently implemented changes in survey design, historical harvest estimates will not be directly comparable to current estimates. Therefore, previous harvest survey information derived from the MQS are considered as final and compiled in the Central Flyway Waterfowl Hunting and Harvest Survey Information, 1961-2001.

For 1999 and subsequent years, waterfowl hunting and harvest estimates that are derived from HIP, along with the usual population survey information, will be compiled in annual updates of the Central Flyway Harvest and Population Survey Data Book. In the future, the annual Data Book will be expanded to also present annual hunter activity and harvest estimates for other migratory game bird species that are now derived from HIP surveys.

# TABLE OF CONTENTS

## U.S. DUCK STAMP AND CANADIAN PERMIT SALES:

Duck Stamp Sales in the United States, 2000-2003 .....	2
Migratory Game Bird Permit Sales in Canada .....	3
Federal Sandhill Crane Permits Issued .....	4
Tundra Swan Hunting Permits .....	5

## WATERFOWL HUNTER ACTIVITY AND SUCCESS:

Active Duck Hunters, Total Duck Hunter Days, Average Duck Hunter Days, and Average Seasonal Duck Bag Per Hunter .....	7
Active Goose Hunters, Total Goose Hunter Days, Average Goose Hunter Days, and Average Seasonal Goose Bag Per Hunter .....	8
Active Mid-continent Sandhill Crane Hunters .....	9
Active Tundra Swan Hunters .....	10
Average Seasonal Tundra Swan Bag Per Active Swan Hunter .....	11

## DUCK HARVESTS IN THE UNITED STATES:

Mallard, Gadwall, and American Wigeon .....	13
Northern Pintail, Northern Shoveler, and Wood Duck .....	14
American Black Duck, Mottled Duck, and Mexican Duck X Mallard .....	15
Blue-winged Teal (Special, Regular, All Seasons) .....	16
Green-winged Teal (Special, Regular, All Seasons) .....	17
Black-bellied Whistling Duck and Fulvous Tree Duck .....	18
Redhead, Canvasback and Ring-necked Duck .....	19
Greater Scaup, Lesser Scaup, and Combined .....	20
Common Goldeneye, Ruddy Duck, and Hooded Merganser .....	21
Total Ducks .....	22

## AGE RATIOS IN THE U.S. HARVEST:

Mallard All, Female, and Male Age Ratios .....	24
Northern Pintail, Gadwall, American Wigeon, Wood Duck, Redhead, Greater and Lesser Scaup Age Ratios .....	25
Blue-winged Teal and Green-winged Teal Age Ratios .....	26

## SEX RATIOS IN THE U.S. HARVEST:

Mallard Adult and Immature Sex Ratios .....	28
---	----

## DUCK HARVESTS IN CANADA:

Mallard .....	30
Pintail .....	31
Total Ducks .....	32

## DUCK HARVESTS IN NORTH AMERICA:

Mallard .....	34
---------------	----

## GOOSE HARVESTS IN THE U.S. AND CANADA:

Snow/Blue Geese, Ross's Geese and White-fronted Geese .....	36
Canada Geese-Regular and All Season .....	37
All Light Geese and Total Geese .....	38

**GOOSE AGE RATIOS IN THE U.S. HARVEST:**

Canada Goose, White-fronted Goose, and Snow Goose Age Ratios . . . . . 40

**WATERFOWL POPULATION SURVEY INFORMATION:**

Central Flyway Mid-winter Goose Survey, 2004 . . . . . 42  
White-fronted Goose Population Status and Trends . . . . . 43  
Canada Goose Population Status and Trends . . . . . 44  
Light Goose Population Status and Trends . . . . . 45  
Central Flyway Mid-winter Waterfowl Survey - 2004 . . . . . 46  
Central Flyway Mid-winter Waterfowl Surveys - 2000-09 . . . . . 47  
Central Flyway Mid-winter Waterfowl Surveys - 1990-99 . . . . . 48  
Central Flyway Mid-winter Waterfowl Survey Comparisons - 1948-2004 . . 49  
Breeding Population Estimates For 10 Duck Species . . . . . 50

**TUNDRA SWAN POPULATION SURVEYS AND HARVESTS:**

Mid-winter Survey for the Eastern Population . . . . . 52  
Harvest Estimates for the Eastern and Western Populations . . . . . 53

**SANDHILL CRANE POPULATION SURVEYS AND HARVESTS:**

Spring Surveys for the Mid-continent Population . . . . . 55  
Harvest Estimates for the Mid-continent Population - U.S. . . . . 56  
Harvest Estimates for the Mid-continent Population - N.A. . . . . 57  
Harvests Estimates for RMP Cranes . . . . . 58  
Population Surveys for RMP Cranes . . . . . 59

**CENTRAL FLYWAY FRAMEWORKS:**

Frameworks for Light Goose Hunting, 1999-2003 . . . . . 61  
Frameworks for U.S. Light Goose Hunting, 1961-2003 . . . . . 62  
Frameworks for Duck Hunting, 1999-2003 . . . . . 63  
Frameworks for Sandhill Crane Hunting, 1999-2003 . . . . . 64

**ADAPTIVE HARVEST MANAGEMENT:**

AHM Decision Matrix, 1995-1998 . . . . . 66  
AHM Decision Matrix, 1999-2004 . . . . . 67

**HISTORICAL MEMBERSHIP LISTS:**

Central Flyway Council . . . . . 69  
Central Flyway Waterfowl Technical Committee . . . . . 70  
Central Flyway Webless Game Bird Technical Committee . . . . . 71  
USFWS Flyway Representatives . . . . . 72

**UNITED STATES  
DUCK STAMP SALES**

**CANADIAN MIGRATORY  
BIRD PERMIT SALES**

**MID-CONTINENT  
SANDHILL CRANE  
HUNTING PERMITS**

**TUNDRA SWAN  
HUNTING PERMITS**

**DUCK STAMP SALES IN THE UNITED STATES: 2000-2002**

YR	MT	ND	SD	WY	NE	CO	KS	NM	OK	TX	ATL FLYWAY	MISS FLYWAY	CEN FLYWAY	PAC FLYWAY	U.S.
2000	7,265	34,926	32,445	9,644	37,072	35,605	29,195	4,214	21,362	144,369	306,740	757,094	356,095	252,738	1,662,666
2001 <sup>1</sup>	(21,994)	34,516	33,466	10,652	33,829	34,519	25,590	5,449	22,419	149,898	306,021	743,157	350,338	247,093	1,650,609
2002 <sup>1</sup>	(21,243)	30,359	30,851	7,837	32,000	31,297	26,345	5,114	21,770	138,075	305,837	719,094	323,648	235,268	1,583,847
2003 <sup>2</sup>															
<b>AVERAGES:</b>															
1934-39	16,699	9,404	15,317	4,496	23,301	13,490	18,117	2,733	17,179	45,263	98,740	365,007	166,000	134,158	763,904
1940-49	29,537	35,917	47,664	8,760	41,027	28,979	41,715	6,496	36,148	106,735	233,818	686,117	382,977	318,251	1,621,163
1950-59	33,024	43,234	46,848	10,777	60,944	36,686	59,606	9,293	44,931	151,917	318,241	924,878	497,258	417,341	2,157,718
1960-69	10,169	35,985	35,857	4,392	32,722	24,834	38,357	4,433	24,895	89,678	310,680	665,259	301,321	359,000	1,636,260
1970-79	8,225	54,915	41,258	7,648	46,285	39,847	57,972	6,468	31,622	134,256	449,986	892,081	428,496	415,996	2,186,556
1980-89	6,410	41,316	33,996	8,959	33,336	40,218	29,836	5,656	17,374	106,389	383,463	660,143	323,489	308,905	1,677,917
1990-99	5,989	31,538	32,154	8,683	32,300	28,573	20,031	4,513	15,547	99,583	300,139	648,178	283,110	228,661	1,340,112
2000-03	7,265	33,267	32,254	9,378	34,300	33,807	27,043	4,926	21,850	144,114	306,199	739,782	343,360	245,033	1,632,374

<sup>1</sup> Estimates for NM, CO, WY, and MT are statewide. MT is summarized in the Pacific Flyway's total and WY, CO, and NM are summarized in the Central Flyway's total.

<sup>2</sup> Duck stamp sales for 2003 not available.



**MIGRATORY GAME BIRD HUNTING PERMITS BY PROVINCE/TERRITORY OF PURCHASE IN CANADA**

YR	NF	PE	NS	NB	PQ	ON	MB	SK	AB	BC	NT	YT	NU	TOTAL
1966	13,269	3,271	7,220	8,535	35,868	144,063	37,784	44,744	52,911	32,394	N/A	N/A		380,059
1967	14,863	3,094	7,883	7,739	32,491	146,493	35,620	44,651	55,892	33,195	N/A	N/A		381,921
1968	17,645	3,649	9,022	9,558	37,110	139,182	38,712	43,596	53,623	33,301	N/A	N/A		385,398
1969	19,089	3,794	8,848	10,110	39,477	134,037	41,611	45,347	53,602	32,764	N/A	N/A		388,679
1970	21,347	3,926	9,926	10,293	46,009	135,231	39,230	47,722	59,986	31,350	N/A	N/A		405,020
1971	23,460	4,513	11,381	11,146	50,276	133,563	40,960	49,448	62,902	30,225	N/A	N/A		417,874
1972	23,682	4,492	12,158	11,336	53,082	131,427	41,133	50,004	63,309	31,032	N/A	N/A		421,655
1973	27,919	4,972	15,071	12,869	57,247	141,277	41,711	51,307	67,012	33,456	N/A	N/A		452,841
1974	25,127	5,038	13,791	11,916	58,345	136,469	37,167	51,504	66,127	27,764	591	323		434,162
1975	30,115	4,963	13,990	12,930	63,768	148,670	42,846	57,723	69,191	25,918	721	485		471,320
1976	29,621	5,756	13,326	13,743	66,453	143,816	46,816	61,669	75,739	26,561	893	513		484,906
1977	36,188	6,158	15,744	14,209	72,828	156,895	46,438	60,029	82,175	28,357	902	607		520,530
1978	37,297	6,396	16,297	15,249	74,745	159,698	50,169	57,958	77,117	28,561	821	638		524,946
1979	35,490	5,888	14,098	13,409	73,209	150,224	49,344	56,174	77,021	28,263	755	584		504,459
1980	31,362	5,802	14,257	12,471	76,133	147,952	48,340	54,081	79,318	27,943	732	525		498,916
1981	31,406	5,611	14,130	12,287	75,178	141,677	46,528	42,856	66,163	28,243	764	514		465,357
1982	31,215	5,461	13,728	12,759	72,850	144,436	45,273	47,236	64,968	26,522	800	572		465,820
1983	30,977	5,898	13,468	12,758	67,700	139,569	40,443	45,383	61,742	24,170	750	474		443,332
1984	31,309	5,525	12,896	11,486	65,308	140,521	35,238	37,720	51,717	21,892	850	496		414,958
1985	25,652	5,171	10,749	10,354	60,823	130,089	31,753	36,445	44,880	18,753	713	361		375,743
1986	25,498	5,300	11,047	11,083	59,685	131,930	33,570	37,692	45,042	17,924	692	358		379,821
1987	21,080	4,959	10,299	9,897	55,124	122,472	30,207	29,930	40,122	16,259	523	391		341,263
1988	23,655	4,906	10,264	10,646	57,206	117,310	25,108	23,258	34,513	15,595	496	367		323,324
1989	24,707	4,838	10,092	9,971	54,605	114,292	23,898	22,916	34,559	14,694	420	308		315,300
1990	24,831	4,625	10,115	9,974	54,700	115,130	22,641	22,964	32,212	13,851	431	240		311,714
1991	20,738	4,209	10,104	9,997	53,739	108,802	22,122	22,414	29,399	13,601	352	300		295,777
1992	20,310	3,753	9,192	9,337	49,262	103,395	20,048	20,620	28,056	12,429	348	256		277,006
1993	20,464	3,425	8,866	8,614	46,281	87,288	14,959	15,388	24,762	11,560	304	270		242,181
1994	20,399	3,380	9,314	9,468	46,537	92,344	18,838	20,254	26,211	11,037	320	294		258,396
1995	20,231	3,479	9,176	8,674	38,955	83,720	19,630	20,554	25,747	9,855	342	318		240,681
1996	16,312	3,303	8,652	8,536	36,004	80,194	19,702	20,475	27,299	10,069	318	306		231,170
1997	14,289	3,051	7,731	7,546	31,435	72,521	18,918	20,109	26,847	10,185	278	268		213,178
1998	13,101	2,946	7,681	7,095	30,113	70,407	18,445	21,822	22,238	9,816	286	231		204,181
1999	13,111	2,671	7,410	6,821	30,124	67,077	17,433	21,685	21,415	9,314	292	231		197,584
2000	12,217	2,805	7,072	6,399	30,271	63,672	15,810	21,908	21,792	9,007	267	224		191,444
2001	16,998	2,416	6,645	5,975	29,138	58,458	15,038	18,387	19,527	8,185	223	251	20	181,261
2002	16,056	2,341	6,316	5,942	28,702	56,645	14,832	16,958	17,814	7,464	244	217	24	173,555
2003	15,626	2,316	5,926	6,065	29,376	56,911	15,124	18,155	18,372	6,509	243	159	12	174,794
<b>AVERAGES:</b>														
1966-69	16,217	3,452	8,243	8,986	36,237	140,944	38,432	44,585	54,007	32,914	N/A	N/A		384,014
1970-79	29,025	5,210	13,578	12,710	61,596	143,727	43,581	54,354	70,058	29,149	781	525		463,771
1980-89	27,686	5,347	12,093	11,371	64,461	133,025	36,036	37,752	52,302	21,200	674	437		402,383
1990-03	17,477	3,194	8,157	7,889	38,188	79,755	18,110	20,121	24,407	10,206	303	255	19	228,066

FEDERAL MID-CONTINENT POPULATION SANDHILL CRANE PERMITS ISSUED IN THE CENTRAL FLYWAY

YR	CO	KS	MT	NM	ND	OK	SD	TX	WY	TOTAL
1975	401		158	1,225	4,172	171	198	5,482	56	11,863
1976	341		117	1,195	4,137	265	200	5,060	37	11,352
1977	374		82	1,452	6,294	519	134	4,897	48	13,800
1978	343		209	956	5,798	620	98	5,198	52	13,274
1979	528		159	1,288	4,949	470	63	5,098	43	12,598
1980	437		118	1,082	5,754	510	240	5,239	33	13,413
1981	397		53	1,022	5,796	466	197	5,297	30	13,258
1982	528		147	962	4,714	750	579	4,650	40	12,370
1983	575		175	706	8,033	909	528	7,317	63	18,306
1984	538		113	721	7,436	1,187	544	6,838	43	17,420
1985	555		143	710	6,802	1,102	656	7,417	59	17,444
1986	617		99	595	8,926	1,073	705	7,258	25	19,298
1987	610		128	502	8,778	1,213	517	6,289	30	18,067
1988	512		162	480	6,214	1,472	437	7,053	38	16,368
1989	434		172	430	6,128	1,717	524	8,066	25	17,496
1990	389		143	533	7,268	1,725	646	11,994	22	22,720
1991	501		238	602	3,353	1,618	668	11,142	25	18,147
1992	498		303	582	3,760	1,397	721	9,848	18	17,127
1993	411	575	336	541	4,572	1,277	708	10,407	37	18,864
1994	427	567	320	547	4,790	1,561	636	10,515	49	19,412
1995	571	711	351	564	5,242	1,323	650	10,755	42	20,209
1996	612	837	369	499	5,570	1,391	677	11,334	41	21,330
1997	572	997	325	454	4,934	1,393	757	37,365 <sup>2</sup>	46	46,843
1998	4,937 <sup>2</sup>	1,088	270	449	6,082	1,385	951	32,523 <sup>2</sup>	49	47,734
1999	4,847 <sup>2</sup>	1,235	279	516	6,050	1,438	810	33,380 <sup>2</sup>	52	48,607
2000	5,169 <sup>2</sup>	1,084	283	493	7,451	1,333	721	44,719 <sup>2</sup>	58	61,311
2001	5,869 <sup>2</sup>	1,374	253	509	8,078	1,315	680	49,410 <sup>2</sup>	72	67,560
2002	5,644 <sup>2</sup>	1,279	303	496	8,245 <sup>2</sup>	1,186	619	37,558 <sup>2</sup>	54	55,384
2003 <sup>1</sup>	5,854 <sup>2</sup>	1,206	273	471	6,030 <sup>2</sup>	1,000	563	43,199 <sup>2</sup>	50	58,646
<b>AVERAGES:</b>										
1975-79	397		145	1,223	5,070	409	139	5,147	47	12,577
1980-89	520		131	721	6,858	1,040	493	6,542	39	16,344
1990-99	1,377	859	293	529	5,162	1,451	722	17,926	38	28,099
2000-02	5,561	1,246	280	499	7,925	1,278	673	43,896	61	61,418
1975-02	1,344	975	207	718	6,047	1,100	531	14,361	42	24,699
<b>CURRENT YEAR PERCENT CHANGE FROM:</b>										
2002	4%	-6%	-10%	-5%	-27%	-16%	-9%	15%	-7%	6%
1975-79			88%	-61%	19%	144%			6%	
1980-89			108%	-35%	-12%	-4%	14%		30%	
1990-99		40%	-7%	-11%	17%	-31%	-22%	141%	31%	109%
2000-02	5%	-3%	-2%	-6%	-24%	-22%	-16%	-2%	-18%	-5%
1975-02	336%	24%	32%	-34%	0%	-9%	6%	201%	18%	137%

<sup>1</sup> Preliminary

<sup>2</sup> Harvest Information Program (HIP) or a point-of-sale electronic record used to identify crane hunters in lieu of a special sandhill crane hunting permit

**TUNDRA SWAN HUNTING PERMITS ISSUED FOR THE EASTERN AND WESTERN POPULATIONS**

YR	EASTERN POPULATION						WESTERN POPULATION					TOTAL
	MT	ND	SD	NC	VA	TOTAL	UT	NV	MT	AK	TOTAL	
1962							1,000				1,000	1,000
1963							1,000				1,000	1,000
1964							1,000				1,000	1,000
1965							995				995	995
1966							1,000				1,000	1,000
1967							1,000				1,000	1,000
1968							1,000				1,000	1,000
1969							2,500	500			3,000	3,000
1970							2,500	500	500		3,500	3,500
1971							2,495	500	500		3,495	3,495
1972							2,500	500	500		3,500	3,500
1973							2,500	500	500		3,500	3,500
1974							2,500	500	500		3,500	3,500
1975							2,500	500	500		3,500	3,500
1976							2,500	500	500		3,500	3,500
1977							2,488	500	500		3,488	3,488
1978							2,500	500	500		3,500	3,500
1979							2,500	500	500		3,500	3,500
1980							2,500	500	500		3,500	3,500
1981							2,500	500	500		3,500	3,500
1982							2,500	500	500		3,500	3,500
1983	109					109	2,500	650	500		3,650	3,759
1984	108			1,000		1,108	2,500	650	500		3,650	4,758
1985	120			6,000		6,120	2,488	650	500		3,638	9,758
1986	170			6,000		6,170	2,500	608	500		3,608	9,778
1987	171			5,968		6,139	2,499	594	500		3,593	9,732
1988	99	400		5,995	600	7,094	2,500	260	500	112	3,372	10,466
1989	167	1,000		5,444	600	7,211	2,500	324	500	130	3,454	10,665
1990	173	1,000	500	5,989	600	8,262	2,500	297	500	81	3,378	11,640
1991	204	2,000	1,000	6,000	600	9,804	2,500	258	500	84	3,342	13,146
1992	217	2,000	1,502	5,961	600	10,280	2,500	100	500	89	3,189	13,469
1993	212	2,000	1,500	6,000	400	10,112	2,500	205	500	170	3,375	13,487
1994	232	2,000	1,500	6,000	600	10,332	2,500	206	500	216	3,422	13,754
1995	291	2,000	1,500	6,000	600	10,391	2,750	383	500	210	3,843	14,234
1996	372	2,000	1,235	5,000	600	9,207	2,750	376	500	193	3,819	13,026
1997	364	2,000	1,077	5,000	600	9,041	2,750	381	500	201	3,832	12,873
1998	429	2,000	1,216	5,000	600	9,245	2,750	492	500	192	3,934	13,179
1999	432	2,000	863	5,000	600	8,895	2,750	518	500	227	3,995	12,890
2000	434	2,000	850	5,000	600	8,884	2,000	493	500	164	3,157	12,041
2001	398	2,000	983	5,000	600	8,981	2,000	308	500	255	3,063	12,044
2002	393	2,000	1,060	5,000	600	9,053	1,998	264	500	252	3,014	12,067
2003	423	2,200	1,002	5,000	600	9,225	2,000	298	500	215	3,013	12,238

# **WATERFOWL HUNTER ACTIVITY AND SUCCESS**

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**ESTIMATES OF ACTIVE DUCK HUNTERS BY STATE OF HARVEST (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY
1999 <sup>1</sup>	13,800	16,700	10,400	20,100	2,200	39,300	15,000	24,200	85,500	4,800
2000 <sup>1</sup>	14,000	14,800	9,000	19,200	3,100	27,800	14,000	14,800	114,700	4,300
2001 <sup>1</sup>	17,500	16,600	10,900	18,000	5,000	36,400	11,300	18,200	140,700	4,200
2002 <sup>1</sup>	12,200	15,700	14,900	17,200	4,800	34,700	12,800	19,100	95,000	4,400
2003 <sup>1</sup>	13,400	15,100	14,200	18,500	3,900	37,100	13,800	18,200	61,100	4,300

<sup>1</sup> Preliminary

<sup>2</sup> Estimates for NM, CO, WY, and MT are statewide. MT is summarized in the Pacific Flyway's total and WY, CO, and NM are summarized in the Central Flyway's total.

**ESTIMATES OF TOTAL DUCK HUNTER DAYS AFIELD BY STATE OF HARVEST (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999 <sup>1</sup>	79,700	125,600	(59,300)	152,000	13,900	230,400	120,600	153,700	511,600	31,100	1,418,600	1,131,300	4,151,000	1,397,500	8,098,400
2000 <sup>1</sup>	80,500	107,000	(58,800)	126,900	24,700	157,800	99,100	85,800	712,800	23,800	1,418,400	1,109,100	4,184,600	1,205,300	7,917,400
2001 <sup>1</sup>	113,700	100,600	(71,400)	142,000	30,100	186,500	77,600	123,100	727,900	26,500	1,528,000	1,187,400	4,265,100	1,188,200	8,168,700
2002 <sup>1</sup>	68,700	106,700	(80,600)	141,400	33,500	188,200	92,200	123,200	510,400	26,200	1,290,500	1,162,300	4,004,600	1,163,600	7,621,000
2003 <sup>1</sup>	86,000	107,600	(70,600)	135,000	30,900	197,700	103,500	119,400	379,200	23,000	1,182,300	1,106,900	4,033,400	1,118,500	7,441,100

<sup>1</sup> Preliminary

<sup>2</sup> Estimates for NM, CO, WY, and MT are statewide. MT is summarized in the Pacific Flyway's total and WY, CO, and NM are summarized in the Central Flyway's total.

**AVERAGE DUCK HUNTER DAYS AFIELD BY STATE OF HARVEST (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY
1999 <sup>1</sup>	5.78	7.52	(5.70)	7.56	6.32	5.86	8.04	6.35	5.98	6.48
2000 <sup>1</sup>	5.75	7.23	(6.53)	6.61	7.97	5.68	7.08	5.80	6.21	5.53
2001 <sup>1</sup>	6.50	6.06	(6.55)	7.89	6.02	5.12	6.87	6.76	5.17	6.31
2002 <sup>1</sup>	5.63	6.80	(5.41)	8.22	6.98	5.42	7.20	6.45	5.37	5.95
2003 <sup>1</sup>	6.42	7.13	(4.97)	7.30	7.92	5.33	7.50	6.56	6.21	5.35

<sup>1</sup> Preliminary

<sup>2</sup> Estimates for NM, CO, WY, and MT are statewide. MT is summarized in the Pacific Flyway's total and WY, CO, and NM are summarized in the Central Flyway's total.

**AVERAGE SEASONAL DUCK BAG PER HUNTER BY STATE OF HARVEST (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY
1999 <sup>1</sup>	6.5	14.1	10.0	9.5	12.0	14.6	21.4	12.6	16.2	10.6
2000 <sup>1</sup>	8.4	15.4	12.4	11.4	19.7	14.4	16.3	11.9	15.7	10.1
2001 <sup>1</sup>	7.8	10.7	18.7	11.9	12.3	13.6	16.1	13.2	12.1	10.0
2002 <sup>1</sup>	7.8	14.1	8.8	13.1	18.7	15.3	15.3	13.1	9.7	9.8
2003 <sup>1</sup>	10.3	15.5	9.4	12.5	15.6	13.4	16.3	14.0	13.4	9.2

<sup>1</sup> Preliminary

<sup>2</sup> Estimates for NM, CO, WY, and MT are statewide. MT is summarized in the Pacific Flyway's total and WY, CO, and NM are summarized in the Central Flyway's total.

**ESTIMATES OF ACTIVE GOOSE HUNTERS BY STATE OF HARVEST (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY
1999 <sup>1</sup>	15,300	14,200	9,200	19,300	1,800	30,200	11,900	25,100	66,000	3,500
2000 <sup>1</sup>	18,100	17,300	10,000	19,200	2,600	22,100	7,400	17,600	66,500	4,500
2001 <sup>1</sup>	16,700	15,700	10,600	17,800	3,400	26,700	7,500	18,200	140,700	4,200
2002 <sup>1</sup>	15,300	14,500	13,700	15,500	3,400	24,300	5,500	19,100	95,000	4,400
2003 <sup>1</sup>	15,900	16,100	14,000	18,300	2,500	27,600	8,500	20,100	47,000	4,300

<sup>1</sup> Preliminary

<sup>2</sup> Estimates for NM, CO, WY, and MT are statewide. MT is summarized in the Pacific Flyway's total and WY, CO, and NM are summarized in the Central Flyway's total.

**ESTIMATES OF TOTAL GOOSE HUNTER DAYS AFIELD BY STATE OF HARVEST (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999 <sup>1</sup>	62,500	95,100	(50,900)	142,800	6,800	162,900	56,500	166,800	247,700	18,300	959,400	515,900	1,951,600	674,600	4,101,500
2000 <sup>1</sup>	108,900	112,400	(69,500)	147,200	16,100	108,000	35,900	99,300	293,400	26,500	947,700	478,700	2,367,500	643,900	4,437,800
2001 <sup>1</sup>	102,900	87,500	(59,400)	143,600	15,800	132,400	30,000	139,200	251,200	22,500	925,100	855,800	2,157,800	651,900	4,590,600
2002 <sup>1</sup>	85,100	83,600	(67,400)	129,900	20,600	121,700	22,400	145,400	197,800	21,700	828,200	852,900	2,415,900	625,000	4,722,000
2003 <sup>1</sup>	111,400	116,200	(65,200)	137,500	13,300	128,900	44,100	146,700	149,700	24,600	872,400	830,800	2,360,700	656,200	4,720,100

<sup>1</sup> Preliminary

<sup>2</sup> Estimates for NM, CO, WY, and MT are statewide. MT is summarized in the Pacific Flyway's total and WY, CO, and NM are summarized in the Central Flyway's total.

**AVERAGE GOOSE HUNTER DAYS AFIELD BY STATE OF HARVEST (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY
1999 <sup>1</sup>	4.08	6.70	(5.53)	7.40	3.78	5.39	4.75	6.65	3.75	5.23
2000 <sup>1</sup>	6.02	6.50	(6.95)	7.67	6.19	4.89	4.85	5.64	4.41	5.89
2001 <sup>1</sup>	6.16	5.57	(5.60)	8.07	4.65	4.96	4.00	7.65	1.79	5.36
2002 <sup>1</sup>	5.56	5.77	(4.92)	8.38	6.06	5.01	4.07	7.61	2.08	4.93
2003 <sup>1</sup>	7.01	7.22	(4.66)	7.51	5.32	4.67	5.19	7.30	3.19	5.72

<sup>1</sup> Preliminary

<sup>2</sup> Estimates for NM, CO, WY, and MT are statewide. MT is summarized in the Pacific Flyway's total and WY, CO, and NM are summarized in the Central Flyway's total.

**AVERAGE SEASONAL GOOSE BAG PER HUNTER BY STATE OF HARVEST (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY
1999 <sup>1</sup>	4.7	6.0	3.1	5.3	4.6	7.2	3.7	6.8	8.4	3.9
2000 <sup>1</sup>	5.8	6.9	7.8	6.6	4.8	6.0	8.2	6.1	9.5	6.4
2001 <sup>1</sup>	4.2	5.5	4.5	5.7	6.7	6.3	3.3	7.2	6.5	4.0
2002 <sup>1</sup>	5.1	9.5	3.8	4.9	3.9	5.5	5.1	6.9	5.4	4.0
2003 <sup>1</sup>	7.6	9.9	4.8	6.3	4.0	5.4	4.9	9.2	6.4	5.8

<sup>1</sup> Preliminary

<sup>2</sup> Estimates for NM, CO, WY, and MT are statewide. MT is summarized in the Pacific Flyway's total and WY, CO, and NM are summarized in the Central Flyway's total.

## ESTIMATED ACTIVE SANDHILL CRANE HUNTERS<sup>1</sup> IN THE CENTRAL FLYWAY (STATE OF HARVEST)

YR	CO	KS	MT	NM	ND	OK	SD	TX	WY	TOTAL
1975	226		69	806	2,896	80	117	2,733	22	6,949
1976	203		68	752	1,328	148	80	2,497	16	5,092
1977	189		40	921	4,126	339	77	2,329	27	8,048
1978	190		86	836	3,776	334	50	2,390	21	7,683
1979	275		61	745	3,225	307	29	2,356	13	7,011
1980	216		50	625	3,387	275	160	2,439	12	7,164
1981	216		23	598	3,315	269	103	2,543	14	7,081
1982	138		56	386	2,429	342	260	1,553	8	5,172
1983	211		64	253	3,551	384	225	2,435	20	7,143
1984	206		51	301	3,189	467	208	2,380	19	6,821
1985	187		37	216	2,383	372	168	2,613	12	5,988
1986	106		17	178	3,095	299	149	1,991	5	5,840
1987	113		29	133	2,529	358	120	1,942	5	5,229
1988	117		48	171	1,779	531	78	2,497	11	5,232
1989	74		52	152	2,018	492	153	2,805	6	5,752
1990	101		33	180	2,614	395	172	4,130	6	7,631
1991	153		69	220	1,674	370	139	3,231	3	5,859
1992	96		95	182	1,776	330	153	2,655	7	5,294
1993	87	294	97	218	2,223	357	140	3,602	5	7,023
1994	93	293	79	211	2,497	456	151	3,350	11	7,141
1995	154	393	118	211	2,408	331	143	3,707	6	7,471
1996	91	382	82	166	2,744	355	169	3,356	9	7,354
1997	67	452	68	124	2,386	264	178	4,515	10	8,064
1998	96	480	43	155	2,785	345	237	4,022	10	8,173
1999	133	533	60	204	2,444	375	173	2,699	8	6,629
2000	192	430	64	160	2,481	223	209	3,180	11	6,950
2001	202	555	72	173	2,934	391	145	3,554	13	8,039
2002	175	517	85	166	2,407	237	144	4,037	15	7,783
2003 <sup>2</sup>	220	490	59	214	2,037	61	128	4,489	10	7,708
<b>AVERAGES:</b>										
1975-79	217		65	812	3,070	242	71	2,461	20	6,957
1980-89	158		43	301	2,768	379	162	2,320	11	6,142
1990-99	107	404	74	187	2,355	358	166	3,527	8	7,064
2000-02	190	501	74	166	2,607	284	166	3,590	13	7,591
1975-02	154	433	61	337	2,657	337	148	2,912	12	6,772
<b>CURRENT YEAR PERCENT CHANGE FROM:</b>										
2002	26%	-5%	-31%	29%	-15%	-74%	-11%	11%	-33%	-1%
1975-79	2%		-9%	-74%	-34%	-75%	81%	82%	-49%	11%
1980-89	39%		38%	-29%	-26%	-84%	-21%	94%	-11%	25%
1990-99	105%	21%	-21%	14%	-14%	-83%	-23%	27%	33%	9%
2000-02	16%	-2%	-20%	29%	-22%	-78%	-23%	25%	-23%	2%
1975-02	43%	13%	-4%	-37%	-23%	-82%	-13%	54%	-14%	14%

<sup>1</sup> Those permittees reporting hunting cranes 1 or more times

<sup>2</sup> Preliminary

**AVERAGE SEASONAL TUNDRA SWAN BAG (RETRIEVED & UNRETRIEVED) PER ACTIVE HUNTER**

YR	EASTERN POPULATION						WESTERN POPULATION					TOTAL	
	MT	ND	SD	NC	VA	TOTAL	UT	NV	MT	AK	TOTAL		
1964							0.45					0.45	0.45
1965							0.43					0.43	0.43
1966							0.60					0.60	0.60
1967							0.37					0.37	0.37
1968							0.67					0.67	0.67
1969							0.74					0.79	0.79
1970							0.57			0.65		0.67	0.67
1971							0.60	0.29	0.37			0.53	0.53
1972							0.55	0.35	0.57			0.52	0.52
1973							0.66	0.32	0.49			0.60	0.60
1974							0.72	0.56	0.90			0.72	0.72
1975							0.71	0.57	0.87			0.71	0.71
1976							0.58	0.55	0.40			0.55	0.55
1977							0.83	0.25				0.84	0.84
1978							0.70	0.25	0.47			0.61	0.61
1979							0.71	0.66	0.86			0.73	0.73
1980							0.64	0.30	0.68			0.60	0.60
1981							0.87	0.79	0.59			0.82	0.82
1982							0.69	0.46	0.44			0.63	0.63
1983	0.49					0.49	0.66	0.38	0.63			0.61	0.61
1984	0.39			0.39		0.39	0.60	0.51	0.74			0.60	0.55
1985	0.32			0.55		0.55	0.37	0.36	0.72			0.40	0.50
1986	0.80			0.53		0.53	0.51	0.53	0.80			0.54	0.53
1987	0.26			0.60		0.62	0.33	0.26	0.77			0.38	0.53
1988	0.45	0.72		0.58	0.24	0.55	0.51	0.42	0.79	0.00		0.53	0.55
1989	0.39	0.68		0.53	0.29	0.53	0.44	0.32	0.85	0.26		0.48	0.52
1990	0.51	0.70	0.84	0.64	0.29	0.63	0.50	0.31	0.80	0.32		0.52	0.60
1991	0.41	0.52	0.61	0.65	0.45	0.61	0.48	0.35	0.46	0.15		0.46	0.57
1992	0.27	0.59	0.71	0.62	0.40	0.61	0.26	0.44	0.62	0.28		0.32	0.54
1993	0.18	0.49	0.51	0.62	0.41	0.56	0.19	0.43	0.84	0.27		0.30	0.50
1994	0.44	0.48	0.47	0.82	0.41	0.67	0.42	0.60	0.86	0.26		0.49	0.63
1995	0.34	0.55	0.22	0.67	0.45	0.57	0.19	0.32	0.57	0.41		0.26	0.49
1996	0.30	0.48	0.30	0.61	0.42	0.52	0.48	0.41	0.78	0.47		0.51	0.52
1997	0.44	0.56	0.51	0.64	0.45	0.59	0.38	0.45	0.90	0.26		0.44	0.54
1998	0.29	0.43	0.29	0.65	0.52	0.53	0.59	0.50	0.78	0.37		0.59	0.55
1999	0.34	0.57	0.36	0.61	0.30	0.55	0.46	0.53	0.61	0.64		0.49	0.53
2000	0.50	0.44	0.30	0.67	0.36	0.56	0.39	0.25	0.82	0.78		0.43	0.52
2001	0.42	0.40	0.46	0.63	0.30	0.53	0.20	0.27	0.94	0.77		0.35	0.48
2002	0.28	0.48	0.32	0.63	0.38	0.54	0.34	0.28	0.60	0.36		0.37	0.49
2003	0.29	0.18	0.07	0.58	0.35	0.43	0.50	0.37	0.53	0.62		0.50	0.45



**NUMBER OF ACTIVE TUNDRA SWAN HUNTERS FOR THE EASTERN AND WESTERN POPULATIONS (STATE OF HARVEST)**

YR	EASTERN POPULATION						WESTERN POPULATION					TOTAL
	MT	ND	SD	NC	VA	TOTAL	UT	NV	MT	AK	TOTAL	
1964							940				940	940
1965							915				915	915
1966							950				950	950
1967							910				910	910
1968							930				930	930
1969							2,225				2,225	2,225
1970							2,200		275		2,475	2,475
1971							2,146	415	245		2,806	2,806
1972							2,100	400	265		2,765	2,765
1973							2,175	375	230		2,780	2,780
1974							2,200	385	350		2,935	2,935
1975							2,175	390	350		2,915	2,915
1976							2,150	410	380		2,940	2,940
1977							2,264	380			2,644	2,644
1978							2,150	370	350		2,870	2,870
1979							2,150	390	390		2,930	2,930
1980							2,100	395	400		2,895	2,895
1981							2,225	445	330		3,000	3,000
1982							2,200	400	340		2,940	2,940
1983	70					70	2,125	507	375		3,007	3,077
1984	58			867		925	2,150	494	305		2,949	3,874
1985	60			5,080		5,140	2,021	436	275		2,732	7,872
1986	51			4,888		4,939	2,075	480	270		2,825	7,764
1987	106			5,014		5,120	1,924	404	395		2,723	7,843
1988	60	301		4,729	519	5,609	1,875	195	355	71	2,496	8,105
1989	117	865		4,446	517	5,945	1,925	262	400	81	2,668	8,613
1990	121	816	485	4,859	499	6,780	2,050	232	370	46	2,698	9,478
1991	131	1,565	850	4,849	488	7,883	1,950	181	185	53	2,369	10,251
1992	139	1,648	1,352	4,675	516	8,330	1,875	71	365	58	2,369	10,699
1993	119	1,603	1,350	4,802	334	8,208	2,025	135	380	83	2,623	10,831
1994	145	1,616	1,260	4,790	489	8,300	2,100	161	405	119	2,785	11,085
1995	175	1,638	900	4,776	495	7,984	2,172	287	340	118	2,917	10,901
1996	219	1,549	840	3,773	476	6,857	2,392	331	415	81	3,219	10,076
1997	262	1,671	872	3,892	503	7,200	2,392	328	395	125	3,240	10,440
1998	308	1,559	851	3,762	481	6,961	2,420	418	415	108	3,361	10,322
1999	282	1,675	690	3,836	445	6,928	2,338	435	390	148	3,311	10,239
2000	260	1,566	606	4,047	513	6,992	1,680	360	301	59	2,400	9,392
2001	233	1,553	827	3,997	510	7,120	1,560	240	340	151	2,291	9,411
2002	200	1,550	693	3,951	485	6,879	1,658	182	305	151	2,296	9,175
2003	199	1,436	587	4,257	520	6,999	1,740	221	250	131	2,342	9,341

**DUCK HARVESTS  
IN THE  
UNITED STATES**

*D.E. SHARP FILE S:\DATABOOK\TITLES\DKHARV.123*

**ESTIMATED REGULAR SEASON MALLARD HARVESTS (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999 <sup>1</sup>	37,916	114,460	24,980	91,602	7,851	270,263	132,995	146,298	184,583	18,747	1,029,696	450,827	3,090,931	1,284,284	5,855,737
2000 <sup>1</sup>	49,505	103,116	23,203	118,062	21,716	170,817	113,734	89,337	288,176	21,496	999,162	533,447	3,310,933	1,184,545	6,028,088
2001 <sup>1</sup>	80,375	96,280	26,777	131,487	22,761	243,380	102,371	126,237	303,398	24,522	1,157,587	467,064	2,768,031	1,018,040	5,410,722
2002 <sup>1</sup>	40,913	96,063	22,929	114,096	37,328	234,019	102,160	116,388	219,889	23,249	1,007,034	554,703	2,423,134	930,726	4,915,597
2003 <sup>1</sup>	59,600	95,711	38,200	127,992	25,148	231,335	110,031	124,593	130,070	19,430	962,111	427,301	2,570,485	1,058,281	5,018,178

<sup>1</sup> Preliminary

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07/16/04

**ESTIMATED REGULAR SEASON GADWALL HARVESTS (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999 <sup>1</sup>	7,004	27,259	1,399	16,147	2,535	113,205	72,243	42,278	292,930	1,385	576,385	63,046	1,072,942	133,294	1,845,667
2000 <sup>1</sup>	8,555	29,440	2,041	23,356	6,946	88,368	43,230	19,516	380,147	2,199	603,797	65,198	1,283,920	130,199	2,083,115
2001 <sup>1</sup>	8,009	18,868	1,659	13,286	6,552	83,302	28,489	23,638	305,469	2,043	491,316	33,107	828,527	120,428	1,473,378
2002 <sup>1</sup>	4,868	37,731	2,201	21,498	8,532	101,338	34,186	36,482	154,683	2,432	403,950	41,936	673,853	131,618	1,251,359
2003 <sup>1</sup>	10,360	41,063	1,860	20,928	7,480	96,155	40,657	37,432	163,195	3,600	422,728	38,479	858,504	154,055	1,473,766

<sup>1</sup> Preliminary

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**ESTIMATED REGULAR SEASON AMERICAN WIGEON HARVESTS (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999 <sup>1</sup>	4,106	7,093	3,149	7,763	2,077	23,955	16,773	11,487	128,046	1,939	206,387	50,039	164,827	401,370	822,623
2000 <sup>1</sup>	4,628	12,553	1,157	13,089	4,972	20,714	10,565	7,011	139,423	1,873	215,985	39,857	220,235	295,975	772,051
2001 <sup>1</sup>	8,993	6,172	1,817	6,261	6,322	24,574	8,038	9,958	129,091	3,041	204,268	36,719	169,185	320,580	730,752
2002 <sup>1</sup>	8,620	13,444	1,917	15,169	6,328	32,086	11,898	14,565	80,427	3,370	187,825	33,078	147,440	319,232	687,574
2003 <sup>1</sup>	8,697	15,513	1,156	13,328	6,147	23,742	11,322	15,374	52,028	3,699	151,005	39,505	124,228	283,490	598,228

<sup>1</sup> Preliminary

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**ESTIMATED REGULAR SEASON NORTHERN PINTAIL HARVESTS (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999 <sup>1</sup>	886	5,424	840	5,279	1,091	28,398	7,264	13,082	70,130	924	133,317	25,200	148,299	232,704	539,520
2000 <sup>1</sup>	2,314	7,472	680	7,443	2,998	17,449	5,498	6,632	83,440	326	134,252	20,752	155,082	201,163	511,250
2001 <sup>1</sup>	1,827	7,230	632	6,719	2,414	21,381	4,137	10,159	79,733	380	134,612	19,276	122,522	157,475	433,885
2002 <sup>1</sup>	1,653	4,771	781	4,281	1,138	17,716	1,745	9,257	18,513	555	60,407	17,089	102,481	143,432	323,409
2003 <sup>1</sup>	2,174	4,157	653	2,974	2,063	17,806	1,132	6,149	18,383	148	55,641	18,134	123,318	144,019	341,113

<sup>1</sup>Preliminary

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**ESTIMATES OF REGULAR SEASON NORTHERN SHOVELER HARVESTS (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999 <sup>1</sup>	1,771	4,590	770	6,055	1,303	24,341	6,339	14,359	64,220	739	124,486	17,616	197,755	194,723	534,579
2000 <sup>1</sup>	2,033	1,793	612	3,208	1,535	10,612	3,450	4,547	73,044	570	101,406	18,005	198,537	130,904	448,853
2001 <sup>1</sup>	1,405	3,350	237	4,276	2,414	18,049	1,537	13,277	86,291	143	130,979	17,107	231,748	146,420	526,254
2002 <sup>1</sup>	1,965	3,903	568	4,560	2,773	20,069	3,252	9,393	39,082	1,024	86,590	14,138	128,638	157,920	387,285
2003 <sup>1</sup>	4,732	4,258	754	5,618	1,934	19,290	4,838	9,759	36,593	493	88,270	12,748	209,236	157,744	467,998

<sup>1</sup>Preliminary

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**ESTIMATED REGULAR SEASON WOOD DUCK HARVESTS (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999 <sup>1</sup>	1,771	4,450	1,120	11,800	422	2,898	9,245	6,382	88,450	369	126,907	414,691	938,102	52,216	1,531,917
2000 <sup>1</sup>	1,753	2,690	476	6,930	1,609	1,837	3,558	4,547	95,703	81	119,184	351,931	819,745	53,600	1,344,459
2001 <sup>1</sup>	1,967	3,879	1,343	2,291	1,264	1,111	1,537	2,917	95,955	570	112,835	385,682	633,140	53,798	1,185,454
2002 <sup>1</sup>	1,295	3,253	852	3,536	1,920	2,106	2,617	4,901	60,886	299	81,665	372,941	720,392	37,838	1,212,835
2003 <sup>1</sup>	1,790	3,751	553	3,084	559	2,226	7,823	6,149	49,600	247	75,782	336,934	754,754	40,962	1,208,432

<sup>1</sup>Preliminary

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**ESTIMATED REGULAR SEASON AMERICAN BLACK DUCK HARVESTS (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999 <sup>1</sup>	0	0	0	0	0	0	0	0	0	0	0	101,814	70,188	0	172,002
2000 <sup>1</sup>	0	0	0	0	0	0	0	0	0	0	0	121,416	59,964	0	181,381
2001 <sup>1</sup>	0	0	0	0	0	0	0	0	0	0	0	94,559	30,636	0	125,195
2002 <sup>1</sup>	0	0	0	0	0	248	0	0	206	0	454	128,620	47,465	0	176,538
2003 <sup>1</sup>	134	0	0	0	0	0	0	134	0	0	267	95,108	33,971	0	129,347

<sup>1</sup> Preliminary

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**ESTIMATED REGULAR SEASON MOTTLED DUCK HARVESTS (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999 <sup>1</sup>	0	0	0	0	0	0	0	0	7,683	0	7,683	5,747	34,890	0	48,320
2000 <sup>1</sup>	0	0	0	0	0	0	0	0	12,263	0	12,263	9,678	28,599	0	50,540
2001 <sup>1</sup>	0	0	0	0	0	0	0	0	14,497	0	14,497	8,780	30,526	0	53,803
2002 <sup>1</sup>	0	0	0	0	0	0	0	0	6,994	0	6,994	10,651	23,114	0	40,758
2003 <sup>1</sup>	0	0	0	0	0	0	0	0	10,752	0	10,752	10,361	42,013	0	63,126

<sup>1</sup> Preliminary

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**ESTIMATED REGULAR SEASON MEXICAN DUCK X MALLARD HYBRID HARVESTS (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999 <sup>1</sup>	0	0	0	0	211	0	0	0	4,925	0	5,136	0	0	340	5,476
2000 <sup>1</sup>	0	0	0	0	1,462	0	0	6,398	6,398	0	7,860	0	0	1,637	9,497
2001 <sup>1</sup>	0	0	0	0	805	0	0	0	6,558	0	7,363	0	0	747	8,110
2002 <sup>1</sup>	0	0	0	0	4,906	0	0	0	1,028	0	5,934	0	0	1,446	7,380
2003 <sup>1</sup>	0	0	0	0	2,450	0	0	0	3,469	0	5,919	0	0	895	6,814

<sup>1</sup> Preliminary

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07/16/04

**ESTIMATED BLUE-WINGED TEAL HARVEST DURING SPECIAL SEPTEMBER SEASONS (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY <sup>2</sup>	MISS FLYWAY <sup>2</sup>	PAC FLYWAY	U.S.
1999 <sup>1</sup>	2,335	28,093		0	1,690		9,113		131,395		172,626	25,418	446,737	0	644,780
2000 <sup>1</sup>	1,613	27,797		10,266	3,217		9,379		200,204		252,475	21,678	438,854	0	713,007
2001 <sup>1</sup>	1,124	10,580		10,232	1,609		11,230		219,869		254,644	14,942	257,563	0	527,149
2002 <sup>1</sup>	447	8,999		4,839	1,920		2,221		58,623		77,049	11,801	112,648	0	201,498
2003 <sup>1</sup>	3,581	21,393		13,108	1,891		13,792		99,894		153,660	10,920	296,755	0	461,334

<sup>1</sup> Preliminary

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<sup>2</sup> Includes special seasons in FL, KY, and TN initiated in 1981

**ESTIMATED REGULAR SEASON BLUE-WINGED TEAL HARVESTS (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999 <sup>1</sup>	4,508	6,954	1,399	14,128	1,091	25,307	792	22,336	31,125	1,570	109,211	57,870	284,960	59,077	511,118
2000 <sup>1</sup>	6,591	2,391	1,089	8,213	3,583	21,531	1,509	10,705	66,113	1,303	123,028	60,758	282,558	37,913	504,257
2001 <sup>1</sup>	2,740	1,058	2,117	11,453	1,150	34,154	473	20,017	46,942	238	120,341	36,659	354,233	42,698	553,931
2002 <sup>1</sup>	4,064	3,578	852	12,099	1,422	43,731	396	21,100	43,402	2,176	132,820	40,769	338,598	52,022	564,209
2003 <sup>1</sup>	3,837	4,258	704	7,380	473	37,097	206	16,844	37,634	1,036	109,468	34,953	314,434	57,426	516,280

<sup>1</sup> Preliminary

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**ESTIMATED ALL-SEASON BLUE-WINGED TEAL HARVESTS (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999 <sup>1</sup>	6,843	35,047	1,399	14,128	2,781	25,307	9,905	22,336	162,520	1,570	281,837	83,288	731,696	59,077	1,155,898
2000 <sup>1</sup>	8,204	30,188	1,089	18,479	6,800	21,531	10,888	10,705	266,316	1,303	375,503	82,436	721,412	37,913	1,217,263
2001 <sup>1</sup>	3,864	11,638	2,117	21,685	2,759	34,154	11,703	20,017	266,811	238	374,985	51,601	611,796	42,698	1,081,080
2002 <sup>1</sup>	4,511	12,577	852	16,938	3,342	43,731	2,617	21,100	102,025	2,176	209,869	52,570	451,246	52,022	765,706
2003 <sup>1</sup>	7,418	25,651	704	20,488	2,364	37,097	13,998	16,844	137,528	1,036	263,127	45,872	611,188	57,426	977,614

<sup>1</sup> Preliminary

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**ESTIMATED GREEN-WINGED TEAL HARVEST DURING SPECIAL SEPTEMBER SEASONS (Harvest Information Program)**

YR											CEN	ATL	MISS	PAC	U.S.
	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	FLYWAY	FLYWAY <sup>2</sup>	FLYWAY <sup>2</sup>	FLYWAY	
1999 <sup>1</sup>	242	6,060		0	282		2,906		6,501		15,989	8,891	19,122	0	44,002
2000 <sup>1</sup>	771	4,633		1,668	951		4,097		20,793		32,913	7,477	22,433	0	62,822
2001 <sup>1</sup>	1,265	1,763		1,069	1,379		1,891		21,055		28,422	7,345	11,714	0	47,481
2002 <sup>1</sup>	447	3,903		1,675	1,209		872		8,434		16,540	2,113	5,834	0	24,487
2003 <sup>1</sup>	1,791	9,024		3,635	1,032		3,500		12,660		31,641	3,186	27,174	0	62,001

<sup>1</sup> Preliminary

<sup>2</sup> Includes special seasons in FL, KY, and TN initiated in 1981

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**ESTIMATED REGULAR SEASON GREEN-WINGED TEAL HARVESTS (Harvest Information Program)**

YR											CEN	ATL	MISS	PAC	U.S.
	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	FLYWAY	FLYWAY	FLYWAY	FLYWAY	
1999 <sup>1</sup>	6,843	18,974	2,309	29,965	3,908	21,250	39,753	24,250	195,812	1,662	344,726	234,643	867,656	531,732	1,978,758
2000 <sup>1</sup>	9,466	27,946	817	19,891	5,265	21,735	15,524	20,179	191,140	2,443	314,405	183,844	677,108	415,110	1,590,466
2001 <sup>1</sup>	8,009	19,750	2,381	18,326	5,633	13,467	14,186	18,307	197,088	3,327	300,474	134,894	561,568	331,307	1,328,243
2002 <sup>1</sup>	8,754	32,419	2,910	31,921	3,484	34,688	20,940	25,864	114,984	3,071	279,035	156,135	542,564	387,280	1,365,014
2003 <sup>1</sup>	16,115	24,536	1,106	22,140	4,127	26,116	18,630	24,063	113,248	3,649	253,730	133,969	697,677	368,625	1,454,000

<sup>1</sup> Preliminary

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**ESTIMATED ALL-SEASON GREEN-WINGED TEAL HARVESTS (Harvest Information Program)**

YR											CEN	ATL	MISS	PAC	U.S.
	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	FLYWAY	FLYWAY	FLYWAY	FLYWAY	
1999 <sup>1</sup>	7,084	25,034	2,309	29,965	4,190	21,250	42,659	24,250	202,313	1,662	360,715	243,534	886,778	531,732	2,022,760
2000 <sup>1</sup>	10,238	32,579	817	21,559	6,215	21,735	19,621	20,179	211,933	2,443	347,317	191,321	699,540	415,110	1,653,289
2001 <sup>1</sup>	9,274	21,513	2,381	19,395	7,012	13,467	16,077	18,307	218,143	3,327	328,896	142,239	573,282	331,307	1,375,724
2002 <sup>1</sup>	9,201	36,322	2,910	33,596	4,693	34,688	21,812	25,864	123,418	3,071	295,575	158,248	548,398	387,280	1,389,501
2003 <sup>1</sup>	17,905	33,560	1,106	25,775	5,159	26,116	22,130	24,063	125,908	3,649	285,370	137,155	724,851	368,625	1,516,001

<sup>1</sup> Preliminary

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**ESTIMATED REGULAR SEASON BLACK-BELLIED WHISTLING DUCK HARVESTS (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN	ATL	MISS	PAC	U.S.
											FLYWAY	FLYWAY	FLYWAY	FLYWAY	
1999 <sup>1</sup>	0	0	0	0	0	0	0	0	1,182	0	1,182	0	0	0	1,182
2000 <sup>1</sup>	0	0	0	0	0	0	0	0	2,932	0	2,932	276	0	327	3,535
2001 <sup>1</sup>	0	0	0	0	0	0	0	0	4,832	0	4,832	138	535	0	5,505
2002 <sup>1</sup>	0	0	0	0	0	0	0	0	5,142	0	5,142	1,467	0	0	6,609
2003 <sup>1</sup>	0	0	0	0	0	0	0	0	7,284	0	7,284	714	636	0	8,634

<sup>1</sup> Preliminary

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**ESTIMATED REGULAR SEASON FULVOUS TREE DUCK HARVESTS (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN	ATL	MISS	PAC	U.S.
											FLYWAY	FLYWAY	FLYWAY	FLYWAY	
1999 <sup>1</sup>	0	0	0	0	0	0	0	0	0	0	0	196	333	0	530
2000 <sup>1</sup>	0	0	0	0	0	0	0	0	0	0	0	276	0	0	276
2001 <sup>1</sup>	0	0	0	0	0	0	0	0	0	0	0	138	891	0	1,029
2002 <sup>1</sup>	0	0	0	0	0	0	0	0	0	0	0	98	138	0	236
2003 <sup>1</sup>	0	0	0	0	0	0	0	0	520	0	520	0	0	0	520

<sup>1</sup> Preliminary

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**ESTIMATED REGULAR SEASON REDHEAD HARVESTS (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN	ATL	MISS	PAC	U.S.
											FLYWAY	FLYWAY	FLYWAY	FLYWAY	
1998 <sup>1</sup>	1,047	3,477	490	2,329	70	19,898	3,170	7,179	63,629	924	102,212	3,836	56,677	16,240	178,965
1999 <sup>1</sup>	841	2,839	476	2,438	512	9,286	3,450	3,979	61,314	896	86,031	8,148	48,994	14,544	157,718
2001 <sup>1</sup>	422	2,821	0	1,985	805	14,022	2,246	5,935	64,200	143	92,579	6,141	50,617	11,493	160,831
2002 <sup>1</sup>	581	2,927	213	1,861	213	5,946	2,142	953	13,370	512	28,719	2,282	28,995	11,871	71,866
2003 <sup>1</sup>	1,151	1,217	302	2,203	344	12,168	926	3,208	12,487	395	34,400	5,570	37,828	22,922	100,719

<sup>1</sup> Preliminary

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**ESTIMATES OF REGULAR-SEASON CANVASBACK HARVESTS (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN	ATL	MISS	PAC	U.S.
											FLYWAY	FLYWAY	FLYWAY	FLYWAY	
1998 <sup>1</sup>	81	834	490	932	106	8,114	1,585	1,755	20,487	92	34,475	5,577	37,547	20,385	97,983
1999 <sup>1</sup>	140	149	136	0	73	4,592	1,509	1,326	18,661	0	26,587	16,796	49,921	19,788	113,093
2001 <sup>1</sup>	141	529	158	305	0	4,998	236	302	7,248	95	14,013	1,546	11,334	9,332	36,225
2002 <sup>1</sup>	0	0	0	0	0	124	0	0	1,028	0	1,152	0	604	1,299	3,055
2003 <sup>1</sup>	128	101	151	551	43	2,671	823	936	2,601	0	8,005	4,738	11,259	11,380	35,383

<sup>1</sup> Preliminary

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**ESTIMATED REGULAR SEASON RING-NECKED DUCK HARVESTS (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN	ATL	MISS	PAC	U.S.
											FLYWAY	FLYWAY	FLYWAY	FLYWAY	
1998 <sup>1</sup>	725	4,729	0	2,018	669	7,148	14,132	7,498	59,295	924	97,137	152,195	237,456	45,634	532,422
1999 <sup>1</sup>	982	1,345	136	1,668	658	7,041	8,085	3,126	85,840	81	108,963	92,013	260,334	33,398	494,708
2001 <sup>1</sup>	843	2,645	711	2,291	690	6,803	3,665	3,420	58,333	48	79,447	66,583	226,706	38,035	410,771
2002 <sup>1</sup>	715	5,204	497	3,071	1,422	6,070	7,376	4,084	41,756	427	70,622	91,736	250,330	39,101	451,789
2003 <sup>1</sup>	1,023	4,765	101	2,533	860	3,413	7,617	2,139	39,715	197	62,363	112,806	239,855	36,326	451,350

<sup>1</sup> Preliminary

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### ESTIMATED REGULAR SEASON GREATER SCAUP HARVESTS (Harvest Information Program)

YR											CEN	ATL	MISS	PAC	U.S.
	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	FLYWAY	FLYWAY	FLYWAY	FLYWAY	
1998 <sup>1</sup>	0	139	0	0	0	193	660	160	1,773	0	2,925	8,219	9,209	19,422	39,775
1999 <sup>1</sup>	70	0	68	128	0	204	108	0	1,866	0	2,444	13,483	19,253	19,314	54,494
2001 <sup>1</sup>	0	176	0	0	115	139	0	0	1,381	0	1,811	7,582	8,060	15,611	33,064
2002 <sup>1</sup>	45	217	71	745	0	124	159	408	1,851	0	3,619	17,809	30,216	20,614	72,258
2003 <sup>1</sup>	0	0	0	110	43	0	103	134	867	0	1,257	17,344	14,469	16,122	49,192

<sup>1</sup> Preliminary

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### ESTIMATED REGULAR SEASON LESSER SCAUP HARVESTS (Harvest Information Program)

YR											CEN	ATL	MISS	PAC	U.S.
	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	FLYWAY	FLYWAY	FLYWAY	FLYWAY	
1998 <sup>1</sup>	161	278	490	1,397	0	19,318	528	3,510	13,002	369	39,054	64,243	74,670	29,347	207,314
1999 <sup>1</sup>	771	149	612	770	292	21,531	862	3,411	53,317	81	81,797	32,390	187,098	30,657	331,943
2001 <sup>1</sup>	422	882	79	916	230	23,602	473	2,917	42,110	95	71,725	97,228	165,746	29,888	364,587
2002 <sup>1</sup>	1,474	2,060	781	3,536	569	26,264	3,411	4,492	42,373	427	85,386	84,399	185,381	35,280	390,446
2003 <sup>1</sup>	895	913	201	2,644	129	17,065	1,647	3,208	17,863	444	45,008	60,939	153,617	39,032	298,597

<sup>1</sup> Preliminary

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### ESTIMATED REGULAR SEASON TOTAL (LESSER & GREATER) SCAUP HARVESTS (Harvest Information Program)

YR											CEN	ATL	MISS	PAC	U.S.
	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	FLYWAY	FLYWAY	FLYWAY	FLYWAY	
1998 <sup>1</sup>	161	417	490	1,397	0	19,511	1,189	3,669	14,775	369	41,979	72,462	83,879	48,769	247,089
1999 <sup>1</sup>	841	149	680	898	292	21,735	970	3,411	55,183	81	84,242	45,873	206,351	49,970	386,436
2001 <sup>1</sup>	422	1,058	79	916	345	23,741	473	2,917	43,491	95	73,536	104,811	173,806	45,499	397,651
2002 <sup>1</sup>	1,519	2,277	852	4,281	569	26,388	3,569	4,901	44,225	427	89,006	102,208	215,597	55,894	462,705
2003 <sup>1</sup>	895	913	201	2,754	172	17,065	1,750	3,342	18,730	444	46,265	78,283	168,086	55,154	347,789

<sup>1</sup> Preliminary

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**ESTIMATED REGULAR SEASON COMMON GOLDENEYE HARVESTS (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1998 <sup>1</sup>	161	695	350	155	211	580	0	160	788	92	3,192	9,955	21,958	18,709	53,814
1999 <sup>1</sup>	2,384	2,242	544	642	73	0	0	284	1,066	733	7,968	13,105	18,245	23,815	63,133
2001 <sup>1</sup>	1,194	882	869	153	0	694	236	201	1,381	808	6,418	6,027	22,485	15,120	50,049
2002 <sup>1</sup>	1,563	542	213	838	569	619	397	136	1,234	2,304	8,415	12,377	37,405	37,238	95,435
2003 <sup>1</sup>	3,581	913	503	1,101	129	890	721	1,471	694	1,677	11,678	13,439	32,612	41,932	99,661

<sup>1</sup> Preliminary

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**ESTIMATED REGULAR SEASON RUDDY DUCK HARVESTS (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1998 <sup>1</sup>	161	278	0	311	0	1,352	264	1,595	3,349	277	7,587	29,050	14,727	11,612	62,978
1999 <sup>1</sup>	210	448	0	257	0	510	216	663	3,466	0	5,770	11,363	6,465	2,812	26,410
2001 <sup>1</sup>	70	0	0	305	0	1,250	236	704	1,381	0	3,946	6,629	4,191	5,321	20,087
2002 <sup>1</sup>	268	0	71	186	0	619	79	136	617	0	1,977	7,180	4,715	3,191	17,063
2003 <sup>1</sup>	0	406	0	110	0	742	0	267	173	49	1,748	2,474	13,202	5,632	23,056

<sup>1</sup> Preliminary

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**ESTIMATED REGULAR SEASON HOODED MERGANSER HARVESTS (Harvest Information Program)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999 <sup>1</sup>	0	695	0	155	0	773	2,245	319	9,062	0	13,249	29,713	47,565	4,778	95,306
2000 <sup>1</sup>	140	448	0	128	0	408	1,078	284	5,865	81	8,434	35,524	45,463	4,787	94,208
2001 <sup>1</sup>	141	705	158	764	115	278	946	201	6,213	0	9,520	26,608	43,362	4,570	84,060
2002 <sup>1</sup>	179	1,301	0	465	71	619	872	0	5,965	85	9,559	32,978	60,048	2,838	105,422
2003 <sup>1</sup>	0	913	0	330	86	1,039	618	802	3,295	49	7,132	29,181	55,608	5,488	97,409

<sup>1</sup> Preliminary

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**ESTIMATED REGULAR SEASON ALL-DUCK HARVESTS (Harvest Information Program)**

<b>YR</b>	<b>CO</b>	<b>KS</b>	<b>MT</b>	<b>NE</b>	<b>NM</b>	<b>ND</b>	<b>OK</b>	<b>SD</b>	<b>TX</b>	<b>WY</b>	<b>CEN FLYWAY</b>	<b>ATL FLYWAY</b>	<b>MISS FLYWAY</b>	<b>PAC FLYWAY</b>	<b>U.S.</b>
1999 <sup>1</sup>	70,197	234,899	37,785	190,500	23,553	572,401	320,800	305,200	1,382,898	30,198	3,168,434	1,907,600	7,947,902	3,096,267	16,120,203
2000 <sup>1</sup>	93,610	228,500	32,185	218,799	56,520	399,899	227,900	176,400	1,799,702	32,489	3,266,004	1,822,700	8,214,699	2,637,795	15,941,198
2001 <sup>1</sup>	120,211	178,100	37,203	213,800	54,718	493,701	182,400	239,699	1,701,999	35,880	3,257,710	1,670,301	6,617,796	2,363,085	13,908,892
2002 <sup>1</sup>	79,146	221,400	35,564	225,401	75,438	530,599	195,199	250,200	924,398	40,441	2,577,787	1,830,998	5,974,099	2,357,414	12,740,298
2003 <sup>1</sup>	120,990	233,600	46,493	231,323	55,326	496,800	224,900	254,401	815,801	35,704	2,515,337	1,623,561	6,759,446	2,504,383	13,402,727

<sup>1</sup> Preliminary

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# **AGE RATIOS IN THE U.S. HARVEST**

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**MALLARD AGE RATIOS (IMMATURE/ADULT) IN THE REGULAR SEASON HARVEST**  
 Derived from the Parts Collection Survey

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999	0.75	0.65	0.66	0.80	1.10	1.15	0.51	0.90	0.56	0.45	0.73	0.91	0.87	0.97	0.87
2000	0.60	0.44	0.44	0.67	0.63	0.88	0.25	0.78	0.46	0.50	0.54	0.95	0.68	1.04	0.74
2001	0.70	0.64	0.63	0.70	0.93	1.35	0.39	0.70	0.54	0.50	0.70	1.14	1.33	1.22	1.13
2002	0.48	0.51	0.60	0.71	0.88	0.92	0.33	1.04	0.33	0.42	0.60	0.95	0.90	1.18	0.88
2003 <sup>1</sup>	0.90	0.70	0.80	0.80	1.10	1.40	0.50	1.30	0.40	0.90	0.87	1.26	1.41	1.51	1.29

<sup>1</sup> Preliminary

**FEMALE MALLARD AGE RATIOS (IMMATURE/ADULT) IN THE REGULAR SEASON HARVEST**  
 Derived from the Parts Collection Survey

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999	1.2	1.2	1.0	1.6	1.6	1.5	0.8	1.3	0.8	1.6	1.15	1.35	1.35	1.35	1.33
2000	1.1	0.7	0.9	1.1	0.8	1.4	0.4	1.4	0.8	0.5	0.91	1.35	1.14	1.69	1.22
2001	1.3	1.9	0.8	1.5	1.5	2.1	0.9	1.5	1.1	1.0	1.37	1.81	2.51	1.95	2.08
2002	0.9	1.2	0.8	1.5	1.8	1.2	0.7	2.5	0.7	1.0	1.08	1.45	1.61	1.90	1.54
2003 <sup>1</sup>	1.8	1.7	2.0	1.3	1.8	2.3	1.0	2.5	1.0	2.7	1.64	1.88	2.41	2.48	2.24

<sup>1</sup> Preliminary

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**MALE MALLARD AGE RATIOS (IMMATURE/ADULT) IN THE REGULAR SEASON HARVEST**  
 Derived from the Parts Collection Survey

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999	0.6	0.6	0.6	0.6	0.9	1.0	0.4	0.8	0.4	0.3	0.61	0.74	0.70	0.83	0.72
2000	0.4	0.4	0.4	0.6	0.6	0.7	0.2	0.7	0.4	0.5	0.45	0.78	0.54	0.83	0.59
2001	0.5	0.5	0.6	0.6	0.8	1.2	0.3	0.6	0.4	0.4	0.56	0.90	1.00	0.99	0.87
2002	0.4	0.4	0.5	0.6	0.6	0.8	0.3	0.8	0.2	0.3	0.49	0.77	0.69	0.95	0.69
2003 <sup>1</sup>	0.7	0.6	0.7	0.8	0.9	1.2	0.4	1.1	0.3	0.7	0.72	1.03	1.12	1.23	1.04

<sup>1</sup> Preliminary

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**NORTHERN PINTAIL AGE RATIOS (IMMATURE/ADULT) IN THE REGULAR SEASON HARVEST**

Derived from the Parts Collection Survey

YR	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999	0.89	1.18	1.23	0.97	1.04
2000	0.51	0.57	0.90	0.80	0.76
2001	0.86	1.02	1.40	0.63	0.92
2002	1.08	1.32	1.81	0.91	1.25
2003 <sup>1</sup>	1.53	2.29	2.58	0.97	1.57

<sup>1</sup> Preliminary

**WOOD DUCK AGE RATIOS (IMMATURE/ADULT) IN THE ALL-SEASON HARVEST**

Derived from the Parts Collection Survey

YR	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999	1.04	1.03	1.35	1.24	1.23
2000	0.63	1.22	0.99	2.19	1.04
2001	1.32	1.20	2.05	1.29	1.61
2002	1.05	1.15	1.67	1.24	1.43
2003 <sup>1</sup>	1.07	1.59	1.66	1.57	1.60

<sup>1</sup> Preliminary

**GADWALL AGE RATIOS (IMMATURE/ADULT) IN THE REGULAR SEASON HARVEST**

Derived from the Parts Collection Survey

YR	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999	1.27	1.97	1.28	0.92	1.26
2000	0.55	0.79	0.71	0.93	0.67
2001	0.99	0.83	1.33	0.78	1.14
2002	0.82	0.51	0.68	0.99	0.75
2003 <sup>1</sup>	1.62	0.86	1.24	1.41	1.34

<sup>1</sup> Preliminary

**REDHEAD AGE RATIOS (IMMATURE/ADULT) IN THE REGULAR SEASON HARVEST**

Derived from the Parts Collection Survey

YR	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999	1.76	2.27	2.99	0.82	1.92
2000	0.42	0.42	0.71	0.72	0.52
2001	0.70	0.47	1.97	0.44	0.92
2002	0.24	0.10	0.21	1.11	0.31
2003 <sup>1</sup>	1.64	0.54	1.58	1.69	1.53

<sup>1</sup> Preliminary

**AMERICAN WIGEON AGE RATIOS (IMMATURE/ADULT) IN THE REGULAR SEASON HARVEST**

Derived from the Parts Collection Survey

YR	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999	0.70	1.08	1.00	0.87	0.88
2000	0.44	0.50	0.59	0.94	0.66
2001	0.76	1.01	1.16	1.02	0.98
2002	0.90	0.92	1.32	1.64	1.30
2003 <sup>1</sup>	1.34	0.90	1.35	1.11	1.21

<sup>1</sup> Preliminary

**GREATER SCAUP AGE RATIOS (IMMATURE/ADULT) IN THE REGULAR SEASON HARVEST**

Derived from the Parts Collection Survey

YR	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999		1.00	2.09	0.46	0.87
2000		0.77	1.54	1.27	1.23
2001		1.54	2.30	0.48	0.91
2002	3.41	1.66	2.83	0.97	1.83
2003 <sup>1</sup>		0.98	1.37	0.72	0.97

<sup>1</sup> Preliminary

**LESSER SCAUP AGE RATIOS (IMMATURE/ADULT) IN THE REGULAR SEASON HARVEST**

Derived from the Parts Collection Survey

YR	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999	0.89	0.27	0.61	1.02	0.56
2000	0.42	0.34	0.36	1.20	0.42
2001	1.05	0.63	0.59	1.64	0.74
2002	1.33	0.46	0.86	1.60	0.88
2003 <sup>1</sup>	0.95	0.77	1.35	1.58	1.17

<sup>1</sup> Preliminary

**BLUE-WINGED TEAL AGE RATIOS (IMMATURE/ADULT) IN THE REGULAR SEASON HARVEST**  
 Derived from the Parts Collection Survey

YR	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999	2.74	1.21	2.32	1.01	1.94
2000	3.32	0.82	2.09	0.91	1.95
2001	3.87	1.32	2.93	1.29	2.74
2002	3.17	0.82	2.54	1.09	2.23
2003 <sup>1</sup>	2.69	1.29	1.97	1.50	2.06

<sup>1</sup> Preliminary and based on all-season harvest.

**GREEN-WINGED TEAL AGE RATIOS (IMMATURE/ADULT) IN THE REGULAR SEASON HARVEST**  
 Derived from the Parts Collection Survey

YR	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999	1.33	2.58	1.71	1.01	1.54
2000	1.48	1.33	1.02	1.05	1.15
2001	1.78	1.10	1.92	1.05	1.56
2002	1.83	1.92	2.15	1.36	1.81
2003 <sup>1</sup>	2.10	1.83	1.97	1.14	1.74

<sup>1</sup> Preliminary and based on all-season harvest.



# **SEX RATIOS IN THE U.S. HARVEST**

### MALLARD ADULT SEX RATIOS (MALE/FEMALE) IN THE REGULAR SEASON HARVEST

Derived from the Parts Collection Survey

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN	ATL	MISS	PAC	U.S.
											FLYWAY	FLYWAY	FLYWAY	FLYWAY	
1999	4.0	7.5	3.8	4.6	2.8	2.6	3.3	3.6	3.1	7.7	3.55	2.69	2.80	2.88	2.93
2000	4.6	5.8	6.1	5.4	3.0	4.0	4.8	5.1	3.3	4.3	4.24	2.43	3.27	3.25	3.32
2001	5.3	10.1	3.7	6.2	2.5	3.9	5.7	6.7	3.5	5.9	4.72	2.82	3.79	3.25	3.78
2002	4.3	9.3	4.3	6.4	3.8	3.0	4.6	6.1	3.8	6.4	4.41	2.83	3.40	3.26	3.50
2003 <sup>1</sup>	5.5	10.7	8.3	5.5	3.2	3.9	4.8	5.6	4.3	10.3	5.13	2.86	3.57	3.49	3.74

\*Years without a sex ratio estimate had <50 wings in the sample

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<sup>1</sup> Preliminary

### MALLARD IMMATURE SEX RATIOS (MALE/FEMALE) IN THE REGULAR SEASON HARVEST

Derived from the Parts Collection Survey

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN	ATL	MISS	PAC	U.S.
											FLYWAY	FLYWAY	FLYWAY	FLYWAY	
1999	1.9	3.6	2.3	1.9	1.5	1.7	1.6	2.2	1.5	1.4	1.87	1.48	1.46	1.78	1.58
2000	1.8	3.2	2.5	2.8	2.1	2.1	2.2	2.5	1.5	3.9	2.10	1.40	1.54	1.60	1.60
2001	2.3	2.6	2.5	2.5	1.3	2.2	1.8	2.6	1.2	2.1	1.94	1.40	1.52	1.66	1.59
2002	1.7	3.5	2.8	2.6	1.4	2.1	1.7	1.9	1.3	2.1	1.98	1.50	1.46	1.64	1.57
2003 <sup>1</sup>	2.1	3.8	2.8	3.4	1.6	2.0	1.7	2.5	1.2	2.8	2.24	1.57	1.66	1.74	1.74

\*Years without a sex ratio estimate had <50 wings in the sample

D.E. SHARP

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<sup>1</sup> Preliminary

# **DUCK HARVESTS IN CANADA**

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**ESTIMATES OF MALLARD HARVESTS IN CANADA**

YR	NF	PE	NS	NB	PQ	ON	MB	SK	AB	BC	NT	YT	TOTAL
1968 <sup>1</sup>					41,800	231,700	148,600	191,500	275,000	138,300			1,026,900
1969 <sup>1</sup>	100	200	900	500	38,400	228,900	281,300	386,300	541,800	131,900			1,610,300
1970 <sup>1</sup>			700	1,000	42,200	213,900	310,300	687,200	634,300	133,800			2,023,400
1971 <sup>1</sup>		400	700	800	42,400	223,800	198,000	531,700	568,000	113,700			1,679,500
1972	400	100	800	800	61,500	254,200	214,500	477,800	557,600	114,800			1,682,500
1973	100	400	1,200	1,200	72,300	255,400	137,500	349,100	546,900	106,000			1,470,100
1974	300	200	500	1,300	74,100	257,200	145,000	499,600	714,100	108,600			1,800,900
1975	700	400	900	700	58,200	296,200	154,300	572,100	531,500	122,700	4,700	1,300	1,743,700
1976	700	300	1,500	800	73,700	318,200	205,100	608,700	612,300	116,200	13,800	1,000	1,952,300
1977	1,100	200	2,300	700	83,600	264,900	163,100	392,400	515,600	129,300	10,700	800	1,564,700
1978	800	300	1,200	1,500	62,400	322,400	239,600	396,700	379,600	116,800	6,700	1,300	1,529,300
1979	500	500	800	1,600	68,300	265,600	245,100	422,700	486,500	116,500	2,700	1,900	1,612,700
1980	0	1,000	3,200	1,400	81,300	290,500	210,000	354,600	482,400	103,400	5,000	1,400	1,534,200
1981	2,400	1,400	2,400	2,500	92,800	281,400	174,600	230,200	388,200	115,000	2,400	900	1,294,200
1982	500	400	1,400	1,800	94,800	333,700	150,300	241,100	295,000	91,500	3,100	0	1,213,600
1983	1,100	1,000	4,100	2,500	87,100	297,800	159,800	285,800	363,700	121,600	4,000	900	1,329,400
1984	800	700	2,100	1,600	66,800	283,600	118,100	181,700	304,800	89,900	7,500	1,700	1,059,300
1985	400	1,300	3,200	3,300	97,200	290,500	84,500	158,400	180,900	81,800	5,800	1,200	908,500
1986	2,500	700	3,200	2,500	84,400	265,400	113,500	151,100	182,000	72,200	800	900	879,200
1987	1,100	1,100	4,200	3,200	116,800	319,100	137,000	163,600	215,300	78,300	500	300	1,040,500
1988	0	1,000	2,400	1,600	82,300	233,700	59,800	73,500	138,000	64,000	4,700	400	661,400
1989	1,300	1,000	4,500	2,200	74,000	262,100	68,300	74,800	186,700	57,100	1,600	800	734,400
1990	1,000	900	3,500	3,200	86,500	262,700	56,700	78,800	173,900	60,100	2,000	400	729,700
1991	1,000	1,100	3,800	4,700	77,700	218,300	60,200	70,300	121,000	51,700	100	700	610,600
1992	967	198	6,343	5,260	89,551	196,776	66,189	66,902	95,405	51,840	668	244	580,343
1993	1,063	1,071	5,110	3,585	97,625	197,754	41,191	49,752	80,268	43,430	1,158	547	522,554
1994	830	828	3,172	2,755	103,446	192,356	56,301	87,448	108,951	49,233	1,999	201	607,520
1995	532	751	4,822	5,131	83,307	176,680	74,206	104,296	111,048	40,782	1,509	278	603,342
1996	351	1,024	4,286	4,044	82,201	176,869	91,266	121,608	115,668	42,447	1,326	0	641,090
1997	1,461	417	8,047	5,371	77,594	178,169	107,379	133,017	151,167	55,513	437	126	718,698
1998	1,628	1,011	5,440	7,512	76,320	164,431	104,470	129,461	119,826	52,663	881	276	663,919
1999	1,188	667	6,305	4,866	69,568	131,901	82,639	182,714	105,126	48,002	0	220	633,196
2000	1,511	1,915	5,481	5,999	81,655	162,352	78,201	195,276	107,203	49,272	510	72	689,447
2001	601	1,192	5,721	7,047	79,896	166,629	92,115	107,413	94,699	35,575	643	229	591,760
2002	300	2,176	6,498	6,002	66,533	147,847	77,992	118,857	80,707	37,371	1,702	609	546,594
2003	696	804	4,711	6,511	58,873	138,099	66,403	126,397	73,088	35,384	410	110	511,486
<b>AVERAGES:</b>													
1972-79	575	300	1,150	1,075	69,263	279,263	188,025	464,888	543,013	116,363	7,720	1,260	1,669,525
1980-89	1,010	960	3,070	2,260	87,750	285,780	127,590	191,480	273,700	87,480	3,540	850	1,065,470
1990-99	1,002	797	5,083	4,642	84,381	189,594	74,054	102,430	118,236	49,571	1,008	299	631,096
1972-03	870	814	3,536	3,224	80,074	237,586	119,855	225,192	269,349	76,844	3,012	649	640,604

<sup>1</sup> Estimates for 1968-71 are useful only for distribution of harvest among provinces. They are not comparable with estimates in subsequent years because different survey procedures were used.

**ESTIMATES OF PINTAIL HARVESTS IN CANADA**

YR	NF	PE	NS	NB	PQ	ON	MB	SK	AB	BC	NT	YT	TOTAL
1968 <sup>1</sup>	N/A	N/A	N/A	N/A	21,300	N/A	25,800	16,300	51,200	55,500	N/A	N/A	170,100
1969 <sup>1</sup>	2,200	800	500	1,000	20,500	10,900	21,100	33,800	48,700	23,700	N/A	N/A	163,200
1970 <sup>1</sup>	900	1,300	1,400	1,900	26,600	14,900	30,700	66,400	78,100	36,500	N/A	N/A	258,700
1971 <sup>1</sup>	1,000	700	600	1,500	25,800	10,400	20,300	46,000	71,600	28,400	N/A	N/A	206,300
1972	1,000	400	400	400	16,900	9,700	16,700	29,100	68,900	48,700	N/A	N/A	192,200
1973	2,600	500	1,100	1,000	19,400	10,500	18,300	31,000	94,700	48,900	N/A	N/A	228,000
1974	1,100	1,100	1,300	1,300	21,000	10,800	10,700	51,900	98,700	25,700	N/A	N/A	223,600
1975	900	400	500	800	22,000	9,700	20,400	56,300	82,500	23,200	200	700	217,600
1976	1,300	700	1,000	1,700	29,000	17,300	17,600	34,300	60,800	35,200	2,600	300	201,800
1977	2,400	1,800	1,200	1,000	40,600	14,500	11,600	19,900	71,300	30,400	600	400	195,700
1978	900	800	700	1,400	20,600	13,200	20,700	13,700	38,100	23,000	2,200	200	135,500
1979	1,800	600	500	1,100	15,300	9,100	20,300	29,600	48,300	17,900	1,700	200	146,400
1980	900	500	700	1,300	17,100	13,300	12,700	17,900	43,900	20,900	0	100	129,300
1981	1,100	800	1,000	1,200	17,500	11,600	15,100	2,300	41,000	19,200	100	400	111,300
1982	0	1,600	1,100	1,500	20,300	10,200	14,300	12,700	28,700	14,000	0	0	104,400
1983	2,300	600	700	300	16,300	10,600	11,800	16,800	27,800	13,200	3,700	300	104,400
1984	1,700	1,100	700	900	9,500	35,500	13,200	13,000	32,500	18,700	500	500	127,800
1985	1,600	1,000	1,400	1,800	16,500	15,300	10,900	7,700	23,700	11,500	0	900	92,300
1986	700	600	800	1,700	13,000	9,400	6,700	9,000	9,000	8,800	0	800	60,500
1987	1,100	1,800	600	1,100	11,900	6,300	5,400	8,800	21,200	11,600	0	700	70,500
1988	2,200	1,300	500	800	12,600	8,000	14,000	6,000	15,300	11,000	0	0	71,700
1989	1,300	600	300	1,400	15,300	11,600	7,700	5,100	12,000	8,300	200	0	63,800
1990	4,400	500	700	1,700	19,800	8,300	5,600	10,200	13,600	7,700	600	100	73,200
1991	400	600	900	800	7,600	4,300	4,500	4,600	5,700	4,000	100	100	33,600
1992	0	904	84	473	6,327	4,857	5,214	2,076	6,930	6,521	169	67	33,622
1993	1,133	1,228	911	682	11,113	4,946	5,103	3,263	3,907	4,447	65	0	36,798
1994	946	707	1,093	1,084	10,887	4,526	4,769	7,229	7,252	4,727	0	63	43,283
1995	1,727	454	965	1,240	7,831	4,552	8,974	6,521	7,573	4,476	0	0	44,313
1996	1,246	478	897	1,234	5,043	4,011	10,323	14,477	9,621	5,367	0	0	52,697
1997	785	139	116	493	7,423	5,560	13,248	13,656	13,883	5,422	37	0	60,762
1998	1,026	0	653	757	7,735	6,361	14,347	11,099	11,119	6,462	19	276	59,854
1999	390	1,137	755	1,790	8,956	6,457	9,830	10,610	10,304	5,464	0	0	55,693
2000	470	509	499	581	6,480	5,397	8,766	16,168	13,603	5,825	50	0	58,348
2001	137	0	401	611	4,911	3,709	9,207	7,051	8,732	4,807	19	60	39,645
2002	1,153	78	543	702	5,527	9,910	13,879	13,055	7,640	4,551	0	0	57,038
2003	572	598	228	1,270	6,795	10,422	8,999	8,688	8,205	1,948	234	0	47,959
<b>AVERAGES:</b>													
1972-79	1,500	788	838	1,088	23,100	11,850	17,038	33,225	70,413	31,625	1,460	360	192,600
1980-89	1,290	990	780	1,200	15,000	13,180	11,180	9,930	25,510	13,720	450	370	93,600
1990-99	1,205	615	707	1,025	9,272	5,387	8,191	8,373	8,989	5,459	99	61	49,382
1972-03	1,228	735	726	1,066	14,101	9,685	11,589	15,431	29,577	14,435	451	213	99,175

<sup>1</sup> Estimates for 1968-71 are useful only for distribution of harvest among provinces. They are not comparable with estimates in subsequent years because different survey procedures were used.

**ESTIMATES OF ALL-DUCK HARVESTS IN CANADA**

YR	NF	PE	NS	NB	PQ	ON	MB	SK	AB	BC	NT	YT	NUN	TOTAL
1968 <sup>1</sup>	44,300	19,400	54,800	59,600	333,300	794,000	295,700	292,700	459,100	362,600	N/A	N/A		2,715,500
1969 <sup>1</sup>	62,700	25,300	50,100	62,900	465,700	928,100	467,300	557,700	778,200	270,100	N/A	N/A		3,668,100
1970 <sup>1</sup>	66,500	28,900	59,200	61,000	464,900	872,300	518,100	930,500	904,700	283,900	N/A	N/A		4,190,000
1971 <sup>1</sup>	53,300	30,500	71,100	56,600	454,500	739,000	332,200	690,200	848,000	228,600	N/A	N/A		3,504,000
1972	56,200	18,200	55,700	51,100	414,900	815,700	356,200	615,100	800,200	260,700	N/A	N/A		3,444,000
1973	111,500	18,000	117,400	51,900	493,100	752,700	251,900	471,900	831,600	255,400	N/A	N/A		3,355,400
1974	103,800	31,400	105,500	58,700	569,500	811,500	249,600	699,700	1,014,300	210,900	N/A	N/A		3,854,900
1975	101,700	28,400	118,000	59,100	467,900	938,300	299,200	807,300	850,700	236,200	9,500	5,000		3,921,300
1976	98,400	37,400	117,900	68,600	602,900	976,400	352,300	807,800	886,600	231,200	29,200	3,900		4,212,600
1977	132,900	30,200	134,500	53,800	631,200	913,300	259,400	508,800	781,100	259,600	20,800	3,100		3,728,700
1978	142,700	30,000	109,500	65,800	529,100	943,200	361,200	527,300	581,700	210,500	18,100	3,000		3,522,100
1979	122,200	20,900	88,400	49,100	460,400	845,400	383,400	582,700	679,300	204,400	9,400	3,000		3,448,600
1980	106,000	31,900	124,700	59,900	500,200	912,100	335,100	443,600	688,800	186,300	11,500	3,000		3,403,100
1981	114,400	26,200	113,600	59,000	507,900	850,100	293,900	273,300	525,600	188,300	5,000	1,500		2,958,800
1982	111,500	39,600	87,700	60,600	512,500	862,000	280,900	324,100	458,200	163,100	3,100	1,100		2,904,400
1983	119,500	36,100	117,300	72,900	454,000	888,400	284,400	381,700	515,700	193,500	13,000	3,000		3,079,500
1984	115,500	35,000	95,600	68,900	439,800	832,800	215,300	258,300	438,500	173,700	11,500	3,200		2,688,100
1985	110,300	31,100	92,300	69,600	494,900	871,500	174,500	210,900	282,800	145,400	15,500	3,000		2,501,800
1986	124,300	29,600	99,800	71,000	434,100	821,800	207,800	226,500	273,600	124,300	5,400	2,900		2,421,100
1987	59,200	28,700	86,100	59,900	468,900	772,400	213,200	207,200	305,300	133,000	4,400	1,500		2,339,800
1988	83,800	34,300	84,800	63,600	446,900	661,300	126,000	104,800	183,100	115,500	5,100	1,300		1,910,500
1989	92,700	21,600	120,700	64,400	433,800	682,800	121,000	104,100	254,800	102,300	1,200	800		2,000,200
1990	91,500	20,100	104,000	70,500	456,300	684,500	111,800	115,900	231,900	96,200	2,100	500		1,985,300
1991	55,800	28,500	76,700	47,600	357,400	618,600	106,700	102,800	164,600	79,800	800	1,100		1,640,400
1992	63,490	14,995	90,203	52,749	345,468	539,960	119,146	90,093	129,381	80,352	1,237	864		1,527,938
1993	63,384	21,069	90,346	49,239	385,095	564,701	91,892	76,017	119,744	69,688	1,746	1,319		1,534,240
1994	78,453	17,530	87,322	51,273	342,454	502,989	113,788	128,611	163,664	76,716	1,999	882		1,565,681
1995	67,360	27,892	93,199	74,272	298,998	512,934	135,147	149,321	152,792	62,222	2,156	1,392		1,577,685
1996	56,533	19,257	79,992	56,202	255,647	460,414	168,503	190,133	183,079	72,241	1,988	597		1,544,586
1997	57,709	21,371	74,203	50,635	261,923	461,372	183,468	204,211	229,746	81,180	1,667	392		1,627,877
1998	61,367	15,361	82,094	59,803	256,382	425,275	175,742	205,545	170,071	87,429	1,985	1,102		1,542,156
1999	51,464	19,923	86,556	56,641	270,264	385,577	162,355	233,178	157,613	70,934	1,431	308		1,496,244
2000	63,617	13,540	69,188	52,476	244,486	367,333	148,147	242,275	160,684	73,409	1,055	460	114	1,436,784
2001	50,206	17,815	58,477	41,656	215,780	364,497	168,274	153,503	135,353	55,594	1,021	409	0	1,262,585
2002	50,457	15,651	62,118	43,051	189,473	351,891	155,537	173,087	125,532	58,736	3,344	1,131	0	1,230,008
2003	41,648	14,637	55,788	44,613	177,880	313,728	128,550	185,457	124,369	51,992	1,815	548	710	1,141,735
<b>AVERAGES:</b>														
1972-79	108,675	26,813	105,863	57,263	521,125	874,563	314,150	627,575	803,188	233,613	17,400	3,600		3,685,950
1980-89	103,720	31,410	102,260	64,980	469,300	815,520	225,210	253,450	392,640	152,540	7,570	2,130		2,620,730
1990-99	64,706	20,600	86,462	56,891	322,993	515,632	136,854	149,581	170,259	77,676	1,711	846		1,604,211
1972-03	86,237	24,883	93,115	58,082	403,736	678,296	210,448	306,413	393,763	137,837	6,450	1,735	206	2,400,254

<sup>1</sup> Estimates for 1968-71 are useful only for distribution of harvest among provinces. They are not comparable with estimates in subsequent years because different survey procedures were used.

# **DUCK HARVESTS IN NORTH AMERICA**

D.E. SHARP S:\WKFILES\DATABOOK\NAHARV.123

**ESTIMATES OF MALLARD HARVESTS IN THE UNITED STATES (Harvest Information Program) AND CANADA**

YR	UNITED STATES						CANADA					NORTH AMERICAN TOTAL
	ATLANTIC FLYWAY	MISSISSIPPI FLYWAY	CENTRAL FLYWAY	PACIFIC FLYWAY	ALASKA	U.S. TOTAL	EASTERN CANADA <sup>2</sup>	MB/SK/AB	BRITISH COLUMBIA	NT, NU and YT	CANADA TOTAL	
1999 <sup>1</sup>	450,827	3,090,931	1,029,696	1,260,454	23,830	5,855,737	214,495	370,479	48,002	220	633,196	6,488,933
2000 <sup>1</sup>	533,447	3,310,933	999,162	1,165,355	19,190	6,028,088	258,913	380,680	49,272	582	689,447	6,717,535
2001 <sup>1</sup>	467,064	2,768,031	1,157,587	990,996	27,044	5,410,722	261,086	294,227	35,575	872	591,760	6,002,482
2002 <sup>1</sup>	554,703	2,423,134	1,007,034	911,071	19,655	4,915,597	229,356	277,556	37,371	2,311	546,594	5,462,191
2003 <sup>1</sup>	427,301	2,570,485	962,111	1,033,457	24,824	5,018,178	209,694	265,888	35,384	520	511,486	5,529,664

<sup>1</sup> Preliminary

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<sup>2</sup> NF, PE, NS, NB, PQ, and ON



# **GOOSE HARVESTS IN NORTH AMERICA**

*D.E. SHARP S:\DATABOOK\TITLES\GOOSEHAR.123*

**ESTIMATED REGULAR SEASON SNOW/BLUE GOOSE HARVESTS (Harvest Information Survey)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S. TOTAL	CANADA TOTAL	U.S. + CANADA
1999 <sup>1</sup>	11,524	11,239	53	32,546	3,158	77,162	4,861	19,715	327,227	269	487,753	54,820	317,412	51,191	911,176	192,517	1,103,693
2000 <sup>1</sup>	7,156	8,792	0	10,705	3,932	29,449	7,678	4,897	307,436	114	380,158	71,935	234,699	39,040	725,831	227,228	953,059
2001 <sup>1</sup>	8,109	9,324	106	14,308	8,063	42,874	6,730	18,418	237,208	0	345,139	77,802	315,508	44,572	783,020	146,990	930,010
2002 <sup>1</sup>	11,982	25,771	281	14,478	6,869	20,749	4,164	23,171	161,106	0	268,572	39,295	197,297	46,527	551,691	177,343	729,034
2003 <sup>1</sup>	18,137	20,299	323	6,861	2,673	24,803	1,547	28,724	144,289	325	247,982	36,105	286,279	42,607	612,973	152,455	765,428

<sup>1</sup> Preliminary

**ESTIMATED REGULAR SEASON ROSS'S GOOSE HARVESTS (Harvest Information Survey)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S. TOTAL	CANADA TOTAL	U.S. + CANADA
1999 <sup>1</sup>	4,008	1,645	0	4,938	1,804	447	374	1,207	49,808	0	64,232	0	10,870	28,243	103,344	22,749	126,093
2000 <sup>1</sup>	914	0	176	1,107	1,815	320	921	272	38,524	0	44,049	0	8,176	7,221	59,446	17,895	77,341
2001 <sup>1</sup>	1,877	622	0	1,894	11,289	3,019	1,367	1,535	47,666	0	69,268	0	24,655	14,834	108,757	20,985	129,742
2002 <sup>1</sup>	1,498	4,467	94	536	2,424	544	1,530	648	33,780	0	45,521	0	21,014	16,248	82,782	33,956	116,738
2003 <sup>1</sup>	3,666	5,800	129	1,470	1,188	109	703	603	30,661	0	44,329	0	27,580	16,904	88,814	30,621	119,435

<sup>1</sup> Preliminary

**ESTIMATED HARVESTS OF WHITE-FRONTED GEESE (Harvest Information Survey)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S. TOTAL	CANADA TOTAL	U.S. + CANADA
1999 <sup>1</sup>	0	5,482	265	224	0	1,118	2,244	1,006	103,670	0	114,010	0	111,434	32,105	257,549	62,349	319,898
2000 <sup>1</sup>	0	11,303	528	554	60	2,347	3,378	1,768	162,405	0	182,344	0	100,610	26,908	309,862	106,738	416,600
2001 <sup>1</sup>	225	4,662	212	631	0	1,932	421	921	82,434	0	91,438	0	108,928	29,783	230,149	93,194	323,343
2002 <sup>1</sup>	83	10,652	188	715	135	272	850	810	63,663	0	77,367	0	108,685	33,265	219,318	50,567	269,885
2003 <sup>1</sup>	1,158	9,735	0	2,205	0	435	2,953	1,607	61,924	0	80,017	0	110,611	26,153	216,781	64,542	281,323

<sup>1</sup> Preliminary

**ESTIMATED REGULAR SEASON HARVESTS OF CANADA GEESE (Harvest Information Survey)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S. TOTAL	CANADA TOTAL	U.S. + CANADA
1999 <sup>1</sup>	49,853	66,809	15,968	65,092	2,255	137,773	37,021	120,266	72,395	10,232	577,665	241,092	484,522	284,971	1,588,250	565,242	2,153,492
2000 <sup>1</sup>	87,087	97,983	31,502	114,434	1,996	55,229	46,931	64,410	124,636	25,587	649,795	220,441	985,433	329,449	2,185,118	612,043	2,797,161
2001 <sup>1</sup>	54,584	71,793	19,221	84,167	1,935	69,666	13,393	94,036	124,492	13,396	546,684	478,104	582,122	274,294	1,881,204	637,016	2,518,220
2002 <sup>1</sup>	60,243	96,211	30,491	60,771	1,212	79,135	20,456	88,470	83,801	15,471	536,262	483,489	605,451	246,740	1,871,942	645,664	2,517,606
2003 <sup>1</sup>	92,037	123,866	37,264	104,141	2,723	82,252	35,398	109,067	62,525	23,083	672,355	476,710	814,580	321,130	2,284,776	670,802	2,955,578

<sup>1</sup> Preliminary

**ESTIMATED ALL-SEASON HARVESTS OF CANADA GEESE (Harvest Information Survey)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S. TOTAL	CANADA TOTAL	U.S. + CANADA
1999 <sup>1</sup>	49,853	67,434	15,968	65,092	2,255	137,773	37,021	149,472	72,395	10,232	607,496	425,892	731,969	284,971	2,050,328	565,242	2,615,570
2000 <sup>1</sup>	87,087	98,905	32,024	114,434	1,996	99,977	48,523	100,662	124,636	25,587	733,831	404,541	1,220,726	329,449	2,688,547	612,043	3,300,590
2001 <sup>1</sup>	54,584	71,793	19,221	84,167	1,935	121,254	15,983	131,226	124,492	13,396	638,052	687,904	858,422	274,294	2,458,672	637,016	3,095,688
2002 <sup>1</sup>	60,243	96,211	30,491	60,771	1,212	112,535	21,756	128,170	83,801	15,471	610,662	716,689	906,351	246,740	2,480,442	645,664	3,126,106
2003 <sup>1</sup>	92,037	123,866	37,264	104,141	2,723	124,452	36,698	154,867	62,525	23,083	761,655	657,910	1,103,880	332,130	2,855,576	670,802	3,526,378

<sup>1</sup> Preliminary

**ESTIMATED REGULAR SEASON LIGHT (SNOW, BLUE, AND ROSS'S) GOOSE HARVESTS (Harvest Information Survey)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN	ATL	MISS	PAC	U.S.	CANADA	U.S. +
											FLYWAY	FLYWAY	FLYWAY	FLYWAY	TOTAL	TOTAL	CANADA
1999 <sup>1</sup>	15,532	12,884	53	37,484	4,962	77,609	5,235	20,922	377,034	269	551,985	54,820	328,282	79,434	1,014,520	215,266	1,229,786
2000 <sup>1</sup>	8,069	8,792	176	11,813	5,746	29,769	8,599	5,169	345,959	114	424,207	71,935	242,875	46,261	785,277	245,123	1,030,400
2001 <sup>1</sup>	9,986	9,945	106	16,202	19,352	45,893	8,097	19,953	284,874	0	414,407	77,802	340,163	59,405	891,777	167,975	1,059,752
2002 <sup>1</sup>	13,480	30,238	375	15,014	9,294	21,293	5,694	23,819	194,886	0	314,093	39,295	218,310	62,775	634,473	211,299	845,772
2003 <sup>1</sup>	21,803	26,099	453	8,331	3,861	24,912	2,250	29,326	174,951	325	292,312	36,105	313,860	59,511	701,787	183,076	884,863

<sup>1</sup> Preliminary

**ESTIMATED TOTAL GOOSE HARVESTS (Harvest Information Survey)**

YR	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	CEN	ATL	MISS	PAC	U.S.	CANADA	U.S. +
											FLYWAY	FLYWAY	FLYWAY	FLYWAY	TOTAL	TOTAL	CANADA
1999 <sup>1</sup>	65,386	85,800	16,286	102,800	7,217	216,500	44,500	171,400	553,100	10,501	1,273,491	502,300	1,173,200	401,309	3,350,300	843,057	4,193,357
2000 <sup>1</sup>	95,156	119,000	32,728	126,800	7,803	132,200	60,500	107,600	633,000	25,702	1,340,489	509,201	1,566,500	404,712	3,820,902	964,505	4,785,407
2001 <sup>1</sup>	64,795	86,400	19,540	101,000	21,287	169,200	24,500	152,100	491,800	13,396	1,144,018	810,598	1,309,400	370,282	3,634,298	993,068	4,627,366
2002 <sup>1</sup>	73,806	137,100	31,054	76,500	10,641	134,100	28,300	152,800	343,000	15,471	1,002,772	793,699	1,233,700	344,728	3,374,898	907,984	4,282,882
2003 <sup>1</sup>	114,998	159,700	37,717	114,678	6,584	149,800	41,900	185,800	299,400	23,408	1,133,984	738,941	1,528,350	422,294	3,823,569	1,006,309	4,829,878

<sup>1</sup> Preliminary

# **GOOSE AGE RATIOS IN THE U.S. HARVEST**

D.E. SHARP S:\WKFILES\DATABOOK\GSEAGERATIO.123

**CANADA GOOSE AGE RATIOS (IMM/ADULT) IN THE REGULAR SEASON HARVEST**  
**Derived from the Parts Collection Survey**

YEAR	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999	0.25	0.30	0.28	0.25	0.27
2000	0.27	0.20	0.17	0.18	0.20
2001	0.32	0.32	0.29	0.18	0.29
2002	0.45	0.40	0.61	0.51	0.49
2003 <sup>1</sup>	0.53	0.56	0.55	0.71	0.56

<sup>1</sup>Preliminary

17-Jul-04

\*Years without an age ratio estimate had <50 tails in the sample

**WHITE-FRONTED GOOSE AGE RATIOS (IMM/ADULT) IN THE REGULAR SEASON HARVEST**  
**Derived from the Parts Collection Survey**

YEAR	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999	0.74		0.85	1.55	0.85
2000	0.57		0.43	0.80	0.54
2001	0.46		0.66	0.65	0.57
2002	0.49		0.49	0.32	0.46
2003 <sup>1</sup>	1.27		0.82	0.53	0.92

<sup>1</sup>Preliminary

17-Jul-04

\*Years without an age ratio estimate had <50 tails in the sample

**SNOW GOOSE (LESSER & GREATER) AGE RATIOS (IMM/ADULT) IN  
THE REGULAR SEASON HARVEST**  
**Derived from the Parts Collection Survey**

YEAR	CEN FLYWAY	ATL FLYWAY	MISS FLYWAY	PAC FLYWAY	U.S.
1999	0.47	0.02	0.57	0.69	0.48
2000	0.36	1.60	0.51	0.38	0.50
2001	0.54	1.27	0.78	0.35	0.66
2002	0.34	0.27	0.26	0.43	0.31
2003 <sup>1</sup>					

<sup>1</sup>Data not available at time of printing.

17-Jul-04

\*Years without an age ratio estimate had <50 tails in the sample

# **WATERFOWL POPULATION SURVEYS**

D.E. SHARP S:\WKFILES\DATABOOK\POPSUR.123

## RESULTS OF 2004 WINTER GOOSE SURVEYS IN THE CENTRAL FLYWAY<sup>1</sup>

January 2004<sup>3</sup> Mid-winter Waterfowl Survey

State	CANADA GEESE								LIGHT GEESE		W-F	TOTAL
	Hi-Line	SGP	TGP	EPP	WP/GP	RMP	Unclass.	Total	W-CF	M-C		
Montana	35,520	3,940						39,460				39,460
No. Dakota					13,616			13,616				13,616
So. Dakota		1,377	111,180	26,000	219,827			358,384		9		358,393
Wyoming	35,877	4,502					13,228	53,607	2			53,609
Nebraska	9,155	0	299		307,171			316,625		1,816	9	318,450
Colorado	128,060	109,088						237,148	30,981		35	268,164
Kansas		980	109,726		65,813		67,789	244,308		197,753	19,404	461,465
N. Mexico	6,974	11,908					1,806	20,688	32,615			53,303
Oklahoma			146,091		15,673			161,764		49,056	1,187	212,007
Texas		71,791	91,384					163,175	71,675	473,500	58,754	767,104

<sup>1</sup>In TX, SGP based on cruise surveys, TGP cruise/transect. Traditional Mid Dec. coastal cruise count completed for MC Light/WFG geese.

### Central Flyway Goose Population Survey Results<sup>2</sup>

Year	CANADA GEESE								LIGHT GEESE		W-F	TOTAL
	Hi-Line	SGP	TGP	EPP	WP/GP	RMP	Unclass.	Total	W-CF	M-C		
2004	215,586	203,586	458,680	26,000	622,100	13,228	69,595	1,608,775	135,273	722,134	79,389	2,545,571
2003	205,939	156,661	611,842	40,500	561,049	5,119	24,907	1,606,017	105,899	826,982	213,343	2,752,241
2002	217,145	160,873	504,708	8,100	710,260	7,396	16,873	1,625,355	99,874	675,454	260,849	2,661,532
2001	257,929	164,084	149,090	900	677,729	13,327	18,329	1,281,388	105,754	751,928	141,189	2,280,259
2000	270,730	199,493	295,540	13,050	599,292	9,801	11,860	1,399,766	137,535	1,057,042	145,219	2,739,562
1999	119,460	403,197	548,206	45,000	467,137	5,298	52,554	1,640,852	236,365	1,114,384	200,391	3,191,992
1997-98	190,985	339,552	331,863	1,200	482,290		44,947	1,390,837	103,522	1,058,685	356,531	2,909,575
1996-97	148,527	406,838	262,864	0	453,358		39,505	1,311,092	127,172	1,208,606	215,254	2,862,124
1995-96	167,524	414,829	263,996	20,800	403,318		66,445	1,336,912	93,054	835,565	154,519	2,420,050
1994-95	173,752	481,951	244,988	27,500	352,495		35,520	1,316,206	146,386	1,203,360	194,845	2,860,797
1993-94	164,334	312,855	224,200	1,800	272,487		41,916	1,017,592	84,874	1,015,169	188,878	2,306,513
1992-93	117,294	270,495	235,328	26,600	318,029		60,622	1,028,368	45,145	895,951	158,625	2,128,089
1991-92	136,950	558,756	276,329	0	305,861		47,624	1,325,520	87,885	908,373	85,881	2,407,659
1990-91	116,643	512,162	305,117	13,500	328,710		372,398	1,648,530	104,624	799,880	155,211	2,708,245
1989-90	101,840	375,283	136,091	11,000	216,034		329,779	1,170,027	38,686	661,302	90,830	1,960,845
1988-89	99,934	284,168	215,799	0	245,891		375,874	1,221,666	67,637	598,132	103,073	1,990,508
1987-88	65,512	147,322	306,735	0	272,050		224,470	1,016,089	46,217	735,922	90,626	1,888,854
1986-87	117,409	193,318	159,007	0	174,355		382,332	1,026,421	63,545	900,437	194,530	2,184,933
1985-86	68,792	180,824	189,360	0	36,534		307,919	783,429	96,591	837,611	92,727	1,810,358
1984-85	76,111	179,120	197,240	0	160,640		173,394	786,505	62,905	980,220	155,705	1,985,335
1983-84	39,779	143,382	260,650	0	91,450		51,775	587,036	43,038	905,538	140,697	1,676,309

<sup>1</sup> Mid-December Goose Surveys were discontinued after December, 1997.

<sup>2</sup> Yearly totals from 1983-84 to 1997-98 reflect Mid-December counts (when available) for TGP, EPP, and WP/GP Canada geese, W-CF and M-C light geese, and W-F geese; totals for Hi-line and SGP populations reflect Mid-winter Survey data. Counts from these time periods were designated as official counts by respective Management Plans.



**MID-CONTINENT GREATER WHITE-FRONTED GOOSE POPULATION STATUS, OBJECTIVES,  
AND REGULATORY THRESHOLDS**

YEAR	FALL SURVEY <sup>1</sup>	WINTER SURVEY <sup>2</sup>			
		MISSISSIPPI FLYWAY	CENTRAL FLYWAY	MEXICO	TOTAL
1969/70		50,600	22,070	18,800	91,470
1970/71		39,300	21,144		60,444
1971/72		45,800	32,142		77,942
1972/73		43,000	29,665		72,665
1973/74		43,200	49,463		92,663
1974/75		40,400	39,510	46,100	126,010
1975/76		53,400	54,800		108,200
1976/77		50,400	29,575	23,300	103,275
1977/78		53,100	140,605	43,900	237,605
1978/79		49,300	69,005	59,700	178,005
1979/80		59,000	99,450	56,500	214,950
1980/81		67,500	110,950	34,400	212,850
1981/82		65,600	155,850	49,200	270,650
1982/83		62,000	110,898		172,898
1983/84		70,300	140,697		210,997
1984/85		81,300	155,705	38,470	275,475
1985/86		78,600	92,700		171,300
1986/87		71,500	194,525		266,025
1987/88		76,700	90,673	28,325	195,698
1988/89		116,500	103,073		219,573
1989/90		103,300	90,830		194,130
1990/91		135,700	155,211	33,870	324,781
1991/92		172,900	85,881		258,781
1992/93	622,948	99,240	158,625		257,865
1993/94	676,344	154,340	188,878	23,375	366,593
1994/95	727,295	134,421	194,845		329,266
1995/96	1,129,378	145,075	154,519		299,594
1996/97	742,506	106,570	215,254	14,837	336,661
1997/98	622,206	195,593	356,531		552,124
1998/99	1,058,256	118,945	200,391		319,336
1999/00	963,090	92,274	145,219	37,334	274,827
2000/01	1,067,605	104,487	141,189		245,676
2001/02 <sup>3</sup>	712,309	119,987	260,849		380,836
2002/03	637,200	113,844	79,389	8,321	201,554
2003/04	528,200	159,777	213,343		373,120
<b>3-YEAR AVERAGES:</b>					1,431,996
1984/85 - 86/87		77,133	147,643	38,470	263,247
1985/86 - 87/88		75,600	125,966	28,325	229,891
1986/87 - 88/89		88,233	129,424	28,325	245,982
1987/88 - 89/90		98,833	94,859	28,325	222,017
1988/89 - 90/91		118,500	116,371	33,870	268,741
1989/90 - 91/92		137,300	110,641	33,870	281,811
1990/91 - 92/93		135,947	133,239	33,870	303,056
1991/92 - 93/94		142,160	144,461	23,375	309,996
1992/93 - 94/95	675,529	129,334	180,783	23,375	333,491
1993/94 - 95/96	844,339	144,612	179,414	23,375	347,401
1994/95 - 96/97	866,393	128,689	188,206	14,837	331,732
1995/96 - 97/98	831,363	149,079	242,101	14,837	406,018
1996/97 - 98/99	807,656	140,369	257,392	14,837	412,598
1997/98 - 99/2000	881,184	135,604	234,047	37,334	382,096
1998/99 - 2000/01	1,029,650	105,235	162,266	37,334	279,946
1999/00 - 2001/02	914,335	105,583	182,419	37,334	300,446
2000/01-2002/03	805,705	112,773	160,476	8,321	276,022
2001/02 - 2003/04	625,903	131,203	184,527	8,321	318,503
<b>POPULATION OBJECTIVES:</b>					
600,000 (3-yr ave.)					
<b>REGULATORY THRESHOLDS:</b>					
LOWER	500,000				
UPPER	700,000				

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<sup>1</sup> Since 1997, Mid-continent white-fronted geese have been considered one population, officially surveyed during Fall (September) in Saskatchewan and Alberta.

<sup>2</sup> Surveys in Mexico have been conducted at 3-year intervals since 1981-82. For estimation of 3-year averages after 1980/81-1982/83 we used the most recent Mexico count. Mexico data entries include white-fronts counted in the Interior Highlands (traditional areas) and East Coast Surveys. In 2003, no survey conducted on East Coast.

<sup>3</sup> In TX, traditional Mid Dec. cruise count not completed, WFG geese based on transect in Jan.

**CENTRAL FLYWAY CANADA GOOSE POPULATION STATUS, OBJECTIVES, AND REGULATORY THRESHOLDS**

YR	TALL GRASS PRAIRIE				SHORT GRASS PRAIRIE <sup>2</sup>	HI-LINE <sup>2</sup>	WESTERN PRAIRIE/ GR. PLAINS <sup>1</sup>	EASTERN PRAIRIE		
	C. FLYWAY <sup>1</sup>	M. FLYWAY <sup>1</sup>	MEXICO <sup>2,4</sup>	TOTAL				C. FLYWAY <sup>1</sup>	M. FLYWAY <sup>1</sup>	TOTAL
1969/70					151,200	44,200		106,600	106,600	
1970/71	131,100	2,100		133,200	148,500	40,500		126,300	126,300	
1971/72	159,600	1,300		160,900	160,900	31,400		157,400	157,400	
1972/73	147,200	1,200		148,400	259,400	35,600		181,400	181,400	
1973/74	158,500	2,000		160,500	153,600	24,500		205,800	205,800	
1974/75	125,600	2,000	5,900	133,500	123,700	41,200		197,100	197,100	
1975/76	201,500	2,000	200	203,700	242,500	55,600		204,400	204,400	
1976/77	167,900	1,900	1,500	171,300	210,000	67,600		254,200	254,200	
1977/78	211,300	3,100	1,100	215,500	134,000	65,100		270,200	270,200	
1978/79	180,500	4,900	2,200	187,600	163,700	33,800		207,200	207,200	
1979/80	155,200	5,700	5,000	165,900	213,000	67,300		171,800	171,800	
1980/81	244,900	3,500	9,300	257,700	168,200	94,400		150,900	150,900	
1981/82	268,600	12,000	4,100	284,700	156,000	81,900	175,000	145,300	145,300	
1982/83	165,500	6,300		171,800	173,200	75,900	242,000	210,400	210,400	
1983/84	260,700	4,200		264,900	143,500	39,500	150,000	162,700	162,700	
1984/85	197,300	8,100	1,600	207,000	179,100	76,400	230,000	167,600	167,600	
1985/86	189,400	8,800		198,200	181,000	69,800	115,000	169,000	169,000	
1986/87	159,000	4,200		163,200	190,900	98,100	324,000	182,700	182,700	
1987/88	306,100	8,300	1,400	315,800	139,100	66,800	272,100	228,400	228,400	
1988/89	213,000	11,200		224,200	284,800	100,100	330,300	184,500	184,500	
1989/90	146,500	12,515		159,015	378,100	105,900	271,000	324,900	324,900	
1990/91	305,100	10,237	200	315,537	508,500	116,600	390,000	218,400	218,400	
1991/92	276,300	4,065		280,365	620,200	140,500	341,900	(51,000)	189,352	189,400
1992/93	235,328	3,398		238,726	328,194	118,459	318,029	26,600	146,369	172,969
1993/94	224,200	12,555	0	236,755	434,113	164,334	272,487	1,800	116,218	118,018
1994/95	244,988	2,819		247,807	697,781	174,394	352,495	27,500	233,773	261,273
1995/96	263,996	6,314		270,310	559,940	167,524	403,318	20,800	255,700	276,500
1996/97	262,864	9,424	0	272,288	460,721	148,527	453,358	0	67,255	67,255
1997/98	331,813	3,438		335,251	440,570	190,985	482,290	5,000	119,564	124,564
1998/99 <sup>3</sup>	548,206	NA		NA	403,197	119,460	467,162	45,000	NA	NA
2000	295,662	NA	0	NA	200,021	270,730	594,692	17,650	NA	NA
2001	149,090	NA		NA	164,084	257,929	682,738	900	NA	NA
2002 <sup>5</sup>	504,708	NA		NA	160,873	217,145	710,260	8,100	NA	NA
2003 <sup>5</sup>	611,842	NA	NA	NA	156,661	205,939	561,049	40,500	NA	NA
2004 <sup>5</sup>	458,680	NA	NA	NA	203,586	215,586	622,100	26,000	NA	NA
<b>3-YEAR AVERAGES:</b>										
1978/79 - 80/81	193,533	4,700	5,500	203,733	181,633	65,167			176,633	176,633
1979/80 - 81/82	222,900	7,067	6,133	236,100	179,067	81,200	175,000		156,000	156,000
1980/81 - 82/83	226,333	7,267	4,100	237,700	165,800	84,067	208,500		168,867	168,867
1981/82 - 83/84	231,600	7,500	4,100	243,200	157,567	65,767	189,000		172,800	172,800
1982/83 - 84/85	207,833	6,200	1,600	215,633	165,267	63,933	207,333		180,233	180,233
1983/84 - 85/86	215,800	7,033	1,600	224,433	167,867	61,900	165,000		166,433	166,433
1984/85 - 86/87	181,900	7,033	1,600	190,533	183,667	81,433	223,000		173,100	173,100
1985/86 - 87/88	218,167	7,100	1,400	226,667	170,333	78,233	237,033		193,367	193,367
1986/87 - 88/89	226,033	7,900	1,400	235,333	204,933	88,333	308,800		198,533	198,533
1987/88 - 89/90	221,867	10,672	1,400	233,938	267,333	90,933	291,133		245,933	245,933
1988/89 - 90/91	221,533	11,317	200	233,051	390,467	107,533	330,433		242,600	242,600
1989/90 - 91/92	242,633	8,939	200	251,772	502,267	121,000	334,300		244,217	244,233
1990/91 - 92/93	272,243	5,900	200	278,343	485,631	125,186	349,976	26,600	184,707	193,590
1991/92 - 93/94	245,276	6,673	0	251,949	460,836	141,098	310,805	14,200	150,646	160,129
1992/93 - 94/95	234,839	6,257	0	241,096	486,696	152,396	314,337	18,633	165,453	184,087
1993/94 - 95/96	244,395	7,229	0	251,624	563,945	168,751	342,767	16,700	201,897	218,597
1994/95 - 96/97	257,283	6,186	0	263,468	572,814	163,482	403,057	16,100	185,576	201,676
1995/96 - 97/98	286,224	6,392	0	292,616	487,077	169,012	446,322	8,600	147,506	156,106
1996/97 - 98/99	380,961	NA	0	NA	434,829	152,991	467,603	16,667	NA	NA
1997/98 - 2000	391,894	NA	0	NA	347,929	193,725	514,715	22,550	NA	NA
1998/99 - 2001	330,986	NA	0	NA	255,767	216,040	581,531	21,183	NA	NA
2000 - 2002	316,487	NA	0	NA	174,993	248,601	662,563	8,883	NA	NA
2001 - 2003	421,880	NA	0	NA	160,539	227,004	651,349	16,500	NA	NA
2002-2004	525,077	NA	0	NA	173,707	212,890	631,136	24,867	NA	NA
<b>POPULATION OBJECTIVES:</b>										
				250,000	150,000	80,000	SPRING 17,000 pr(WP) 25,000 pr(GP)		SPRING 300,000	
<b>REGULATORY THRESHOLDS:</b>										
				200,000	150,000	150,000		SPRING 260,000		
				250,000	200,000	285,000		340,000		

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<sup>1</sup> Column entries reflect official December surveys (when available) from 1969/70 to 1997/98. December surveys and the separation of MF wintering Canada geese into populations were discontinued after December 1997. Subsequent entries reflect January surveys.  
<sup>2</sup> Column entries reflect January counts (when available) which are the official counts for these populations or population segments.  
<sup>3</sup> Beginning in 1998/99, estimates of TGP and SGP Canada geese are based on newly defined wintering range boundaries.  
<sup>4</sup> Surveys in Mexico have been conducted at 3-year intervals since 1981-82. For estimation of 3-year averages after 1980/81-1982/83, we used the most recent Mexico count. Estimates of TGP geese in this column include only geese counted on the East Coast survey (not counted in 2003).  
<sup>5</sup> In TX, SGP based on cruise surveys, TGP cruise/transect.

**CENTRAL FLYWAY SNOW/ROSS'S GOOSE POPULATION STATUS <sup>1</sup>, OBJECTIVES, AND REGULATORY THRESHOLDS**

YR	WESTERN CENTRAL FLYWAY			MID-CONTINENT		
	U.S.	MEXICO <sup>2</sup>	TOTAL	CENTRAL FLYWAY	MISS. FLYWAY	TOTAL
1969/70	6,925	34,831	41,756	352,390	424,625	777,015
1970/71	11,140			415,254	654,900	1,070,154
1971/72	13,011			376,094	937,300	1,313,394
1972/73	11,579			492,965	532,300	1,025,265
1973/74	16,200			657,507	532,300	1,189,807
1974/75	26,420	26,472	52,892	655,080	441,500	1,096,580
1975/76	23,164			870,730	691,625	1,562,355
1976/77	33,640	51,345	84,985	578,940	571,350	1,150,290
1977/78	31,050	53,695	84,745	1,172,252	794,125	1,966,377
1978/79	28,161	59,060	87,221	772,623	513,050	1,285,673
1979/80	30,450	65,270	95,720	803,801	594,275	1,398,076
1980/81	37,551	44,855	82,406	902,013	504,650	1,406,663
1981/82	50,005	107,630	157,635	925,705	868,350	1,794,055
1982/83	76,134			923,306	832,125	1,755,431
1983/84	60,068			905,541	589,000	1,494,541
1984/85	63,005	83,605	146,610	980,220	992,825	1,973,045
1985/86	96,613			837,589	611,750	1,449,339
1986/87	87,649			900,487	1,013,375	1,913,862
1987/88	46,217	92,025	138,242	735,922	1,014,775	1,750,697
1988/89	67,637			598,132	1,358,100	1,956,232
1989/90	38,686			661,302	1,062,982	1,724,284
1990/91	104,624	77,905	182,529	799,880	1,335,870	2,135,800
1991/92	87,885			908,373	1,113,491	2,021,864
1992/93	45,142			895,951	848,131	1,744,082
1993/94	84,874	169,460	254,334	1,015,169	1,185,646	2,200,815
1994/95	146,386			1,203,360	1,521,732	2,725,092
1995/96	93,054			835,565	1,562,513	2,398,078
1996/97	127,172	88,910	216,082	1,208,606	1,642,287	2,850,893
1997/98	103,522			1,058,685	1,918,543	2,977,228
1998/99 <sup>1</sup>	236,365			1,114,384	1,461,342	2,575,726
2000	137,535	118,445	255,980	1,057,042	1,340,277	2,397,319
2001	105,754			751,927	1,589,344	2,341,271
2002 <sup>3</sup>	99,874			675,454	2,020,687	2,696,141
2003	105,899	61,519	167,418	826,982	1,608,046	2,435,028
2004	135,273			722,134	1,431,996	2,154,130
<b>3-YEAR AVERAGES:</b>						
1979/80 - 81/82	39,335	72,585	111,920	877,173	655,758	1,532,931
1980/81 - 82/83	54,563	76,243	130,806	917,008	735,042	1,652,050
1981/82 - 83/84	62,069	107,630	169,699	918,184	763,158	1,681,342
1982/83 - 84/85	66,402	83,605	150,007	936,356	804,650	1,741,006
1983/84 - 85/86	73,229	83,605	156,834	907,783	731,192	1,638,975
1984/85 - 86/87	82,422	83,605	166,027	906,099	872,650	1,778,749
1985/86 - 87/88	76,826	92,025	168,851	824,666	879,967	1,704,633
1986/87 - 88/89	67,168	92,025	159,193	744,847	1,128,750	1,873,597
1987/88 - 89/90	50,847	92,025	142,872	665,119	1,145,286	1,810,404
1988/89 - 90/91	70,316	77,905	148,221	686,438	1,252,317	1,938,772
1989/90 - 91/92	77,065	77,905	154,970	789,852	1,170,781	1,960,649
1990/91 - 92/93	79,217	77,905	157,122	789,852	1,170,781	1,967,249
1991/92 - 93/94	72,634	169,460	242,094	939,831	1,049,089	1,988,920
1992/93 - 94/95	92,134	169,460	261,594	1,038,160	1,185,170	2,223,330
1993/94 - 95/96	108,105	169,460	277,565	1,018,031	1,423,297	2,441,328
1994/95 - 96/97	122,204	88,910	211,114	1,082,510	1,575,511	2,658,021
1995/96 - 97/98	107,916	88,910	196,826	1,034,285	1,707,781	2,742,066
1996/97 - 98/99	155,686	88,910	244,596	1,127,225	1,674,057	2,801,282
1997/98 - 2000	159,141	118,445	277,586	1,076,704	1,573,387	2,650,091
1998/99 - 2001	159,885	118,445	278,330	974,451	1,463,654	2,438,105
1999/00 - 2002	114,388	118,445	232,833	828,141	1,650,103	2,478,244
2001 - 2003	103,842	61,519	165,361	751,454	1,739,359	2,490,813
2002-2004	113,682	61,519	175,201	741,523	1,686,910	2,428,433
<b>POPULATION OBJECTIVES:</b>			110,000	1,000,000 - 1,500,000		
<b>REGULATORY THRESHOLDS:</b>				1,000,000 - 1,500,000		

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<sup>1</sup> From 1969/70 to 1997/98 light geese were surveyed in Mid-December except in Mexico (January). After 1997, Mid-December surveys were discontinued and all subsequent surveys were conducted in January.

<sup>2</sup> Surveys in Mexico have been conducted at 3-year intervals since 1981-82. For estimation of 3-year averages after 1980/81-1982/83, we used the most recent Mexico count. Estimates of WCF geese in this column include only those geese counted in traditional survey areas within the Interior Highlands.

<sup>3</sup> \*In 2002, traditional Mid Dec. cruise count not completed in TX, Light goose estimate based on transect in Jan.

**JANUARY 2004<sup>1</sup> MID-WINTER WATERFOWL SURVEY - CENTRAL FLYWAY**

<b>SPECIES</b>	<b>ND</b>	<b>MT</b>	<b>SD</b>	<b>WY</b>	<b>CO</b>	<b>NE</b>	<b>KS</b>	<b>OK</b>	<b>NM</b>	<b>TX</b>	<b>TOTAL</b>
Mallard	3,000	6,332	30,787	30,854	66,346	358,852	125,461	174,150	27,033	360,621	1,183,436
Black Duck							4				4
Mottled Duck										23,734	23,734
Gadwall			52	1,187	438	85	4,506	5,586	18,308	941,245	971,407
Wigeon			86	953	339	774	4,279	1,221	7,035	311,638	326,325
G-W Teal				556	1,789	237	571	7,393	1,938	424,497	436,981
BW/CIN Teal				0	152				3	215,243	215,398
Shoveler			3	0	1,433	10	1,226	221	5,567	161,279	169,739
Pintail				124	1,476	61	62	698	12,753	648,829	664,003
Wood Duck			50		4	9	44	1,057		13,110	14,274
Whistling Duck										15,269	15,269
<b>Total Dabblers</b>	<b>3,000</b>	<b>6,332</b>	<b>30,978</b>	<b>33,674</b>	<b>71,977</b>	<b>360,028</b>	<b>136,153</b>	<b>190,326</b>	<b>72,637</b>	<b>3,115,465</b>	<b>4,020,570</b>
Redhead			1		399	13	646	80	357	126,318	127,814
Canvasback			1		3	4	72	73	107	6,538	6,798
Scaup			21	32	370	16	992	340	12	267,028	268,811
Ringneck			8	97	219	9	1,097	608	49	153,999	156,086
Goldeneye	53	3,126	253	8,530	1,248	1,717	10,124	790	56	7,855	33,752
Bufflehead			34	164	290	15	205	371	271	7,179	8,529
Ruddy Duck					11	0	14	9	245	2,659	2,938
<b>Total Divers</b>	<b>53</b>	<b>3,126</b>	<b>318</b>	<b>8,823</b>	<b>2,540</b>	<b>1,774</b>	<b>13,150</b>	<b>2,271</b>	<b>1,097</b>	<b>571,576</b>	<b>604,728</b>
Scoters											0
Oldsquaw											0
Mergansers	132	92	533	2,130	15,178	11,905	19,690	5,937	4,177	8,061	67,835
Unident. Ducks			100		2,257		3,908	783	51	93,331	100,430
<b>Total Ducks</b>	<b>3,185</b>	<b>9,550</b>	<b>31,929</b>	<b>44,627</b>	<b>91,952</b>	<b>373,707</b>	<b>172,901</b>	<b>199,317</b>	<b>77,962</b>	<b>3,788,433</b>	<b>4,793,563</b>
Brant					1						1
Snow/Blue Goose			9	2	30,981	1,816	190,717	44,717	24,277	545,175	837,694
Ross's Goose						0	7,036	4,339	8,438		19,813
Whitefront					35	9	19,404	1,187		58,754	79,389
Canada Goose	13,616	39,460	358,384	53,607	237,148	316,625	244,308	161,764	20,688	163,175	1,608,775
<b>Total Geese</b>	<b>13,616</b>	<b>39,460</b>	<b>358,393</b>	<b>53,609</b>	<b>268,165</b>	<b>318,450</b>	<b>461,465</b>	<b>212,007</b>	<b>53,403</b>	<b>767,104</b>	<b>2,545,672</b>
Tundra Swan					7		8		7		22
Trumpeter Swan			158	14	5	84	2	8			271
Mute Swan			14		2						16
Unident. Swans								8			8
<b>Total Swans</b>	<b>0</b>	<b>0</b>	<b>172</b>	<b>14</b>	<b>14</b>	<b>84</b>	<b>10</b>	<b>16</b>	<b>7</b>	<b>0</b>	<b>317</b>
Coot				304	357		641	2,754	3,396	554,485	561,937
<b>Grand Total</b>	<b>16,801</b>	<b>49,010</b>	<b>390,494</b>	<b>98,554</b>	<b>360,488</b>	<b>692,241</b>	<b>635,017</b>	<b>414,094</b>	<b>134,768</b>	<b>5,110,022</b>	<b>7,901,489</b>

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\*In TX, SGP based on cruise surveys, TGP cruise/transect. Traditional Mid Dec. coastal cruise count completed for MC Light/WFG geese.

<sup>1</sup> Jan count in High and Rolling Plains also included in Light/WFG count but transect numbers in the other survey zones not included.

<sup>1</sup> USFWS did not participate in the 2004 MWS so coverage was not complete in the High Plains of TX.

**CENTRAL FLYWAY MID-WINTER WATERFOWL SURVEY RESULTS, 2000-09**

<b>SPECIES</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2000-09 AVG</b>
Mallard	1,798,494	1,866,170	1,877,544	1,825,639	1,183,436						1,710,257
Black Duck	11	0	0	10	4						5
Mottled Duck	30,639	15,035	25,076	24,797	23,734						23,856
Gadwall	762,360	561,275	532,403	588,194	971,407						683,128
Wigeon	421,453	180,825	286,363	450,146	326,325						333,022
G-W Teal	576,173	210,864	451,114	187,545	436,981						372,535
BW/CIN Teal	2,519	30,862	24,093	149,309	215,398						84,436
Shoveler	161,851	152,701	122,979	173,302	169,739						156,114
Pintail	374,407	327,797	492,311	713,071	664,003						514,318
Wood Duck	13,397	39,505	10,370	7,454	14,274						17,000
Whistling Duck	0	0	0	11,719	15,269						5,398
<b>Total Dabblers</b>	<b>4,141,304</b>	<b>3,385,034</b>	<b>3,822,253</b>	<b>4,131,186</b>	<b>4,020,570</b>						<b>3,900,069</b>
Redhead	115,096	256,224	517,788	359,795	127,814						275,343
Canvasback	15,438	22,286	62,756	16,142	6,798						24,684
Scaup	144,800	89,889	141,456	327,027	268,811						194,397
Ringneck	127,735	98,015	117,639	127,152	156,086						125,325
Goldeneye	27,481	36,340	27,775	21,966	33,752						29,463
Bufflehead	37,690	44,682	18,750	9,244	8,529						23,779
Ruddy Duck	54,570	3,201	2,459	3,258	2,938						13,285
<b>Total Divers</b>	<b>522,810</b>	<b>550,637</b>	<b>888,623</b>	<b>864,584</b>	<b>604,728</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>686,276</b>
Scoter	0	0	0	0	0						0
Oldsquaw	0	0	2	1	0						1
Mergansers	190,795	69,329	116,994	96,455	67,835						108,282
Unident. Ducks	232,465	85,110	146,930	94,391	100,430						131,865
<b>TOTAL DUCKS</b>	<b>5,087,374</b>	<b>4,090,110</b>	<b>4,974,802</b>	<b>5,186,617</b>	<b>4,793,563</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,826,493</b>
Brant	0	0	0	0	1						0
Snow/Blue Goose	1,186,088	847,996	771,141	920,940	837,694						912,772
Ross' Goose	8,489	9,685	4,187	11,941	19,813						10,823
White-fronted Goose	145,219	141,189	260,849	213,343	79,389						167,998
Canada goose	1,400,416	1,286,397	1,625,355	1,606,017	1,608,775						1,505,392
<b>TOTAL GEESE</b>	<b>2,740,212</b>	<b>2,285,267</b>	<b>2,661,532</b>	<b>2,752,241</b>	<b>2,545,672</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,596,985</b>
Tundra Swan	7	15	13	7	22						13
Trumpeter Swan	395	303	227	395	271						318
Mute Swan	2	0	0	6	16						5
Unident. Swans	5	17	25	16	8						14
<b>TOTAL SWANS</b>	<b>409</b>	<b>335</b>	<b>265</b>	<b>424</b>	<b>317</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>350</b>
Coot	218,707	265,066	549,363	346,894	561,937						388,393
<b>GRAND TOTAL</b>	<b>8,046,702</b>	<b>6,640,778</b>	<b>8,185,962</b>	<b>8,286,176</b>	<b>7,901,489</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7,812,221</b>

**CENTRAL FLYWAY MID-WINTER WATERFOWL SURVEY RESULTS, 1990-99**

<b>SPECIES</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>1990-99 AVG</b>
Mallard	1,299,805	791,723	1,437,186	591,251	746,749	862,067	919,812	1,328,407	1,902,451	2,558,207	1,243,766
Black Duck	0	5	1	0	6	0	0	1	0	0	1
Mottled Duck	22,300	11,300	45,100	52,700	47,377	41,920	35,863	21,814	24,488	17,892	32,075
Gadwall	136,621	71,072	129,079	116,749	138,305	129,771	152,979	370,233	489,898	554,810	228,952
Wigeon	32,444	27,396	214,920	45,670	55,936	60,856	66,863	81,744	175,581	155,411	91,682
G-W Teal	280,257	81,307	722,935	327,341	156,102	2,205,886	260,638	449,524	381,897	494,256	536,014
BW/CIN Teal	1,112	760	5,065	3,948	3,252	15,949	1,317	6,928	2,784	15,106	5,622
Shoveler	85,945	41,682	54,154	59,683	142,284	77,357	68,113	77,396	83,302	110,886	80,080
Pintail	589,250	97,190	905,320	319,120	431,924	721,753	317,173	505,419	612,712	992,064	549,193
Wood Duck	405	900	2,109	3,038	1,927	10,085	595	16,772	19,444	5,915	6,119
Whistling Duck	100	100	1,500	16,300	735	899	545	1,000	3,510	2,796	2,749
<b>Total Dabblers</b>	<b>2,448,239</b>	<b>1,123,435</b>	<b>3,517,369</b>	<b>1,535,800</b>	<b>1,724,597</b>	<b>4,126,543</b>	<b>1,823,898</b>	<b>2,859,238</b>	<b>3,696,067</b>	<b>4,907,343</b>	<b>2,776,253</b>
Redhead	193,608	213,347	236,326	313,557	231,067	565,268	262,530	296,567	251,866	293,855	285,799
Canvasback	32,934	5,250	17,935	6,746	15,072	57,077	22,676	9,424	14,177	40,470	22,176
Scaup	36,683	12,667	24,737	57,012	92,990	51,886	76,855	55,550	74,713	131,968	61,506
Ringneck	41,304	8,163	45,232	28,936	18,954	13,847	12,068	61,576	186,004	202,481	61,857
Goldeneye	18,217	12,446	18,398	12,839	17,092	24,633	18,055	17,296	17,450	22,464	17,889
Bufflehead	4,839	3,811	7,620	24,688	13,899	12,192	11,029	7,041	16,499	16,665	11,828
Ruddy Duck	2,720	1,369	2,899	14,040	5,558	24,527	5,501	4,190	1,316	3,169	6,529
<b>Total Divers</b>	<b>330,305</b>	<b>257,053</b>	<b>353,147</b>	<b>457,818</b>	<b>394,632</b>	<b>749,430</b>	<b>408,714</b>	<b>451,644</b>	<b>562,025</b>	<b>711,072</b>	<b>467,584</b>
Scoter	2	0	0	0	0	0	0	0	0	0	0
Oldsquaw	1	0	0	0	0	0	0	0	0	0	0
Mergansers	134,073	124,543	131,322	93,361	105,802	65,783	122,796	90,481	66,516	89,148	102,383
Unident. Ducks	438,525	13,937	8,881	17,446	4,293	5,357	18,773	701,689	704,765	407,522	232,119
<b>TOTAL DUCKS</b>	<b>3,351,145</b>	<b>1,518,968</b>	<b>4,010,719</b>	<b>2,104,425</b>	<b>2,229,324</b>	<b>4,947,113</b>	<b>2,374,181</b>	<b>4,103,052</b>	<b>5,029,373</b>	<b>6,115,085</b>	<b>3,578,339</b>
Brant	0	0	0	0	0	0	0	0	0	0	0
Snow/Blue Goose	699,988	904,504	996,258	941,096	1,100,043	1,349,746	928,619	1,330,006	1,162,207	1,344,173	1,075,664
Ross' Goose								5,772	0	6,576	4,116
White-fronted Goose	90,830	155,211	85,881	158,625	188,878	194,845	154,519	215,254	356,531	200,391	180,097
Canada goose	1,170,027	1,648,529	1,779,685	1,028,518	1,017,592	1,316,206	1,333,912	1,311,092	1,390,837	1,640,852	1,363,725
<b>TOTAL GEESE</b>	<b>1,960,845</b>	<b>2,708,244</b>	<b>2,861,824</b>	<b>2,128,239</b>	<b>2,306,513</b>	<b>2,860,797</b>	<b>2,417,050</b>	<b>2,862,124</b>	<b>2,909,575</b>	<b>3,191,992</b>	<b>2,620,720</b>
Tundra Swan	3	10	1	1	0	32	8	3	9	2	7
Trumpeter Swan	170	203	166	161	252	234	227	177	270	139	200
Mute Swan	0	2	0	0	1	2	0	0	0	0	1
Unident. Swans	0	0	0	12	3	5	0	0	7	26	5
<b>TOTAL SWANS</b>	<b>173</b>	<b>215</b>	<b>167</b>	<b>174</b>	<b>256</b>	<b>273</b>	<b>235</b>	<b>180</b>	<b>286</b>	<b>167</b>	<b>213</b>
Coot	273,221	75,155	127,631	98,390	153,174	289,636	246,531	135,878	658,349	443,535	250,150
<b>GRAND TOTAL</b>	<b>5,585,384</b>	<b>4,302,582</b>	<b>7,000,341</b>	<b>4,331,228</b>	<b>4,689,267</b>	<b>8,097,819</b>	<b>5,037,997</b>	<b>7,101,234</b>	<b>8,597,583</b>	<b>9,750,779</b>	<b>6,449,421</b>

**CENTRAL FLYWAY MID-WINTER WATERFOWL SURVEY RESULTS IN 2004 RELATED TO PREVIOUS SURVEYS**

<b>SPECIES</b>	<b>2004</b>	<b>2003</b>	<b>% Change, 2004 from 2003</b>	<b>1990-99 Avg</b>	<b>% Change, 2004 from 90-99 Avg</b>	<b>1948-99 Avg</b>	<b>% Change, 2004 from 48-99 Avg</b>	<b>% Change, 2004 from 80-89 Avg</b>	<b>% Change, 2004 from 70-79 Avg</b>	<b>% Change, 2004 from 60-69 Avg</b>	<b>% Change, 2004 from 48-59 Avg</b>
Mallard	1,183,436	1,825,639	-35%	1,243,766	-5%	1,739,955	-32%	-8%	-46%	-37%	-42%
Black Duck	4	10		1	300%	16	-75%	54%	-88%	-88%	-69%
Mottled Duck	23,734	24,797	-4%	32,075	-26%	22,231	7%	-32%	-47%		
Gadwall	971,407	588,194	65%	228,952	324%	125,004					
Wigeon	326,325	450,146	-28%	91,682	256%	131,143	149%		75%	106%	147%
G-W Teal	436,981	187,545	133%	536,014	-18%	335,800	30%	1%	-20%	207%	
BW/CIN Teal	215,398	149,309	44%	5,111	4114%	7,605					
Shoveler	169,739	173,302	-2%	80,077	112%	52,525		175%	110%		
Pintail	664,003	713,071	-7%	549,193	21%	763,202	-13%	13%	-41%	41%	-35%
Wood Duck	14,274	7,454	91%	6,119	133%	2,207					
Whistling Duck	15,269	11,719		2,749	456%	675					
<b>Total Dabblers</b>	<b>4,020,570</b>	<b>4,131,186</b>	<b>-3%</b>	<b>2,776,250</b>	<b>45%</b>	<b>3,180,365</b>	<b>26%</b>	<b>52%</b>	<b>-8%</b>	<b>47%</b>	<b>20%</b>
Redhead	127,814	359,795	-64%	285,799	-55%	347,580	-63%	-45%	-57%	-59%	-78%
Canvasback	6,798	16,142	-58%	22,176	-69%	18,822	-64%	-79%	-63%	-20%	-50%
Scaup	268,811	327,027	-18%	61,506	337%	108,881	147%				10%
Ringneck	156,086	127,152	23%	61,857	152%	18,410					
Goldeneye	33,752	21,966	54%	17,887	89%	14,671	130%	82%			115%
Bufflehead	8,529	9,244	-8%	11,828	-28%	5,519	55%				
Ruddy Duck	2,938	3,258	-10%	6,529	-55%	7,030	-58%	-74%	-41%	-72%	10%
<b>Total Divers</b>	<b>604,728</b>	<b>864,584</b>	<b>-30%</b>	<b>467,582</b>	<b>29%</b>	<b>520,913</b>	<b>16%</b>	<b>54%</b>	<b>45%</b>	<b>48%</b>	<b>-23%</b>
Scoter	0	0		0		0					
Oldsquaw	0	1		0		0					
Mergansers	67,835	96,455	-30%	102,382	-34%	84,112	-19%	-44%	-15%	-12%	41%
Unident. Ducks	100,430	94,391	6%	232,119	-57%	73,759	36%		171%	518%	74%
<b>TOTAL DUCKS</b>	<b>4,793,563</b>	<b>5,186,617</b>	<b>-8%</b>	<b>3,578,333</b>	<b>34%</b>	<b>3,859,149</b>	<b>24%</b>	<b>51%</b>	<b>-3%</b>	<b>48%</b>	<b>21%</b>
Brant	1	0		0		0					
Snow/Blue Goose	837,694	920,940	-9%	1,075,864	-22%	655,048	28%	-8%	28%	178%	118%
Ross' Goose	19,813	11,941	66%	2,943		241					
White-fronted Goose	79,389	213,343	-63%	180,097	-56%	76,939	3%	-37%	63%		
Canada goose	1,608,775	1,606,017	0%	1,359,837	18%	562,288	186%	124%			
<b>TOTAL GEESE</b>	<b>2,545,672</b>	<b>2,752,241</b>	<b>-8%</b>	<b>2,616,386</b>	<b>-3%</b>	<b>1,294,516</b>	<b>97%</b>	<b>45%</b>	<b>120%</b>	<b>374%</b>	<b>399%</b>
Tundra Swan	22	7	214%	7	219%	13	74%		144%	7%	-3%
Trumpeter Swan	271	395	-31%	198	37%	159	71%	55%	153%	70%	75%
Mute Swan	16	6		1	1500%	0					
Unident. Swans	8	16	-50%	3		1					
<b>TOTAL SWANS</b>	<b>317</b>	<b>424</b>	<b>-25%</b>	<b>209</b>	<b>52%</b>	<b>173</b>	<b>84%</b>	<b>80%</b>	<b>173%</b>	<b>74%</b>	<b>93%</b>
Coot	561,937	346,894	62%	249,281	125%	210,877	166%	96%	198%	135%	
<b>GRAND TOTAL</b>	<b>7,901,489</b>	<b>8,286,176</b>	<b>-5%</b>	<b>6,444,209</b>	<b>23%</b>	<b>5,364,715</b>	<b>47%</b>	<b>51%</b>	<b>26%</b>	<b>97%</b>	<b>73%</b>

**BREEDING POPULATION ESTIMATES FOR 10 SPECIES OF DUCKS (Thousands) FROM THE TRADITIONAL SURVEY AREA (strata 1-18, 20-50, 75-77)**

<b>YEAR</b>	<b>MAL</b>	<b>GAD</b>	<b>WIG</b>	<b>GWT</b>	<b>BWT</b>	<b>SHO</b>	<b>PIN</b>	<b>RED</b>	<b>CAN</b>	<b>SCP</b>	<b>TOTAL</b>
1955	8,777	652	3,217	1,807	5,305	1,643	9,775	540	589	5,620	37,925
1956	10,453	773	3,145	1,525	4,998	1,781	10,373	757	699	5,994	40,498
1957	9,297	667	2,920	1,103	4,300	1,476	6,607	509	626	5,767	33,272
1958	11,234	502	2,552	1,347	5,457	1,384	6,038	457	747	5,350	35,068
1959	9,024	590	3,788	2,653	5,099	1,578	5,873	499	489	7,038	36,631
1960	7,372	784	2,988	1,427	4,293	1,825	5,722	498	606	4,869	30,384
1961	7,330	655	3,048	1,729	3,655	1,383	4,218	323	435	5,380	28,156
1962	5,536	905	1,959	723	3,011	1,269	3,624	508	360	5,286	23,181
1963	6,749	1,055	1,831	1,242	3,724	1,398	3,846	413	506	5,438	26,202
1964	6,064	873	2,590	1,561	4,021	1,718	3,291	528	644	5,132	26,422
1965	5,132	1,260	2,301	1,282	3,595	1,424	3,592	599	522	4,640	24,347
1966	6,732	1,680	2,318	1,617	3,733	2,147	4,812	713	663	4,439	28,854
1967	7,510	1,385	2,326	1,594	4,492	2,315	5,278	736	503	4,928	31,067
1968	7,089	1,949	2,299	1,431	3,463	1,685	3,489	499	564	4,413	26,881
1969	7,532	1,573	2,941	1,491	4,139	2,157	5,904	633	504	5,140	32,014
1970	9,986	1,608	3,470	2,183	4,862	2,230	6,392	622	580	5,663	37,596
1971	9,416	1,606	3,273	1,889	4,610	2,011	5,847	534	451	5,134	34,771
1972	9,266	1,623	3,200	1,948	4,279	2,467	6,979	551	426	7,997	38,736
1973	8,079	1,246	2,878	1,949	3,333	1,619	4,356	501	621	6,257	30,839
1974	6,880	1,592	2,672	1,865	4,976	2,011	6,598	626	513	5,781	33,514
1975	7,727	1,644	2,778	1,665	5,885	1,981	5,900	832	595	6,460	35,467
1976	7,934	1,245	2,505	1,548	4,745	1,748	5,476	666	614	5,819	32,300
1977	7,397	1,299	2,575	1,286	4,463	1,452	3,226	634	664	6,260	29,256
1978	7,425	1,558	3,282	2,174	4,499	1,975	5,108	725	373	5,984	33,103
1979	7,883	1,758	3,107	2,072	4,876	2,407	5,376	698	582	7,658	36,417
1980	7,707	1,393	3,596	2,050	4,895	1,908	4,508	728	735	6,382	33,902
1981	6,410	1,395	2,946	1,911	3,721	2,334	3,480	595	621	5,991	29,404
1982	6,409	1,634	2,459	1,536	3,658	2,148	3,709	617	513	5,532	28,215
1983	6,456	1,519	2,636	1,875	3,367	1,876	3,511	712	527	7,174	29,653
1984	5,415	1,515	3,002	1,408	3,979	1,618	2,965	671	530	7,024	28,127
1985	4,961	1,303	2,051	1,475	3,502	1,702	2,516	578	376	5,098	23,562
1986	6,124	1,547	1,737	1,675	4,479	2,128	2,740	560	438	5,235	26,663
1987	5,790	1,306	2,013	2,006	3,529	1,950	2,628	502	450	4,863	25,037
1988	6,369	1,350	2,211	2,061	4,011	1,681	2,006	442	435	4,671	25,237
1989	5,645	1,415	1,973	1,842	3,125	1,538	2,112	511	477	4,342	22,980
1990	5,452	1,672	1,860	1,790	2,776	1,759	2,257	481	539	4,293	22,879
1991	5,445	1,584	2,254	1,558	3,764	1,716	1,803	446	491	5,255	24,316
1992	5,976	2,033	2,208	1,773	4,333	1,954	2,098	596	482	4,639	26,092
1993	5,708	1,755	2,053	1,695	3,193	2,047	2,053	485	472	4,080	23,541
1994	6,980	2,318	2,382	2,108	4,616	2,912	2,972	654	526	4,529	29,997
1995	8,269	2,836	2,615	2,301	5,140	2,855	2,758	889	771	4,446	32,880
1996	7,941	2,984	2,273	2,459	6,416	3,449	2,736	834	849	4,217	34,158
1997	9,940	3,897	3,118	2,507	6,124	4,120	3,558	918	689	4,112	38,983
1998	9,640	3,742	2,858	2,087	6,399	3,183	2,521	1,005	686	3,472	35,593
1999	10,806	3,236	2,920	2,631	7,150	3,890	3,058	973	716	4,412	39,792
2000	9,470	3,158	2,733	3,194	7,431	3,521	2,908	926	707	4,026	38,074
2001	7,904	2,679	2,494	2,509	5,757	3,314	3,296	712	580	3,694	32,939
2002	7,504	2,235	2,334	2,334	4,207	2,318	1,790	565	487	3,524	27,298
2003	7,950	2,549	2,551	2,679	5,518	3,620	2,558	637	558	3,734	32,353
2004 <sup>1</sup>	7,425	2,590	1,981	2,461	4,073	2,810	2,185	605	617	3,807	28,554
<b>AVERAGES:</b>											
1955-69	7,722	1,020	2,682	1,502	4,219	1,679	5,496	547	564	5,296	30,727
1970-79	8,199	1,518	2,974	1,858	4,653	1,990	5,526	639	542	6,301	34,200
1980-89	6,129	1,438	2,462	1,784	3,827	1,888	3,018	592	510	5,631	27,278
1990-99	7,616	2,606	2,454	2,091	4,991	2,789	2,581	728	622	4,346	30,823
1955-03	7,512	1,664	2,638	1,848	4,508	2,135	4,168	625	562	5,249	30,910
<b>Current Year Percent Change From:</b>											
NAWMP	-9%	71%	-33%	32%	-12%	41%	-60%	-5%	14%	-40%	-17%
Long Term	-1%	56%	-25%	33%	-10%	32%	-48%	-3%	10%	-27%	-8%

<sup>1</sup> Preliminary, subject to further editing.



# **TUNDRA SWAN POPULATION STATUS & HARVESTS**

D.E. SHARP FILE: S:\DATA\BOOK\TITLES\SWANHARV.123

**EASTERN POPULATION OF TUNDRA SWANS OBSERVED DURING THE MIDWINTER WATERFOWL SURVEY**

YR	ATLANTIC FLYWAY													3-YR	MF	CF
	MA	NY	PA	WV	NJ	DE	MD	VA	NC	SC	GA	FL	TOTAL	AVG		
1955	0	0	118	0	7	1	71,604	4,250	13,686	15	0	0	89,681	66,253	1	16
1956	0	0	18	0	0	4	20,002	7,325	11,347	3	0	0	38,699	60,573	121	21
1957	6	0	0	3	8	7	35,200	600	4,400	0	0	0	40,224	56,201	171	3
1958	0	365	4	0	14	0	17,012	1,387	9,389	10	0	0	28,181	35,701	180	10
1959	0	6	0	0	11	0	15,200	3,500	9,000	0	0	0	27,717	32,041	131	1
1960	0	0	0	0	100	0	23,200	5,100	12,800	0	0	0	41,200	32,366	251	25
1961	0	0	0	0	0	0	36,200	9,500	16,800	0	0	0	62,500	43,806	25	53
1962	0	0	100	0	0	0	25,600	4,500	9,200	0	0	0	39,400	47,700	181	55
1963	0	0	0	0	100	0	35,800	12,500	13,000	0	0	0	61,400	54,433	188	5
1964	100	0	0	0	100	0	37,300	100	24,700	0	0	0	62,300	54,367	316	9
1965	0	0	0	0	100	0	45,400	600	7,900	0	0	0	54,000	59,233	172	4
1966	0	0	100	0	100	0	45,300	1,400	10,900	0	0	0	57,800	58,033	1,203	2
1967	0	0	0	0	10	100	52,200	1,200	18,800	0	0	0	72,310	61,370	331	29
1968	0	0	0	0	100	0	26,000	2,300	17,200	0	0	0	45,600	58,570	35	13
1969	0	0	0	0	0	0	36,400	0	25,600	0	0	0	62,000	59,970	0	6
1970	0	0	0	0	100	0	34,100	5,800	15,000	0	0	0	55,000	54,200	0	5
1971	0	0	0	0	10	0	38,800	3,400	16,000	0	0	0	58,210	58,403	0	33
1972	0	0	100	0	400	2,500	39,700	3,100	17,000	0	0	0	62,800	58,670	623	8
1973	417	1	263	0	166	51	34,399	3,000	19,000	13	0	0	57,310	59,440	100	10
1974	0	1	284	0	162	1,210	32,398	4,800	25,000	13	0	0	63,868	61,326	0	9
1975	0	2	322	0	570	395	36,400	2,097	26,900	0	2	0	66,688	62,622	0	7
1976	0	7	614	0	300	395	28,492	7,109	41,700	11	0	0	78,628	69,728	0	7
1977	0	0	70	0	315	435	27,597	4,485	43,300	36	0	0	76,238	73,851	0	1
1978	0	0	1,576	0	1,300	1,715	34,996	6,857	23,800	0	0	0	70,244	75,037	0	11
1979	0	4	599	0	2,710	61	34,495	9,700	30,500	52	0	0	78,121	74,868	0	0
1980	0	37	217	0	527	1,566	29,994	11,300	19,700	66	0	0	63,407	70,591	200	2
1981	0	3	1,260	0	725	959	29,996	13,122	46,600	100	0	0	92,765	78,098	200	0
1982	0	0	242	0	900	0	19,600	9,800	42,200	165	0	0	72,907	76,360	200	2
1983	0	0	800	0	1,800	3,000	23,000	5,600	52,200	64	0	0	86,464	84,045	500	2
1984	209	0	100	0	600	0	29,002	7,000	44,100	199	0	25	81,235	80,202	0	5
1985	0	0	340	0	1,230	100	23,500	6,965	61,500	269	5	0	93,909	87,203	400	0
1986	0	0	756	0	800	400	30,200	6,378	52,300	86	1	25	90,946	88,697	0	0
1987	0	0	5,105	1	4,000	1,400	25,700	4,685	53,543	70	0	0	94,504	93,120	100	3
1988	0	13	5	0	2,800	0	22,100	5,291	46,805	96	0	0	77,110	87,520	300	4
1989	0	0	502	0	2,300	175	28,542	5,927	53,100	45	3	0	90,594	87,403	0	4
1990	0	0	340	0	2,700	90	20,078	6,092	60,238	155	0	0	89,693	85,799	17	3
1991	0	0	1,856	0	2,800	121	23,104	4,491	64,999	53	0	0	97,424	92,570	20	10
1992	0	35	3,058	0	724	144	22,976	7,207	75,607	37	0	0	109,788	98,968	327	1
1993	0	83	4,868	0	305	72	18,248	7,046	45,930	41	0	0	76,593	94,602	858	1
1994	0	8	686	1	1,044	126	18,780	9,132	52,482	86	0	0	82,345	89,575	61	0
1995	0	206	2,012	1	770	64	15,578	7,605	54,978	116	0	0	81,330	80,089	2,447	32
1996	0	0	115	4	512	197	16,344	10,945	50,716	188	0	0	79,021	80,899	393	8
1997	0	0	3,515	0	667	594	12,238	11,211	57,730	165	0	0	86,120	82,157	233	3
1998	0	139	1,949	0	495	1,171	21,563	7,186	63,761	280	0	0	96,544	87,228	1,335	9
1999	0	0	553	0	935	76	15,557	8,814	83,106	0	0	0	109,041	97,235	1,618	2
2000	0	0	1,106	0	130	1,497	15,609	7,596	77,044	100	0	0	103,082	102,889	2,344	7
2001	0	99	363	24	197	72	20,798	9,428	66,966	220	0	0	98,167	103,430	46	15
2002	0	116	1,098	3	473	920	16,610	5,994	78,394	222	0	0	103,830	101,693	3,661	13
2003	0	205	548	0	105	802	15,112	7,725	83,351	339	0	0	108,187	103,395	2,160	7
2004	0	8	1,261	0	495	667	17,891	5,729	67,188	292	0	0	93,581	101,866	2,050	22

**ESTIMATED HARVESTS (RETRIEVED) OF EASTERN AND WESTERN POPULATION TUNDRA SWANS**

YR	EASTERN POPULATION						WESTERN POPULATION					TOTAL	
	MT	ND	SD	NC	VA	TOTAL	UT	NV	MT	AK	TOTAL		
1962							320					320	320
1963							392					392	392
1964							335					335	335
1965							336					336	336
1966							491					491	491
1967							246					246	246
1968							520					520	520
1969							1,377	87				1,464	1,464
1970							1,078	208	179			1,465	1,465
1971							1,109	102	91			1,302	1,302
1972							1,028	124	150			1,302	1,302
1973							1,191	109	101			1,401	1,401
1974							1,377	190	259			1,826	1,826
1975							1,383	188	266			1,837	1,837
1976							1,109	206	139			1,454	1,454
1977							1,575	84	214			1,873	1,873
1978							1,152	90	146			1,388	1,388
1979							1,293	214	275			1,782	1,782
1980							1,156	103	250			1,509	1,509
1981							1,619	301	177			2,097	2,097
1982							1,244	161	139			1,544	1,544
1983	34					34	1,168	169	218			1,555	1,589
1984	22			313		335	1,194	229	221			1,644	1,979
1985	19			2,523		2,542	673	145	185			1,003	3,545
1986	41			2,302		2,343	947	196	200			1,343	3,686
1987	27			2,684	117	2,828	600	94	280			974	3,802
1988	25	191		2,488	117	2,821	854	78	260			1,192	4,013
1989	41	511		2,128	133	2,813	694	81	302	16		1,093	3,906
1990	59	474	339	2,855	128	3,855	874	67	275	15		1,231	5,086
1991	52	704	444	2,940	205	4,345	774	62	79	8		923	5,268
1992	37	833	814	2,609	187	4,480	450	29	221	16		716	5,196
1993	18	712	545	2,773	130	4,178	337	55	290	18		700	4,878
1994	62	690	483	3,750	194	5,179	768	89	326	29		1,212	6,391
1995	56	805	172	2,833	217	4,083	348	72	182	47		649	4,732
1996	61	663	233	2,177	195	3,329	897	119	302	35		1,353	4,682
1997	101	870	403	2,325	217	3,916	704	131	300	25		1,160	5,076
1998	81	618	233	2,363	248	3,543	1,142	185	276	39		1,642	5,185
1999	93	867	223	2,290	128	3,601	858	213	226	90		1,387	4,988
2000	115	633	151	2,515	179	3,593	550	82	217	43		892	4,485
2001	93	561	337	2,322	144	3,457	249	62	289	113		713	4,170
2002	51	688	193	2,363	177	3,472	480	45	167	51		743	4,215
2003	56	235	41	2,355	174	2,861	761	77	119	77		1,034	3,895
<b>AVERAGES:</b>													
1962-69							502	87				513	513
1970-79							1,230	152	182			1,563	1,563
1980-89	30	351		2,073	122	1,959	1,015	156	223	16		1,395	2,767
1990-99	62	724	389	2,692	185	4,051	715	102	248	32		1,097	5,148
1983-2003	54	628	329	2,445	170	3,219	730	109	235	41		1,103	4,322

**MID-CONTINENT & ROCKY MOUNTAIN POPULATIONS  
OF SANDHILL CRANES  
POPULATION STATUS & HARVESTS**

Annual spring population indices for the Mid-Continent Population of sandhill cranes.

YR	CENTRAL PLATTE RIVER VALLEY, NE				OTHER						ALL AREAS			
	OCULAR CRUISE TRANSECT	OCULAR TRANSECT	PHOTO CORRECTED OCULAR TRANSECT		OTHER NE	KS	CO	OK	NM	TX	OCULAR CRUISE TRANSECT	OCULAR TRANSECT	PHOTO CORRECTED OCULAR TRANSECT	
			ANNUAL	3-YR AVG									ANNUAL	3-YR AVG
1974	162,600				9,000	1,900	0	400	0	3,200	177,100			
1975	223,600				2,300	900	500	100	100	tr	227,500			
1976	147,500				2,800	300	0	100	1,000	800	152,500			
1977	173,400				1,100	1,600	0	400	12,500	30,700	220,000			
1978	149,800	188,582			2,200	700	0	0	2,300	4,900	159,900	198,682		
1979		203,574			2,600	1,100	500	1,500	0	0		209,274		
1980	223,400	254,417			5,000	4,100	0	100	500	1,400	234,500	265,517		
1981		248,882			8,300	11,200	500	0	0	21,800		290,682		
1982		347,996	417,263		7,100	2,000	2,800	0	100	7,800		367,796	437,063	
1983		306,316	343,378		4,100	200	0	200	tr	7,000		317,816	354,878	
1984		222,710	261,802	340,814	18,100	900	0	1,100	tr	800		243,610	282,702	358,214
1985		378,127	514,763	373,314	11,500	3,000				1,200		393,827	530,463	389,348
1986		317,025	353,040	376,535	1,000	200				2,100		320,325	356,340	389,835
1987		383,581	416,058	427,954	0	tr				400		383,981	416,458	434,420
1988		386,853	463,457	410,852	0	0				7,700		394,553	471,157	414,652
1989		391,353	391,995	423,837	100	1,000				800		393,253	393,895	427,170
1990		385,950	412,154	422,535	11,000	5,200				10,300		412,450	438,654	434,569
1991		297,831	340,645	381,598	100	800				200		298,931	341,745	391,431
1992		257,709	406,457	386,419	12,200	300				1,100		271,309	420,057	400,152
1993		253,799	378,883	375,328	16,800	37,750				13,500		321,849	446,933	402,912
1994		395,543	477,215	420,852	14,600	0	2,400			0		412,543	494,215	453,735
1995		273,376	326,181	394,093	30,400	0	6,700			0		310,476	363,281	434,810
1996		318,514	519,984	441,127	7,600	0	3,900			0		330,014	531,484	462,993
1997		350,932	534,630	460,265	16,200	100				0		367,232	550,930	481,898
1998		337,203	530,848	528,487	13,600	100				0		350,903	544,548	542,321
1999		219,800	284,900	450,126	3,500	100,000				0		323,300	388,400	494,626
2000		484,600	490,100	435,283	16,900	26,100				500		528,100	533,600	488,849
2001		387,300	413,500	396,167	10,500	42,300				3,500		443,600	469,800	463,933
2002		309,000	315,000	375,875	17,100	15,100				1,200		342,400	354,200	436,500
2003		300,900	348,000	370,300	24,800	4,100				3,800		333,600	380,700	425,340
2004		356,850												

Estimated retrieved harvests of Mid-Continent sandhill cranes in the U.S.

YR	CO	KS	MT	NM	ND	OK	SD	TX	WY	CENTRAL FLYWAY	AZ	NM	AK <sup>2 3</sup>	PACIFIC FLYWAY	U.S. TOTAL
1975	91		16	911	2,122	142	86	6,123	6	9,497			1,094	1,094	10,591
1976	106		29	858	52	200	12	6,122	14	7,393			637	637	8,030
1977	39		18	1,456	4,078	410	47	6,094	9	12,151			620	620	12,771
1978	106		36	1,089	2,777	389	19	5,720	10	10,146			310	310	10,456
1979	129		14	1,170	2,733	397	19	5,917	0	10,379			675	675	11,054
1980	68		16	1,019	2,245	363	130	6,305	6	10,152			1,050	1,050	11,202
1981	92		11	907	2,395	397	78	6,245	9	10,134	20		553	573	10,707
1982	49		21	335	2,469	535	212	4,295	0	7,916	62		1,160	1,222	9,138
1983	70		28	354	6,471	373	177	5,471	15	12,959	17		1,540	1,557	14,516
1984	85		15	414	4,367	433	139	5,811	7	11,271	23		1,986	2,009	13,280
1985	82		7	334	4,650	416	101	7,184	2	12,776	48		1,197	1,245	14,021
1986	33		1	250	6,563	392	99	5,149	0	12,487	108	184	731	1,023	13,510
1987	86		15	159	5,334	957	99	6,117	3	12,770	127	318	836	1,281	14,051
1988	68		18	372	3,815	1,061	100	7,330	8	12,772	172	127	1,241	1,540	14,312
1989	25		33	319	4,656	1,003	194	7,400	9	13,639	126	138	545	809	14,448
1990	87		44	377	6,804	698	165	9,865	1	18,041	114	259	918	1,291	19,332
1991	224		31	593	4,580	604	128	6,916	3	13,079	172	235	1,047	1,454	14,533
1992	84		103	505	4,654	478	141	6,455	13	12,433	139	54	640	833	13,266
1993	112	602	95	506	6,985	826	110	8,769	0	18,005	113	178	201	492	18,497
1994	143	767	56	357	6,235	1,167	239	7,233	4	16,201	86	153	648	887	17,088
1995	208	990	156	673	7,017	1,091	170	10,322	1	20,628	124	111	812	1,047	21,675
1996	91	933	58	332	6,639	1,066	166	7,816	10	17,111	114	78	1,205	1,397	18,508
1997	168	1,167	45	248	6,545	600	189	10,800	4	19,766	171	45	870	1,086	20,852
1998	64	1,362	17	258	7,967	645	454	9,054	10	19,831	114	55	1,370	1,539	21,370
1999	56	1,455	29	321	5,748	879	184	8,469	8	17,149	92	101	2,400	2,593	19,742
2000	363	590	15	311	5,081	552	374	8,208	10	15,504	166	100	995	1,261	16,765
2001	257	1,033	43	297	5,173	713	478	6,999	7	15,000	154	106	941	1,201	16,201
2002	294	1,067	23	342	2,852	490	160	7,837	22	13,087	197	92	850	1,139	14,226
2003 <sup>1</sup>	275	927	149	539	4,234	176	164	12,058	5	18,527	155	162	330	647	19,174
<b>AVERAGES:</b>															
1975-79	94		23	1,097	2,352	308	37	5,995	8	9,913			667	667	10,580
1980-89	66		17	446	4,297	593	133	6,131	6	11,688	78	192	1,084	1,231	12,919
1990-99	124	1,039	63	417	6,317	805	195	8,570	5	17,224	124	127	1,011	1,262	18,486
2000-02	305	812	29	304	5,127	633	426	7,604	9	15,252	160	103	968	1,231	16,483
1975-02	117	989	36	545	4,746	622	160	7,118	6	13,674	108	140	971	1,138	14,812
<b>CURRENT YEAR PERCENT CHANGE FROM:</b>															
2002	-6%	-13%	548%	58%	48%	-64%	3%	54%	-77%	42%	-21%	76%	-61%	-43%	35%
1975-79	192%		559%	-51%	80%	-43%	348%	101%	-36%	87%			-51%	-3%	81%
1980-89	318%		803%	21%	-1%	-70%	23%	97%	-15%	59%	98%	-16%	-70%	-47%	48%
1990-99	122%	-11%	135%	29%	-33%	-78%	-16%	41%	-7%	8%	25%	28%	-67%	-49%	4%
2000-02	-10%	14%	414%	77%	-17%	-72%	-62%	59%	-41%	21%	-3%	57%	-66%	-47%	16%
1975-02	135%	-6%	315%	-1%	-11% #	-72%	3%	69%	-20%	35%	44%	16%	-66%	-43%	29%

<sup>1</sup> Preliminary

<sup>2</sup> A proportion of the Alaskan harvest is composed of lesser sandhill cranes from the Pacific Coast Population

<sup>3</sup> In Alaska, state surveys for crane harvests were used during 1975-97, for 1998-99 a sample of waterfowl hunters was used. For the HIP surveys beginning in 2000, harvest zones 1-6 are combined to represent the MC crane harvest.

**Annual sport hunting mortality estimates for the Mid-Continent Population  
of sandhill cranes in North America.**

YR	SPORT HUNTING MORTALITY					
	Retrieved				Unretrieved No. Am. <sup>3</sup>	Total
	Central Flyway	Pacific Flyway	Canada	Mexico <sup>2</sup>		
1975	9,497	1,094	6,164	1,676	3,672	22,102
1976	7,393	637	1,635	967	2,032	12,663
1977	12,151	620	367	1,314	2,473	16,925
1978	10,146	310	876	1,133	2,324	14,789
1979	10,379	675	3,798	1,485	2,842	19,179
1980	10,152	1,050	5,582	1,678	3,402	21,864
1981	10,134	573	2,959	1,367	2,760	17,792
1982	7,916	1,222	2,837	1,198	2,451	15,624
1983	12,959	1,557	3,098	1,761	3,503	22,879
1984	11,271	2,009	3,717	1,700	3,375	22,072
1985	12,776	1,245	5,159	1,918	3,524	24,622
1986	12,487	1,023	6,106	1,962	3,688	25,266
1987	12,770	1,281	5,267	1,932	3,406	24,656
1988	12,772	1,540	6,946	2,126	3,750	27,134
1989	13,639	809	4,984	1,943	3,628	25,003
1990	18,041	1,291	4,839	2,417	4,228	30,817
1991	13,079	1,454	5,394	1,993	3,536	25,456
1992	12,433	833	5,645	1,891	3,133	23,935
1993	18,005	492	2,791	2,129	3,334	26,751
1994	16,201	887	3,788	2,088	3,029	25,992
1995	20,628	1,047	5,829	2,750	4,161	34,416
1996	17,111	1,397	4,313	2,282	3,609	28,713
1997	19,766	1,086	5,901	2,675	4,211	33,640
1998	19,831	1,539	9,525	3,090	4,973	38,957
1999	17,149	2,593	8,400	2,814	4,478	35,435
2000	15,504	1,261	9,450	2,621	4,095	32,931
2001	15,000	1,201	8,785	2,499	4,014	31,499
2002	13,087	1,139	7,948	2,217	3,448	27,839
2003 <sup>1</sup>	18,527	647	9,586	2,876	4,070	35,706
<b>AVERAGES:</b>						
1975-79	9,913	667	2,568	1,315	2,668	17,132
1980-89	11,688	1,231	4,666	1,758	3,349	22,691
1990-99	17,224	1,262	5,643	2,413	3,869	30,411
2000-02	14,530	1,200	8,728	2,446	3,852	30,756
1975-02	13,653	1,138	5,075	1,987	3,467	25,320
<b>CURRENT YEAR PERCENT CHANGE FROM:</b>						
2002	42%	-43%	21%	30%	18%	28%
1975-79	87%	-3%	273%	119%	53%	108%
1980-89	59%	-47%	105%	64%	22%	57%
1990-99	8%	-49%	70%	19%	5%	17%
2000-02	28%	-46%	10%	18%	6%	16%
1975-02	36%	-43%	89%	45%	17%	41%

<sup>1</sup> Preliminary

<sup>2</sup> Unknown harvests (Mexico) were assumed to be 10% of harvests in the U.S. and Canada.

<sup>3</sup> Unretrieved kill as reported by hunters is used for the Central Flyway; for the remainder of harvest areas, it is assumed to be 20% of retrieved harvests.

**Estimated retrieved harvests of the Rocky Mountain Population of greater sandhill cranes.**

<b>YR</b>	<b>UT</b>	<b>NM</b>	<b>AZ</b>	<b>WY</b>	<b>MT</b>	<b>ID</b>	<b>TOTAL</b>
1981			20				20
1982			9	143			152
1983			35	154			189
1984			33	101			134
1985			40	138			178
1986			23	195			218
1987			60	190			250
1988		310	40	128			478
1989	54	483	51	125			713
1990	35	79	9	58			181
1991	48	47	44	101			240
1992		147	39	168	42		396
1993	28	297	61	115	45		546
1994	34	416	27	150	40		667
1995	27	270	33	77	41		448
1996	32	236	27	84	49	20	448
1997	30	114	22	82	62	136	446
1998	34	180	37	93	59	135	538
1999	54	198	21	124	71	190	658 <sup>1</sup>
2000	69	257	37	163	91	193	810 <sup>2</sup>
2001	77	288	26	142	87	278	898
2002	60	160	42	132	51	194	639
2003	57	169	34	72	50	146	528
<b>AVERAGES:</b>							
1981-89	54	397	35	147			259
1990-99	36	198	32	105	51	120	457
2000-02	69	273	32	153	89	236	854
1981-02	45	237	33	127	59	159	410
<b>CURRENT YEAR PERCENT CHANGE FROM:</b>							
2002	-5%	6%	-19%	-45%	-2%	-25%	-17%
1981-89	6%	-57%	-2%	-51%			104%
1990-99	59%	-15%	6%	-32%	-2%	21%	16%
2000-02	-17%	-38%	8%	-53%	-44%	-38%	-38%
1981-02	27%	-29%	3%	-43%	-15%	-8%	29%

<sup>1</sup> RMP Sandhill cranes (40) were also taken as part of research project in the San Luis Valley, CO D.E. SHARP S:\CF\_D\EXCEL\CRANES\Shcranerep.xls 07/16/04

<sup>2</sup> RMP Sandhill cranes (20) were also taken as part of research project in the San Luis Valley, CO



**Spring population indices for Rocky Mountain sandhill cranes, 1984 - 96.**

YR	SAN LUIS VALLEY, COLORADO					SURVEY COND.
	RAW COUNT	ADJ. FOR EST. BIAS <sup>1</sup>	ADJ. TO REM. LES. <sup>2</sup>	OTHER AREAS	INDEX	
1984	10,962	14,488	13,562	550	14,112	POOR
1985	18,393	21,773	20,382	0	20,382	GOOD
1986	14,031	14,031	13,135	20	13,155	POOR
1987	13,561	15,661	14,660	0	14,660	POOR
1988	17,510	17,510	16,381	22	16,403	POOR
1989	17,302	18,389	17,004	0	17,004	GOOD
1990	20,851	24,593	21,221	275	21,496	GOOD
1991	19,990	18,405	16,045	175	16,220	GOOD
1992	23,516	23,516	19,999	9	20,008	GROUND
1993	17,576	17,576	16,478	1,260	17,738	POOR
1994	17,229	16,036	15,063	203	15,266	FAIR
1995	25,276	23,390	20,229	0	20,229	GOOD
1996	23,019	26,379	22,737	1,010	23,747	GOOD

<sup>1</sup> Raw estimate adjusted by photography for estimation bias.

<sup>2</sup> Population estimate adjusted to remove the number of lesser sandhill cranes (non-RMP cranes).

**Fall pre-migration population indices for Rocky Mountain sandhill cranes.**

YR	UT	CO	ID	WY	MT	TOTAL	3-YR AVG
1987	1,578	1,443	10,686	2,327	1,447	17,481	
1992	2,810	3,181	5,801	2,241	5,264	19,297	
1995	1,528	2,284	6,864	1,671	3,681	16,028	
1996	1,849	1,255	8,334	2,526	2,974	16,938	
1997 <sup>1</sup>	2,450	1,604	8,132	2,255	3,595	18,036	17,001
1998	2,185	1,273	8,067	3,262	3,415	18,202	17,725
1999	2,292	1,102	8,761	4,205	3,141	19,501	18,580
2000	2,416	749	9,337	3,890	3,598	19,990	19,231
2001	1,522	666	7,160	2,626	4,585	16,559	18,683
2002	1,869	1,355	7,698	3,038	4,843	18,803	18,451
2003	2,546	745	7,822	3,446	4,964	19,523	18,295

<sup>1</sup> In October 1997, a special survey was also conducted in the SLV, Colorado and other areas, which resulted in a total of 27,090 Rocky Mountain and Mid-Continent cranes being counted.

**CENTRAL FLYWAY  
FRAMEWORKS**

**SUMMARY OF CENTRAL FLYWAY FRAMEWORKS FOR LIGHT GOOSE HUNTING, 1999-2004**

**1999**

**2000**

**2001**

**2002**

**2003**

**2004**

**EAST TIER STATES - ND, SD, NE, KS, OK, & E. TX**

Beginning Shooting Time	1/2 hr. before sunrise	1/2 hr. before sunrise	1/2 hr. before sunrise	1/2 hr. before sunrise	1/2 hr. before sunrise
Ending Shooting Time	Sunset	Sunset	Sunset	Sunset	Sunset
Earliest Opening Date	October 2	September 30	September 29	September 21	September 27
Latest Closing Date	March 10 <sup>3</sup>	March 10	March 10	March 10	March 10
Season Length	107	107	107	107	107
Daily Bag/Possession	20/None	20/None	20/None	20/None	20/None

<sup>1</sup> Excluding ND, SD, and NE north of the Platte River and the Rainwater Basin Zone where the ending date is February 18.

<sup>2</sup> Excluding Nebraska's Rainwater Basin Zone where the ending date is February 16.

<sup>3</sup> Excluding Nebraska's Rainwater Basin West Zone where the ending date is February 1.

**WEST TIER STATES - MT, WY, CO, NM, & W. TX**

Beginning Shooting Time	1/2 hr. before sunrise	1/2 hr. before sunrise	1/2 hr. before sunrise	1/2 hr. before sunrise	1/2 hr. before sunrise
Ending Shooting Time	Sunset	Sunset	Sunset	Sunset	Sunset
Earliest Opening Date	October 2	September 30	September 29	September 21	September 27
Latest Closing Date	March 10	March 10	March 10	March 10	March 10
Season Length	107	107	107	107	107
Daily Bag/Possession	20/None	20/None	20/None	20/None	20/None

<sup>1</sup> Excluding MT and WY north of I-80, where the ending date is February 18.

16-Jul-04

U.S. Federal Frameworks for the Hunting of Light Geese 1961-2003

YEAR	PACIFIC FLYWAY <sup>1</sup>						CENTRAL FLYWAY <sup>2</sup>								MISSISSIPPI FLYWAY				ATLANTIC FLYWAY					
				BAG/POSS			WEST TIER STATES				EAST TIER STATES													
	OPEN	CLOSE	DAYS	SNOWS	ROSS'	OPEN	CLOSE	DAYS	BAG/POSS	OPEN	CLOSE	DAYS	BAG/POSS	OPEN	CLOSE	DAYS	BAG/POSS	OPEN	CLOSE	DAYS	BAG/POSS			
1961	Oct 7	Jan 7	75	6/6	Closed <sup>3</sup>	Oct 01	Jan 08	60	5/5	3,4,6	Oct 01	Jan 08	60	5/5	3,6	Oct 01	Jan 08	60	5/5	18				
1962	Oct 6	Jan 6	75	6/6	Closed <sup>3</sup>	Oct 06	Jan 06	75	5/5	3,6	Oct 01	Jan 13	75	5/5	3,6	Oct 01	Jan 13	60	5/5	18				
1963	Oct 5	Jan 5	90	6/6	1/1	Oct 05	Jan 05	90	5/5	5,6	Oct 01	Jan 15	75	5/5	5,6	Oct 01	Jan 15	70	5/5	18				
1964	Oct 10	Jan 10	90	6/6	1/1	Oct 10	Jan 10	90	5/5	5,6	Oct 01	Jan 15	75	5/5	5,6	Oct 01	Jan 15	70	5/5	18				
1965	Oct 9	Jan 9	90	6/6	1/1	Oct 01	Jan 15	75	5/5	5,6	Oct 01	Jan 15	75	5/5	5,6	Oct 01	Jan 15	70	5/5	18				
1966	Oct 8	Jan 8	90	6/6	1/1	Oct 01	Jan 15	75	5/5	5,6	Oct 01	Jan 15	75	5/5	5,6	Oct 01	Jan 15	70	5/5	18				
1967	Oct 7	Jan 14	90	6/6	1/1	Sep 30	Jan 14	75	5/5	5,6	Sep 30	Jan 14	75	5/5	5,6	Sep 30	Jan 14	70	5/5	18				
1968	Oct 5	Jan 12	93	6/6	1/1	Oct 01	Jan 15	75	2/2	5,6	Oct 01	Jan 15	75	5/5	5,6	Sep 28	Jan 12	70	5/5	18				
1969	Oct 4	Jan 11	93	6/6	1/1	Oct 01	Jan 15	86	2/4	5,6	Oct 01	Jan 15	86	5/5	5,6	Sep 27	Jan 11 <sup>21</sup>	70	5/5	18				
1970	Oct 3	Jan 17	93	6/6	1/1	Oct 01	Jan 17	90	2/4	5,6	Oct 01	Jan 17	75	5/5	5,6	Oct 01	Jan 24 <sup>21</sup>	70	5/5	18				
1971	Oct 2	Jan 16	93	6/6	1/1	Oct 01	Jan 16	90	2/4	5,6	Oct 01	Jan 16	75	5/5	5,6	Oct 01	Jan 23 <sup>23</sup>	70	5/5	18				
1972	Oct 1	Jan 20	93	6/6	1/1	Oct 01	Jan 24	93	2/4	5,6	Oct 01	Jan 24	72	4/4	5,6	Oct 01	Jan 20 <sup>23</sup>	70	5/5	18				
1973	Sep 29	Jan 20	93	6/6	1/1	Sep 29	Jan 20	93	2/4	5,6	Sep 29	Jan 20	72	5/5	5,6	Oct 01	Jan 20 <sup>23</sup>	70	5/5	18				
1974	Sep 28	Jan 19	93	6/6	1/1	Sep 28	Jan 19	93	2/4	5,6	Sep 28	Jan 19	72	5/5	5,6	Oct 01	Jan 20 <sup>23</sup>	70	5/5	18				
1975	Oct 4	Jan 18	93	3/6	1/1	Oct 04	Jan 18	93	2/4	5,6	Oct 04	Jan 18	72	5/5	5,6	Oct 01	Jan 20 <sup>23</sup>	70	5/5	18	Oct 1	Jan 31	30	2/4
1976	Oct 2	Jan 23	93	3/6	1/1	Oct 02	Jan 23	93	2/4	5,6,9	Oct 02	Jan 23	72	5/5	5	Oct 01	Jan 20 <sup>23</sup>	70	5/5	18	Oct 1	Jan 31	30	2/4
1977	Oct 1	Jan 22	93	3/6	1/1	Oct 01	Jan 22	93	2/4	5,6,9	Oct 01	Jan 22	86	5/5	5	Oct 01	Jan 20 <sup>23</sup>	70	5/5	18	Oct 1	Jan 31	60	2/4
1978	Sep 30	Jan 21	93	3/6	1/1	Sep 30	Jan 21	93	2/4	5,6,9	Sep 30	Jan 21	86	5/5	5	Oct 01	Jan 20 <sup>23</sup>	70	5/5	18	Oct 1	Jan 31	70	2/4
1979	Sep 29	Jan 20	93	3/6	3/6	Sep 29	Jan 20	93	2/4	6,9	Sep 29	Jan 20	86	5/5	5	Sep 29	Jan 20 <sup>23</sup>	70	5/5	18	Oct 1	Jan 31	70	4/8
1980	Oct 4	Jan 18	93	3/6	3/6	Oct 04	Jan 18 <sup>8</sup>	93	2/4	6,10	Oct 04	Jan 18	86	5/10	5	Oct 04	Jan 20 <sup>23</sup>	70	5/10	18	Oct 1	Jan 31	70	4/8
1981	Oct 3	Jan 17	93	3/6	3/6	Oct 03	Jan 17 <sup>8</sup>	93	2/4	6,10	Oct 03	Jan 17	86	5/10	5	Oct 03	Jan 20 <sup>23</sup>	70	5/10	18	Oct 1	Jan 31	90	4/8
1982	Oct 2	Jan 23	93	3/6	3/6	Oct 02	Jan 23 <sup>8</sup>	93	2/4	6,10	Oct 02	Jan 23	86	5/10	5	Oct 02	Jan 20 <sup>23</sup>	70	5/10	18	Oct 1	Jan 31	90	4/8
1983	Oct 1	Jan 22	93	3/6	3/6	Oct 01	Jan 22 <sup>8</sup>	93	2/4	6,10	Oct 01	Jan 22	86	5/10	5	Oct 01	Jan 20 <sup>23</sup>	70	5/10	18	Oct 1	Jan 31	90	4/8
1984	Sep 29	Jan 20	93	3/6	3/6	Sep 29	Feb 12 <sup>8</sup>	93	2/4	6,10	Sep 29	Feb 12	86	5/10	5	Sep 29	Jan 20 <sup>23</sup>	70	5/10	18	Oct 1	Jan 31	90	4/8
1985	Sep 28	Jan 19	93	3/6	3/6	Sep 28	Feb 16 <sup>11</sup>	93	5/10	5	Sep 28	Feb 16	86	5/10	5	Sep 28	Jan 20 <sup>23</sup>	70	5/10	18	Oct 1	Jan 31	90	4/8
1986	Oct 4	Jan 18	93	3/6	3/6	Oct 04	Feb 15 <sup>11</sup>	93	5/10	5	Oct 04	Feb 15	86	5/10	5	Oct 04	Jan 20 <sup>19,22,23</sup>	70	5/10	18	Oct 1	Jan 31	90	4/8
1987	Oct 3	Jan 17	93	3/6	3/6	Oct 03	Feb 14 <sup>11</sup>	93	5/10	5	Oct 03	Feb 14	86	5/10	5	Oct 03	Jan 17 <sup>19,22,23</sup>	70	5/10	18	Oct 1	Jan 31	90	4/8
1988	Oct 1	Jan 22	93	3/6	3/6	Oct 01	Feb 14 <sup>11</sup>	95	5/10	5	Oct 01	Feb 14	86	5/10	5	Oct 01	Jan 22 <sup>23,24</sup>	70	5/10	18	Oct 1	Jan 31	90	4/8
1989	Sep 30	Jan 21	93	3/6	3/6	Sep 30	Feb 18 <sup>11</sup>	95	5/10	5	Sep 30	Feb 18	100	5/10	5	Sep 30	Jan 21 <sup>23,24</sup>	80	7/14	18	Oct 1	Jan 31	90	5/10
1990	Sep 29	Jan 20	93	3/6	3/6	Sep 29	Feb 17 <sup>11</sup>	100	5/10	5	Sep 29	Feb 17	86;100	5/10;7/14	5	Sep 29	Jan 20 <sup>23,24</sup>	80	7/14	18	Oct 1	Feb 10	107	5/10
1991	Sep 28	Jan 19	93	3/6	3/6	Sep 28	Feb 16 <sup>11</sup>	107	5/10	5	Sep 28	Feb 16	86;100	5/10;7/14	5	Sep 28	Jan 31 <sup>23</sup>	80	7/14	18	Oct 1	Jan 10	107	5/10
1992	Oct 3	Jan 17	93	3/6	3/6	Oct 03	Feb 14 <sup>11</sup>	107	5/10	5	Oct 03	Feb 14	107	10/20	5	Oct 03	Jan 31 <sup>23</sup>	80	7/14	18	Oct 1	Feb 10	107	5/10
1993	Oct 2	Jan 23	100	3/6	3/6	Oct 02	Feb 13 <sup>11</sup>	107	5/10	5	Oct 02	Feb 13	107	10/20	5	Oct 02	Feb 14	80	7/14	18	Oct 1	Feb 10	107	5/10
1994	Oct 1	Jan 20	100	3/6	3/6	Oct 01	Feb 28 <sup>12</sup>	107	5/10	5	Oct 01	Feb 28 <sup>7</sup>	107	10/20	5	Oct 01	Feb 14	107	7/14	18	Oct 1	Feb 10	107	5/10
1995	Oct 1	Jan 21	100	3/6	3/6	Sep 30	Mar 10 <sup>17</sup>	107	5/10	5	Sep 30	Mar 10 <sup>13</sup>	107	10/20	5	Oct 01	Feb 14 <sup>25</sup>	107	10/20	18	Oct 1	Feb 10 <sup>26</sup>	107	5/10
1996	Sep 29	Jan 19	100	3/6	3/6	Sep 28	Mar 10	107	10/40	5	Sep 28	Mar 10 <sup>14</sup>	107	10/40	5	Sep 28	Mar 10	107	10/30	5	Oct 1	Mar 10	107	8/24
1997	Oct 04	Jan 18	100	3/6	3/6	Oct 04	Mar 10	107	10/40	5	Oct 04	Mar 10 <sup>14</sup>	107	10/40	5	Oct 04	Mar 10	107	10/30	5	Oct 1	Mar 10	107	10/30
1998	Oct 03	Jan 17	100	3/6	3/6	Oct 03	Mar 10	107	20/none	5	Oct 03	Mar 10 <sup>15</sup>	107	20/none	5	Oct 03	Mar 10	107	20/none	5	Oct 1	Mar 10	107	15/none
1999	Oct 02	Jan 23	100	3/6	3/6	Oct 02	Mar 10	107	20/none	5	Oct 02	Mar 10 <sup>15</sup>	107	20/none	5	Oct 02	Mar 10	107	20/none	5	Oct 1	Mar 10	107	15/none
2000	Sep 30	Jan 21	100	3/6	3/6	Sep 30	Mar 10	107	20/none	5	Sep 30	Mar 10 <sup>15</sup>	107	20/none	5	Sep 30	Mar 10	107	20/none	5	Oct 1	Mar 10	107	15/none
2001	Sep 29	Jan 20	100	3/6	3/6	Sep 29	Mar 10	107	20/none	5	Sep 29	Mar 10	107	20/none	5	Sep 29	Mar 10	107	20/none	5	Oct 1	Mar 10	107	15/none
2002	Sep 21	Jan 19	100	3/6	3/6	Sep 21	Mar 10	107	20/none	5	Sep 21	Mar 10	107	20/none	5	Sep 21	Mar 10	107	20/none	5	Oct 1	Mar 10	107	15/none
2003	Oct 04	Jan 25	100	3/6	3/6	Sep 27	Mar 10	107	20/none	5	Sep 27	Mar 10	107	20/none	5	Sep 27	Mar 10	107	20/none	5	Oct 1	Mar 10	107	15/none

1 Alaska frameworks are separate: Generally 105-107 days with a total goose bag of 6  
 2. East - ND/SD/NE/KS/OK/TX (E.), West - MT/WY/COLORADO/TX (W.)  
 3. The season is closed on Ross' geese  
 4. The season is closed on snow geese in Wyoming  
 5. The bag/possession limit on Ross' geese is 1/1.  
 6. Aggregate goose limit  
 7. Excluding ND, SD, and NE, where the ending date is Feb 12  
 8. Excluding NM MRGV, where the ending date is Feb 14 (1981), Feb 13 (1982), Feb 12 (1983), Feb 28 (1984)  
 9. The bag/pos limit for light geese is 5/5 for NM and the western goose zone, TX  
 10. The bag/pos limit for light geese is 5/10 for NM and the western goose zone, TX  
 11. Excluding NM MRGV, where the ending date is Feb 28  
 12. Excluding MT and WY where the ending date is Feb 12  
 13. Excluding ND, SD and NE north of the Platte R. and the Rainwater Basin Zone where the ending date is Feb 18

14. Excluding NE Rainwater Basin Zone where the ending date is Feb 16  
 15. Excluding NE Rainwater Basin Zone where the ending date is Feb 01  
 17. Excluding MT and WY north of I-80 where the ending date is Feb 18  
 18. Aggregate goose bag limit - all may be light geese  
 19. Closing date for AR is Jan 31  
 20. Season closed in Issaquena, Sharkey and Washington Co. MS  
 21. Closing date in LA is Feb 15  
 22. Opening date in WI is Oct 01  
 23. Closing date for LA is Feb 14  
 24. Closing date in KY, AR, TN, MS and AL is Jan 31  
 25. States and portions of states south of I-80 have an ending date of Mar 10  
 26. NJ, DE, MD, NC, PA, SC, and VA closing date of 3/10 allowed; SC chose 2/10 closing

**SUMMARY OF CENTRAL FLYWAY FRAMEWORKS FOR DUCK HUNTING, 1999-2004**

	1999	2000	2001	2002	2003	2004
Beginning Shooting Time	1/2 hr. before sunrise	1/2 hr. before sunrise	1/2 hr. before sunrise	1/2 hr. before sunrise	1/2 hr. before sunrise	1/2 hr. before sunrise
Ending Shooting Time	Sunset	Sunset	Sunset	Sunset	Sunset	Sunset
Opening Date	Oct 2	Sep 30	Sep 29	Sep 21	Sep 27	Sep 27
Closing Date	Jan 23	Jan 21	Jan 20	Jan 26	Jan 25	Jan 25
Season Length	74 +23 HP <sup>1</sup>	74 +23 HP <sup>1</sup>	74 +23 HP <sup>1</sup>	74 +23 HP <sup>1</sup>	74 +23 HP <sup>1</sup>	74 +23 HP <sup>1</sup>
Daily Bag/Possession	6 12	6 12	6 12	6 12	6 12	6 12
<b>Species/Sex Restrictions</b>						
Mallard (M)	5	5	5	5	5	5
Mallard (F)	2	2	2	2	2	2
Pintail	1	1	1	1/39 days	1/39 days	1/39 days
H. Merganser <sup>2</sup>	1	1	1	1	1	1
Canvasback	1	1	1/25 days	Closed	1/39 days	1/39 days
Redhead	2	2	2	2	2	2
Scaup	3	3	3	3	3	3
Wood Duck	2	2	2	2	2	2
Mottled Duck	1	1	1	1	1	1

D.E. SHARP FILE S:\CF\_D\PROJECTS\FRAMEWORKS\dkframALL.xls

16-Jul-04

<sup>1</sup> HP = High Plains Management Unit: Additional days must be taken no earlier than the Saturday closest to December 10.

<sup>2</sup> The merganser bag can be separated from the duck bag.

**SUMMARY OF CENTRAL FLYWAY FRAMEWORKS FOR SANDHILL CRANE HUNTING, 1999-2003**

YEAR	Participating States	Beg. Shooting Time	Ending Shooting Time	Daily Bag/Possession	FRAMEWORK OFFERED			SEASONS SELECTED		
					Opening Date	Closing Date	Season Length	Opening Date	Closing Date	Season Length
1999	CF portions of CO (excluding San Luis Valley&NP) <sup>3</sup>	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	58	Oct 02	Nov 28	58
"	KS	sunrise	2pm	2/4	Sep 01	Feb 28	58	Nov 06	Jan 02	58
"	Portions of TX <sup>2</sup>	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	93	Nov 13	Feb 13	93
"	Portions of OK	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	93	Oct 30	Jan 30	93
"	CF Portions of MT <sup>3</sup>	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	58	Oct 02	Nov 28	58
"	Portions of ND	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	58	Sep 11	Nov 07	58
"	Portions of SD	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	58	Sep 25	Nov 21	58
"	Portions of WY <sup>3</sup>	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	58	Sep 11	Nov 07	58
"	Portions of NM <sup>3</sup>	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	93	Oct 30	Jan 30	93
2000	CF portions of CO (excluding San Luis Valley&NP) <sup>3</sup>	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	58	Oct 07	Dec 03	58
"	KS	sunrise	2pm	2/4	Sep 01	Feb 28	58	Nov 04	Dec 31	58
"	Portions of TX <sup>2</sup>	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	93	Nov 11	Feb 11	93
"	Portions of OK	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	93	Nov 04	Feb 04	93
"	CF Portions of MT <sup>3</sup>	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	58	Sep 30	Nov 26	58
"	Portions of ND	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	58	Sep 18	Nov 12	56
"	Portions of SD	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	58	Sep 23	Nov 19	58
"	Portions of WY <sup>3</sup>	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	58	Sep 09	Nov 05	58
"	Portions of NM <sup>3</sup>	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	93	Oct 31	Jan 31	93
2001	CF portions of CO (excluding San Luis Valley&NP) <sup>3</sup>	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	58	Oct 07	Dec 03	58
"	KS	sunrise	2pm	2/4	Sep 01	Feb 28	58	Nov 03	Dec 30	58
"	Portions of TX <sup>2</sup>	1/2 hr. before sunrise	sunset	3/6, 2/4	Sep 01	Feb 28	37, 93	Nov 10	Feb 10	93
"	Portions of OK	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	93	Nov 03	Feb 03	93
"	CF Portions of MT <sup>3</sup>	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	58	Sep 29	Nov 25	58
"	Portions of ND	1/2 hr. before sunrise	sunset	3/6, 2/4	Sep 01	Feb 28	37, 58	Sep 15	Nov 11, Oct 21	58, 37
"	Portions of SD	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	58	Sep 22	Nov 18	58
"	Portions of WY <sup>3</sup>	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	58	Sep 15	Nov 11	58
"	Portions of NM <sup>3</sup>	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	93	Oct 31	Jan 31	93
2002	CF portions of CO (excluding San Luis Valley&NP) <sup>3</sup>	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	58	Oct 05	Dec 01	58
"	KS	sunrise	2pm	2/4	Sep 01	Feb 28	58	Nov 02	Dec 29	58
"	Portions of TX <sup>2</sup>	1/2 hr. before sunrise	sunset	3/6, 2/4	Sep 01	Feb 28	37, 93	Nov 09	Feb 09	93
"	Portions of OK	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	93	Nov 09	Feb 09	93
"	CF Portions of MT <sup>3</sup>	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	58	Sep 28	Nov 24	58
"	Portions of ND	1/2 hr. before sunrise	sunset	3/6, 2/4	Sep 01	Feb 28	37, 58	Sep 21	Nov 17, Oct 27	58, 37
"	Portions of SD	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	58	Sep 21	Nov 17	58
"	Portions of WY <sup>3</sup>	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	58	Sep 14	Nov 10	58
"	Portions of NM <sup>3</sup>	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	93	Oct 31	Jan 31	93
2003	CF portions of CO (excluding San Luis Valley&NP) <sup>3</sup>	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	58	Oct 04	Nov 30	58
"	KS	sunrise	2pm	2/4	Sep 01	Feb 28	58	Nov 01	Dec 28	58
"	Portions of TX <sup>2</sup>	1/2 hr. before sunrise	sunset	3/6, 2/4	Sep 01	Feb 28	37, 93	Nov 01	Feb 09	101
"	Portions of OK	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	93	Oct 25	Jan 25	93
"	CF Portions of MT <sup>3</sup>	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	58	Sep 06	Nov 23	79
"	Portions of ND	1/2 hr. before sunrise	sunset	3/6, 2/4	Sep 01	Feb 28	37, 58	Sep 20	Nov 6, Oct 26	58, 37
"	Portions of SD	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	58	Sep 27	Nov 23	58
"	Portions of WY <sup>3</sup>	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	58	Sep 13	Nov 09	58
"	Portions of NM <sup>3</sup>	1/2 hr. before sunrise	sunset	3/6	Sep 01	Feb 28	93	Oct 31	Jan 31	93

<sup>1</sup> Additional experimental seasons offered

<sup>2</sup> Season covers dates selected >1 zone/area

<sup>3</sup> RMP hunt: 9/1-1/31, 30 days, 3/9

# **ADAPTIVE HARVEST MANAGEMENT CRITERIA**

### 1995-96 AHM MATRIX

Optimal regulatory choices<sup>1</sup> for midcontinent mallards during the 1995-96 hunting season.

MALLARDS <sup>2</sup>	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
4.5	M	M	M	L	L	L	L	L	L	L
5.0	L	L	L	L	L	L	L	L	L	L
5.5	L	L	L	L	L	L	L	L	L	L
6.0	L	L	L	L	L	L	L	L	L	L
6.5	L	L	L	L	L	L	L	L	L	L
7.0	L	L	L	L	L	L	L	L	L	L
7.5	L	L	L	L	L	L	L	L	L	L
8.0	L	L	L	L	L	L	L	L	L	L
8.5	L	L	L	L	L	L	L	L	L	L
9.0	L	L	L	L	L	L	L	L	L	L
9.5	L	L	L	L	L	L	L	L	L	L
10.0	L	L	L	L	L	L	L	L	L	L
10.5	L	L	L	L	L	L	L	L	L	L
11.0	L	L	L	L	L	L	L	L	L	L

- <sup>1</sup> Package choices: R = restrictive, M = moderate, L = liberal. The 1995-96 optimal choice is indicated by grey-shaded cell (1995 values = 9.32 million mallards and 3.89 million ponds).
- <sup>2</sup> Estimated number (millions) of midcontinent mallards during May surveys (including MN, WI, and MI).
- <sup>3</sup> Estimated number (millions) of ponds counted in Prairie Canada during May surveys.
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### 1997-98 AHM MATRIX

Optimal regulatory choices<sup>1</sup> for midcontinent mallards during the 1997-98 hunting season.

MALLARDS <sup>2</sup>	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
4.5										
5.0										
5.5								VR	VR	VR
6.0			VR	VR	VR	VR	VR	R	R	R
6.5	VR	VR	VR	VR	R	R	R	M	M	M
7.0	R	R	R	R	R	M	M	L	L	L
7.5	R	R	M	M	M	M	L	L	L	L
8.0	M	M	M	M	L	L	L	L	L	L
8.5	M	M	L	L	L	L	L	L	L	L
9.0	L	L	L	L	L	L	L	L	L	L
9.5	L	L	L	L	L	L	L	L	L	L
10.0	L	L	L	L	L	L	L	L	L	L
10.5	L	L	L	L	L	L	L	L	L	L
11.0	L	L	L	L	L	L	L	L	L	L

- <sup>1</sup> Package choices: VR = very restrictive, R = restrictive, M = moderate, L = liberal. 1997-98 optimal is indicated by grey-shaded cell (1997 values = 10.97 million mallards and 5.06 million ponds).
- <sup>2</sup> Estimated number (millions) of midcontinent mallards during May surveys (including MN, WI, and MI).
- <sup>3</sup> Estimated number (millions) of ponds counted in Prairie Canada during May surveys.
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### 1996-97 AHM MATRIX

Optimal regulatory choices<sup>1</sup> for midcontinent mallards during the 1996-97 hunting season.

MALLARDS <sup>2</sup>	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
4.5										
5.0							R	R	R	R
5.5					R	R	R	M	M	M
6.0	R	R	R	R	M	M	L	L	L	L
6.5	R	R	R	M	M	M	L	L	L	L
7.0	M	M	M	L	L	L	L	L	L	L
7.5	M	L	L	L	L	L	L	L	L	L
8.0	L	L	L	L	L	L	L	L	L	L
8.5	L	L	L	L	L	L	L	L	L	L
9.0	L	L	L	L	L	L	L	L	L	L
9.5	L	L	L	L	L	L	L	L	L	L
10.0	L	L	L	L	L	L	L	L	L	L
10.5	L	L	L	L	L	L	L	L	L	L
11.0	L	L	L	L	L	L	L	L	L	L

- <sup>1</sup> Package choices: R = restrictive, M = moderate, L = liberal. The 1996-97 optimal choice is indicated by grey-shaded cell (1996 values = 8.89 million mallards and 5.00 million ponds).
- <sup>2</sup> Estimated number (millions) of midcontinent mallards during May surveys (including MN, WI, and MI).
- <sup>3</sup> Estimated number (millions) of ponds counted in Prairie Canada during May surveys.
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### 1998-99 AHM MATRIX

Optimal regulatory choices<sup>1</sup> for midcontinent mallards during the 1998-99 hunting season.

MALLARDS <sup>2</sup>	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
4.5										
5.0										VR
5.5							VR	VR	VR	R
6.0		VR	VR	VR	VR	VR	R	R	R	M
6.5	VR	VR	VR	R	R	R	M	M	M	L
7.0	R	R	R	R	M	M	M	L	L	L
7.5	R	M	M	M	M	L	L	L	L	L
8.0	M	M	M	L	L	L	L	L	L	L
8.5	M	L	L	L	L	L	L	L	L	L
9.0	L	L	L	L	L	L	L	L	L	L
9.5	L	L	L	L	L	L	L	L	L	L
10.0	L	L	L	L	L	L	L	L	L	L
10.5	L	L	L	L	L	L	L	L	L	L
11.0	L	L	L	L	L	L	L	L	L	L

- <sup>1</sup> Package choices: VR = very restrictive, R = restrictive, M = moderate, L = liberal. 1998-99 optimal choice is indicated by large-framed cell (1998 values = 10.62 million mallards and 2.52 million ponds).
- <sup>2</sup> Estimated number (millions) of midcontinent mallards during May surveys (including MN, WI, and MI).
- <sup>3</sup> Estimated number (millions) of ponds counted in Prairie Canada during May surveys.
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### 1999-2000 AHM MATRIX

Optimal regulatory choices<sup>1</sup> for midcontinent mallards during the 1999 hunting season.

MALLARDS <sup>2</sup>	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
4.5										VR
5.0										R
5.5										M
6.0		VR	VR	VR	VR	VR	R	M	M	L
6.5	VR	VR	VR	R	R	R	M	M	M	L
7.0	R	R	R	M	M	M	M	L	L	L
7.5	R	M	M	M	M	L	L	L	L	L
8.0	M	M	M	L	L	L	L	L	L	L
8.5	M	L	L	L	L	L	L	L	L	L
9.0	L	L	L	L	L	L	L	L	L	L
9.5	L	L	L	L	L	L	L	L	L	L
10.0	L	L	L	L	L	L	L	L	L	L
10.5	L	L	L	L	L	L	L	L	L	L
11.0	L	L	L	L	L	L	L	L	L	L
11.5	L	L	L	L	L	L	L	L	L	L

<sup>1</sup> Package choices: VR = very restrictive, R = restrictive, M = moderate, L = liberal. 1999-2000 optimal choice is indicated by grey-shaded cell (1999 values = 11.8 million mallards and 3.9 million ponds).  
<sup>2</sup> Estimated number (millions) of midcontinent mallards during May surveys (including MN, WI, and MI).  
<sup>3</sup> Estimated number (millions) of ponds in Prairie Canada during May surveys.  
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### 2001-2002 AHM MATRIX

Optimal regulatory choices<sup>1</sup> for midcontinent mallards during the 2001 hunting season.

MALLARDS <sup>2</sup>	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
4.5										VR
5.0						VR	VR	VR	VR	R
5.5		VR	VR	VR	VR	R	R	R	M	M
6.0		R	R	R	R	M	M	M	M	L
6.5		R	R	M	M	M	M	L	L	L
7.0		M	M	M	L	L	L	L	L	L
7.5		M	L	L	L	L	L	L	L	L
8.0		L	L	L	L	L	L	L	L	L
8.5		L	L	L	L	L	L	L	L	L
9.0		L	L	L	L	L	L	L	L	L
9.5		L	L	L	L	L	L	L	L	L
10.0		L	L	L	L	L	L	L	L	L
10.5		L	L	L	L	L	L	L	L	L
11.0		L	L	L	L	L	L	L	L	L

<sup>1</sup> Package choices: VR = very restrictive, R = restrictive, M = moderate, L = liberal. 2001-2002 optimal choice is indicated by grey-shaded cell (2001 values = 8.7 million mallards and 2.7 million ponds).  
<sup>2</sup> Estimated number (millions) of midcontinent mallards during May surveys (including MN, WI, and MI).  
<sup>3</sup> Estimated number (millions) of ponds in Prairie Canada during May surveys.  
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### 2000-2001 AHM MATRIX

Optimal regulatory choices<sup>1</sup> for midcontinent mallards during the 2000 hunting season.

MALLARDS <sup>2</sup>	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
4.5										VR
5.0							VR	VR	VR	R
5.5		VR	VR	VR	VR	VR	R	R	R	M
6.0		VR	R	R	R	M	M	M	M	L
6.5		R	R	M	M	M	M	M	L	L
7.0		M	M	M	M	L	L	L	L	L
7.5		M	M	L	L	L	L	L	L	L
8.0		L	L	L	L	L	L	L	L	L
8.5		L	L	L	L	L	L	L	L	L
9.0		L	L	L	L	L	L	L	L	L
9.5		L	L	L	L	L	L	L	L	L
10.0		L	L	L	L	L	L	L	L	L
10.5		L	L	L	L	L	L	L	L	L

<sup>1</sup> Package choices: VR = very restrictive, R = restrictive, M = moderate, L = liberal. 2000-2001 optimal choice is indicated by grey-shaded cell (2000 values = 10.5 million mallards and 2.4 million ponds).  
<sup>2</sup> Estimated number (millions) of midcontinent mallards during May surveys (including MN, WI, and MI).  
<sup>3</sup> Estimated number (millions) of ponds in Prairie Canada during May surveys.  
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### 2002-2003 AHM MATRIX

Optimal regulatory choices<sup>1</sup> for midcontinent mallards during the 2002 hunting season.

MALLARDS <sup>2</sup>	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
4.5											
5.0											
5.5											
6.0											
6.5					VR	R	R	R	VR	VR	VR
7.0		R	R	R	R	R	M	M	M	M	M
7.5		R	R	M	M	M	L	L	L	L	L
8.0		M	L	L	L	L	L	L	L	L	L
8.5		L	L	L	L	L	L	L	L	L	L
9.0		L	L	L	L	L	L	L	L	L	L
9.5		L	L	L	L	L	L	L	L	L	L
10.0		L	L	L	L	L	L	L	L	L	L
10.5		L	L	L	L	L	L	L	L	L	L
11.0		L	L	L	L	L	L	L	L	L	L

<sup>1</sup> Package choices: VR = very restrictive, R = restrictive, M = moderate, L = liberal. 2002-2003 optimal choice is indicated by grey-shaded cell (2002 values = 8.5 million mallards and 1.4 million ponds).  
<sup>2</sup> Estimated number (millions) of midcontinent mallards during May surveys (including MN, WI, and MI).  
<sup>3</sup> Estimated number (millions) of ponds in Prairie Canada during May surveys.  
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### 2003-2004 AHM MATRIX

Optimal regulatory choices<sup>1</sup> for midcontinent mallards during the 2003 hunting season.

MALLARDS <sup>2</sup>	CANADIAN PONDS <sup>3</sup>									
	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
<=5.25										
5.50-6.50	R	R	R	R	R	R	R	R	R	R
6.75	R	R	R	R	R	R	R	R	M	M
7.0	R	R	R	R	R	R	R	M	M	L
7.25	R	R	R	R	M	M	L	L	L	L
7.5	R	R	R	M	L	L	L	L	L	L
7.75	R	M	M	L	L	L	L	L	L	L
8.0	M	M	M	L	L	L	L	L	L	L
8.25	M	L	L	L	L	L	L	L	L	L
>=8.5	L	L	L	L	L	L	L	L	L	L

<sup>1</sup> Package choices: R = restrictive, M = moderate, L = liberal. 2003-2004 optimal choice is indicated by grey-shaded cell (2003 values = 8.8 million mallards and 3.52 million ponds).  
<sup>2</sup> Estimated number (millions) of midcontinent mallards during May surveys (including MN, WI, and MI).  
<sup>3</sup> Estimated number (millions) of ponds in Prairie Canada during May surveys.  
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### 2004-2005 AHM MATRIX

Optimal regulatory choices<sup>1</sup> for midcontinent mallards during the 2004 hunting season.

MALLARDS <sup>2</sup>	CANADIAN PONDS <sup>3</sup>									
	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
<=5.25	C	C	C	C	C	C	C	C	C	C
5.50-6.25	R	R	R	R	R	R	R	R	R	R
6.50	R	R	R	R	R	R	R	R	R	M
6.75	R	R	R	R	R	R	R	M	M	L
7.00	R	R	R	R	M	M	M	M	L	L
7.25	R	R	R	M	M	M	L	L	L	L
7.50	R	R	M	M	L	L	L	L	L	L
7.75	M	M	L	L	L	L	L	L	L	L
8.00	M	L	L	L	L	L	L	L	L	L
>=8.5	L	L	L	L	L	L	L	L	L	L

<sup>1</sup> Package choices: C = closed, R = restrictive, M = moderate, L = liberal. 2004-2005 optimal choice is indicated by grey-shaded cell (2004 values = 8.36 million mallards and 2.51 million ponds).  
<sup>2</sup> Estimated number (millions) of midcontinent mallards during May surveys (including MN, WI, and MI).  
<sup>3</sup> Estimated number (millions) of ponds in Prairie Canada during May surveys.  
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**CENTRAL FLYWAY  
COUNCIL**

**CENTRAL FLYWAY  
WATERFOWL TECHNICAL  
COMMITTEE**

**CENTRAL FLYWAY  
WEBLESS GAME BIRD  
TECHNICAL  
COMMITTEE**

**USFWS  
FLYWAY  
REPRESENTATIVES**

# CENTRAL FLYWAY COUNCIL

## 1948-2004

	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	AB	NWT	SK
1948	C.N. Feast	D.D. Leahy	W.G. Freeman	L.P. Vance	H.C. Pickens	H.R. Morgan	A. D. Aldrich	E. Peterson	W.C. Glazener	L. Bagley			
1949	C.N. Feast	D.D. Leahy	R.D. Shipley	L.P. Vance	H.C. Pickens	H.R. Morgan	A. D. Aldrich	E. Peterson	W.C. Glazener	L. Bagley			
1950	C.N. Feast	D.D. Leahy	R.D. Shipley	L.P. Vance	H.C. Pickens	H.R. Morgan	A. D. Aldrich	E. Peterson	W.C. Glazener	L. Bagley			
1951	C.N. Feast	D.D. Leahy	R.D. Shipley	L.P. Vance	H.C. Pickens	H.R. Morgan	A. D. Aldrich	E. Peterson	W.C. Glazener	L. Bagley			
1952	T.L. Kimball	D.D. Leahy	R.D. Shipley	L.P. Vance	H.C. Pickens	H.R. Morgan	A. D. Aldrich	E. Peterson	W.J. Cutbirth	L. Bagley			Ernie L. Paynter
1953	T.L. Kimball	D.D. Leahy	R.D. Shipley	L.P. Vance	H.C. Pickens	H.R. Morgan	A. D. Aldrich	E. Peterson	W.J. Cutbirth	L. Bagley			Ernie L. Paynter
1954	T.L. Kimball	D.D. Leahy	R.D. Shipley	L.P. Vance	H.C. Pickens	H.R. Morgan	A. D. Aldrich	E. Peterson	W.J. Cutbirth	L. Bagley			Ernie L. Paynter
1955	T.L. Kimball	D.D. Leahy	R.D. Shipley	L.P. Vance	H.C. Pickens	H.R. Morgan	D. Ware	E. Peterson	W.J. Cutbirth	L. Bagley			Ernie L. Paynter
1956	T.L. Kimball	D.D. Leahy	A. O'Claire	L.P. Vance	H.C. Pickens	H.R. Morgan	D. Ware	E. Peterson	W.J. Cutbirth	A.F.C. Greene			Ernie L. Paynter
1957	T.L. Kimball	D.D. Leahy	A. O'Claire	M.O. Steen	H.C. Pickens	I. G. Bue	C. Burch	T. A. Schrader	H. Dodgen	A.F.C. Greene			Ernie L. Paynter
1958	T.L. Kimball	D.D. Leahy	A. O'Claire	M.O. Steen	F. A. Thompson	I. G. Bue	C. Burch	H.R. Woodward	H. Dodgen	A.F.C. Greene			Ernie L. Paynter
1959	T.L. Kimball	D.D. Leahy	W.J. Everin	M.O. Steen	F. A. Thompson	I. G. Bue	C. Burch	H.R. Woodward	H. Dodgen	A.F.C. Greene			Ernie L. Paynter
1960	T.L. Kimball	D.D. Leahy	W.J. Everin	M.O. Steen	F. A. Thompson	I. G. Bue	R.A. Stafford	H.R. Woodward	H. Dodgen	S.J. Jiacoletti			Ernie L. Paynter
1961	H.L. Woodward	F. Warders	W.J. Everin	M.O. Steen	F. A. Thompson	I. G. Bue	R.A. Stafford	W.J. Fillmore	E. Walker	S.J. Jiacoletti			Ernie L. Paynter
1962	H.L. Woodward	G. Moore	W.J. Everin	M.O. Steen	F. A. Thompson	R.W. Stuart	R.A. Stafford	W.J. Fillmore	A.J. Springs	S.J. Jiacoletti			Ernie L. Paynter
1963	H.L. Woodward	G. Moore	W.J. Everin	M.O. Steen	W.S. Huey	R.W. Stuart	R.A. Stafford	W.J. Fillmore	A.J. Springs	G.F. Wrakestraw			Ernie L. Paynter
1964	H.L. Woodward	G. Moore	W.G. Freeman	M.O. Steen	W.S. Huey	R.W. Stuart	W. Bever	W.J. Fillmore	A.J. Springs	G.F. Wrakestraw			Ernie L. Paynter
1965	H.L. Woodward	G. Moore	F.H. Dunkle	M.O. Steen	W.S. Huey	R.W. Stuart	W. Bever	W.J. Fillmore	A.J. Springs	G.F. Wrakestraw			Ernie L. Paynter
1966	H.L. Woodward	G. Moore	F.H. Dunkle	M.O. Steen	W.S. Huey	R.W. Stuart	W. Bever	W.J. Fillmore	A.J. Springs	J.B. White			Ernie L. Paynter
1967	H.L. Woodward	G. Moore	F.H. Dunkle	M.O. Steen	W.S. Huey	R.W. Stuart	W. Bever	R.A. Hodgins	A.J. Springs	J.B. White			Ernie L. Paynter
1968	H.L. Woodward	M.D. Schwilling	F.H. Dunkle	M.O. Steen	W.S. Huey	R.W. Stuart	W. Bever	R.A. Hodgins	A.J. Springs	J.B. White			C. Bernie Forbes
1969	H.L. Woodward	M.D. Schwilling	F.H. Dunkle	W.R. Barbee	W.S. Huey	R.W. Stuart	F. Copelin	R.A. Hodgins	A.J. Springs	J.B. White	D. Neave		C. Bernie Forbes
1970	H.L. Woodward	M.D. Schwilling	F.H. Dunkle	W.R. Barbee	W.S. Huey	R.W. Stuart	F. Copelin	R.A. Hodgins	J.R. Singleton	J.B. White	D. Neave		C. Bernie Forbes
1971	H.L. Woodward	M.D. Schwilling	F.H. Dunkle	W.R. Barbee	W.S. Huey	R.W. Stuart	F. Copelin	R.A. Hodgins	D. Russell	E. Thomas	D. Neave		H. Maliepaard
1972	H.L. Woodward	M.D. Schwilling	W.G. Freeman	W.R. Barbee	W.S. Huey	R.W. Stuart	F. Copelin	R.A. Hodgins	R. Kemp	G.F. Wrakestraw	D. Neave		H. Maliepaard
1973	J.R. Grieb	M.D. Schwilling	W.G. Freeman	W.R. Barbee	W.S. Huey	R.W. Stuart	G. Wint	J. Popowski	R. Kemp	G.F. Wrakestraw	D. Neave		H. Maliepaard
1974	J.R. Grieb	D. Wettersten	W.G. Freeman	W.R. Barbee	W.S. Huey	R.W. Stuart	G. Wint	J. Popowski	T.L. Clark	G.F. Wrakestraw	D. Neave		H. Maliepaard
1975	J.R. Grieb	D. Wettersten	W.G. Freeman	W.R. Barbee	W.S. Huey	R.W. Stuart	G. Wint	J. Popowski	T.L. Clark	G.F. Wrakestraw	D. Neave		H. Maliepaard
1976	J.R. Grieb	D. Wettersten	W.G. Freeman	W.J. Bailey	W.S. Huey	R.W. Stuart	G. Wint	J. Popowski	T.L. Clark	G.F. Wrakestraw	D. Neave		H. Maliepaard
1977	J.R. Grieb	L. Queal	W.G. Freeman	W.J. Bailey	W.S. Huey	R.W. Stuart	G. Wint	J. Merwin	T.L. Clark	E. Thomas	D. Neave		H. Maliepaard
1978	J.R. Grieb	L. Queal	W.G. Freeman	W.J. Bailey	W.S. Huey	R.W. Stuart	G. Wint	J. Merwin	T.L. Clark	E. Thomas	D. Neave		H. Maliepaard
1979	J.R. Grieb	J. Conley	E. Allen	W.J. Bailey	H. Olsen	R.W. Stuart	G. Wint	J. Lounsberry	T.L. Clark	E. Thomas	D. Neave		H. Maliepaard
1980	J.R. Grieb	W. Hanzlick	E. Allen	W.J. Bailey	H. Olsen	L. Kruckenberg	G. Wint	K. L. Cool	T.L. Clark	E. Thomas	G. Kemp		H. Maliepaard
1981	J.R. Grieb	W. Hanzlick	E. Allen	W.J. Bailey	H. Olsen	C.H. Schroeder	S. Lewis	K. L. Cool	T.L. Clark	E. Thomas	R.R. Andrews		H. Maliepaard
1982	J.R. Grieb	W. Hanzlick	E. Allen	W.J. Bailey	H. Olsen	C.H. Schroeder	S. Lewis	K. L. Cool	T.L. Clark	D. Dexter	R.R. Andrews		H. Maliepaard
1983	J.R. Grieb	W. Hanzlick	E. Allen	W.J. Bailey	H. Olsen	C.H. Schroeder	S. Lewis	K. L. Cool	T.L. Clark	D. Dexter	R.R. Andrews		H. Maliepaard
1984	J. Ruch	W. Hanzlick	D.W. Witt	W.J. Bailey	D. Sutcliffe	C.H. Schroeder	S. Lewis	K. L. Cool	T.L. Clark	D. Dexter	R.R. Andrews		H. Maliepaard
1985	J. Lipscomb	W. Hanzlick	D.W. Witt	W.J. Bailey	D. Sutcliffe	C.H. Schroeder	S. Lewis	J. Salyer	T.L. Clark	D. Strickland	R.R. Andrews		H. Maliepaard
1986	J. Lipscomb	W. Hanzlick	A. Olsen	W.J. Bailey	W. Montoya	C.H. Schroeder	S. Lewis	J. Salyer	B. Alexander	D. Strickland	R.R. Andrews		H. Maliepaard
1987	J. Lipscomb	W. A. Wentz	A. Olsen	W.J. Bailey	W. Montoya	C.H. Schroeder	S. Lewis	R. Beringson	C. Allen	D. Strickland	R.R. Andrews		H. Maliepaard
1988	R.D. Hopper	W. A. Wentz	A. Olsen	W.J. Bailey	W. Montoya	M.A. Johnson	S. Lewis	R. Beringson	C. Allen	D. Strickland	R.R. Andrews		H. Maliepaard
1989	R.D. Hopper	W. A. Wentz	K.L. Cool	W.J. Bailey	W. Montoya	L.A. Jones	S. Lewis	R. Beringson	B. Alexander	D. Strickland	R.R. Andrews	K. Lloyd	H. Maliepaard
1990	R.D. Hopper	W. A. Wentz	K.L. Cool	W.J. Bailey	W. Montoya	L.A. Jones	S. Lewis	R. Beringson	B. Alexander	J. Talbot	R.R. Andrews	K. Lloyd	H. Maliepaard
1991	R.D. Hopper	J. Kramer	K.L. Cool	W.J. Bailey	W. Montoya	L.A. Jones	S. Lewis	R. Beringson	B. Alexander	J. Talbot	R.R. Andrews	K. Lloyd	H. Maliepaard
1992	R.D. Hopper	J. Kramer	K.L. Cool	W.J. Bailey	W. Montoya	L.A. Jones	S. Lewis	R. Beringson	B. Alexander	J. Talbot	R.R. Andrews	K. Lloyd	D. Sherratt
1993	R.D. Hopper	J. Kramer	T.C. Hinz	W. Sheets	W. Montoya	K. L. Cool	G. Duffy	R. Beringson	V. Bevill	P. Petera	R.R. Andrews	D. Melton	H.M. Hunt
1994	P. Olson	J. Kramer	T.C. Hinz	W. Sheets	W. Montoya	K. L. Cool	G. Duffy	R. Beringson	V. Bevill	P. Petera	R.R. Andrews	D. Melton	D. Sherratt
1995	P. Olson	J. Kramer	T.C. Hinz	W. Sheets	D. Sutcliffe	K. L. Cool	G. Duffy	G. Vandel	V. Bevill	J. Talbot	R.R. Andrews	D. Melton	D. Sherratt
1996	J.K. Ringelman	J. Kramer	T.C. Hinz	W. Sheets	D. Sutcliffe	K. Trego	G. Duffy	G. Vandel	V. Bevill	R. Rothwell	R.R. Andrews	D. Melton	D. Sherratt
1997	J. Lipscomb	J. Kramer	T.C. Hinz	W. Sheets	D. Sutcliffe	K. Trego	G. Duffy	G. Vandel	V. Bevill	W. Wichers	R.R. Andrews	D. Stewart	D. Sherratt
1998	J. Mumma	J. Kramer	T.C. Hinz	K. Nelson	S.R. Gonzales	R. Kreil	G. Duffy	G. Vandel	V. Bevill	W. Wichers	B. Markham	D. Stewart	D. Sherratt
1999	W. Graul	J. Kramer	T.C. Hinz	K. Nelson	B. Hale	R. Kreil	G. Duffy	G. Vandel	V. Bevill	W. Wichers	B. Markham	D. Stewart	D. Sherratt
2000	W. Graul	J. Kramer	J. Herbert	K. Nelson	B. Hale	R. Kreil	R. Hatcher	G. Vandel	V. Bevill	W. Wichers	B. Markham	D. Stewart	D. Sherratt
2001	W. Graul	J. Kramer	J. Herbert	K. Nelson	B. Hale	R. Kreil	R. Hatcher	G. Vandel	V. Bevill	W. Wichers	B. Markham	D. Stewart	D. Sherratt
2002	J. Ver Steeg	J. Kramer	J. Herbert	K. Nelson	L. Rios	R. Kreil	A. Peoples	G. Vandel	V. Bevill	W. Wichers	B. Markham	D. Stewart	D. Sherratt
2003	J. Ver Steeg	J. Kramer	J. Herbert	K. Nelson	L. Rios	R. Kreil	A. Peoples	G. Vandel	V. Bevill	W. Wichers	J. Skrenek	D. Stewart	D. Sherratt
2004	J. Ver Steeg	J. Kramer	J. Herbert	K. Nelson	RJ Kirkpatrick	R. Kreil	A. Peoples	G. Vandel	V. Bevill	W. Wichers	J. Skrenek	D. Stewart	D. Sherratt

# CENTRAL FLYWAY WATERFOWL TECHNICAL COMMITTEE

## 1954-2004

	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	AB	NWT	SK
1954	J.R. Grieb	J. Coats	W.G. Freeman	H.W. Miller	H.C. Pickens	B. Fashingbauer	R.D. Gray	E.H. Smith	J.R. Singleton	R. LaPatterson			
1955	J.R. Grieb	J. Coats	W.G. Freeman	H.W. Miller	H.C. Pickens	B. Fashingbauer	M. Dodson	R. Murdy	J.R. Singleton	R.M. Ballou			
1956	J.R. Grieb	O. Gasswint	W.G. Freeman	H.W. Miller	L. Lee	C.H. Schroeder	M. Dodson	R. Murdy	J.R. Singleton	R.M. Ballou			
1957	J.R. Grieb	O. Gasswint	W.G. Freeman	H.W. Miller	L. Lee	C.H. Schroeder	B. Atkins	R. Murdy	J.R. Singleton	R.M. Ballou			
1958	J.R. Grieb	O. Gasswint	W.G. Freeman	H.W. Miller	W.S. Huey	C.H. Schroeder	J.F. Sykora	M.E. Anderson	J.R. Singleton	R.M. Ballou			J.L. Nelson
1959	J.R. Grieb	D.C. Coleman	W.G. Freeman	H.W. Miller	W.S. Huey	C.H. Schroeder	J.F. Sykora	M.E. Anderson	J.R. Singleton	R.M. Ballou			J.L. Nelson
1960	J.R. Grieb	D.C. Coleman	W.G. Freeman	G. Schildman	W.S. Huey	C.H. Schroeder	F.F. Copelin	M.E. Anderson	J.R. Singleton	G.F. Wrakestraw			J.L. Nelson
1961	J.R. Grieb	D.C. Coleman	D.W. Witt	G. Schildman	W.S. Huey	C.H. Schroeder	F.F. Copelin	M.E. Anderson	J.R. Singleton	G.F. Wrakestraw			J.L. Nelson
1962	J.R. Grieb	D.C. Coleman	D.W. Witt	G. Schildman	W.S. Huey	C.H. Schroeder	F.F. Copelin	M.E. Anderson	E.A. Walker	G.F. Wrakestraw			J.L. Nelson
1963	J.R. Grieb	M.D. Schwillling	D.W. Witt	G. Schildman	L. Gordon	C.H. Schroeder	F.F. Copelin	R.D. Hart	A.J. Springs	G.F. Wrakestraw			J.L. Nelson
1964	J.R. Grieb	M.D. Schwillling	D.W. Witt	G. Schildman	G.W. Merrill	C.H. Schroeder	C.O. Gilliam	R.D. Hart	A.J. Springs	G.F. Wrakestraw			R. Caldwell
1965	J.R. Grieb	M.D. Schwillling	D.W. Witt	G. Schildman	G.W. Merrill	C.H. Schroeder	C.O. Gilliam	C. Twedt	A.J. Springs	G.F. Wrakestraw			R. Caldwell
1966	J.R. Grieb	M.D. Schwillling	D.W. Witt	G. Schildman	G.W. Merrill	C.H. Schroeder	C.O. Gilliam	C. Twedt	A.J. Springs	G.F. Wrakestraw	W. Wishart		R. Caldwell
1967	J.R. Grieb	M.D. Schwillling	D.W. Witt	G. Schildman	G.W. Merrill	C.H. Schroeder	C.O. Gilliam	R.C. Drewien	C.D. Stutzenbaker	G.F. Wrakestraw	W. Wishart		R. Caldwell
1968	J.R. Grieb	M.D. Schwillling	D.W. Witt	G. Schildman	G.W. Merrill	C.H. Schroeder	L. Due	R.C. Drewien	C.D. Stutzenbaker	G.F. Wrakestraw	W. Wishart		R. Caldwell
1969	H.D. Funk	M.D. Schwillling	D.W. Witt	G. Schildman	G.W. Merrill	C.H. Schroeder	L. Due	R.C. Drewien	C.D. Stutzenbaker	G.F. Wrakestraw	D. Neave		D.S. Gray
1970	H.D. Funk	M.D. Schwillling	D.W. Witt	G. Schildman	G.W. Merrill	C.H. Schroeder	L. Due	T. Kuck	C.D. Stutzenbaker	G.F. Wrakestraw	D. Neave		D.S. Gray
1971	H.D. Funk	M.D. Schwillling	D.W. Witt	G. Schildman	G.W. Merrill	C.H. Schroeder	L. Due	T. Kuck	C.D. Stutzenbaker	G.F. Wrakestraw	D. Neave		D.S. Gray
1972	H.D. Funk	M.D. Schwillling	J. Egan	G. Schildman	G.W. Merrill	C.H. Schroeder	L. Due	T. Kuck	C.D. Stutzenbaker	G.F. Wrakestraw	D. Neave		D.S. Gray
1973	H.D. Funk	M.D. Schwillling	J. Egan	G. Schildman	J.L. Sands	C.H. Schroeder	L. Due	T. Kuck	C.D. Stutzenbaker	G.F. Wrakestraw	T. Burgess		D.S. Gray
1974	H.D. Funk	M.D. Schwillling	J. Egan	G. Schildman	J.L. Sands	C.H. Schroeder	L. Due	T. Kuck	C.D. Stutzenbaker	G.F. Wrakestraw	H. Weaver		D.S. Gray
1975	H.D. Funk	M.D. Schwillling	D.W. Witt	N. Dey	J.L. Sands	C.H. Schroeder	L. Due	T. Kuck	C.D. Stutzenbaker	G.F. Wrakestraw	H. Weaver		D.S. Gray
1976	H.D. Funk	M.D. Schwillling	D.W. Witt	N. Dey	J.L. Sands	C.H. Schroeder	L. Due	T. Kuck	C.D. Stutzenbaker	G.F. Wrakestraw	H. Weaver		D.S. Gray
1977	H.D. Funk	M.D. Schwillling	D.W. Witt	N. Dey	J.L. Sands	C.H. Schroeder	L. Due	T. Kuck	C.D. Stutzenbaker	G.F. Wrakestraw	H. Weaver		D. Brewster
1978	H.D. Funk	M.J. Kraft	D.W. Witt	N. Dey	J.L. Sands	C.H. Schroeder	L. Due	T. Kuck	C.D. Stutzenbaker	R. Saul	H. Weaver		D. Brewster
1979	H.D. Funk	M.J. Kraft	D.W. Witt	J. Hyland	J.L. Sands	C.H. Schroeder	L. Due	T. Kuck	C.D. Stutzenbaker	R. Saul	H. Weaver		D. Brewster
1980	H.D. Funk	M.J. Kraft	T.C. Hinz	J. Hyland	J.L. Sands	C.H. Schroeder	L. Due	T. Kuck	C.D. Stutzenbaker	R. Saul	H. Weaver		S. Barber
1981	H.D. Funk	M.J. Kraft	T.C. Hinz	J. Hyland	J.L. Sands	C.H. Schroeder	L. Due	T. Kuck	C.D. Stutzenbaker	R. Saul	H. Weaver		M. Killaby
1982	H.D. Funk	M.J. Kraft	T.C. Hinz	J. Hyland	J.L. Sands	M.A. Johnson	L. Due	T. Kuck	C.D. Stutzenbaker	R. Saul	H. Weaver		D. Brewster
1983	H.D. Funk	M.J. Kraft	T.C. Hinz	P. J. Gabig	G. Downer	M.A. Johnson	L. Due	R. Fowler	C.D. Stutzenbaker	R. Saul	H. Weaver		D. Brewster
1984	H.D. Funk	M.J. Kraft	T.C. Hinz	P. J. Gabig	J. Herring	M.A. Johnson	L. Due	S.G. Simpson	C.D. Stutzenbaker	R. Saul	H. Weaver		D. Brewster
1985	H.D. Funk	M.J. Kraft	T.C. Hinz	P. J. Gabig	J. Herring	M.A. Johnson	M. E. O'Meilia	S.G. Simpson	C.D. Stutzenbaker	R. Saul	H. Weaver		D. Brewster
1986	H.D. Funk	M.J. Kraft	T.C. Hinz	P. J. Gabig	J. Herring	M.A. Johnson	M. E. O'Meilia	S.G. Simpson	D.W. Witt	R. Saul	H. Weaver		J. Mulhern
1987	H.D. Funk	M.J. Kraft	T.C. Hinz	P. J. Gabig	G. Schmidt	M.A. Johnson	M. E. O'Meilia	S.G. Simpson	R.L. Jessen	R. Saul	H. Weaver		J. Mulhern
1988	H.D. Funk	M.J. Kraft	T.C. Hinz	P. J. Gabig	J. Ward	M.A. Johnson	M. E. O'Meilia	S.G. Simpson	R.L. Jessen	R. Saul	K. Lungle	R. Bromley	J. Mulhern
1989	H.D. Funk	M.J. Kraft	T.C. Hinz	P. J. Gabig	J. Ward	M.A. Johnson	M. E. O'Meilia	D. Hansen	R.L. Jessen	R. Saul	K. Lungle	R. Bromley	J. Mulhern
1990	H.D. Funk	M.J. Kraft	T.C. Hinz	P. J. Gabig	J. Ward	M.A. Johnson	M. E. O'Meilia	S. Vaa	R.L. Jessen	R. Saul	K. Lungle	R. Bromley	J. Mulhern
1991	H.D. Funk	M.J. Kraft	T.C. Hinz	P. J. Gabig	J. Ward	M.A. Johnson	M. E. O'Meilia	S. Vaa	R.L. Jessen	R. Saul	K. Lungle	R. Bromley	J. Mulhern
1992	H.D. Funk	M.J. Kraft	J. Hansen	P. J. Gabig	B. Hale	M.A. Johnson	M. E. O'Meilia	S. Vaa	R.L. Jessen	R. Saul	K. Lungle	R. Bromley	J. Mulhern
1993	H.D. Funk	M.J. Kraft	J. Hansen	P. J. Gabig	B. Hale	M.A. Johnson	M. E. O'Meilia	S. Vaa	B. Sullivan	R. Saul	K. Lungle	R. Bromley	J. Mulhern
1994	J.K. Ringelman	M.J. Kraft	J. Hansen	P. J. Gabig	B. Hale	M.A. Johnson	M. E. O'Meilia	S. Vaa	B. Sullivan	R. Saul	K. Lungle	R. Bromley	J. Mulhern
1995	J.K. Ringelman	M.J. Kraft	J. Hansen	P. J. Gabig	B. Hale	M.A. Johnson	M. E. O'Meilia	S. Vaa	B. Sullivan	L. Roberts	K. Lungle	R. Bromley	J. Mulhern
1996	J.K. Ringelman	M.J. Kraft	J. Hansen	P. J. Gabig	B. Hale	M.A. Johnson	M. E. O'Meilia	S. Vaa	B. Sullivan	L. Roberts	K. Lungle	R. Bromley	J. Mulhern
1997	J. Gammonley	M.J. Kraft	J. Hansen	P. J. Gabig	T. Mitchusson	M.A. Johnson	M. E. O'Meilia	S. Vaa	B. Sullivan	L. Roberts	K. Lungle	R. Case	J. Mulhern
1998	J. Gammonley	M.J. Kraft	J. Hansen	P. J. Gabig	T. Mitchusson	M.A. Johnson	M. E. O'Meilia	S. Vaa	B. Sullivan	L. Roberts	K. Lungle	R. Case	D. McKinnon
1999	J. Gammonley	M.J. Kraft	J. Hansen	M. Vrtiska	T. Mitchusson	M.A. Johnson	M. E. O'Meilia	S. Vaa	B. Sullivan	L. Roberts	K. Lungle	R. Case	D. McKinnon
2000	J. Gammonley	M.J. Kraft	J. Hansen	M. Vrtiska	T. Mitchusson	M.A. Johnson	M. E. O'Meilia	S. Vaa	D. Morrison	L. Roberts	K. Lungle	R. Case	D. McKinnon
2001	J. Gammonley	M.J. Kraft	J. Hansen	M. Vrtiska	T. Mitchusson	M.A. Johnson	M. E. O'Meilia	S. Vaa	D. Morrison	L. Roberts	K. Lungle	R. Case	D. McKinnon
2002	J. Gammonley	M.J. Kraft	J. Hansen	M. Vrtiska	T. Mitchusson	M.A. Johnson	M. E. O'Meilia	S. Vaa	D. Morrison	L. Roberts	K. Lungle	R. Case	D. McKinnon
2003	J. Gammonley	M.J. Kraft	J. Hansen	M. Vrtiska	T. Mitchusson	M.A. Johnson	M. E. O'Meilia	S. Vaa	D. Morrison	L. Roberts	R. Case		D. Brewster
2004	J. Gammonley	M.J. Kraft	J. Hansen	M. Vrtiska	T. Mitchusson	M.A. Johnson	M. E. O'Meilia	S. Vaa	D. Morrison	L. Roberts	R. Case		D. Brewster

# CENTRAL FLYWAY WEBLESS MIGRATORY GAME BIRD TECHNICAL COMMITTEE 1966-2004

	CO	KS	MT	NE	NM	ND	OK	SD	TX	WY	IA	AR	MO	MN	MB	AB	NWT	SK	
1966	J.R. Grieb	M.D. Schwilling	D.W. Witt	G. Schildman	G. W. Merrill	C.H. Schroeder	C.O. Gilliam	C. Twedt	A.J. Springs	G.F. Wrakestraw			K. Sadler	E. Kopischke					
1967	H.D. Funk	M.D. Schwilling	D.W. Witt	K. Johnson	G. W. Merrill	C.H. Schroeder	C.O. Gilliam	R. C. Drewien	C.D. Stutzenbaker	G.F. Wrakestraw	G. Klonglan		K. Sadler	E. Kopischke					
1968	H.D. Funk	M.D. Schwilling	D.W. Witt	K. Johnson	G. W. Merrill	C.H. Schroeder	C.O. Gilliam	R. C. Drewien	C.D. Stutzenbaker	G.F. Wrakestraw	R. Bishop		K. Sadler	E. Kopischke					
1969	H.D. Funk	M.D. Schwilling	D.W. Witt	K. Johnson	G. W. Merrill	C.H. Schroeder	L. Due	T. Kuck	C.D. Stutzenbaker	G.F. Wrakestraw	R. Bishop		K. Sadler	E. Kopischke					
1970	H.D. Funk	M.D. Schwilling	D.W. Witt	K. Johnson	G. W. Merrill	C.H. Schroeder	L. Due	T. Kuck	T. L. Clark	G.F. Wrakestraw	R. Bishop		K. Sadler	E. Kopischke					
1971	C.E. Braun	M.D. Schwilling	D.W. Witt	J.T. Sweet	J. L. Sands	C.H. Schroeder	L. Due	T. Kuck	T. L. Clark	G.F. Wrakestraw	R. Bishop		K. Sadler	E. Kopischke					
1972	C.E. Braun	M.D. Schwilling	D.W. Witt	J.T. Sweet	J. L. Sands	C.H. Schroeder	L. Due	T. Kuck	K. E. Gamble	G.F. Wrakestraw	A. Farris		K. Sadler	E. Kopischke					
1973	C.E. Braun	M.J. Kraft	D.W. Witt	J.T. Sweet	J. L. Sands	C.H. Schroeder	L. Due	T. Kuck	K. E. Gamble	G.F. Wrakestraw	A. Farris		K. Sadler	E. Kopischke					
1974	C.E. Braun	M.J. Kraft	D.W. Witt	J.T. Sweet	J. L. Sands	C.H. Schroeder	L. Due	T. Kuck	T. L. Clark	G.F. Wrakestraw	A. Farris		K. Sadler	E. Kopischke					
1975	C.E. Braun	M.J. Kraft	D.W. Witt	J.T. Sweet	J. L. Sands	C.H. Schroeder	L. Due	T. Kuck	J. Dunks	G.F. Wrakestraw	C. Schwartz		K. Sadler	E. Kopischke					
1976	C.E. Braun	M.J. Kraft	D.W. Witt	J.T. Sweet	J. L. Sands	C.H. Schroeder	L. Due	T. Kuck	J. Dunks	G.F. Wrakestraw	C. Schwartz		K. Sadler	R.L. Jessen					
1977	C.E. Braun	M.J. Kraft	D.W. Witt	J.T. Sweet	J. L. Sands	C.H. Schroeder	L. Due	T. Kuck	J. Dunks	G.F. Wrakestraw	R. George		K. Sadler	R.L. Jessen					
1978	C.E. Braun	M.J. Kraft	D.W. Witt	J.T. Sweet	J. L. Sands	C.H. Schroeder	L. Due	T. Kuck	J. Dunks	G.F. Wrakestraw	R. George		K. Sadler	R.L. Jessen					
1979	C.E. Braun	M.J. Kraft	D.W. Witt	J.T. Sweet	J. L. Sands	C.H. Schroeder	L. Due	T. Kuck	J. Dunks	G.F. Wrakestraw	R. George		K. Sadler	R.L. Jessen					
1980	C.E. Braun	M.J. Kraft	T.C. Hinz	J.T. Sweet	J. L. Sands	C.H. Schroeder	L. Due	T. Kuck	J. Dunks	R. Saul	R. George		K. Sadler	R.L. Jessen					
1981	H.D. Funk	M.J. Kraft	T.C. Hinz	J.T. Sweet	J. L. Sands	C.H. Schroeder	L. Due	T. Kuck	C.D. Stutzenbaker	R. Saul	R. George		K. Sadler	R.L. Jessen					
1982	H.D. Funk	M.J. Kraft	T.C. Hinz	J. Hyland	J. L. Sands	M. A. Johnson	L. Due	T. Kuck	R. George	R. Saul	R. Bishop		K. Sadler	R.L. Jessen					
1983	H.D. Funk	G.J. Horak	T.C. Hinz	J. Hyland	G. Downer	M. A. Johnson	L. Due	T. Kuck	R. George	R. Saul	R. Bishop		K. Sadler	R.L. Jessen					
1984	H.D. Funk	G.J. Horak	T.C. Hinz	P.J. Gabig	G. Downer	M. A. Johnson	L. Due	S. G. Simpson	R. George	R. Saul	R. Bishop		K. Sadler	R.L. Jessen					
1985	H.D. Funk	G.J. Horak	T.C. Hinz	P.J. Gabig	J. Herring	M. A. Johnson	L. Due	S. G. Simpson	R. George	R. Saul	R. Bishop		K. Sadler	R.L. Jessen					
1986	H.D. Funk	G.J. Horak	T.C. Hinz	P.J. Gabig	J. Herring	S. C. Kohn	M. E. O'Meilia	S. G. Simpson	R. George	R. Saul	R. Bishop	S. Yaich	D. L. Hallett	R.L. Jessen					
1987	H.D. Funk	G.J. Horak	T.C. Hinz	P.J. Gabig	J. Gonzales	S. C. Kohn	M. E. O'Meilia	S. G. Simpson	R. George	R. Saul	R. Bishop	S. Yaich	D. L. Hallett	R.L. Jessen					
1988	H.D. Funk	G.J. Horak	T.C. Hinz	P.J. Gabig	J. Ward	S. C. Kohn	M. E. O'Meilia	S. G. Simpson	R. George	R. Saul	R. Bishop	S. Yaich	D. L. Hallett	T. Eberhardt					
1989	H.D. Funk	G.J. Horak	T.C. Hinz	P.J. Gabig	J. Ward	S. C. Kohn	M. E. O'Meilia	S. G. Simpson	R. George	R. Saul	R. Bishop	S. Yaich	D. L. Hallett	T. Eberhardt					
1990	H.D. Funk	M.J. Kraft	T.C. Hinz	P.J. Gabig	J. Ward	S. C. Kohn	M. E. O'Meilia	S. Vaa	R. George	R. Saul	R. Bishop	S. Yaich	J. H. Schulz	T. Eberhardt					
1991	H.D. Funk	M.J. Kraft	J. Hansen	P.J. Gabig	J. Ward	S. C. Kohn	M. E. O'Meilia	S. Vaa	R. George	R. Saul	G. Zenner	S. Yaich	J. H. Schulz	A. Berner					
1992	H.D. Funk	M.J. Kraft	J. Hansen	P.J. Gabig	B. Hale	S. C. Kohn	M. E. O'Meilia	S. Vaa	R. George	R. Saul	G. Zenner	S. Yaich	J. H. Schulz	A. Berner					
1993	H.D. Funk	M.J. Kraft	J. Hansen	P.J. Gabig	B. Hale	S. C. Kohn	M. E. O'Meilia	S. Vaa	J. Roberson	R. Saul	G. Zenner	T. Moser	J. H. Schulz	A. Berner					
1994	J.K. Ringelman	M.J. Kraft	J. Hansen	P.J. Gabig	B. Hale	S. C. Kohn	M. E. O'Meilia	S. Vaa	J. Roberson	R. Saul	G. Zenner	T. Moser	J. H. Schulz	A. Berner					
1995	J.K. Ringelman	H. Hands	J. Hansen	P.J. Gabig	B. Hale	S. C. Kohn	M. E. O'Meilia	S. Vaa	J. Roberson	L. Roberts	G. Zenner	T. Moser	J. H. Schulz	A. Berner					
1996	J.K. Ringelman	H. Hands	J. Hansen	P.J. Gabig	B. Hale	S. C. Kohn	M. E. O'Meilia	S. Vaa	J. Roberson	L. Roberts	G. Zenner	T. Moser	J. H. Schulz	A. Berner	M. Gillespie	K. Lungle	R. Bromley	J. Mulhern	
1997	J. Gammonley	H. Hands	J. Hansen	P.J. Gabig	T. Mitchusson	S. C. Kohn	M. E. O'Meilia	S. Vaa	J. Roberson	L. Roberts	T. Bogenschutz	T. Moser	J. H. Schulz	A. Berner	M. Gillespie	K. Lungle	R. Bromley	J. Mulhern	
1998	J. Gammonley	H. Hands	J. Hansen	P.J. Gabig	T. Mitchusson	S. C. Kohn	M. E. O'Meilia	S. Vaa	J. Roberson	L. Roberts	T. Bogenschutz	M. Hill	J. H. Schulz	A. Berner	M. Gillespie	K. Lungle	R. Case	D. McKinnon	
1999	J. Gammonley	H. Hands	J. Hansen	S. Taylor	T. Mitchusson	S. C. Kohn	M. E. O'Meilia	S. Vaa	J. Roberson	L. Roberts	T. Bogenschutz	M. Hill	J. H. Schulz	A. Berner	M. Gillespie	K. Lungle	R. Case	D. McKinnon	
2000	J. Gammonley	H. Hands	J. Hansen	S. Taylor	T. Mitchusson	S. C. Kohn	M. E. O'Meilia	S. Vaa	J. Roberson	L. Roberts							K. Lungle	R. Case	D. McKinnon
2001	J. Gammonley	H. Hands	J. Hansen	S. Taylor	T. Mitchusson	S. C. Kohn	M. E. O'Meilia	S. Vaa	J. Roberson	L. Roberts							K. Lungle	R. Case	D. McKinnon
2002	J. Gammonley	H. Hands	J. Hansen	S. Taylor	T. Mitchusson	S. C. Kohn	M. E. O'Meilia	S. Vaa	J. Roberson	L. Roberts							K. Lungle	R. Case	D. McKinnon
2003	J. Gammonley	H. Hands	J. Hansen	S. Taylor	T. Mitchusson	S. C. Kohn	M. E. O'Meilia	S. Vaa	J. Roberson	L. Roberts								R. Case	D. McKinnon
2004	J. Gammonley	H. Hands	J. Hansen	S. Taylor	T. Mitchusson	S. C. Kohn	M. E. O'Meilia	S. Vaa	J. Roberson	L. Roberts								R. Case	D. McKinnon

<sup>1</sup> The name and composition of the CMUTC was changed in 1999 to Central Flyway Webless Migratory Game Bird Technical Committee: Voting membership restricted to CF States/Provinces.

# USFWS FLYWAY REPRESENTATIVES

## 1952-2004

**ATLANTIC  
FLYWAY**

**MISSISSIPPI  
FLYWAY**

**CENTRAL  
FLYWAY**

**PACIFIC  
FLYWAY**

1949				<i>Leo K. Couch</i>
1950				<i>Leo K. Couch</i>
1951				<i>Leo K. Couch</i>
1952	C. Edward Addy	<i>vacant</i>	<i>vacant</i>	John C. Chattin
1953	C. Edward Addy	Arthur S. Hawkins	Cecil S. Williams	John C. Chattin
1954	C. Edward Addy	Arthur S. Hawkins	Cecil S. Williams	John C. Chattin
1955	C. Edward Addy	Arthur S. Hawkins	Cecil S. Williams	John C. Chattin
1956	C. Edward Addy	Arthur S. Hawkins	Cecil S. Williams	John C. Chattin
1957	C. Edward Addy	Arthur S. Hawkins	Cecil S. Williams	John C. Chattin
1958	C. Edward Addy	Arthur S. Hawkins	Raymond J. Buller	John C. Chattin
1959	C. Edward Addy	Arthur S. Hawkins	Raymond J. Buller	John C. Chattin
1960	C. Edward Addy	Arthur S. Hawkins	Raymond J. Buller	John C. Chattin
1961	C. Edward Addy	Arthur S. Hawkins	Raymond J. Buller	John C. Chattin
1962	C. Edward Addy	Arthur S. Hawkins	Raymond J. Buller	John C. Chattin
1963	C. Edward Addy	Arthur S. Hawkins	Raymond J. Buller	John C. Chattin
1964	C. Edward Addy	Arthur S. Hawkins	Raymond J. Buller	John C. Chattin
1965	C. Edward Addy	Arthur S. Hawkins	Raymond J. Buller	John C. Chattin
1966	C. Edward Addy	Arthur S. Hawkins	Raymond J. Buller	John C. Chattin
1967	C. Edward Addy	Arthur S. Hawkins	Raymond J. Buller	John C. Chattin
1968	C. Edward Addy	Arthur S. Hawkins	Raymond J. Buller	John C. Chattin
1969	C. Edward Addy	Arthur S. Hawkins	Raymond J. Buller	John C. Chattin
1970	C. Edward Addy	Arthur S. Hawkins	Raymond J. Buller	John C. Chattin
1971	C. Edward Addy	Arthur S. Hawkins	Raymond J. Buller	John C. Chattin
1972	C. Edward Addy	<i>vacant</i>	Raymond J. Buller	John C. Chattin
1973	<i>vacant</i>	Kenneth E. Gamble	Raymond J. Buller	John C. Chattin
1974	Warren W. Blandin	Kenneth E. Gamble	Raymond J. Buller	John C. Chattin
1975	Warren W. Blandin	Kenneth E. Gamble	Harvey W. Miller	John C. Chattin
1976	Warren W. Blandin	Kenneth E. Gamble	Harvey W. Miller	John C. Chattin
1977	Warren W. Blandin	Kenneth E. Gamble	Harvey W. Miller	James C. Bartonek
1978	Warren W. Blandin	Kenneth E. Gamble	Harvey W. Miller	James C. Bartonek
1979	Warren W. Blandin	Kenneth E. Gamble	Harvey W. Miller	James C. Bartonek
1980	Warren W. Blandin	Kenneth E. Gamble	Harvey W. Miller	James C. Bartonek
1981	Warren W. Blandin	Kenneth E. Gamble	Harvey W. Miller	James C. Bartonek
1982	Warren W. Blandin	Kenneth E. Gamble	Harvey W. Miller	James C. Bartonek
1983	<i>vacant</i>	Kenneth E. Gamble	Harvey W. Miller	James C. Bartonek
1984	Jerome R. Serie	Kenneth E. Gamble	Harvey W. Miller	James C. Bartonek
1985	Jerome R. Serie	Kenneth E. Gamble	Harvey W. Miller	James C. Bartonek
1986	Jerome R. Serie	Kenneth E. Gamble	Harvey W. Miller	James C. Bartonek
1987	Jerome R. Serie	Kenneth E. Gamble	Harvey W. Miller	James C. Bartonek
1988	Jerome R. Serie	Kenneth E. Gamble	Wilbur N. Ladd	James C. Bartonek
1989	Jerome R. Serie	Kenneth E. Gamble	Wilbur N. Ladd	James C. Bartonek
1990	Jerome R. Serie	Kenneth E. Gamble	David E. Sharp	James C. Bartonek
1991	Jerome R. Serie	Kenneth E. Gamble	David E. Sharp	James C. Bartonek
1992	Jerome R. Serie	Kenneth E. Gamble	David E. Sharp	James C. Bartonek
1993	Jerome R. Serie	Kenneth E. Gamble	David E. Sharp	James C. Bartonek
1994	Jerome R. Serie	Kenneth E. Gamble	David E. Sharp	James C. Bartonek
1995	Jerome R. Serie	Kenneth E. Gamble	David E. Sharp	James C. Bartonek
1996	Jerome R. Serie	Kenneth E. Gamble	David E. Sharp	Robert E. Trost
1997	Jerome R. Serie	Kenneth E. Gamble	David E. Sharp	Robert E. Trost
1998	Jerome R. Serie	Kenneth E. Gamble	David E. Sharp	Robert E. Trost
1999	Jerome R. Serie	Kenneth E. Gamble	David E. Sharp	Robert E. Trost
2000	Jerome R. Serie	Kenneth E. Gamble	David E. Sharp	Robert E. Trost
2001	Jerome R. Serie	Kenneth E. Gamble	David E. Sharp	Robert E. Trost
2002	Jerome R. Serie	Kenneth E. Gamble	David E. Sharp	Robert E. Trost
2003	Jerome R. Serie	Kenneth E. Gamble	David E. Sharp	Robert E. Trost
2004	Jerome R. Serie	Kenneth E. Gamble	David E. Sharp	Robert E. Trost