

2009 SPRING POPULATION SURVEYS OF GREATER SNOW GEESE IN SOUTHERN QUÉBEC AND POPULATION STUDY ON BYLOT ISLAND, NUNAVUT

Since 1965, Canadian Wildlife Service conducts its annual spring survey on Greater Snow Geese during their migration in southern Québec. This year the survey was carry out on May 4. Five aircrafts were used simultaneously during this day. The preliminary estimate of the size of the 2009 spring population, counted during staging in southern Québec, was 1,428,000 \pm 91,000 geese, higher than last year (947,000 \pm 64,000). Appendix I represent population and productivity estimates from southern Québec from 1965 to 2009.

Breeding conditions of greater snow geese are fairly good this year on Bylot Island. Snow melt was early due to warm and sunny temperature in early June. Here are some productivity data for this year (sample size for this year and 20-year average values are given in parentheses):

- Mean initiation date: 11 June (N= 102; 12 June)
- Mean clutch size: 3.44 eggs (N = 115; 3.71)
- Mean nesting success to mid incubation: 88% (N = 220; 64%).

Thus, nesting phenology is near normal, clutch size slightly below normal but nesting success is above normal. Predation by arctic foxes is light so far and most predation is by jaegers (in this case, largely partial nest predation and rarely total predation). Nest density in the Bylot Island colony is also relatively high this year, indicative of a good reproductive effort. Therefore, at this stage we expect a good fall flight for greater snow geese, probably above average.

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**APPENDIX I: GREATER SNOW GOOSE POPULATION AND PRODUCTIVITY
ESTIMATES FROM SOUTHERN QUÉBEC, 1965-2009.**

Year	Estimated spring population ¹	Percent young in fall flight ²		Brood size ³ in fall	
		Mean	no. geese	mean	no. broods
1965	25,400				
1966	25,400				
1967	40,900				
1968	38,900				
1969	68,800				
1970	89,600				
1971	123,300				
1972	134,800				
1973	143,000	40.6	800	2.94	49
1974	165,000	6.4	7,282	2.19	119
1975	153,800	31.2	17,579	2.71	1,294
1976	165,600	12.6	20,847	2.46	419
1977	160,000	23.9	10,297	2.28	396
1978	192,600	17.9	9,679	2.34	309
1979	170,100	28.2	20,849	2.65	1,226
1980	180,000	35.3	12,120	2.76	651
1981	170,800	16.3	10,683	2.30	229
1982	163,000	25.1	9,577	2.48	661
1983	185,000	47.4	12,353	2.86	1,246
1984	225,400	30.4	39,781	2.63	2,434
1985	260,000	25.8	33,700	2.49	1,682
1986	303,500	2.3	22,998	1.89	74
1987	255,000	40.2	33,278	2.77	1,882
1988	363,800 ⁴	33.1	40,246	2.76	2,444
1989	363,200	31.1	29,191	2.59	2,014
1990	368,300	23.6	20,313	2.54	830
1991	352,600	38.3	15,102	2.69	1,247
1992	448,100	5.4	32,252	2.06	404
1993	498,400	47.8	24,163	2.75	2,743
1994	591,400	9.2	16,444	2.44	242
1995	616,600	16.6	19,519	2.47	665
1996	669,100	25.1	22,595	2.34	1,247
1997	657,500	36.8	17,586	2.69	1,222
1998	8366,00 ⁵	33.1	17,982	2.52	1,440
1999	1,008,000 ⁵	2.1	20,394	2.09	91
2000	816,500 ⁵	22.7	20,468	2.54	1,302
2001	837,400	27.5	22,106	2.36	1,072
2002	639,300	6.0	18,930	1.91	274
2003	678,000	27.0	15,900	2.36	1,092
2004	957,600	17.8	26,206	2.44	1,031
2005	814,600	20.7	29,022	2.38	1,470
2006	1,016,900	19.7	23,378	2.34	1,143
2007	1,019,000	20.6	25,463	2.28	1,371
2008	947,000	40.0	32,017	2.62	3,187
2009	1,428,000	-	-	-	-

¹ from aerial photo counts

² from visual ground counts

³ broods accompanied by 2 parents

⁴ no spring survey conducted - the value provided was derived from population model published in Gauvin & Reed (CWS Occas. Pap. No. 64. 1987)

⁵ the estimates in brackets for 1998 and 2000 have been corrected to account for flocks not observed during the survey, using data from a telemetry study. The 1999 value is the mean of the correction factors used in 1998 and 2000.