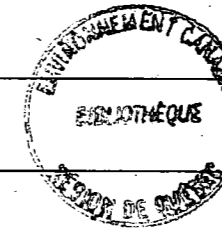


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Progress Notes

Canadian Wildlife Service



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Migratory game birds harvested in Canada during the 1991 hunting season

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Introduction

The Harvest Questionnaire Survey (HQS), and the Species Composition Survey (SCS) are conducted annually to estimate the number of migratory game birds killed by hunters in Canada. Together they make up the National Harvest Survey (NHS).

Methods

The HQS is based on a questionnaire that asks hunters to provide information on the number, location, and timing of their hunting trips and on the migratory game birds killed (for nine species groups). The questionnaire was mailed in early December 1991 to a sample selected from the lists of purchasers of migratory game bird hunting permits for the current and previous years. A

reminder was mailed to nonrespondents in early February 1992.

The SCS asks hunters to send in the wing from each duck killed and the tail feathers from each goose killed, along with the location and timing details of the harvest. This allows the species group harvest estimates from the HQS to be partitioned by species. The results of the SCS do not include estimates of illegal kill, legal hunting without permits by native people, or crippling loss. Cooch et al. (1978) give a full description of the survey methods.

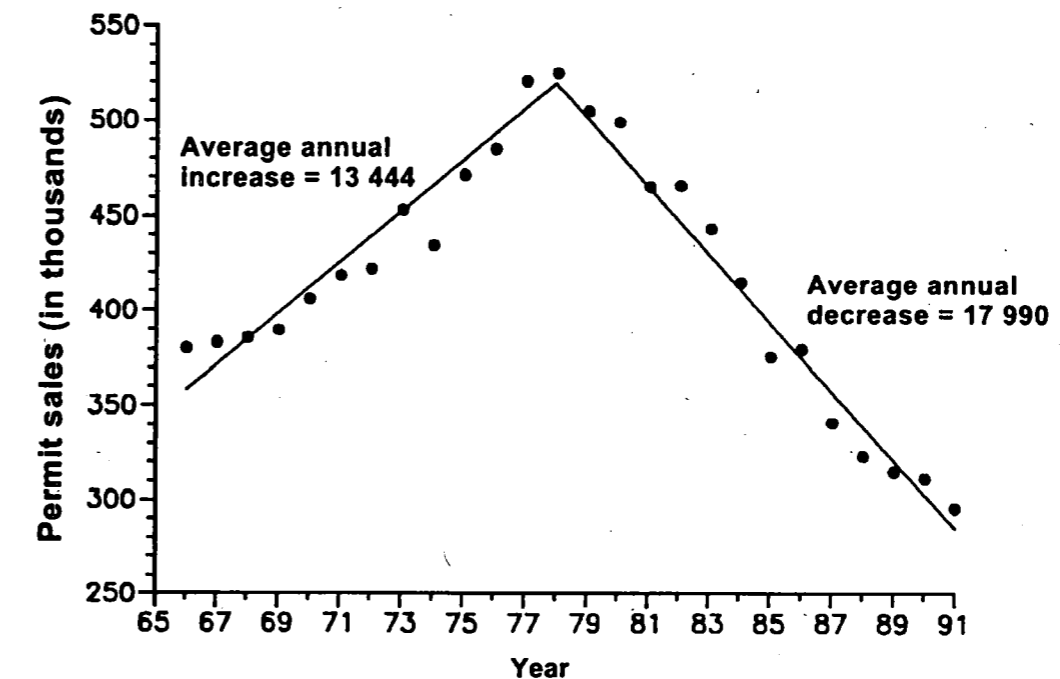
Wing/tail envelopes were mailed in August 1991 to hunters selected from lists of permit purchasers in previous years. Additional wing envelopes for the SCS were sent in late December 1991 to the hunters selected in Newfoundland, as they have been since 1983. This extra mailing increases the reliability of the estimate of species composition for Newfoundland, by ensuring that wings from the winter harvest of sea ducks are adequately represented. The recent trend in kill estimates by species for this province is not comparable with the results prior to 1983. Murres are also legally taken by hunters in Newfoundland, but that kill is addressed by separate surveys (Elliot et al. 1991).

Hunters in eastern Canada were asked to send a wing from any woodcock shot. The results of this additional

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Figure 1
Total sales of migratory game bird hunting permits in Canada, 1966-91, (based on permit stubs returned^a)



^a Note that total number of stubs received in 1989, 1990, and 1991 is smaller than the reported sales by vendors (see text).

wing collection can be obtained from the Canadian Wildlife Service, P.O. Box 1590, Sackville, New Brunswick E0A 3C0. For woodcock hunted in Quebec, the address is 1141 Route de l'Église, C.P. 10100, Ste-Foy, Quebec G1V 4H5.

The 1991 HQS questionnaire used the same concise format as in 1990. A section on rails was added to the question on harvest of species groups in 1989, and the rail data for the last three years are presented for the first time in Table 14.

Analysis

The analysis of the data was changed substantially in 1992. In previous years, all data processing for the survey was done on a mainframe computer. In 1992, the survey results were processed on microcomputers. Transferring the survey processing to microcomputers was done to reduce costs, to streamline operations, and to update the analysis programs. Survey analysis was done using the statistical package SAS. Use of the new data analysis programs on data from previous years results in harvest estimates that are somewhat different from those previously published.

There are several possible sources for these differences: i) differences in the decision rules for inputting missing values or excluding observations with missing values, ii) differences in the algorithms used for the calculations, and iii) differences caused by rounding of variables. However, differences in the estimates obtained with the two analyses approaches were small compared to the variance in the data. More details on the new estimation procedures including variance for the NHS are available in: Collins, B.T. "Estimation procedures for the Migratory Bird Harvest Surveys" in prep.

The algorithm that partitions the number of parts received into time periods has been modified so that each time period must include at least five parts. This modification affects only those hunting zones from which few parts were received. The advantage of this modification is that it stabilizes the estimates of harvest by species by reducing the amount of partitioning into time periods that had too little information to precisely assign the group harvest among species.

Many of the tables in this report set out the estimates from previous years alongside the current year estimates. To enhance comparability of the current year results with those from previous years, all data from previous years that appear in this Progress Note were reanalyzed using the new data analysis programs. Because of this, the estimates of harvest are somewhat different from those published in earlier Progress Notes.

Results

In the past 26 years, the number of permits sold has changed markedly (Fig. 1). The decrease in sales since 1978 should be noted by those who use kill statistics as

indices of trends in migratory game bird populations and harvest characteristics. The permit sale totals for each province are given in Table 1. Note that Table 1 and Figure 1 report the total sales based on permit stubs returned to CWS. Traditionally we have observed a slight discrepancy (1%) between the reported number of permits sold by vendors and the number of stubs returned. Since 1989 however this difference appears to be in at least the 5% range which implies that numbers presented here for 1989, 1990, and 1991 underestimate the total number of permits sold. Estimates of migratory birds harvest are based on permit stubs received, harvest estimates for 1989-91 may also be underestimated.

The survey results are summarized for the same 23 geographic zones for which the survey sample selection is stratified (Fig. 2).

The distribution of permit sales between those who purchased a permit the previous year (renewals) and those who did not, and between resident and non-resident (non-Canadian) purchasers, is shown in Table 2.

Table 3 gives the number of permit purchasers who were sampled and who responded to the 1991 HQS. This is compared with earlier years in Table 4. Tables 5 through 16 present the results of the HQS questionnaire. Indications of the amount of recreational activity provided by hunting are presented in Tables 6 and 15.

Table 17 shows the number of permit purchasers who were sampled and who responded to the 1991 SCS. Results of the SCS are used to assign species-specific proportions to the estimated duck and goose kills. The most recent four years of estimated harvests for each species are summarized for Canada (Table 18) and by province and zone (Tables 19 through 30), based on data from both the HQS and the SCS.

In some areas, Canada Geese are further identified to groups of subspecies based on size differences. In the western provinces the tables show kills for Large and Small Canada Geese; elsewhere, subspecies that could not be separated are recorded simply as Canada Geese.

In the process of calculating estimates, rounding to significant digits took place at the last step in the analyses. It should not be expected that rounded column totals will equal the sum of values that have also been rounded.

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Figure 2
Geographic zones used in selecting samples for the HQS and SCS and for reporting their results

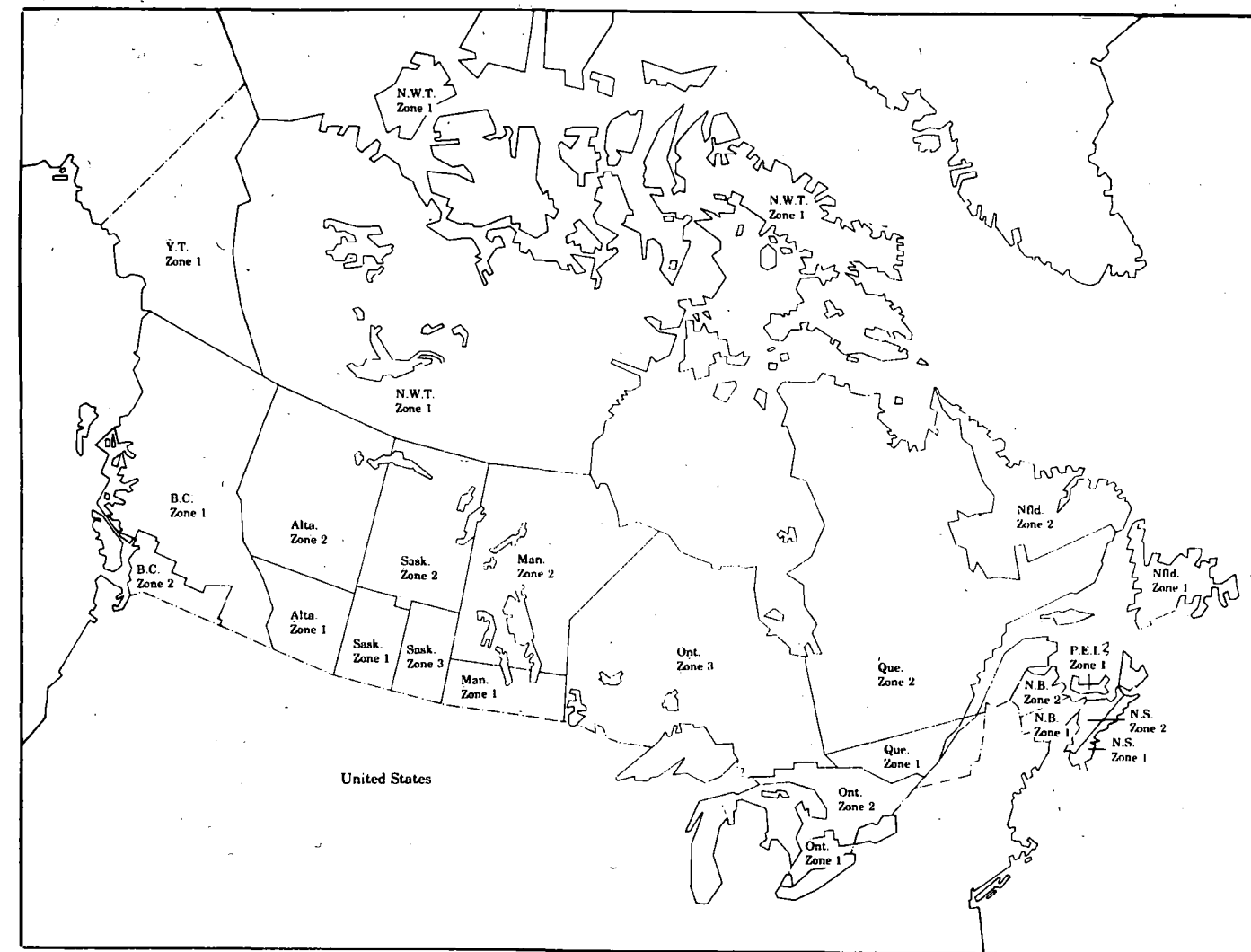


Table 1
Migratory game bird hunting permit sales, by province of purchase, 1966-91, (based on permit stubs returned^a)

Year	Nfld.	PEI	NS	NB	Que.	Ont.	Man.	Sask.	Alta.	BC	NWT	Yukon	Total sales
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
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
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
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
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
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
1985	25 652	5 171	10 749	10 354	60 823	130 089	31 752	36 445	44 880	18 753	713	361	375 743
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
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
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
1981	31 406	5 611	14 130	12 287	75 178	141 677	46 528	42 856	66 163	28 243	764	514	465 352
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
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
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
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
1976	29 621	5 756	13 326	13 743	66 453	143 816	46 816	61 669	75 739	26 561	893	513	484 771
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
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
1973	27 919	4 972	15 071	12 869	57 247	141 277	41 711	51 307	67 012	33 456	— ^b	—	452 841
1972	23 682	4 492	12 158	11 336	53 082	131 427	41 133	50 004	63 309	31 032	—	—	421 677
1971	23 460	4 513	11 381	11 146	50 276	133 563	40 960	49 448	62 902	30 225	—	—	418 237
1970	21 347	3 962	9 926	10 293	46 009	135 231	39 230	47 722	59 986	31 350	—	—	405 650
1969	19 089	3 794	8 848	10 110	39 477	134 037	41 611	45 347	53 602	32 764	—	—	389 325
1968	17 645	3 649	9 022	9 558	37 110	139 182	38 712	43 596	53 623	33 301	—	—	385 553
1967	14 863	3 094	7 883	7 739	32 491	146 493	35 620	44 651	55 892	33 195	—	—	383 032
1966	13 269	3 271	7 220	8 535	35 868	144 063	37 784	44 744	52 911	32 394	—	—	380 059

^a Note that total number of stubs received in 1989, 1990, and 1991 is smaller than the reported sales by vendors (see text).

^b No data.

Table 2
Permit sales in 1991, by hunter residence, permit renewal status, province and zone of purchase

Province	Zone	Permit sales			Renewals			Nonrenewals		
		Total	Res. ^a	Nonres.	Total	Res. ^a	Nonres.	Total	Res. ^a	Nonres.
Nfld.	1	18 733	18 691	42	14 722	14 689	33	4 011	4 002	9
	2	2 005	2 005	0	1 691	1 691	0	314	314	0
	Total	20 738	20 696	42	16 413	16 380	33	4 325	4 316	9
PEI	Total	4 209	4 161	48	3 816	3 782	34	393	379	14
NS	1	7 310	7 284	26	6 268	6 255	13	1 042	1 029	13
	2	2 794	2 751	43	2 164	2 135	29	630	616	14
	Total	10 104	10 035	69	8 432	8 390	42	1 672	1 645	27
NB	1	6 510	6 337	173	5 042	4 945	97	1 468	1 392	76
	2	3 487	3 381	106	2 686	2 633	53	801	748	53
	Total	9 997	9 718	279	7 728	7 578	150	2 269	2 140	129
Que.	1	41 055	40 124	931	32 523	32 092	431	8 532	8 032	500
	2	12 684	12 585	99	9 445	9 393	52	3 239	3 192	47
	Total	53 739	52 709	1 030	41 968	41 485	483	11 771	11 224	547
Ont.	1	31 273	27 388	3 885	26 128	23 163	2 965	5 145	4 225	920
	2	58 766	57 961	805	49 772	49 215	557	8 994	8 746	248
	3	18 763	15 254	3 509	14 356	12 197	2 159	4 407	3 057	1 350
	Total	108 802	100 603	8 199	90 256	84 575	5 681	18 546	16 028	2 518
Man.	1	18 395	15 282	3 113	16 010	13 529	2 481	2 385	1 753	632
	2	3 727	2 839	888	3 254	2 572	682	473	267	206
	Total	22 122	18 121	4 001	19 264	16 101	3 163	2 858	2 020	838
Sask.	1	8 522	7 305	1 217	6 457	5 729	728	2 065	1 576	489
	2	4 094	3 773	321	3 117	2 917	200	977	856	121
	3	9 798	7 968	1 830	7 138	6 036	1 102	2 660	1 932	728
	Total	22 414	19 046	3 368	16 712	14 682	2 030	5 702	4 364	1 338
Alta.	1	12 024	11 644	380	9 588	9 347	241	2 436	2 297	139
	2	17 375	16 763	612	13 792	13 432	360	3 583	3 331	252
	Total	29 399	28 407	992	23 380	22 779	601	6 019	5 628	391
BC	1	5 902	5 717	185	3 988	3 925	63	1 914	1 792	122
	2	7 699	7 650	49	5 730	5 704	26	1 969	1 946	23
	Total	13 601	13 367	234	9 718	9 629	89	3 883	3 738	145
NWT	Total	352	350	2	223	223	0	129	127	2
Yukon	Total	300	287	13	150	147	3	150	140	10
Canada	Total	295 777	277 500	18 277	238 060	225 751	12 309	57 717	51 749	5 968

^a Res. = Canadian resident.

Table 3
Characteristics of sample of the HQS, by province and zone, 1991

Characteristics of sample										
Province	Zone	Sample ^a	Responses ^b	Response rate ^c	Permit purchasers ^d	% ^e	Active hunters ^f	% ^g	Successful hunters ^h	% ⁱ
Nfld.	1	2 448	930	38.0	606	65.2	366	60.4	255	69.7
	2	686	191	27.8	122	63.9	81	66.4	62	76.5
	Total	3 134	1 121	35.8	728	64.9	447	61.4	317	70.9
PEI	Total	544	190	34.9	147	77.4	117	79.6	104	88.9
NS	1	1 490	579	38.9	390	67.4	281	72.1	244	86.8
	2	463	251	54.2	148	59.0	120	81.1	95	79.2
	Total	1 953	830	42.5	538	64.8	401	74.5	339	84.5
NB	1	621	338	54.4	244	72.2	198	81.1	171	86.4
	2	332	150	45.2	113	75.3	82	72.6	69	84.1
	Total	953	488	51.2	357	73.2	280	78.4	240	85.7
Que.	1	3 985	2 304	57.8	1 666	72.3	1 257	75.5	1 110	88.3
	2	1 705	962	56.4	657	68.3	458	69.7	418	91.3
	Total	5 690	3 266	57.4	2 323	71.1	1 715	73.8	1 528	89.1
Ont.	1	2 782	1 529	55.0	1 243	81.3	928	74.7	798	86.0
	2	6 036	3 454	57.2	2 772	80.3	1 989	71.8	1 641	82.5
	3	3 738	1 854	49.6	1 580	85.2	1 207	76.4	1 077	89.2
	Total	12 556	6 837	54.5	5 595	81.8	4 124	73.7	3 516	85.3
Man.	1	3 068	1 629	53.1	1 357	83.3	1 229	90.6	1 167	95.0
	2	1 240	566	45.6	455	80.4	396	87.0	377	95.2
	Total	4 308	2 195	51.0	1 812	82.6	1 625	89.7	1 544	95.0
Sask.	1	1 421	668	47.0	501	75.0	416	83.0	391	94.0
	2	970	423	43.6	303	71.6	247	81.5	222	89.9
	3	1 546	781	50.5	619	79.3	550	88.9	515	93.6
	Total	3 937	1 872	47.5	1 423	76.0	1 213	85.2	1 128	93.0
Alta.	1	4 584	2 363	51.5	1 365	57.8	1 035	75.8	946	91.4
	2	3 642	1 955	53.7	1 492	76.3	1 163	77.9	1 053	90.5
	Total	8 226	4 318	52.5	2 857	66.2	2 198	76.9	1 999	90.9
BC	1	960	582	60.6	373	64.1	257	68.9	227	88.3
	2	1 593	863	54.2	586	67.9	418	71.3	378	90.4
	Total	2 553	1 445	56.6	959	66.4	675	70.4	605	89.6
NWT	Total	227	103	45.4	55	53.4	39	70.9	37	94.9
Yukon	Total	122	63	51.6	30	47.6	20	66.7	14	70.0
Canada	Total	44 203	22 728	51.4	16 824	74.0	12 854	76.4	11 371	88.5

- ^a Number of questionnaires sent out.
- ^b Number of questionnaires completed and returned.
- ^c Percentage of sample for which responses were received.
- ^d Respondents who bought a permit in 1991 (usable responses).
- ^e Percentage of respondents who purchased a permit.
- ^f Respondents who hunted.
- ^g Percentage of permit purchasers who hunted.
- ^h Respondents who hunted successfully.
- ⁱ Percentage of active hunters who harvested migratory birds.

Table 4
Characteristics of sample of the HQS, 1975-91

Year	Permit sales	Characteristics of sample									
		Sample ^a	% ^b	Responses	% ^c	Permit purchasers	% ^d	Active hunters	% ^e	Successful hunters	% ^f
1975	471 320	40 400	8.6	20 648	51.1	15 872	76.9	12 980	81.1	11 170	70.4
1976	484 771	44 969	9.3	20 397	45.4	15 729	77.1	12 805	81.4	10 999	69.9
1977	520 530	45 015	8.6	22 896	50.9	17 833	77.9	14 119	79.2	11 812	66.2
1978	524 596	44 968	8.6	25 745	57.3	19 806	76.9	15 505	78.3	13 168	66.5
1979	504 459	44 743	8.9	23 699	53.0	17 808	75.1	13 642	77.0	11 668	65.5
1980	498 916	44 743	9.0	24 297	54.3	18 364	75.6	14 344	78.1	12 342	67.2
1981	465 352	44 631	9.6	21 269	47.7	15 471	72.7	11 760	76.0	9 886	63.9
1982	465 820	41 559	8.9	19 542	47.0	14 701	75.2	11 376	77.0	9 636	65.5
1983	443 332	40 612	9.2	19 080	47.0	14 629	76.7	11 515	78.7	9 883	67.6
1984	414 958	40 502	9.8	19 157	47.3	14 793	76.0	11 425	77.0	10 076	68.1
1985	375 743	40 502	10.8	19 371	47.8	14 253	73.6	11 373	80.0	9 821	68.9
1986	379 821	40 502	10.7	20 210	49.9	15 312	75.8	12 264	80.1	10 536	68.8
1987	341 263	37 607	11.0	17 407	46.3	13 034	74.9	10 479	80.4	9 083	69.7
1988	323 324	38 010	11.8	23 455	61.7	17 599	75.0	13 308	75.6	11 718	66.6
1989	315 300	43 770	13.9	21 703	49.6	16 476	75.9	12 909	78.4	11 557	70.1
1990	311 714	44 222	14.2	23 025	52.1	17 414	75.6	13 719	78.8	12 318	70.7
1991	295 777	44 203	14.9	22 728	51.4	16 824	74.0	12 854	76.4	11 371	67.6
Average	419 823	42 409	10.1	21 449	50.6	16 230	75.7	12 728	78.4	11 003	67.8

- ^a Number of questionnaires sent out.
- ^b Sample as a percentage of permit sales.
- ^c Percentage of sampled population who responded.
- ^d Percentage of respondents who bought a permit.
- ^e Percentage of permit purchasers who hunted.
- ^f Percentage of permit purchasers who hunted successfully.

Table 5
Estimated number of successful hunters, and waterfowl harvested, by province, species group, and zone, 1989-91

Province/ species group	Zone	Successful hunters			Birds harvested			Birds harvested/ successful hunter		
		1989	1990	1991	1989	1990	1991	1989	1990	1991
Newfoundland										
Ducks	1	9 389	9 160	7 160	67 126	66 103	45 893	7.15	7.22	6.41
	2	1 668	1 605	998	25 560	25 439	9 946	15.33	15.85	9.96
	Total	11 057	10 764	8 158	92 687	91 542	55 838	8.38	8.50	6.84
Geese	1	1 881	1 390	1 600	4 378	3 742	4 046	2.33	2.69	2.53
	2	968	735	382	4 467	3 506	1 630	4.61	4.77	4.27
	Total	2 850	2 125	1 982	8 845	7 248	5 676	3.10	3.41	2.86
Prince Edward Island										
Ducks	Total	1 992	2 248	2 617	21 622	20 110	28 450	10.85	8.95	10.87
Geese	Total	3 154	2 661	2 678	23 275	25 177	21 857	7.38	9.46	8.16
Nova Scotia										
Ducks	1	4 403	3 943	2 919	92 073	81 803	50 352	20.91	20.74	17.25
	2	2 194	2 016	2 651	28 653	22 235	26 307	13.06	11.03	9.92
	Total	6 598	5 959	5 570	120 726	104 038	76 659	18.30	17.46	13.76
Geese	1	1 678	896	886	12 554	3 551	7 287	7.48	3.96	8.23
	2	826	488	609	3 155	3 019	2 407	3.82	6.18	3.95
	Total	2 503	1 384	1 494	15 709	6 569	9 694	6.27	4.75	6.49
New Brunswick										
Ducks	1	4 560	4 915	3 786	47 501	57 029	32 867	10.42	11.60	8.68
	2	1 855	1 764	1 711	16 947	13 510	14 711	9.14	7.66	8.60
	Total	6 415	6 679	5 497	64 448	70 539	47 578	10.05	10.56	8.66
Geese	1	757	807	459	3 126	4 288	2 141	4.13	5.31	4.67
	2	1 069	780	586	3 660	3 605	2 890	3.42	4.62	4.93
	Total	1 827	1 587	1 045	6 786	7 893	5 031	3.71	4.97	4.82
Quebec										
Ducks	1	24 929	25 559	23 028	342 578	358 362	287 787	13.74	14.02	12.50
	2	7 687	8 833	7 739	91 208	97 967	69 638	11.86	11.09	9.00
	Total	32 617	34 391	30 767	433 786	456 329	357 425	13.30	13.27	11.62
Geese	1	12 370	14 696	12 493	78 849	95 050	78 481	6.37	6.47	6.28
	2	3 632	3 873	3 163	21 712	23 683	22 459	5.98	6.11	7.10
	Total	16 002	18 569	15 656	100 562	118 733	100 940	6.28	6.39	6.45
Ontario										
Ducks	1	15 422	15 493	14 208	192 571	212 278	188 642	12.49	13.70	13.28
	2	36 389	35 954	32 207	353 236	344 070	311 853	9.71	9.57	9.68
	3	11 664	11 542	10 426	136 991	128 112	117 548	11.74	11.10	11.28
	Total	63 475	62 989	56 840	682 799	684 460	618 044	10.76	10.87	10.87
Geese	1	8 980	9 222	7 665	43 754	42 841	29 139	4.87	4.65	3.80
	2	10 104	11 188	11 532	34 656	41 084	43 566	3.43	3.67	3.78
	3	5 738	3 186	3 396	29 115	16 678	14 187	5.07	5.24	4.18
	Total	24 822	23 596	22 593	107 524	100 603	86 892	4.33	4.26	3.85
Manitoba										
Ducks	1	8 878	9 350	9 777	76 424	73 516	79 651	8.61	7.86	8.15
	2	4 288	3 587	2 551	44 605	38 319	27 038	10.40	10.68	10.60
	Total	13 167	12 936	12 328	121 029	111 835	106 689	9.19	8.65	8.65
Geese	1	12 881	11 195	13 224	130 856	95 682	120 882	10.16	8.55	9.14
	2	4 315	3 694	2 342	40 145	33 223	18 933	9.30	8.99	8.08
	Total	17 197	14 889	15 566	171 001	128 905	139 814	9.94	8.66	8.98
Saskatchewan										
Ducks	1	4 447	4 243	4 252	36 881	34 951	29 658	8.29	8.24	6.97
	2	3 218	3 314	2 187	35 552	34 332	21 645	11.05	10.36	9.90
	3	4 412	5 784	6 095	31 689	46 374	51 494	7.18	8.02	8.45
	Total	12 077	13 341	12 535	104 122	115 657	102 797	8.62	8.67	8.20

Table 5 (concluded)
Estimated number of successful hunters, and waterfowl harvested, by province, species group, and zone, 1989-91

Province/ species group	Zone	Successful hunters			Birds harvested			Birds harvested/ successful hunter		
		1989	1990	1991	1989	1990	1991	1989	1990	1991
Alberta										
Ducks	1	9 549	8 567	7 788	85 983	81 091	76 028	8.91	9.57	9.76
	2	13 407	12 782	9 089	169 708	149 931	88 564	12.66	11.73	9.74
	Total	22 956	21 349	16 877	254 799	231 914	164 593	11.10	10.86	9.75
Geese	1	8 976	8 061	7 185	76 647	60 826	56 143	8.54	7.55	7.81
	2	9 487	10 687	8 639	77 119	95 633	72 155	8.13	8.95	8.35
	Total	18 462	18 748	15 824	153 766	156 458	128 298	8.33	8.35	8.11
British Columbia										
Ducks	1	3 276	3 275	3 064	34 472	35 423	26 594	10.52	10.82	8.68
	2	4 018	3 458	3 322	68 429	60 741	53 242	17.03	17.57	16.03
	Total	7 294	6 733	6 385	102 900	96 165	79 836	14.11	14.28	12.50
Geese	1	2 174	2 056	1 963	10 638	10 455	9 980	4.89	5.09	5.08
	2	1 594	1 583	1 645	6 753	4 721	9 844	4.24	2.98	5.99
	Total	3 767	3 639	3 607	17 391	15 176	19 824	4.62	4.17	5.50
Northwest Territories										
Ducks	Total	75	222	134	1 205	2 141	757	15.98	9.64	5.64
Geese	Total	80	112	36	367	707	137	4.60	6.32	3.80
Yukon										
Ducks	Total	81	90	125	773	453	1 059	9.57	5.04	8.44
Geese	Total	34	75	70	206	407	502	5.97	5.41	7.16
Canada										
Ducks	Total	177 804	177 702	157 834	2 000 895	1 985 184	1 639 726	11.25	11.17	10.39
Geese	Total	106 674	103 704	95 850	756 362	730 537	664 795	7.09	7.04	6.94

(continued)

Table 6
Estimated recreational activity provided by the hunting of ducks and geese, 1991

Province	Zone	Permit sales	Active hunters	Successful hunters	Birds harvested	Recreation days	S. bag ^a (avg.)	D. bag ^b (avg.)	R. days ^c (avg.)
Nfld.	1	18 733	10 916	7 401	42 538	134 077	3.9	0.3	12.3
	2	2 005	1 366	1 059	10 485	14 703	7.7	0.7	10.8
	Total	20 738	12 282	8 460	53 023	148 780	4.3	0.4	12.1
PEI	Total	4 209	3 907	3 573	45 919	51 003	11.8	0.9	13.1
NS	1	7 310	3 472	3 033	44 728	48 758	12.9	0.9	14.0
	2	2 794	3 325	2 724	23 002	25 894	6.9	0.9	7.8
	Total	10 104	6 798	5 757	67 730	74 652	10.0	0.9	11.0
NB	1	6 510	4 441	3 798	29 703	30 991	6.7	1.0	7.0
	2	3 487	2 390	1 887	15 132	17 703	6.3	0.9	7.4
	Total	9 997	6 831	5 684	44 836	48 693	6.6	0.9	7.1
Que.	1	41 055	29 530	26 034	299 879	264 406	10.2	1.1	9.0
	2	12 684	9 184	8 439	82 522	85 414	9.0	1.0	9.3
	Total	53 739	38 713	34 473	382 401	349 820	9.9	1.1	9.0
Ont.	1	31 273	19 193	16 106	206 940	157 816	10.8	1.3	8.2
	2	58 766	42 421	34 849	326 124	311 831	7.7	1.0	7.4
	3	18 763	12 950	11 077	123 168	92 601	9.5	1.3	7.2
	Total	108 802	74 563	62 032	656 232	562 248	8.8	1.2	7.5
Man.	1	18 395	16 139	15 137	171 193	93 782	10.6	1.8	5.8
	2	3 727	3 651	3 393	41 721	19 933	11.4	2.1	5.5
	Total	22 122	19 789	18 530	212 914	113 715	10.8	1.9	5.7
Sask.	1	8 522	7 472	7 118	83 348	40 140	11.2	2.1	5.4
	2	4 094	3 549	3 199	43 882	20 786	12.4	2.1	5.9
	3	9 798	8 485	7 977	99 056	53 965	11.7	1.8	6.4
	Total	22 414	19 506	18 294	226 285	114 891	11.6	2.0	5.9
Alta.	1	12 024	10 616	9 861	127 295	63 823	12.0	2.0	6.0
	2	17 375	12 942	11 853	137 530	80 625	10.6	1.7	6.2
	Total	29 399	23 558	21 714	264 825	144 448	11.2	1.8	6.1
BC	1	5 902	4 198	3 534	31 957	23 685	7.6	1.3	5.6
	2	7 699	4 036	3 653	56 844	38 802	14.1	1.5	9.6
	Total	13 601	8 233	7 187	88 801	62 487	10.8	1.4	7.6
NWT	Total	352	155	141	947	632	6.1	1.5	4.1
Yukon	Total	300	196	131	1 202	832	6.1	1.4	4.2
Canada	Total	295 777	214 533	185 976	2 045 114	1 672 202	9.5	1.2	7.8

^a Mean seasonal bag per active hunter.

^b Mean daily bag per active hunter.

^c Mean recreation days per active hunter.

Table 7
Estimated number of migratory game birds, other than waterfowl, harvested in Canada, 1986-91

Species	1986	1987	1988	1989	1990	1991	Average 1986-91
American Woodcock	104 386	129 721	115 497	103 903	100 071	98 589	108 695
Common Snipe	55 085	57 018	36 785	49 585	39 700	30 927	44 850
American Coot	15 330	10 499	11 519	9 914	8 870	7 760	10 649
Sandhill Crane	6 115	5 145	6 949	4 975	4 835	5 286	5 551
Mourning Dove	529	1 185	295	850	580	364	634
Band-tailed Pigeon	1 653	1 935	1 805	1 038	677	458	1 261
Rails ^a	—	—	—	1 221	836	477	845
Total	183 099	205 504	172 850	171 485	155 569	143 860	172 061

^a Rail harvest has been surveyed by the HQS only since 1989.

Table 8
Estimated number of successful hunters of American Woodcock, and birds harvested, by province, and zone, 1989-91

Province	Zone	Successful hunters			Birds harvested			Birds harvested/ successful hunter		
		1989	1990	1991	1989	1990	1991	1989	1990	1991
PEI	Total	93	104	0	126	226	0	1.35	2.16	—
	1	265	345	236	1 472	2 806	3 546	5.54	8.14	15.05
NS	2	265	248	346	1 823	1 572	2 113	6.89	6.33	6.10
	Total	530	593	582	3 295	4 378	5 658	6.21	7.38	9.73
	1	811	893	595	9 366	8 276	7 109	11.55	9.27	11.95
NB	2	298	343	286	3 079	1 850	3 287	10.35	5.40	11.48
	Total	1 109	1 236	881	12 445	10 125	10 397	11.23	8.19	11.80
	1	4 416	3 895	3 440	30 228	32 032	26 452	6.85	8.22	7.69
Que.	2	751	822	669	3 273	5 399	2 715	4.36	6.57	4.06
	Total	5 167	4 717	4 109	33 501	37 432	29 167	6.48	7.94	7.10
	1	2 520	2 489	2 564	19 544	16 972	19 896	7.75	6.82	7.76
Ont.	2	4 711	3 697	4 265	30 046	23 978	29 518	6.38	6.49	6.92
	3	1 017	1 149	662	4 946	6 657	3 953	4.87	5.79	5.97
	Total	8 248	7 335	7 491	54 535	47 608	53 367	6.61	6.49	7.12
	Canada	Total	15 147	13 985	13 062	103 903	99 768	98 589	6.86	7.13
Number of successful hunters sampled		634	642	587						

Table 9
Estimated number of successful hunters of Common Snipe, and birds harvested, by province and zone, 1989-91

Province	Zone	Successful hunters			Birds harvested			Birds harvested/ successful hunter		
		1989	1990	1991	1989	1990	1991	1989	1990	1991
Nfld.	1	2 119	1 464	1 455	11 058	7 835	6 568	5.22	5.35	4.51
	2	119	70	100	379	1 325	172	3.18	19.01	1.72
	Total	2 238	1 534	1 555	11 437	9 161	6 739	5.11	5.97	4.33
PEI	Total	126	70	82	348	144	467	2.75	2.06	5.71
NS	1	164	282	159	2 989	840	911	18.18	2.98	5.73
	2	129	110	127	593	610	371	4.58	5.54	2.92
	Total	294	392	286	3 582	1 450	1 282	12.19	3.70	4.48
NB	1	347	352	70	1 362	1 494	205	3.92	4.24	2.90
	2	153	61	37	405	91	400	2.65	1.50	10.83
	Total	500	413	107	1 767	1 586	605	3.53	3.84	5.63
Que.	1	2 958	2 223	2 583	15 830	13 134	12 737	5.35	5.91	4.93
	2	867	594	520	4 543	2 926	2 435	5.24	4.93	4.68
	Total	3 825	2 817	3 102	20 373	16 059	15 171	5.33	5.70	4.89
Ont.	1	363	175	460	2 871	625	939	7.90	3.56	2.04
	2	1 064	894	752	3 544	4 028	2 186	3.33	4.51	2.91
	3	188	349	274	807	1 385	938	4.29	3.97	3.43
Total	1 615	1 418	1 486	7 222	6 038	4 064	4.47	4.26	2.74	
Man.	1	78	152	93	329	886	177	4.24	5.84	1.89
	2	16	30	20	128	202	58	8.00	6.72	2.96
	Total	94	182	113	457	1 087	234	4.88	5.99	2.08
Sask.	1	42	57	0	123	266	0	2.90	4.69	—
	2	0	0	24	0	0	66	—	—	2.78
	3	82	92	79	735	638	535	9.00	6.94	6.76
Total	124	149	103	858	904	600	6.91	6.08	5.84	
Alta.	1	116	161	127	478	558	636	4.11	3.47	5.02
	2	219	206	104	1 607	2 474	586	7.33	11.99	5.61
	Total	335	367	231	2 085	3 032	1 222	6.22	8.26	5.29
BC	1	51	19	47	557	26	73	11.00	1.36	1.56
	2	118	43	88	898	117	470	7.60	2.72	5.32
	Total	169	62	135	1 455	143	543	8.62	2.31	4.02
NWT	Total	0	0	0	0	0	0	—	—	—
Yukon	Total	0	15	0	0	73	0	—	5.00	—
Canada	Total	9 321	7 418	7 200	49 585	39 676	30 927	5.32	5.35	4.30
Number of successful hunters sampled		392	335	328						

Table 10
Estimated number of successful hunters of American Coot, and birds harvested, by province and zone, 1989-91

Province	Zone	Successful hunters			Birds harvested			Birds harvested/ successful hunter		
		1989	1990	1991	1989	1990	1991	1989	1990	1991
Que.	1	1 175	1 018	881	3 770	3 596	3 268	3.21	3.53	3.71
	2	181	218	108	701	1 401	406	3.86	6.43	3.74
	Total	1 357	1 236	989	4 471	4 996	3 673	3.30	4.04	3.71
Ont.	1	109	104	202	235	369	456	2.15	3.53	2.25
	2	602	310	420	1 618	658	1 035	2.69	2.12	2.47
	3	122	266	196	476	1 031	691	3.91	3.87	3.53
Total	833	681	817	2 328	2 057	2 182	2.80	3.02	2.67	
Man.	1	185	88	113	935	456	396	5.07	5.16	3.52
	2	30	34	30	205	176	117	6.84	5.22	3.94
	Total	214	122	142	1 140	631	513	5.31	5.18	3.61
Sask.	1	118	30	51	311	65	69	2.65	2.14	1.36
	2	71	20	27	769	60	40	10.90	3.00	1.50
	3	20	88	99	41	256	416	2.00	2.90	4.19
Total	209	139	177	1 121	381	525	5.38	2.75	2.97	
Alta.	1	100	111	106	196	222	343	1.96	2.00	3.23
	2	10	85	119	10	240	261	1.00	2.84	2.18
	Total	110	196	226	205	462	604	1.88	2.36	2.68
BC	1	98	38	45	293	293	237	2.99	7.81	5.20
	2	68	24	11	354	48	22	5.25	2.01	2.00
	Total	166	61	57	648	341	259	3.91	5.55	4.58
NWT	Total	0	0	4	0	0	4	—	—	1.00
Yukon	Total	0	0	0	0	0	0	—	—	—
Canada	Total	2 888	2 434	2 411	9 914	8 870	7 760	3.43	3.64	3.22
Number of successful hunters sampled		149	149	114						

Table 11
Estimated number of successful hunters of Sandhill Crane, and birds harvested, by province and zone, 1989-91

Province	Zone	Successful hunters			Birds harvested			Birds harvested/ successful hunter		
		1989	1990	1991	1989	1990	1991	1989	1990	1991
Man.	1	424	307	310	1 327	977	1 534	3.13	3.18	4.95
	2	172	33	88	1 324	45	242	7.68	1.35	2.74
	Total	596	341	398	2 651	1 023	1 776	4.45	3.00	4.46
Sask.	1	157	354	124	714	1 535	530	4.56	4.34	4.28
	2	0	51	0	0	158	0	—	3.12	—
	3	333	367	507	1 609	2 118	2 980	4.84	5.78	5.88
	Total	489	772	630	2 323	3 812	3 510	4.75	4.94	5.57
Canada	Total	1 085	1 112	1 028	4 975	4 835	5 286	4.58	4.35	5.14
Number of successful hunters sampled		53	60	53						

Table 12
Estimated number of successful hunters of Mourning Dove, and birds harvested, by province and zone, 1989-91

Province	Zone	Successful hunters			Birds harvested			Birds harvested/ successful hunter		
		1989	1990	1991	1989	1990	1991	1989	1990	1991
BC	1	45	60	12	325	275	201	7	5	17
	2	38	29	11	525	304	163	14	11	15
	Total	83	88	22	850	580	364	10	7	16
Number of successful hunters sampled		4	7	2						

Table 13
Estimated number of successful hunters of Band-tailed Pigeon, and birds harvested, by province and zone, 1989-91

Province	Zone	Successful hunters			Birds harvested			Birds harvested/ successful hunter		
		1989	1990	1991	1989	1990	1991	1989	1990	1991
BC	1	17	12	12	330	24	12	20	2	1
	2	107	118	87	708	653	446	7	6	5
	Total	123	130	98	1 038	677	458	8	5	4
Number of successful hunters sampled		7	10	8						

Table 14
Estimated number of successful hunters of rails, and birds harvested, by province and zone, 1989-91*

Province	Zone	Successful hunters			Birds harvested			Birds harvested/ successful hunter		
		1989	1990	1991	1989	1990	1991	1989	1990	1991
NS	1	0	0	19	0	0	79	—	—	4
	Total	0	0	19	0	0	79	—	—	4
NB	1	0	7	0	0	14	0	—	2	—
	Total	0	7	0	0	14	0	—	2	—
Que.	1	138	0	56	194	0	103	1	—	1
	2	0	51	0	0	588	0	—	11	—
	Total	138	51	56	194	588	103	1	12	2
Ont.	1	4	62	0	8	62	0	2	1	—
	2	98	22	44	318	135	131	3	6	3
	3	36	0	4	182	0	4	5	—	1
	Total	138	84	48	508	197	136	4	2	3
Man.	1	45	0	26	92	0	109	2	—	4
	2	16	0	4	400	0	4	25	—	1
	Total	61	0	29	493	0	112	8	—	4
Sask.	3	0	0	13	0	0	13	—	—	1
	Total	0	0	13	0	0	13	—	—	1
Alta.	1	26	12	6	26	12	34	1	1	6
	2	0	9	0	0	27	0	—	3	—
	Total	26	21	6	26	39	34	1	2	6
Canada	Total	363	163	172	1 221	836	477	3	5	3
Number of successful hunters sampled		17	8	11						

* In 1989 and 1990, only two thirds of the records of successful rail hunters could be used in the data analysis. Numbers for these years must therefore be used as preliminary estimates of the rail hunting success and total harvest. If further editing of this file is possible, improved estimates will be reported in subsequent publications.

Table 15
Estimated recreational activity provided by the hunting of migratory game birds other than waterfowl, 1991

Province	Zone	Permit sales	Active hunters	Successful hunters	Birds harvested	Recreation days	S. bag ^a (avg.)	D. bag ^b (avg.)	R. days ^c (avg.)
Nfld.	1	18 733	3 253	1 455	6 507	40 239	2.0	0.2	12.4
	2	2 005	305	100	170	2 194	0.6	0.1	7.2
	Total	20 738	3 558	1 555	6 677	42 433	1.9	0.2	11.9
PEI	Total	4 209	429	82	461	3 143	1.1	0.1	7.3
NS	1	7 310	1 042	375	4 467	5 867	4.3	0.8	5.6
	2	2 794	844	454	2 492	3 957	3.0	0.6	4.7
	Total	10 104	1 886	829	6 960	9 824	3.7	0.7	5.2
NB	1	6 510	985	659	7 404	6 381	7.5	1.2	6.5
	2	3 487	416	286	3 643	4 647	8.8	0.8	11.2
	Total	9 997	1 401	945	11 047	11 028	7.9	1.0	7.9
Que.	1	41 055	7 584	5 374	43 038	41 230	5.7	1.0	5.4
	2	12 684	1 968	1 076	5 809	11 563	3.0	0.5	5.9
	Total	53 739	9 552	6 450	48 847	52 793	5.1	0.9	5.5
Ont.	1	31 273	4 488	2 832	21 179	23 634	4.7	0.9	5.3
	2	58 766	9 136	4 832	34 026	54 804	3.7	0.6	6.0
	3	18 763	2 133	910	5 572	14 321	2.6	0.4	6.7
	Total	108 802	15 758	8 574	60 777	92 759	3.9	0.7	5.9
Man.	1	18 395	2 010	475	2 212	8 559	1.1	0.3	4.3
	2	3 727	576	129	420	2 201	0.7	0.2	3.8
	Total	22 122	2 586	604	2 631	10 760	1.0	0.2	4.2
Sask.	1	8 522	816	174	599	2 000	0.7	0.2	3.7
	2	4 094	317	50	106	1 287	0.3	0.1	4.1
	3	9 798	1 177	648	3 940	6 787	3.3	0.6	5.8
	Total	22 414	2 310	873	4 645	11 074	2.0	0.4	4.8
Alta.	1	12 024	919	210	1 004	4 713	1.1	0.2	5.1
	2	17 375	1 331	200	838	8 715	0.6	0.1	6.5
	Total	29 399	2 250	411	1 842	13 428	0.8	0.1	6.0
BC	1	5 902	411	104	519	1 051	1.3	0.5	2.6
	2	7 699	550	197	1 092	2 174	2.0	0.5	4.0
	Total	13 601	961	301	1 611	3 226	1.7	0.5	3.4
NWT	Total	352	17	4	4	53	0.2	0.1	3.2
Yukon	Total	300	22	0	0	219	0.0	0.0	10.1
Canada	Total	295 777	40 731	20 627	145 500	250 739	3.6	0.6	6.2

^a Mean seasonal bag per active hunter.

^b Mean daily bag per active hunter.

^c Mean recreation days per active hunter.

Table 16
Precision of the estimates (90% confidence interval) of number of active waterfowl hunters and number of ducks and geese harvested, by province and zone, 1990-91

Province	Zone	Year	Active hunters (±%)	Duck harvest (±%)	Goose harvest (±%)	
Nfld.	1	1990	13 157 ± 5.89	66 103 ± 17.54	3 742 ± 38.26	
		1991	10 916 ± 7.04	45 893 ± 15.86	4 046 ± 35.92	
	2	1990	1 995 ± 12.57	25 439 ± 24.60	3 506 ± 39.25	
		1991	1 366 ± 15.97	9 946 ± 31.76	1 630 ± 52.05	
PEI	1	1990	3 863 ± 9.00	20 110 ± 26.19	25 177 ± 26.26	
		1991	3 907 ± 9.65	28 450 ± 33.83	21 857 ± 38.31	
NS	1	1990	4 624 ± 6.79	81 803 ± 14.57	3 551 ± 29.59	
		1991	3 472 ± 10.00	50 352 ± 21.08	7 287 ± 39.25	
	2	1990	2 509 ± 11.48	22 235 ± 21.26	3 019 ± 49.52	
		1991	3 325 ± 10.39	26 307 ± 17.97	2 407 ± 40.37	
NB	1	1990	5 409 ± 8.05	57 029 ± 20.79	4 288 ± 40.73	
		1991	4 441 ± 9.98	32 867 ± 16.94	2 141 ± 62.60	
	2	1990	2 097 ± 16.57	13 510 ± 27.07	3 605 ± 44.69	
		1991	2 390 ± 15.95	14 711 ± 25.65	2 890 ± 58.31	
Que.	1	1990	30 738 ± 3.36	358 362 ± 8.22	95 050 ± 10.29	
		1991	29 530 ± 3.59	287 787 ± 8.76	78 481 ± 10.91	
	2	1990	10 032 ± 6.01	97 967 ± 10.26	23 683 ± 21.88	
		1991	9 184 ± 6.08	69 638 ± 9.96	22 459 ± 20.83	
Ont.	1	1990	20 998 ± 4.61	212 278 ± 10.71	42 841 ± 14.54	
		1991	19 193 ± 4.87	188 642 ± 9.94	29 139 ± 16.34	
	2	1990	45 794 ± 2.77	344 070 ± 7.82	41 084 ± 11.54	
		1991	42 421 ± 2.89	311 853 ± 6.60	43 566 ± 10.75	
	3	1990	13 997 ± 4.78	128 112 ± 8.25	16 678 ± 18.20	
		1991	12 950 ± 4.84	117 548 ± 9.12	14 187 ± 15.91	
Man.	1	1990	14 470 ± 4.13	73 516 ± 9.03	95 682 ± 8.28	
		1991	16 139 ± 3.60	79 651 ± 8.07	120 882 ± 6.64	
	2	1990	5 296 ± 6.87	38 319 ± 9.62	33 223 ± 12.64	
		1991	3 651 ± 7.59	27 038 ± 10.21	18 933 ± 13.82	
Sask.	1	1990	7 314 ± 6.19	34 951 ± 14.91	70 785 ± 11.72	
		1991	7 472 ± 6.05	29 658 ± 12.95	61 713 ± 10.25	
	2	1990	4 921 ± 7.79	34 332 ± 14.42	32 761 ± 13.95	
		1991	3 549 ± 9.02	21 645 ± 19.58	23 853 ± 16.03	
	3	1990	8 211 ± 5.61	46 374 ± 9.59	59 114 ± 10.26	
		1991	8 485 ± 5.84	51 494 ± 14.37	60 563 ± 11.25	
Alta.	1	1990	11 976 ± 4.21	81 983 ± 8.26	60 826 ± 9.47	
		1991	10 616 ± 4.33	76 028 ± 9.13	56 143 ± 8.09	
	2	1990	16 640 ± 3.81	149 931 ± 7.99	95 633 ± 9.42	
		1991	12 942 ± 4.20	88 564 ± 10.90	72 155 ± 9.09	
	BC	1	1990	4 789 ± 8.91	35 423 ± 15.74	10 455 ± 19.39
			1991	4 198 ± 9.43	26 594 ± 14.85	9 980 ± 20.61
2	1990	4 003 ± 7.29	60 741 ± 12.74	4 721 ± 18.95		
		1991	4 036 ± 7.84	53 242 ± 13.27	9 844 ± 22.44	
NWT	1	1990	283 ± 26.26	2 141 ± 32.71	707 ± 59.57	
		1991	155 ± 29.92	757 ± 42.67	137 ± 49.52	
Yukon	1	1990	143 ± 27.54	453 ± 57.95	407 ± 91.79	
		1991	196 ± 31.95	1 059 ± 53.64	502 ± 83.04	
Canada	Total	1990	233 259 ± 1.19	1 985 184 ± 2.87	730 537 ± 3.29	
		1991	214 533 ± 1.26	1 639 726 ± 2.89	664 795 ± 3.28	

Table 17
Characteristics of sample of the SCS, by province and zone, 1991

Province	Zone	Permit sales	Sample	Response rate ^a	Estimated response rate from successful hunters ^b	Net coverage of hunting population ^c	Parts of birds received
Nfld.	1	18 733	990	6.5	23.7	0.6	238
	2	2 005	458	4.4	11.7	1.5	79
PEI	1	4 209	993	5.6	8.0	1.4	284
NS	1	7 310	1 903	6.9	19.3	3.8	815
	2	2 794	936	13.6	17.0	3.8	708
NB	1	6 510	716	12.2	24.5	2.0	666
	2	3 487	843	5.3	10.5	1.9	142
Que.	1	41 055	1 968	20.6	39.3	1.4	3 195
	2	12 684	1 206	16.3	31.6	2.1	1 457
Ont.	1	31 273	1 779	13.7	36.4	1.3	1 323
	2	58 766	2 310	24.9	48.9	1.4	3 344
	3	18 763	2 260	10.9	25.4	1.9	1 208
Man.	1	18 395	823	17.0	23.4	0.9	861
	2	3 727	241	16.2	25.1	1.1	250
Sask.	1	8 522	411	17.5	29.9	1.0	493
	2	4 094	317	12.3	24.0	1.1	237
	3	9 798	445	18.9	27.9	1.0	424
Alta.	1	12 024	654	21.9	35.7	1.3	887
	2	17 375	826	18.4	36.1	1.2	933
BC	1	5 902	1 555	9.6	22.9	3.6	880
	2	7 699	1 250	9.4	23.6	2.9	734
NWT	1	352	123	8.1	45.6	6.4	44
Yukon	1	300	67	6.0	19.1	2.0	53
Canada	Total	295 777	23 074	13.6	27.6	1.5	19 255

^a The percentage of selected hunters who submitted a part sample.

^b The percentage of successful hunters who submitted a part sample, obtained using the SCS response rate and the proportion of successful waterfowl hunters in the HQS sample selected from the previous year.

^c The percentage of the total hunting population who submitted a part sample, obtained using number of responses/estimated active hunters.

Table 18
Total waterfowl harvested in Canada, by species, 1988-91

Species	1988		1989		1990		1991	
	Harvest	%	Harvest	%	Harvest	%	Harvest	%
Common Merganser	23 616	1.2	18 820	0.9	21 070	1.1	15 027	0.9
Red-breasted Merganser	8 302	0.4	16 371	0.8	9 919	0.5	9 819	0.6
Hooded Merganser	24 879	1.3	26 452	1.3	24 385	1.2	33 876	2.1
Mallard	668 420	35.0	744 066	37.2	734 535	37.0	610 714	37.2
American Black Duck	301 222	15.8	261 087	13.0	243 537	12.3	236 935	14.4
Gadwall	23 114	1.2	37 462	1.9	36 292	1.8	32 815	2.0
European Wigeon	0	0.0	0	0.0	58	0.0	0	0.0
American Wigeon	46 628	2.4	58 197	2.9	47 402	2.4	36 618	2.2
Eurasian Green-winged Teal	0	0.0	73	0.0	0	0.0	0	0.0
American Green-winged Teal	145 670	7.6	195 747	9.8	199 714	10.1	112 378	6.9
Blue-winged Teal	43 258	2.3	42 465	2.1	37 549	1.9	28 014	1.7
Northern Shoveler	17 829	0.9	18 881	0.9	14 640	0.7	12 623	0.8
Northern Pintail	69 426	3.6	63 046	3.2	71 643	3.6	33 633	2.1
Wood Duck	129 778	6.8	130 865	6.5	138 551	7.0	135 057	8.2
Redhead	8 721	0.5	6 567	0.3	16 409	0.8	13 080	0.8
Canvasback	7 508	0.4	6 068	0.3	8 522	0.4	9 118	0.6
Greater Scaup	32 419	1.7	33 867	1.7	27 694	1.4	18 786	1.1
Lesser Scaup	73 153	3.8	86 001	4.3	68 366	3.4	64 974	4.0
Ring-necked Duck	98 322	5.2	86 748	4.3	109 962	5.5	104 654	6.4
Common Goldeneye	81 534	4.3	67 249	3.4	76 294	3.8	47 797	2.9
Barrow's Goldeneye	2 038	0.1	4 255	0.2	1 053	0.1	3 071	0.2
Bufflehead	38 173	2.0	28 339	1.4	27 782	1.4	32 514	2.0
Oldsquaw	10 810	0.6	9 337	0.5	6 021	0.3	4 735	0.3
Harlequin Duck	1 160	0.1	283	0.0	233	0.0	180	0.0
Common Eider	21 899	1.1	23 577	1.2	26 521	1.3	19 906	1.2
King Eider	64	0.0	204	0.0	606	0.0	323	0.0
Black Scoter	5 792	0.3	6 794	0.3	7 032	0.4	7 248	0.4
White-winged Scoter	12 801	0.7	11 792	0.6	10 191	0.5	4 109	0.3
Surf Scoter	11 576	0.6	15 360	0.8	18 502	0.9	7 795	0.5
Ruddy Duck	710	0.0	921	0.0	704	0.0	3 925	0.2
Total ducks	1 908 822	100.0	2 000 895	100.0	1 985 184	100.0	1 639 726	100.0
Lesser Snow Goose (white ph.)	74 408	12.5	83 472	11.1	65 488	9.0	62 723	9.4
Lesser Snow Goose (blue ph.)	38 347	6.5	55 591	7.4	37 950	5.2	37 465	5.6
Greater Snow Goose	41 542	7.0	43 778	5.8	61 138	8.4	47 802	7.2
Ross' Goose	4 481	0.8	5 107	0.7	9 427	1.3	3 820	0.6
White-fronted Goose	39 045	6.6	54 051	7.2	45 102	6.2	44 535	6.7
Canada Goose	188 170	31.7	222 477	29.5	204 081	28.1	180 187	27.1
Small Canada Goose	55 157	9.3	86 771	11.5	71 687	9.9	92 627	13.9
Large Canada Goose	152 568	25.7	203 177	26.9	232 187	31.9	194 809	29.3
Brant	402	0.1	100	0.0	307	0.0	827	0.1
Total geese	594 120	100.0	754 523	100.0	727 366	100.0	664 795	100.0
Total waterfowl	2 502 942	—	2 755 418	—	2 712 550	—	2 304 521	—

Table 19
Estimated number of waterfowl harvested in Newfoundland, 1988-91

Species	Zone	1988		1989		1990		1991	
		Harvest	% ^a	Harvest	% ^a	Harvest	% ^a	Harvest	% ^a
Common Merganser	1	6 624	9.7	4 411	6.6	4 258	6.4	155	0.3
	2	2 215	14.0	911	3.6	317	1.2	0	0.0
	Total	8 839	10.5	5 322	5.7	4 575	5.0	155	0.3
Red-breasted Merganser	1	1 429	2.1	6 710	10.0	1 877	2.8	819	1.8
	2	632	4.0	981	3.8	2 277	9.0	2 734	27.5
	Total	2 061	2.5	7 691	8.3	4 154	4.5	3 553	6.4
Hooded Merganser	2	0	0.0	0	0.0	493	1.9	1 355	13.6
	Total	0	0.0	0	0.0	493	0.5	1 355	2.4
Mallard	1	0	0.0	708	1.1	519	0.8	597	1.3
	2	0	0.0	572	2.2	643	2.5	419	4.2
	Total	0	0.0	1 280	1.4	1 162	1.3	1 016	1.8
American Black Duck	1	14 757	21.7	25 346	37.8	16 982	25.7	14 371	31.3
	2	5 380	34.0	3 953	15.5	5 681	22.3	2 203	22.2
	Total	20 137	24.0	29 299	31.6	22 663	24.8	16 574	29.7
Gadwall	1	0	0.0	0	0.0	91	0.1	155	0.3
	Total	0	0.0	0	0.0	91	0.1	155	0.3
American Wigeon	1	0	0.0	1 102	1.6	91	0.1	688	1.5
	Total	0	0.0	1 102	1.2	91	0.1	688	1.2
American Green-winged Teal	1	6 499	9.6	8 654	12.9	9 392	14.2	7 238	15.8
	2	0	0.0	2 190	8.6	1 216	4.8	851	8.6
	Total	6 499	7.8	10 844	11.7	10 608	11.6	8 089	14.5
Blue-winged Teal	1	0	0.0	651	1.0	346	0.5	0	0.0
	Total	0	0.0	651	0.7	346	0.4	0	0.0
Northern Pintail	1	1 998	2.9	815	1.2	2 449	3.7	270	0.6
	2	0	0.0	606	2.4	1 665	6.5	111	1.1
	Total	1 998	2.4	1 421	1.5	4 114	4.5	381	0.7
Greater Scaup	1	920	1.4	3 658	5.4	2 984	4.5	0	0.0
	2	0	0.0	1 606	6.3	700	2.8	0	0.0
	Total	920	1.1	5 264	5.7	3 683	4.0	0	0.0
Lesser Scaup	1	0	0.0	90	0.1	887	1.3	0	0.0
	2	0	0.0	1 973	7.7	870	3.4	264	2.6
	Total	0	0.0	2 063	2.2	1 756	1.9	264	0.5
Ring-necked Duck	1	5 485	8.1	3 581	5.3	8 889	13.4	7 217	15.7
	Total	5 485	6.5	3 581	3.9	8 889	9.7	7 217	12.9
Common Goldeneye	1	11 528	16.9	6 519	9.7	7 794	11.8	6 696	14.6
	2	3 797	24.0	4 499	17.6	6 602	26.0	375	3.8
	Total	15 326	18.3	11 018	11.9	14 396	15.7	7 071	12.7
Barrow's Goldeneye	1	0	0.0	0	0.0	0	0.0	448	1.0
	2	0	0.0	196	0.8	104	0.4	120	1.2
	Total	0	0.0	196	0.2	104	0.1	569	1.0
Bufflehead	1	0	0.0	0	0.0	0	0.0	688	1.5
	Total	0	0.0	0	0.0	0	0.0	688	1.2
Total sport ducks		61 266	73.1	79 731	86.0	77 125	84.3	47 775	85.6
Oldsquaw	1	3 526	5.2	0	0.0	904	1.4	0	0.0
	Total	3 526	4.2	0	0.0	904	1.0	0	0.0
Harlequin Duck	1	0	0.0	0	0.0	233	0.4	0	0.0
	Total	0	0.0	0	0.0	233	0.3	0	0.0

Table 19 (concluded)
Estimated number of waterfowl harvested in Newfoundland, 1988-91

Species	Zone	1988		1989		1990		1991	
		Harvest	% ^a	Harvest	% ^a	Harvest	% ^a	Harvest	% ^a
Common Eider	1	11 902	17.5	3 667	5.5	6 817	10.3	5 366	11.7
	2	3 794	24.0	6 068	23.7	1 493	5.9	582	5.9
	Total	15 696	18.7	9 735	10.5	8 310	9.1	5 948	10.7
King Eider	1	0	0.0	0	0.0	224	0.3	323	0.7
	Total	0	0.0	0	0.0	224	0.2	323	0.6
Black Scoter	1	152	0.2	0	0.0	91	0.1	688	1.5
	2	0	0.0	445	1.7	268	1.1	152	1.5
	Total	152	0.2	445	0.5	359	0.4	840	1.5
White-winged Scoter	1	2 236	3.3	200	0.3	930	1.4	0	0.0
	Total	2 236	2.7	200	0.2	930	1.0	0	0.0
Surf Scoter	1	961	1.4	1 015	1.5	346	0.5	173	0.4
	2	0	0.0	1 562	6.1	3 111	12.2	779	7.8
	Total	961	1.1	2 577	2.8	3 457	3.8	952	1.7
Total sea ducks		22 572	26.9	12 956	14.0	14 417	15.7	8 063	14.4
Total ducks		83 838	100.0	92 687	100.0	91 542	100.0	55 838	100.0
Greater Snow Goose	1	0	0.0	0	0.0	287	8.3	0	0.0
	Total	0	0.0	0	0.0	287	4.1	0	0.0
White-fronted Goose	1	0	0.0	0	0.0	287	8.3	0	0.0
	Total	0	0.0	0	0.0	287	4.1	0	0.0
Canada Goose	1	5 975	100.0	4 378	100.0	2 873	83.3	3 492	86.3
	2	3 404	100.0	4 467	100.0	3 506	100.0	1 630	100.0
	Total	9 379	100.0	8 845	100.0	6 379	91.7	5 122	90.2
Large Canada Goose	1	0	0.0	0	0.0	0	0.0	554	13.7
	Total	0	0.0	0	0.0	0	0.0	554	9.8
Total geese		9 379	100.0	8 845	100.0	6 954	100.0	5 676	100.0
Total waterfowl		93 217	—	101 531	—	98 496	—	61 514	—

^a Zonal percentages were calculated as (species / total ducks or total geese in zone) × 100; total percentages were calculated as (species/total ducks or total geese in province) × 100.

(continued)

Table 20
Estimated number of waterfowl harvested in Prince Edward Island, 1988-91

Species	1988		1989		1990		1991	
	Harvest	%	Harvest	%	Harvest	%	Harvest	%
Red-breasted Merganser	90	0.3	119	0.5	92	0.5	0	0.0
Hooded Merganser	73	0.2	0	0.0	35	0.2	581	2.0
Mallard	902	2.6	925	4.3	1 028	5.1	1 113	3.9
American Black Duck	20 364	59.6	11 548	53.4	11 369	56.5	14 883	52.3
Gadwall	145	0.4	154	0.7	217	1.1	211	0.7
American Wigeon	266	0.8	517	2.4	236	1.2	883	3.1
American Green-winged Teal	7 467	21.9	6 101	28.2	4 076	20.3	6 132	21.6
Blue-winged Teal	889	2.6	569	2.6	1 237	6.2	1 848	6.5
Northern Shoveler	73	0.2	52	0.2	0	0.0	0	0.0
Northern Pintail	1 449	4.2	660	3.1	450	2.2	564	2.0
Wood Duck	0	0.0	52	0.2	0	0.0	456	1.6
Greater Scaup	0	0.0	51	0.2	79	0.4	0	0.0
Lesser Scaup	87	0.3	52	0.2	35	0.2	0	0.0
Ring-necked Duck	1 475	4.3	824	3.8	1 255	6.2	1 570	5.5
Common Goldeneye	576	1.7	0	0.0	0	0.0	211	0.7
Bufflehead	288	0.8	0	0.0	0	0.0	0	0.0
Total sport ducks	34 144	100.0	21 622	100.0	20 110	100.0	28 450	100.0
Total ducks	34 144	100.0	21 622	100.0	20 110	100.0	28 450	100.0
Canada Goose	24 906	100.0	23 143	99.6	25 177	100.0	21 857	100.0
Brant	0	0.0	100	0.4	0	0.0	0	0.0
Total geese	24 906	100.0	23 243	100.0	25 177	100.0	21 857	100.0
Total waterfowl	59 051	—	44 865	—	45 287	—	50 308	—

Table 21
Estimated number of waterfowl harvested in Nova Scotia, 1988-91

Species	Zone	1988		1989		1990		1991	
		Harvest	% ^a	Harvest	% ^a	Harvest	% ^a	Harvest	% ^a
Common Merganser	1	472	0.9	1 415	1.5	479	0.6	788	1.6
	2	603	1.9	801	2.8	671	3.0	25	0.1
	Total	1 075	1.3	2 217	1.8	1 150	1.1	813	1.1
Red-breasted Merganser	1	1 350	2.5	2 587	2.8	1 176	1.4	1 114	2.2
	2	230	0.7	556	1.9	424	1.9	181	0.7
	Total	1 580	1.8	3 143	2.6	1 599	1.5	1 296	1.7
Hooded Merganser	1	158	0.3	407	0.4	0	0.0	554	1.1
	2	93	0.3	308	1.1	0	0.0	42	0.2
	Total	251	0.3	715	0.6	0	0.0	596	0.8
Mallard	1	1 240	2.3	3 072	3.3	2 830	3.5	2 187	4.3
	2	1 064	3.4	1 267	4.4	727	3.3	1 647	6.3
	Total	2 304	2.7	4 339	3.6	3 557	3.4	3 834	5.0
American Black Duck	1	24 055	44.3	31 566	34.3	26 503	32.4	22 662	45.0
	2	20 256	65.1	15 756	55.0	11 509	51.8	16 969	64.5
	Total	44 311	51.9	47 322	39.2	38 012	36.5	39 632	51.7
Gadwall	1	118	0.2	0	0.0	131	0.2	0	0.0
	2	0	0.0	0	0.0	17	0.1	0	0.0
	Total	118	0.1	0	0.0	147	0.1	0	0.0
European Wigeon	1	0	0.0	0	0.0	37	0.0	0	0.0
	2	0	0.0	0	0.0	21	0.1	0	0.0
	Total	0	0.0	0	0.0	58	0.1	0	0.0
American Wigeon	1	35	0.1	76	0.1	111	0.1	179	0.4
	2	101	0.3	404	1.4	212	1.0	287	1.1
	Total	137	0.2	479	0.4	324	0.3	466	0.6
American Green-winged Teal	1	4 066	7.5	17 334	18.8	14 725	18.0	4 693	9.3
	2	4 963	16.0	5 838	20.4	4 545	20.4	3 590	13.6
	Total	9 030	10.6	23 172	19.2	19 270	18.5	8 283	10.8
Blue-winged Teal	1	70	0.1	76	0.1	74	0.1	248	0.5
	2	338	1.1	366	1.3	142	0.6	308	1.2
	Total	408	0.5	442	0.4	216	0.2	556	0.7
Northern Shoveler	1	0	0.0	248	0.3	75	0.1	0	0.0
	2	0	0.0	127	0.4	21	0.1	0	0.0
	Total	0	0.0	374	0.3	96	0.1	0	0.0
Northern Pintail	1	163	0.3	218	0.2	304	0.4	630	1.3
	2	323	1.0	126	0.4	349	1.6	263	1.0
	Total	486	0.6	343	0.3	653	0.6	893	1.2
Wood Duck	1	358	0.7	624	0.7	338	0.4	0	0.0
	2	203	0.7	157	0.5	221	1.0	357	1.4
	Total	561	0.7	781	0.6	559	0.5	357	0.5
Redhead	1	76	0.1	0	0.0	0	0.0	0	0.0
	Total	76	0.1	0	0.0	0	0.0	0	0.0
Greater Scaup	1	2 504	4.6	1 938	2.1	1 351	1.7	843	1.7
	2	717	2.3	609	2.1	258	1.2	547	2.1
	Total	3 220	3.8	2 548	2.1	1 609	1.5	1 390	1.8
Lesser Scaup	1	708	1.3	1 199	1.3	811	1.0	183	0.4
	2	235	0.8	38	0.1	240	1.1	182	0.7
	Total	943	1.1	1 237	1.0	1 051	1.0	365	0.5
Ring-necked Duck	1	1 872	3.4	2 129	2.3	1 816	2.2	1 575	3.1
	2	934	3.0	527	1.8	946	4.3	640	2.4
	Total	2 805	3.3	2 656	2.2	2 762	2.7	2 215	2.9

Table 23 (continued)
Estimated number of waterfowl harvested in Quebec, 1988-91

Species	Zone	1988		1989		1990		1991	
		Harvest	% ^a	Harvest	% ^a	Harvest	% ^a	Harvest	% ^a
Common Goldeneye	1	14 799	4.1	5 845	1.7	15 463	4.3	8 107	2.8
	2	2 266	2.8	3 663	4.0	2 203	2.2	2 049	2.9
	Total	17 065	3.8	9 508	2.2	17 666	3.9	10 155	2.8
Barrow's Goldeneye	1	0	0.0	1 116	0.3	149	0.0	0	0.0
	2	106	0.1	577	0.6	232	0.2	586	0.8
	Total	106	0.0	1 693	0.4	381	0.1	586	0.2
Bufflehead	1	4 857	1.3	4 204	1.2	3 738	1.0	1 412	0.5
	2	506	0.6	521	0.6	74	0.1	899	1.3
	Total	5 364	1.2	4 726	1.1	3 811	0.8	2 310	0.6
Ruddy Duck	1	0	0.0	383	0.1	0	0.0	0	0.0
	Total	0	0.0	383	0.1	0	0.0	0	0.0
Total sport ducks		423 423	95.0	407 386	93.9	436 699	95.7	343 283	96.0
Oldsquaw	1	824	0.2	5 159	1.5	1 413	0.4	977	0.3
	2	1 558	1.9	1 015	1.1	348	0.4	2 098	3.0
	Total	2 382	0.5	6 174	1.4	1 761	0.4	3 074	0.9
Harlequin Duck	1	0	0.0	0	0.0	0	0.0	180	0.1
	Total	0	0.0	0	0.0	0	0.0	180	0.1
Common Eider	1	0	0.0	857	0.3	444	0.1	361	0.1
	2	1 777	2.2	1 205	1.3	3 015	3.1	3 143	4.5
	Total	1 777	0.4	2 062	0.5	3 458	0.8	3 503	1.0
King Eider	2	64	0.1	0	0.0	0	0.0	0	0.0
	Total	64	0.0	0	0.0	0	0.0	0	0.0
Black Scoter	1	2 970	0.8	3 745	1.1	3 314	0.9	3 038	1.1
	2	486	0.6	1 255	1.4	582	0.6	256	0.4
	Total	3 457	0.8	5 000	1.2	3 896	0.9	3 294	0.9
White-winged Scoter	1	5 716	1.6	7 513	2.2	4 786	1.3	1 503	0.5
	2	1 366	1.7	565	0.6	533	0.5	915	1.3
	Total	7 082	1.6	8 079	1.9	5 319	1.2	2 418	0.7
Surf Scoter	1	4 836	1.3	4 041	1.2	2 857	0.8	867	0.3
	2	2 534	3.2	1 044	1.1	2 337	2.4	805	1.2
	Total	7 370	1.7	5 086	1.2	5 195	1.1	1 671	0.5
Total sea ducks		22 132	5.0	26 400	6.1	19 630	4.3	14 142	4.0
Total ducks		445 554	100.0	433 786	100.0	456 329	100.0	357 425	100.0
Lesser Snow Goose (white phase)	1	3 626	7.1	763	1.0	2 138	2.3	1 066	1.4
	2	80	0.5	129	0.6	155	0.7	108	0.5
	Total	3 706	5.6	892	0.9	2 293	1.9	1 174	1.2
Lesser Snow Goose (blue phase)	1	161	0.3	277	0.4	0	0.0	1 327	1.7
	2	0	0.0	0	0.0	0	0.0	108	0.5
	Total	161	0.2	277	0.3	0	0.0	1 435	1.4
Greater Snow Goose	1	38 979	76.7	41 942	53.2	55 238	58.8	43 859	55.9
	2	2 413	16.2	1 587	7.3	5 409	22.8	3 400	15.1
	Total	41 392	63.0	43 529	43.3	60 647	51.5	47 260	46.8
White-fronted Goose	2	0	0.0	0	0.0	0	0.0	69	0.3
	Total	0	0.0	0	0.0	0	0.0	69	0.1
Canada Goose	1	8 030	15.8	35 867	45.5	34 598	36.8	31 379	40.0
	2	12 395	83.3	19 985	92.1	17 640	74.5	18 425	82.0
	Total	20 424	31.1	55 852	55.5	52 238	44.4	49 804	49.3

(continued)

Table 23 (concluded)
Estimated number of waterfowl harvested in Quebec, 1988-91

Species	Zone	1988		1989		1990		1991	
		Harvest	% ^a	Harvest	% ^a	Harvest	% ^a	Harvest	% ^a
Small Canada Goose	1	0	0.0	0	0.0	726	0.8	374	0.5
	2	0	0.0	0	0.0	252	1.1	209	0.9
	Total	0	0.0	0	0.0	977	0.8	583	0.6
Large Canada Goose	1	0	0.0	0	0.0	1 297	1.4	329	0.4
	2	0	0.0	0	0.0	227	1.0	0	0.0
	Total	0	0.0	0	0.0	1 525	1.3	329	0.3
Brant	1	0	0.0	0	0.0	0	0.0	147	0.2
	2	0	0.0	0	0.0	0	0.0	139	0.6
	Total	0	0.0	0	0.0	0	0.0	286	0.3
Total geese		65 684	100.0	100 550	100.0	117 679	100.0	100 940	100.0
Total waterfowl		511 238	—	534 336	—	574 008	—	458 365	—

^a Zonal percentages were calculated as (species / total ducks or total geese in zone) × 100; total percentages were calculated as (species/total ducks or total geese in province) × 100.

Table 28 (concluded)
Estimated number of waterfowl harvested in British Columbia, 1988-91

Species	Zone	1988		1989		1990		1991	
		Harvest	% ^a	Harvest	% ^a	Harvest	% ^a	Harvest	% ^a
Common Goldeneye	1	604	1.5	388	1.1	381	1.1	234	0.9
	2	430	0.6	305	0.4	0	0.0	0	0.0
	Total	1 035	0.9	694	0.7	381	0.4	234	0.3
Barrow's Goldeneye	1	913	2.2	1 390	4.0	358	1.0	659	2.5
	2	0	0.0	81	0.1	0	0.0	112	0.2
	Total	913	0.8	1 472	1.4	358	0.4	771	1.0
Bufflehead	1	1 032	2.5	451	1.3	539	1.5	346	1.3
	2	862	1.2	172	0.3	0	0.0	158	0.3
	Total	1 894	1.6	623	0.6	539	0.6	504	0.6
Ruddy Duck	1	0	0.0	0	0.0	66	0.2	0	0.0
Total	0	0.0	0	0.0	66	0.1	0	0.0	
Total sport ducks		115 478	99.8	102 860	100.0	96 124	100.0	79 836	100.0
Oldsquaw	2	134	0.2	0	0.0	0	0.0	0	0.0
	Total	134	0.1	0	0.0	0	0.0	0	0.0
King Eider	1	0	0.0	0	0.0	41	0.1	0	0.0
	Total	0	0.0	0	0.0	41	0.0	0	0.0
White-winged Scoter	2	53	0.1	0	0.0	0	0.0	0	0.0
	Total	53	0.0	0	0.0	0	0.0	0	0.0
Surf Scoter	1	0	0.0	40	0.1	0	0.0	0	0.0
	Total	0	0.0	40	0.0	0	0.0	0	0.0
Total sea ducks		188	0.2	40	0.0	41	0.0	0	0.0
Total ducks		115 666	100.0	102 900	100.0	96 165	100.0	79 836	100.0
Lesser Snow Goose (white phase)	1	0	0.0	0	0.0	0	0.0	10	0.1
	2	1 556	19.6	926	13.7	137	3.0	2 327	23.6
	Total	1 556	9.2	926	5.3	137	0.9	2 337	11.8
White-fronted Goose	1	20	0.2	39	0.4	67	0.6	39	0.4
	2	64	0.8	7	0.1	52	1.1	0	0.0
	Total	84	0.5	47	0.3	119	0.8	39	0.2
Canada Goose	1	5 533	61.7	217	2.0	142	1.4	163	1.6
	2	4 091	51.5	60	0.9	233	5.0	147	1.5
	Total	9 624	56.9	277	1.6	376	2.5	309	1.6
Small Canada Goose	1	622	6.9	3 106	29.2	2 305	22.0	2 908	29.1
	2	67	0.8	1 402	20.8	389	8.4	884	9.0
	Total	689	4.1	4 507	25.9	2 694	17.8	3 792	19.1
Large Canada Goose	1	2 788	31.1	7 276	68.4	7 940	75.9	6 860	68.7
	2	2 165	27.3	4 357	64.5	3 826	82.5	6 486	65.9
	Total	4 953	29.3	11 634	66.9	11 766	78.0	13 346	67.3
Total geese		16 906	100.0	17 391	100.0	15 091	100.0	19 824	100.0
Total waterfowl		132 572	—	120 292	—	11 256	—	99 661	—

^a Zonal percentages were calculated as (species / total ducks or total geese in zone) × 100; total percentages were calculated as (species/total ducks or total geese in province) × 100.

Table 29
Estimated number of waterfowl harvested in the Northwest Territories, 1988-91

Species	1988		1989		1990		1991	
	Harvest	%	Harvest	%	Harvest	%	Harvest	%
Mallard	2 543	85.7	438	36.4	866	40.4	90	11.8
American Wigeon	0	0.0	0	0.0	449	21.0	333	44.0
American Green-winged Teal	0	0.0	45	3.7	112	5.2	105	13.9
Blue-winged Teal	0	0.0	16	1.3	0	0.0	0	0.0
Northern Shoveler	0	0.0	0	0.0	112	5.2	0	0.0
Northern Pintail	0	0.0	45	3.7	281	13.1	123	16.2
Redhead	0	0.0	0	0.0	0	0.0	24	3.1
Canvasback	0	0.0	45	3.7	23	1.1	0	0.0
Lesser Scaup	424	14.3	179	14.8	191	8.9	41	5.4
Ring-necked Duck	0	0.0	179	14.8	0	0.0	37	4.8
Common Goldeneye	0	0.0	179	14.8	107	5.0	0	0.0
Bufflehead	0	0.0	0	0.0	0	0.0	5	0.7
Total sport ducks	2 967	100.0	1 124	93.3	2 141	100.0	757	100.0
Common Eider	0	0.0	81	6.7	0	0.0	0	0.0
Total sea ducks	0	0.0	81	6.7	0	0.0	0	0.0
Total ducks	2 967	100.0	1 205	100.0	2 141	100.0	757	100.0
Lesser Snow Goose (white phase)	0	0.0	0	0.0	339	63.6	0	0.0
White-fronted Goose	0	0.0	0	0.0	97	18.2	0	0.0
Canada Goose	0	0.0	367	100.0	48	9.1	137	100.0
Small Canada Goose	0	0.0	0	0.0	48	9.1	0	0.0
Total geese	0	0.0	367	100.0	533	100.0	137	100.0
Total waterfowl	2 967	—	1 572	—	2 674	—	894	—

Table 30
Estimated number of waterfowl harvested in the Yukon Territory, 1988-91

Species	1988		1989		1990		1991	
	Harvest	%	Harvest	%	Harvest	%	Harvest	%
Mallard	412	39.2	773	100.0	290	64.1	720	68.0
American Wigeon	444	42.3	0	0.0	81	17.9	261	24.6
Northern Shoveler	0	0.0	0	0.0	41	9.0	23	2.1
Northern Pintail	0	0.0	0	0.0	41	9.0	55	5.2
Common Goldeneye	68	6.5	0	0.0	0	0.0	0	0.0
Bufflehead	127	12.1	0	0.0	0	0.0	0	0.0
Total sport ducks	1 051	100.0	773	100.0	453	100.0	1 059	100.0
Total ducks	1 051	100.0	773	100.0	453	100.0	1 059	100.0
Lesser Snow Goose (white phase)	0	0.0	0	0.0	407	100.0	0	0.0
Small Canada Goose	174	100.0	0	0.0	0	0.0	0	0.0
Large Canada Goose	0	0.0	0	0.0	0	100.0	502	0.0
Total geese	174	100.0	0	0.0	407	100.0	502	100.0
Total waterfowl	1 226	—	773	—	860	—	1 561	—



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