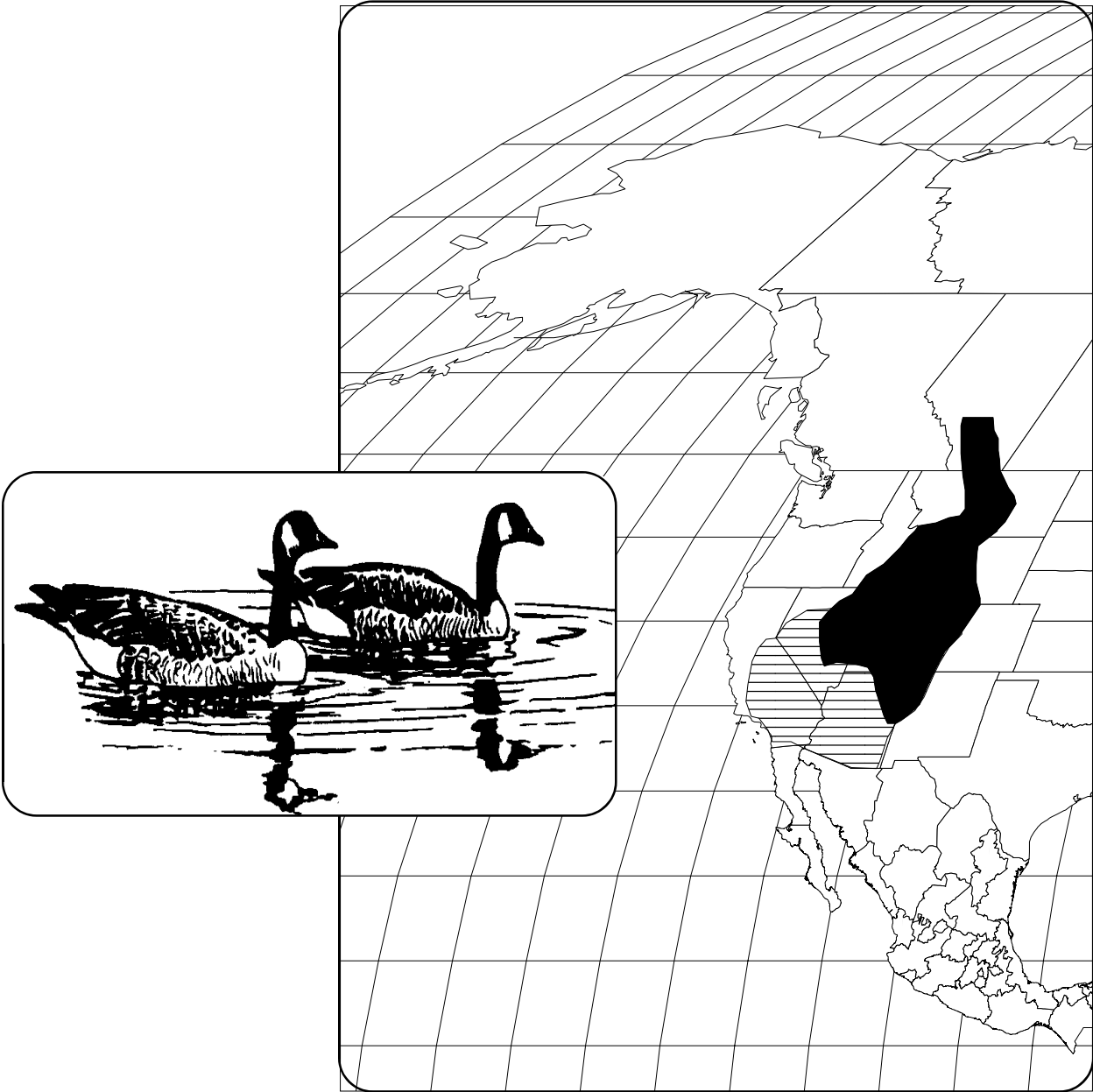


# Rocky Mountain Population of Western Canada Geese



**PACIFIC FLYWAY MANAGEMENT PLAN**  
**FOR THE**  
**ROCKY MOUNTAIN POPULATION OF CANADA GEESE**

Prepared for the

Pacific Flyway Council  
U.S. Fish and Wildlife Service  
Canadian Wildlife Service

by the

Subcommittee on Rocky Mountain Canada Geese  
Pacific Flyway Study Committee

Approved by:

\_\_\_\_\_

Chair, Pacific Flyway Council

\_\_\_\_\_

Date

March 1983  
Revised March 1992  
Revised January 2001

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PACIFIC FLYWAY MANAGEMENT PLAN  
FOR THE  
ROCKY MOUNTAIN POPULATION OF CANADA GEESE

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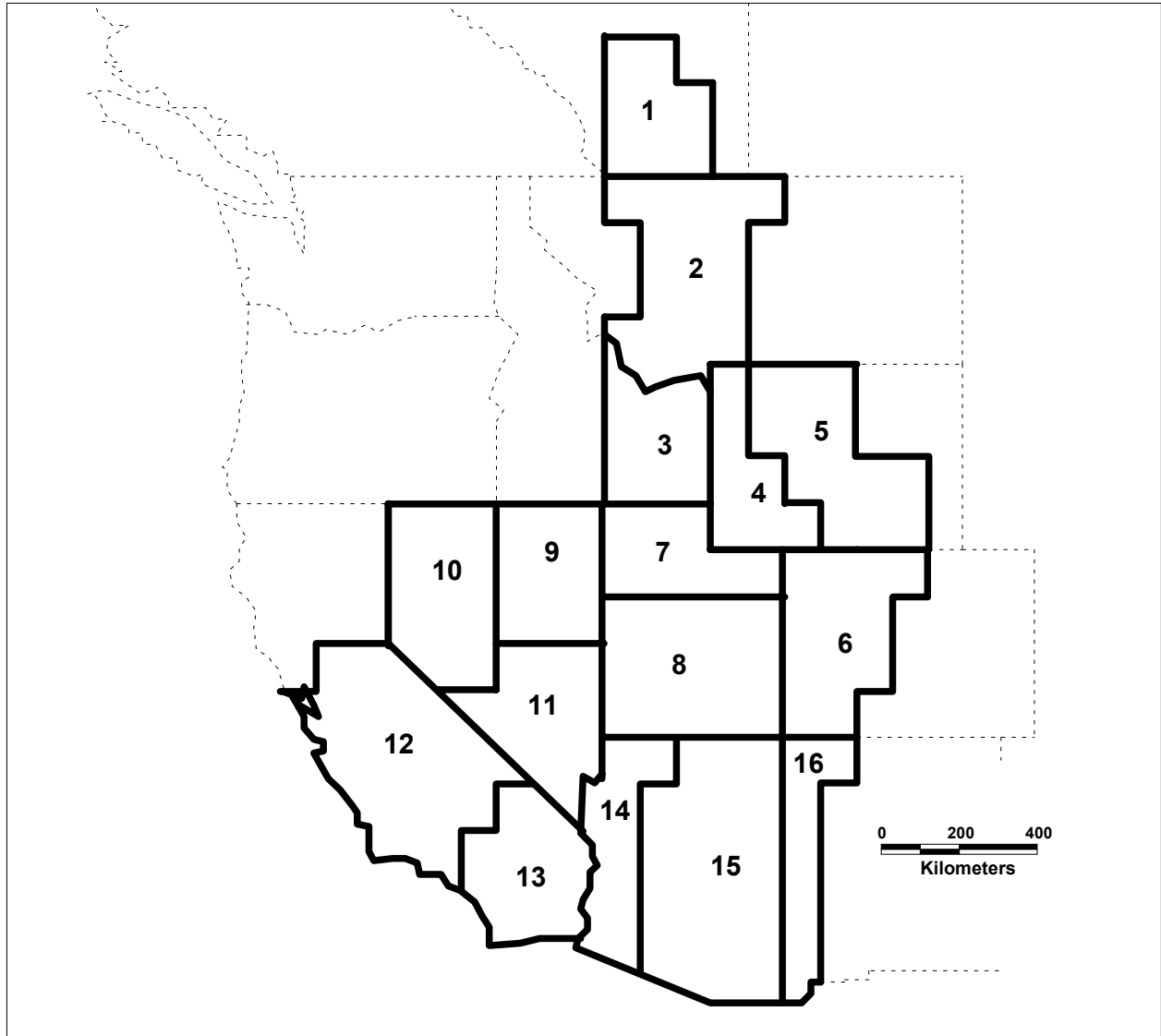
## I. INTRODUCTION

The western Canada goose (*Branta canadensis moffitti*) winters almost exclusively within the Pacific Flyway. For management purposes, two populations are recognized: the Rocky Mountain Population (RMP) and the Pacific Population (PP) (Krohn and Bizeau 1980). The RMP is highly migratory, although there are growing segments that are not making annual migrations. In contrast, the PP is relatively nonmigratory with most flocks wintering on or near their nesting areas; however northern nesters, their offspring, and molters do make regular migrations. Due to the mobile nature of the RMP and the number of political borders crossed annually by these geese, interstate and international cooperation and coordination are essential to effective management of this resource.

Sixteen reference areas are used in this plan to facilitate management and tabulation of population and harvest data (Figure 1). These areas were delineated on the basis of band-recovery distribution and are defined in detail by Krohn and Bizeau (1980).

In the early 1990s, a significant portion of the RMP that had traditionally wintered in southern California, north-eastern Arizona, and southern Nevada, apparently shifted into northwestern New Mexico. Relatively few RMP Canada geese wintered in New Mexico before the late 1980s (see Appendix A).

The purpose of this plan is to provide guidelines to wildlife agencies responsible for the management of RMP Canada geese for the next 5 years.



### REFERENCE AREAS

- |                         |                        |
|-------------------------|------------------------|
| 1=Southern Alberta      | 9=Northeastern Nevada  |
| 2=Central Montana       | 10=Northwestern Nevada |
| 3=Southeastern Idaho    | 11=Southern Nevada     |
| 4=Western Wyoming       | 12=Central California  |
| 5=Central Wyoming       | 13=Southern California |
| 6=Northwestern Colorado | 14=Western Arizona     |
| 7=Northern Utah         | 15=Eastern Arizona     |
| 8=Southern Utah         | 16=Western New Mexico  |

Figure 1. Reference areas for management of the Rocky Mountain Population of Canada geese (modified from Krohn and Bizeau 1980).

## II. GOAL AND OBJECTIVES

The goal of this management plan is to maintain numbers and distribution of RMP Canada geese to optimize recreational opportunity while controlling depredation and nuisance problems.

Objectives of this plan are to:

- A. Maintain a breeding population index of 117,000 birds, while considering desired levels of regional breeding and wintering flocks within individual reference areas (Table 1);
- B. Maintain seasonal breeding, wintering, and molting distributions (Figure 2, and Appendices A, B, and C);
- C. Maintain suitable breeding and wintering habitats to support distribution objectives;
- D. Maintain optimum hunting opportunities and provide for viewing, educational, and scientific pursuits;
- E. Evaluate current population and reference area boundaries to determine if they reflect true demographic differences among neighboring Canada goose populations (PP, Hi-Line Population (HLP), and RMP);
- F. Evaluate depredation and nuisance issues and implement management practices where appropriate.

**Table 1. Breeding Population Index and Objective by Reference Area for the Rocky Mountain Population of Canada Geese.**

<b>Reference Area</b>	<b>Breeding Population Index<sup>a</sup></b>	<b>Objective Breeding Population Index</b>
1. Southern Alberta <sup>b</sup>	81,700	60,000
2. Central Montana	27,600	30,000
3. Southeastern Idaho	5,040 <sup>c</sup>	5,550
4. Western Wyoming	9,720 <sup>c</sup>	12,000
5. Central Wyoming	6,520 <sup>c</sup>	6,050
6. Western Colorado	380 <sup>c</sup>	460
7. Northern Utah	1,520 <sup>c</sup>	1,550
8. Southern Utah	240 <sup>c</sup>	250
9. Northeastern Nevada	620 <sup>c</sup>	700
11. Southern Nevada	200 <sup>c</sup>	240
15. Eastern Arizona	40	100
16. Northwestern New Mexico	200	200
<b>Totals</b>	<b>133,780</b>	<b>117,100</b>
Restrictive level when 3 yr. average falls below --		87,825
Liberalization level when 3 yr. average is above --		146,375

<sup>a</sup> The breeding population index is based upon the 10-year mean for the period between 1990 and 1999.

<sup>b</sup> Alberta numbers are provisional and will be adjusted as new data becomes available.

<sup>c</sup> The breeding pair index is derived by doubling the state reported breeding pair index.

### III. STATUS

#### Nomenclature

Managers assumed the western Canada goose (*B. c. moffitti*) was distributed among several populations within geographically distinct nesting and wintering ranges. One of these, the so-called Great Basin Population (GBP), was never clearly nor fully defined. Canada geese nesting in portions of California, Idaho, Washington, British Columbia, Alberta, and other areas outside of the Great Basin were considered by some waterfowl managers to be affiliated with the GBP. In 1983, the Pacific Flyway Study Committee (PFSC) formally recognized two populations of western Canada geese within the flyway, the Rocky Mountain and Pacific, and has ceased referring to the GBP.

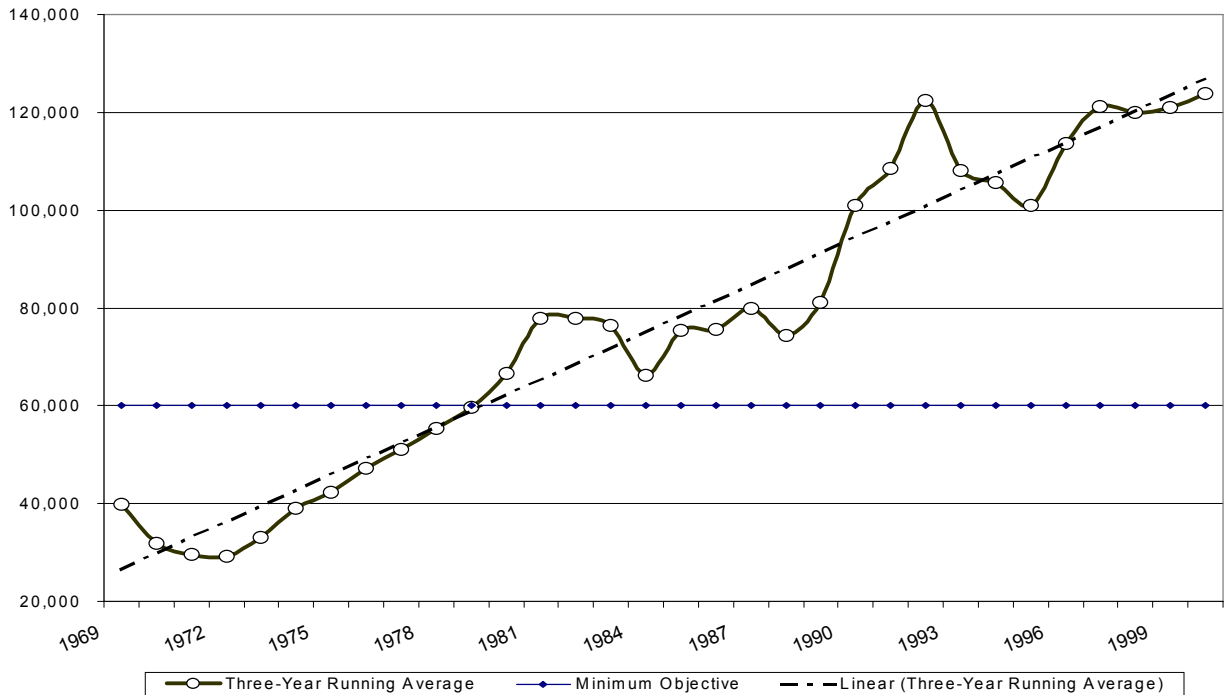
To enhance management of western Canada geese in the Pacific Flyway, the PFSC reviewed existing banding data based upon a Multi-Response Permutation Procedure (MRPP) analysis (Biondini et al. 1988). This initial analysis has given rise to some uncertainties about the current delineation between the PP and the RMP Canada geese. Further analysis will be necessary before adjustments are recommended.

#### Distribution and Numbers

The RMP nests from central Nevada to western Colorado, and from at least as far north as central Alberta, and south to east-central Arizona and north-western New Mexico (Figure 2). Major nesting regions for the RMP range from southern Alberta to northern Utah. The RMP winters from central and southern California to central Arizona and as far north as southern Alberta (Figure 2). Historically, the most northern wintering area for significant numbers of RMP Canada geese was American Falls Reservoir in southeastern Idaho, however, growing segments of the population are wintering farther north. Major segments wintered in central and southern California, western Arizona, and southern Nevada, but available information suggests that some of these segments may be declining. The number of RMP Canada geese counted during Midwinter Waterfowl Survey (MWS) in New Mexico has grown from 3 birds in 1971 to 23,475 in 2000. This may represent a significant shift in the wintering area for this population.

Identified molting concentrations are found on reservoirs and lakes in northern Utah, Wyoming, southwestern Montana, and southern Alberta (Figure 2, Appendix B). Molting sites that have not been verified are believed to exist in the Northwest Territories. A detailed description of the range of the RMP is provided by Krohn and Bizeau (1980).

Krohn and Bizeau (1980) estimated the RMP included about 7,000 breeding pairs (14,000 breeding population) in the early 1970s. A current estimate of the breeding population for the RMP is over 130,000, based upon expanded survey coverage, which now includes Montana and Alberta .



**Figure 3. Three-year running average of the Midwinter Waterfowl Survey for the Rocky Mountain Population of Canada Geese 1969-2000.**

The MWS have historically provided the only indices for the management of this population. The RMP MWS index increased from about 30,000 geese during the early 1970s, to more than 100,000 during the 1990s (Figure 3, Appendix A). Numbers of wintering geese increased in most reference areas, with central Wyoming, western Nevada, and New Mexico showing the greatest increase, while indices in southern California and southern Nevada appear to have declined.

### Use

RMP Canada geese are the most important geese in bags of hunters in interior Pacific Flyway states. Estimates from state and Canadian surveys (federal surveys in Alberta) indicate the harvest of Canada geese, within the winter range of the RMP, averaged about 90,000 birds per season during 1976-80, and increased to over 150,000 by the end of the 1990s. An unknown percentage of this harvest is comprised of other populations of Canada geese. While harvest estimates have increased over the past 25 years, analysis of band recovery data from Alberta and Utah suggests that harvest rates have declined. Southern Alberta, northern Utah, and southeastern Idaho continue to be the most important harvest areas and collectively accounted for more than two-thirds of the total harvest. Estimates of harvest and hunter activity in each reference area are enumerated in Appendices D and E.

Harvest estimates from reference areas where multiple populations of Canada geese mix are less precise than from areas where RMP Canada geese are harvested exclusively. Harvest data cannot

be reconciled with estimates of wintering and breeding populations, and production indices. Like other RMP data, they are best used as indicators of trend within a particular reference area.

The RMP provides wildlife viewing for numerous recreationists, however, accurate estimates are not available. Most viewing opportunities exist on state wildlife management areas, national wildlife refuges, and urban areas.

### Management

Declining goose populations during the early 1950s in the RMP range, prompted scrutiny by state wildlife agencies and the U.S. Fish and Wildlife Service (USFWS). It was apparent that more restrictive regulations were necessary to halt population declines. The first special regulations concerning these flocks were adopted in 1955. Subsequently, the PFSC established a MWS index goal of 50,000 birds. In the 1991 revision of the management plan for RMP Canada geese, the MWS objective was increased to 60,000. Regulations were gradually liberalized in response to increasing populations in the 1980s and 1990s (Figure 3).

The PFSC replaced the MWS objective with a breeding population index because it is a more reliable measurement of the status of the RMP than the MWS. Although interpretation of the MWS is confounded by the presence of other populations of Canada geese, the MWS continues to provide an index to assess distribution objectives and winter trends.

Several national wildlife refuges and state wildlife management areas have been established within the range of the RMP, and some areas are managed specifically for these geese. Nesting structures and islands have been constructed throughout the nesting range of the RMP to increase production. Efforts to enhance nesting opportunities for RMP Canada geese have decreased concurrently with improved population status and increased depredation problems.

When the RMP was relatively low, several states transplanted geese into unoccupied habitat. However, as the population increased, management efforts have focused on the development of appropriate harvest regulations, reducing depredation complaints, and maintaining habitat. Some translocations continue to occur in Nevada and Idaho to supplement natural pioneering into unoccupied suitable habitat, and to augment existing populations.

## IV. MANAGEMENT ISSUES

The following issues are generally range-wide in nature, however, some affect various reference areas to different degrees and their solutions will be the responsibility of individual wildlife agencies involved.

- A. Data Collection: Data must be consistently collected to monitor the population's status relative to the objectives of this plan. Improved methodologies, particularly for harvest and midwinter surveys, are addressed in Section V, Population Monitoring and Research.

- B. Refinement of Harvest Surveys: Federal and state harvest surveys lack the necessary refinement to reliably measure RMP Canada goose harvest within the various reference areas because estimates of total Canada goose harvest are imprecise, and because surveys can not distinguish among other populations of Canada geese. Consequently harvest trends and their effects on populations are difficult to assess. This issue is addressed in Section V, Population Monitoring.

The problem areas are southern Alberta (Hi-line, Shortgrass, RMP), Montana (Hi-line, PP, RMP), Idaho (PP, RMP), Nevada (PP, lessers, RMP) and California (PP, Aleutian, cacklers, lessers, RMP). RMP geese also comprise an unknown percent of the harvest in other states. Most harvest surveys provide estimates of Canada geese harvested but do not assign harvest to a specific population or subspecies. Measurements from tail fans obtained through the USFWS's Parts Collection Survey enable separation of large and small subspecies (e.g., westerns and cackling) but do not separate populations within the same subspecies (e.g., RMP from PP within westerns). This problem is further addressed in Section V, Research.

- C. Population Distribution: The recent increase in the RMP indicates that it does not appear to be limited by habitat. Furthermore, changes in population distribution appear to be occurring as a higher proportion of the RMP breeds and winters in northern reference areas. It is unknown if these changes are related to harvest patterns or habitat quality. The increasing population, with attendant depredation and nuisance problems (see Section D below) as well as the potential for increased consumptive uses, indicate that more intensive management may be needed. Equitable distribution of wintering flocks and associated hunting opportunity is desirable. These issues are addressed in Section V, Research.
- D. Depredation and Nuisance Problems: Depredation of agricultural crops by RMP Canada geese occurs throughout their range. Except in localized instances, depredation has been relatively minor, and has been addressed locally by agency control efforts. However, in some areas, particularly in southern Alberta, the tolerance by land owners is declining and the problem is expected to increase. About half of the compensation for crop depredation in Alberta is associated with Canada geese. Urban nuisance complaints are widespread and increasing and will need to be addressed throughout the RMP range on a case-by-case basis. Where lethal control actions are proposed, effects on migration and wintering populations in other reference areas will be analyzed.
- E. Refine Population Boundaries: Boundaries between the RMP, Hi-Line, and PP Canada geese in areas of contiguous breeding have not been adequately delineated in central Alberta, central Montana, central Wyoming, south-central Idaho, and north-central Nevada (Krohn and Bizeau 1980). The recent MRPP analysis has not resolved the boundary between the RMP and the P. P.
- F. Habitat Loss and Degradation: Wetland drainage, industrial and residential growth, and land-use changes have resulted in loss or degradation of habitat. Increased or decreased



water flows from irrigation and hydroelectric projects adversely affect habitats of wintering geese. However, the increasing population over the past few decades indicates that habitat loss and degradation are not limiting factors at this time.

## V. RECOMMENDED MANAGEMENT PROCEDURES

The following management procedures are recommended. The degree and timing of their implementation by the various agencies will be influenced by personnel, fiscal, regulatory, and statutory constraints beyond the scope of this plan. Whenever possible, management procedures in this plan should be coordinated and incorporated into those recommended in plans for other species and populations of Pacific Flyway waterfowl. The Nevada Division of Wildlife representative is responsible for the maintenance and annual update of the data sheets for the RMP Canada Goose Management Plan.

### Population Monitoring

1. Annual Breeding Population Index: Breeding population surveys will be conducted within each reference area throughout the breeding range of RMP Canada geese. These surveys may be either breeding pair or breeding population surveys. Data, presented in the format found in Appendix C, will be forwarded to the Nevada Division of Wildlife representative by July 10 of each year.

Lead Agencies: Canadian Wildlife Service (CWS), USFWS, Alberta, Arizona, Colorado, Idaho, Montana, Nevada, Utah, Wyoming, and New Mexico

Priority: 1

Schedule: Annual

2. Banding Needs Assessment: Banding for monitoring recovery distribution, derivation of harvest, harvest, and survival rates for individual flocks, will be considered as part of a needs assessment conducted by the RMP Subcommittee in cooperation with the USFWS and CWS. Expanded banding programs will be considered after the needs assessment is complete.

Lead Agencies: All responsible agencies

Priority: 2

Schedule: By 2002

3. Annual Production Trend Survey: Nesting and/or brood surveys are encouraged in all reference areas throughout the breeding range of RMP Canada geese. Survey methods may differ between areas and states but should be consistent among years to facilitate analyses of trends. Data, presented in the format found in Appendix C, will be forwarded to the Nevada Division of Wildlife representative by July 10 of each year.

Lead Agencies: Alberta, Arizona, Colorado, Idaho, Montana, Nevada, Utah, Wyoming, and New Mexico

Participating: USFWS

Priority: 2

Schedule: Annual

4. Annual Midwinter Waterfowl Survey: RMP Canada geese will be counted in all reference areas that support concentrations of wintering geese during the MWS, which is normally conducted during the first week in January. The USFWS has responsibility for coordinating the survey with each state agency participating in that survey. State agencies will immediately, upon completion of the survey, submit data on RMP Canada geese to the Pacific Flyway Representative and Nevada Division of Wildlife Representative for compilation in the format of Appendix A and for distribution at the March PFSC meeting.

Lead Agencies: Arizona, California, Colorado, Idaho, Montana, Nevada, Utah, New Mexico, Wyoming, and USFWS

Priority: 1

Schedule: Annual

5. Annual Goose Harvest Survey: Hunter-harvest surveys will be conducted by each state, either through individual state surveys or through the Federal Harvest Information Program, to assess RMP Canada goose harvest. Data for Alberta will be derived from the Canadian federal survey. Wherever possible, these data will be reported by reference area and in the format found in Appendix D and E. Data will be submitted to the Nevada Division of Wildlife representative by July 10.

Lead Agencies: All agencies

Priority: 2

Schedule: Annual

## Harvest Management

The RMP Canada Goose Subcommittee (Subcommittee) will meet annually in March and July, to assess the status of the RMP and to make recommendations for hunting regulations to the PFSC.

Guidelines to be used in recommending changes in range wide hunting regulations areas follows:

1. When the most recent 3-year moving average breeding population index is less than 87,825 birds, major hunting restrictions in appropriate reference areas, should be considered;
2. When the most recent 3-year average breeding population index is between 87,825 and 117,100 birds, minor harvest adjustments may be made for individual flocks and reference areas;
3. When the most recent 3-year average breeding population index exceeds 146,375 birds, liberalized regulations will be considered in appropriate reference areas;
4. Particular attention should be given to the effects of regulations within specific reference areas that contribute geese to other areas of the Flyway.

The Subcommittee plans to manage the population on the basis of the breeding population index with consideration to the needs of individual reference areas. The MWS will still be used to track broad population and distribution changes. Population and harvest objectives would then be evaluated. The Subcommittee will meet at the winter meeting of the PFSC to formulate September RMP Canada goose season frameworks recommendations and will formulate regular season frameworks and other recommendations at the July meeting.

Lead Agency: Subcommittee

Priority: 1

Schedule: Annual

## Research

The Subcommittee will, as needed, recommend research and review proposals for research. The Subcommittee will establish priorities for research based on the needs of the RMP. Priorities for projects within a state or province will be established by the initiating agency. Areas of identifiable needed research are as follows:

1. Harvest Information: Determine the proportion of RMP geese among the Canada geese being harvested in Alberta, western Nevada, and California.
2. Range Delineation: Delineate the RMP range, particularly in northern molting and breeding areas, and identify areas where overlap or exchange may occur with geese from other populations, such as the Pacific, Hi-line, and Western and Eastern Prairie. Research and banding on molting areas in northern Canada will be done in cooperation with wildlife agencies responsible for the welfare of these Canada goose populations.

### Depredation and Nuisance Problems

Increasing problems with depredation and nuisance Canada geese facilitated the development of a Flyway Depredation Policy. All agencies should strive to implement programs to assist in the deployment of management actions to assist landowners. Wildlife agencies should foster partnerships with municipalities to address problems. Stable funding sources to maintain assistance programs need to be sought.

Lead Agencies: All states and provinces, CWS, USFWS, USDA

### Translocation Programs

Translocations of western Canada geese to new areas outside the RMP range are discouraged. Because of their broad distribution and significant population growth in recent years, translocation programs designed for range expansion purposes shall be coordinated through the Subcommittee. Geese moved to new relocation sites might create new depredation and nuisance problems. In the case of translocating geese away from a depredation area, any state that could potentially be affected shall be consulted prior to moving any birds.

### Annual Review

The Subcommittee shall meet annually in July, to review progress toward achieving the goal and objectives of this plan and to recommend revisions. The Subcommittee shall prepare an annual status report to the PFSC and the Pacific Flyway Council at their joint meeting in July. The report shall consist of summaries of winter, breeding, production, and harvest surveys described under the Section V, Surveys and Banding, the minutes of the summer meeting, and recommendations for the forthcoming hunting season.

The Subcommittee Chairmanship shall be rotated every two years among the 8 states. The term of chairmanship is from October 1 to September 31. Responsibility for chairmanship is:

1999 - NV  
2001 - UT  
2003 - WY  
2005 - AZ  
2007 - CA  
2009 - CO  
2011 - ID  
2013 - MT  
2015 - NV

## VI. LITERATURE CITED

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## **APPENDICES**

Appendix A. M iwinter Waterfowl Survey (MWS) indices of the Rocky Mountain Population of Canada geese by reference area (RA).

Year	Mont. Cent.	Idaho SE	Wyoming			Colo. West	Utah			Nevada				Arizona				
			Cent.	West.	Total		North.	South.	Total	NE	South.	NW	Total	West.	East	North	Total	
1967	499	6,388		50	50	71	13	987	1,000	112	959	5,537	6,608	1,531	2,071		3,602	
1968	469	2,149	75	173	248	92	1,008	243	1,251	2	1,200	2,108	3,310	1,587	2,783		4,370	
1969	268	3,508	197 a	454	651	1,207	2,444	443	2,887	62	438	5,313	5,813	1,973	1,079		3,052	
1970	232	5,348	85	89	174	1,014	1,161	445	1,606	33	839	4,303	5,175	1,957	1,178		3,135	
1971	84	3,218	72	75 a	147	1,179	1,722	673	2,395	5	550	3,021	3,576	2,080	1,422		3,502	
1972	70	11,615	197	225	422	1,205	2,209	517	2,726	2	659	3,422	4,083	2,505	1,736		4,241	
1973	335	5,063	15	377	392	1,673	887	208	1,095	3	1,005	2,695	3,703	2,046	2,699		4,745	
1974	330	10,005	90	276	366	1,558	2,894	904	3,798	70	1,320	3,661	5,051	3,242	2,115		5,357	
1975	159	12,738	30	547	577	2,174	1,730	324	2,054	35	1,500	3,195	4,730	764	1,770		2,534	
1976	0	19,675	32	215	247	1,503	1,321	722	2,043	540	1,225	4,090	5,855	1,995	1,550		3,545	
1977	75	18,723	125	682	787	1,391	5,092	1,585	6,677	225	1,210	5,282	6,717	1,900	1,611		3,511	
1978	60	26,269	300	409	709	2,405	6,863	2,220	9,083	1,090	1,400	5,540	8,030	2,685	1,654		4,339	
1979	1	31,885	164 a	585 a	749	2,979	2,222	1,530	3,752	200	1,715	3,535	5,450	3,217	1,745		4,962	
1980	740	27,976	176 a	638 a	814	2,362	2,205	3,417	5,622	1,000	1,940	8,135	11,075	12,050	1,942		13,992	
1981	1,922	52,204	187 a	692 a	879	3,892	5,904	722	6,626	2,715	1,280	7,148	11,143	7,700	1,470		9,170	
1982	66	21,564	1,681	689	2,370	4,876	2,314	2,494	4,808	1,466	1,352	6,743	9,561	8,625	2,210		10,835	
1983	3,300	15,256	900	464	1,364	4,803	2,405	2,624	5,029	1,205	1,825	7,244	10,274	11,450	1,923		13,373	
1984	25	7,765	470	558	1,028	2,912	2,480	2,362	4,842	2,115	2,380	12,420	16,915	14,850	1,981		16,831	
1985	355	28,812	1,926	548	2,474	4,678	1,090	3,092	4,182	1,420	2,790	11,010	15,220	15,950	1,669		17,619	
1986	0	6,130	295	602	897	6,667	1,671	3,701	5,372	1,952	1,706	13,283	16,941	21,200	1,842		23,042	
1987	1,029	16,946	758	482	1,240	4,658	2,915	3,748	6,663	2,925	1,205	11,265	15,395	16,930	1,286		18,216	
1988	819	19,229	732	486	1,218	5,996	2,263	2,488	4,751	1,236	1,280	8,263	10,779	22,600	1,330		23,930	
1989	1,218	10,138	2,538	476	3,014	8,864	2,092	1,346	3,438	1,068	1,102	9,895	12,065	20,850	1,744		22,594	
1990	3,864	22,474	1,977	673	2,650	15,877	3,480	3,295	6,775	2,925	1,405	13,952	18,282	25,600	1,374		26,974	
1991	2,773	14,522	1,352	393	1,745	3,533	1,339	1,622	2,961	806	1,972	13,589	16,367	30,100	1,797		31,897	
1992	14,704	46,689	2,668	293	2,961	8,111	3,837	2,616	7,053	914	1,358	12,044	14,316	17,650	1,083		18,733	
1993	5,235	9,210	2,862	137	2,999	6,782	2,983	4,257	7,240	806	1,340	7,600	9,746	22,596	1,296		23,892	
1994	5,559	11,199	2,279	394	2,674	10,046	5,491	3,232	8,723	401	446	11,524	12,371	21,300	1,307		22,607	
1995	14,242	19,298	4,022	394	4,416	8,353	4,382	2,484	6,866	42	700	14,566	15,308	19,527	1,551		21,078	
1996	3,096	47,070	3,353	328 a	3,681	8,297	17,121	1,871	18,992	2,250	580	12,195	15,025	14,043	1,283		15,326	
1997	2,990	24,116	3,510	344 a	3,854	7,687	16,284	1,948	18,232	1,987	570	15,130	17,687	17,000	1,598		18,598	
1998	24,122	22,878	4,758	225	4,983	7,721	11,683	2,395	14,078	1,350	625	14,267	16,242	12,816	1,348		14,164	
1999	7,188	33,784	5,298	262	5,560	4,774	10,050	1,356	11,406	512	25,795	28,672	18,259	2,331	450		21,040	
2000	26,112	14,859	8,726	547	9,273	8,397	7,441	1,631	9,072	890	840	14,805	16,535	6,281	1,833	315		8,429
Avg.	3,586	18,491	1,571	405	1,930	4,628	4,088	1,885	5,973	1,006	1,213	8,899	11,118	11,319	1,694	383		13,036

a No survey calculated number

NOTE:

ARIZONA: Counts from Cibola, Havasu, and Imperial NW Rs. and L. Colo. River R. are used instead of California's MWS indices for survey area A-21. N. AZ first surveyed in 1999.

CALIFORNIA: Central RA includes A-19, 22 & 23; Southern RA is 14-6 and 14-7, less A-21. The geese along the Colorado River (A-21) are deleted from California; ground counts conducted in Arizona since 1975 are used instead and assigned to Arizona.

COLORADO: Brown Park was not surveyed in 1967-69, 1971-72, 1980.

IDAHO: SE Idaho indices differ from those reported prior to 1991 because of recalculations based upon boundaries between RMP and PP geese. The 1983 index for

SE Idaho may be lacking approx. 20,000 (reported as 30,000 in other accounts) geese that left American Falls just prior to the survey and not reported to be elsewhere. Southeast RA is MWS areas 1-6, and 7A, i.e. portion of 7 east of US Hwy 93.

MONTANA: MWS data in several earlier years included data for YNP, but these values are not reported herein. Winter of 1994 is 5-year previous-year average.

NEVADA: Beginning in 1976, MWS data for Humboldt Co. were included in 55-1 instead of 55-2; previously reported data had included Humboldt Co. in the NE reference area. NW

Nevada's indices include both RMP and PP Canada geese, unsegregated. NW, NE, and So. RA's correspond to MWS areas 55-1, 55-2, and 55-3, respectively.

UTAH: Northern RA is comprised of 85-1 and Daggett, Duchesne, and Uinta Cos. of 85-3; remainder of MWS units 85-3 & all of 85-2 are used for Southern RA.

WYOMING: MWS data in some years included data for YNP and Nat. Elk Refuge, but these values are not reported herein. In January 1991, Snake River in Western RA was not

surveyed. Western RA = Snake R., Salt R., & Lower Green R.; Central RA = Shoshone R., Wind R., Big Horn R. Winter of 1994 is 5-year previous-year average

NEW MEXICO Northwestem New Mexico from Havaap Lake to the Arizona Boarder - Band analysis has shown these to be RMP birds.

NOTE: In 1993, Lesser/Cackling Canada's are not included in index - NV (NW) 4,690; CA (Central) 127



Appendix A. Midwinter Waterfowl Survey (MWS) indices of the Rocky Mountain Population of Canada geese by reference area (RA) (Continued).

California			New Mex.	Total	3-Yr-Avg
Cent.	South.	Total	NW		Index
3,795	27,610	31,405	0	49,623	
5,928	14,290	20,218	0	32,107	
5,377	15,095	20,472	N.S.	37,858	39,863
2,916	6,160	9,076	N.S.	25,760	31,908
4,160	7,115	11,275	3	25,379	29,666
3,590	8,694	12,284	45	36,691	29,277
4,145	15,995	20,140	28	37,174	33,081
4,095	12,255	16,350	158	42,973	38,946
7,440	14,324	21,764	179	46,909	42,352
5,735	12,965	18,700	177	51,745	47,209
5,965	10,450	16,415	525	54,821	51,158
2,610	5,480	8,090	411	59,396	55,321
5,615	7,515	13,130	3,694	66,602	60,273
3,985	11,510	15,495	661	78,737	68,245
5,495	3,365	8,860	700	95,396	80,245
4,837	5,775	10,612	1,370	65,662	79,932
5,945	8,840	14,785	2,406	70,590	77,216
1,220	4,010	5,230	7,054	62,602	66,285
6,144	10,855	16,999	2,451	92,790	75,327
1,419	7,811	9,230	3,388 a	71,667	75,686
2,496	4,848	7,344	3,857 a	75,348	79,935
1,645	3,050	4,695	4,325	75,742	74,252
5,891	6,635	12,526	18,455 a	92,312	81,134
3,323	2,215	5,538	32,646	135,080	101,045
6,837	6,067	12,904	11,673	98,375	108,589
1,398	1,742	3,140	18,352	134,059	122,505
6,528	3,025	9,553	17,224	91,881	108,105
3,617	484	4,101	13,645	90,925	105,622
1,587	684	2,271	28,213	120,045	100,950
3,972	1,537	5,509	12,714	129,710	113,560
4,669	669	5,338	15,320	113,822	121,192
218	1,018	1,236	11,234	116,658	120,063
1,599	393	1,992	18,333	132,614	121,031
4,352	1,715	6,067	23,475	122,219	123,830
4,075	7,182	11,257	7,897	77,449	76,994

Appendix B. Number of RMP Canada geese using major molting areas

Year	Wyoming <sup>a</sup>												Total
	Wheat-land	Path-finder	Yellow-tail	Yellow-stone L.	Turbid Lake	Eden-BSandy	Pick-ett L.	67 Res-ervoir	Jack-son L.	Heart Lake	Ystone Meadow	McNinch Res.#1	
1980	8,500	150	150	3,500	650	285	225						13,460
1981	7,500	100	150	3,000	650	223	475						12,098
1982	5,000			7,275	1,050	290	495						14,110
1983	5,000			7,470	850	225	400						13,945
1984	4,500			7,685	1,350	200	300	150	780	325	250		15,540
1985	6,500	100		7,298	1,200	300	300	250	300	270	198		16,716
1986	7,000	150		2,810	700	160	160	380	900	260	215		12,735
1987	6,815	110		6,860	1,100	300	203	570	750	300	110		17,118
1988	8,965	60		6,900	1,000	546	245	870	1,500	200	200		20,486
1989	9,250			5,035	950	643	511	810	1,380	150	345		19,074
1990	7,563	545		3,955	350	807	421	855	225	180	810		15,711
1991	7,420			1,990	—	874	181		220	25			10,710
1992	6,210	62		1,539	475	1,244	389			52			9,971
1993	9,430	141	47	1,907	900	991	391		653	150			14,610
1994	10,600	193		1,055	800	887	420		474	354	1,619		16,402
1995													
1996	6,574	238		2,929	539	924	367	446	435	238	1,163		13,853
1997													
1998													
1999	14,277	613		4,889	890	1,924	1,505	654	550	510	1,664	252	27,728
2000													
<b>Avg.:</b>	<b>7,712</b>	<b>205</b>	<b>116</b>	<b>4,476</b>	<b>841</b>	<b>637</b>	<b>411</b>	<b>554</b>	<b>681</b>	<b>232</b>	<b>657</b>	<b>252</b>	<b>15,545</b>

<sup>a</sup> Beginning in 1996, Wyoming will conduct this survey once every 3 years.

Year	Alberta			Montana		Utah				GRAND TOTAL
	Ross	Knight	Total	Lin a Resvz	Total	Nepon-set	Bear R. Bay	Bear R. NWR	Total	
1970						406	0		406	406
1971						1,139	0		1,139	1,139
1972						310	19		329	329
1973						551	30		581	581
1974		300	300			712	1,700		2,412	2,712
1975		200	200			1,029	2,247		3,276	3,476
1976	150		150	6,239	6,239	654	1,620		2,274	8,663
1977	175	175	350	9,230	9,230	1,213	1,750		2,963	12,543
1978	200	250	450	9,578	9,578	1,191	1,623		2,814	12,842
1979				9,000	9,000	1,390	1,784	1,220	4,394	13,394
1980				10,000	10,000	1,716	4,156	1,954	7,826	31,286
1981				3,000	3,000	2,293	3,823	2,429	8,545	23,643
1982				4,800	4,800	2,275	3,929	2,903	9,107	28,017
1983				5,500	5,500	1,312	5,934	636	7,882	27,327
1984				9,000	9,000	1,750	7,214	3,394	12,358	36,898
1985				6,000	6,000	528	1,642	1,712	3,882	26,598
1986						935	3,885	1,723	6,543	19,278
1987				10,985	10,985	628	2,738	2,549	5,915	34,018
1988				10,300	10,300	565	3,101	1,202	4,868	35,654
1989						771	3,017	3,134	6,922	25,996
1990										15,711
1991						626	2,911	1,312	4,849	15,559
1992						866	3,373	1,215	5,454	15,425
1993						991	4,155	78	5,224	19,834
1994						1,455	3,587	16	5,058	21,460
1995						878	7,136	1,418	9,432	9,432
1996						739	7,016	109	7,864	21,717
1997						982	7,252	267	8,501	8,501
1998						994	11,893	110	12,997	12,997
1999						1,494	8,480	1,039	11,013	38,741
2000						1,430	9,288	239	10,957	10,957
<b>Avg.:</b>	<b>175</b>	<b>231</b>	<b>290</b>	<b>7,803</b>	<b>7,803</b>	<b>1,061</b>	<b>3,843</b>	<b>1,365</b>	<b>5,860</b>	<b>29,497</b>

Appendix C-1. Breeding pair indices of the Rocky Mountain population of Canada geese by Reference Area  
 [Survey methods and coverage vary and, therefore, a direct comparison between areas is not valid]

Year	Albt. South.	Mont Cent.	Idaho SE	Wyoming		Colo. NW	Utah		Nevada			Arizona East	TOTAL
				Cent	West		North	South.	NW <sup>a</sup>	NE	South.		
1971	31,066	470	1,109	531	992	133	420	82	--	--	19 <sup>b</sup>	--	34,822
1972	20,304	389	1,227	320	786	124	673	106	603	214	42 <sup>b</sup>	--	24,788
1973	27,404	503	1,053	408	1,218	119	563	67	513	229	31 <sup>b</sup>	--	32,108
1974	28,227	447	1,541	517	1,218	--	662	82	577	293	55 <sup>b</sup>	--	33,619
1975	26,898	--	1,739	559	868	140	542	119	387	174	61 <sup>b</sup>	7	31,494
1976	12,282	502	1,770	511	1,384	147	720	104	421	154	49 <sup>b</sup>	6	18,050
1977	12,965	779	1,398	681	1,387	187	503	81	402	224	75 <sup>b</sup>	11	18,693
1978	24,266	597	2,345	730	1,381	177	975	137	453	255	60 <sup>b</sup>	13	29,044
1979	32,592	796	2,143	651	1,645	268	1,076	135	267	210	94 <sup>b</sup>	7	38,808
1980	16,616	797	1,884	782	1,650	243	522	132	415	336	95 <sup>b</sup>	10	23,482
1981	35,529	867	2,878	871	1,647	259	495	179	--	119 <sup>b</sup>	70 <sup>b</sup>	10	42,924
1982	32,901	1,108	2,766	910	2,307	307	698	91	676	384	93	8	42,249
1983	27,343	886	2,743	984	2,302	245	498	83	659	392	84	9	33,485
1984	23,926	--	2,657	1,023	2,105	291	186	103	782	439	84	6	31,602
1985	26,101	898	1,480	1,055	2,544	363	233	136	900	468	89	9	34,276
1986	51,291	989	2,134	975	2,284	337	335	123	851	422	82	--	59,823
1987	36,540	1,020	3,085	904	3,007	484	416	174	981	563	70	3	47,247
1988	73,725	928	3,400	1,040	3,092	446	405	196	945	495	97	5	84,774
1989	60,770	810	1,623	1,212	2,995	364	489	150	854	359	107	--	69,733
1990	46,083	--	2,399	1,064	2,504	434	807	105	845	353	93 <sup>b</sup>	9	54,696
1991	43,739	9,791	2,961	930	1,967	284	530	151	--	--	154 <sup>b</sup>	14	60,521
1992	61,380	23,933	2,587	1,436	2,308	183	932	98	528	288	99	13	93,785
1993	61,153	36,407	3,351	1,395	2,459	99	1,133	92	473	217	102	16	106,897
1994	92,260	29,748	2,678	1,194	2,204	150	767	122	538	256	132	18	130,067
1995	105,101	28,992	2,216	1,080	1,320	132	610	131	626	219	86	18 <sup>c</sup>	140,531
1996	94,783	36,205	1,759	1,301 <sup>c</sup>	1,758 <sup>c</sup>	226	829	162	518	191	66	18	137,816
1997	64,263	24,671	2,507	1,333 <sup>c</sup>	1,637 <sup>c</sup>	158 <sup>c</sup>	648	95	669	302	90	18	96,392
1998	114,227	16,646	2,457	1,302	1,516 <sup>c</sup>	49	826	121	703	387	124	8	138,366
1999	134,076	41,393	2,476	1,497	1,934	99	551	128	870	504	74	20	183,622
2000	138,450	26,651	2,486	1,758	1,829	116 <sup>c</sup>	644	124	1,049	780	87	15	173,989

<sup>a</sup> -NW Nevada Reference Area is assigned to Pacific Population of Canada geese. <sup>b</sup> - Ground Counts all others are aerial <sup>c</sup> = Calculated number based upon ave  
 Note: In 1992, Montana's reporting changed from limited state surveys to the USFWS's Breeding Population data.  
 Currently both Alberta and Montana report the Breeding Population data.

Appendix C-2. Production (number of goslings) indices for Rocky Mountain population of Canada geese by Reference Area  
 [Survey methods and coverage vary and, therefore, a direct comparison between areas is not valid]

Year	Albt. South.	Mont Cent.	Idaho SE	Wyoming		Colo. NW	Utah		Nevada			Arizona East	TOTAL
				Cent	West		North	South.	NW <sup>a</sup>	NE	South.		
1971	--	889	--	--	--	542	1,955	382	157	--	--	--	<b>3,925</b>
1972	--	741	--	--	--	453	2,741	455	345	--	--	--	<b>4,735</b>
1973	--	573	--	--	--	422	2,645	307	333	--	233 <sup>b</sup>	--	<b>4,513</b>
1974	--	999	--	--	--	--	1,335	392	431	--	144 <sup>b</sup>	--	<b>3,301</b>
1975	--	823	--	587	70	497	2,283	517	305	70 <sup>b</sup>	162 <sup>b</sup>	19	<b>5,333</b>
1976	--	940	--	747	116	585	3,288	412	156	66 <sup>b</sup>	135 <sup>b</sup>	11	<b>6,456</b>
1977	1,970	1,213	--	613	40	683	2,411	340	113	67 <sup>b</sup>	48 <sup>b</sup>	8	<b>6,293</b>
1978	2,717	1,304	--	735	--	733	3,841	733	298	99 <sup>b</sup>	182 <sup>b</sup>	20	<b>10,662</b>
1979	2,938	1,785	--	858	45	1,160	4,742	635	464	130 <sup>b</sup>	199 <sup>b</sup>	15	<b>12,971</b>
1980	2,207	1,135	--	971	62	1,052	2,329	597	413	124	18	36	<b>8,944</b>
1981	2,756	1,214	--	1,143	96	1,121	2,276	846	570	212	23	49	<b>9,163</b>
1982	810	1,493	--	1,316	108	1,329	3,290	450	593	105	35	29	<b>9,558</b>
1983	1,483	1,240	--	1,438	125	1,061	2,354	379	846	274	69	9	<b>9,278</b>
1984	1,981	1,150	--	1,388	201	1,386	855	488	861	327	28	20	<b>8,685</b>
1985	1,988	825	--	1,474	--	1,634	1,073	491	633	112	48	9	<b>8,287</b>
1986	2,242	1,172	--	1,124	186	1,517	1,557	625	506	252	37	--	<b>9,218</b>
1987	1,735	1,883	--	1,251	56	2,178	1,675	753	487	257	10	9	<b>10,294</b>
1988	1,376	1,920	--	1,097	210	2,542	1,675	604	554	155	16	10	<b>10,159</b>
1989	1,162	1,642	--	1,516	247	1,365	2,260	524	532	242	202 <sup>b</sup>	--	<b>9,692</b>
1990	2,013	1,859	--	1,678	311	2,053	2,440	426	498	216	204 <sup>b</sup>	10	<b>11,708</b>
1991	--	686 <sup>c</sup>	--	--	--	1,457	2,124	509	221	--	154	28	<b>5,179</b>
1992	--	1,126	--	--	--	597	3,048	382	411	86	280	18	<b>5,948</b>
1993	--	2,009	--	--	--	520	2,581	433	95	--	138	28	<b>5,804</b>
1994	--	941	--	--	--	822	4,506	631	313	91	17	30	<b>7,351</b>
1995	--	466	--	--	--	620	3,708	647	316	121	133	27	<b>6,038</b>
1996	--	588	--	--	--	745	4,313	793	298	137	110	--	<b>6,984</b>
1997	--	--	--	--	--	--	3,191	465	622	241	101	9	<b>4,629</b>
1998	--	--	--	--	--	--	4,117	560	278	164	63	19	<b>5,201</b>
1999	--	--	--	--	--	--	2,574	573	231	85	157	20	<b>3,640</b>
2000	--	--	--	--	--	--	3,440	665	--	--	--	41	<b>4,146</b>

a-NW Nevada Reference Area is assigned to Pacific Population of Canada geese.

b-Ground Counts - all others were aerial

c-Incomplete counts, but numbers probably the same as previous year.

Appendix D. Harvest of RMP Canada geese by reference area as measured from state and federal surveys

Year	Albt. South.	Mont. Cent.	Idaho SE	Wyoming		Colo. NW	Utah		Nevada			Arizona	Calif. S&C	N.Mex.	Total
				Cent.	West.		North.	South.	NW	NE	South.				
1975	19,633	4,880	13,300	1,094	969	683	19,604	1,457	2,604	181	846	1,488	14,875		<b>80,126</b>
1976	20,263	4,371	16,300	1,317	713	450	17,865	1,517	5,714	129	536	1940	17,162		<b>46,458</b>
1977	17,065	5,365	19,200	1,408	1,067	386	14,856	1,052	3,723	140	279	1508	10,295		<b>74,836</b>
1978	25,337	4,867	25,500	1,557	2,183	713	30,433	4,032	5,215	178	605	3,732	14,994		<b>104,352</b>
1970	21,629	7,648	25,100	1,385	2,202	1,481	22,703	4,025	4,052	172	1,014	6,597	8,007		<b>96,982</b>
1971	30,212	6,969	25,900	1,598	1,594	1,070	20,848	3,804	3,733	93	649	1,593	9,208		<b>107,271</b>
1981	25,975	4,663	23,700	2,633	1,323	1,564	16,227	4,699	6,918	417	1,582	5,189	9,401		<b>104,291</b>
1982	33,278	4,577	33,800	2,176	3,086	2,464	28,331	5,341	5,720	383	455	3,714	6,305		<b>129,630</b>
1983	33,116	4,962	25,000	3,289	3,258	2,403	24,061	7,599	7,239	472	1,190	3,354	13,629		<b>129,572</b>
1984	25,625	6,948	17,100	3,875	3,127	1,930	26,018	11,180	10,143	456	1,059	4,300	11,749		<b>106,410</b>
1985	29,734	5,222	34,200	1,995	2,572	3,103	36,300	12,951	7,486	659	1,725	4,994	14,650		<b>103,237</b>
1986	25,762	6,719	24,000	3,723	2,702	2,900	15,151	6,796	5,632	704	633	6,621	7,537		<b>95,540</b>
1987	35,337	9,343	12,000	1,692	2,586	2,676	15,108	7,938	7,122	598	1,054	4,778	7,232		<b>105,772</b>
1988	30,186	7,149	18,600	2,540	2,242	3,115	9,706	5,559	6,922	507	1,261	4,054	9,667		<b>98,968</b>
1989	33,978	7,574	25,500	2,441	2,842	5,874	12,011	3,193	5,999	578	555	2,273	12,022		<b>111,998</b>
1990	38,701	12,330	31,400	1,970	2,123	8,214	13,314	6,318	9,095	669	888	2,219	10,761		<b>138,002</b>
1991	32,296	12,676	28,500	3,129	2,308	4,148	14,792	3,967	4,965	227	381	1,936	8,715		<b>118,040</b>
1992	26,452	8,009	20,100	1,892	1,672	5,937	12,046	4,316	8,742	787	611	3,631	13,188		<b>107,383</b>
1993	28,134	11,039	31,100	2,465	1,613	5,558	20,618 a	5,188 a	5,352	499	742	2,723	8,055		<b>123,086</b>
1994	30,130	11,884 a	29,400	2,723	2,308	2,445	29,190	6,060	7,321	399	853	3,009	7,586		<b>133,308</b>
1995	35,486	12,463 a	33,400	3,965	2,482	4,829	20,488	2,483	4,723	158	325	3,184	6,543		<b>130,529</b>
1996	42,952	13,042 a	40,127 a	4,437	4,642	6,575	33,226	7,090	7,637	874	517	3,247	6,290		<b>170,656</b>
1997	42,255	13,621 a	16,345	3,773	2,523	6,550	14,168	3,815	4,638	666	745	2,796	7,758		<b>119,653</b>
1998	33,419	14,199 a	14,771	5,023 a	3,137 a	6,272	21,047	5,561	7,145	867	623	2,761	3,844	3,199	<b>121,868</b>
1999	46,331	14,778 a	8,142	6,273	3,750	8,470	23,038	4,893	6,410	610	555	5,164	4,166	2,460	<b>135,040</b>
2000	41,843	15,358	32,300	6,419	2,755	7,180	16,948 a	4,128 a	3,609	480	450	3,916	7,110	328	<b>142,496</b>

a = Calculated number based upon average or trend

Appendix E. Hunter-use Days of RMP Canada geese by reference area from state and federal surveys

Year	Albt. South.	Mont. Cent.	Idaho SE	Wyoming		Colo. NW	Utah		Nevada			Arizona	Calif. S&C	Total
				Cent.	West.		North.	South.	NW	NE	South.			
1975	--	25,210	51,790	5,129	4350	3,510	273,094	24,276	56,665	6,995	22,404	56,814	--	<b>530,237</b>
1976	--	27,187	67,715	6,374	3491	5,059	201,608	11,705	48,503	6,427	18,328	60,152	--	<b>456,549</b>
1977	--	26,954	47,513	5,049	5689	4,270	188,882	19,300	43,131	5,126	15,116	49,482	--	<b>408,492</b>
1978	--	23,559	53,663	6,269	7319	3,762	192,218	25,871	45,269	4,475	12,915	48,921	--	<b>422,241</b>
1970	--	30,634	43,880	8,079	7532	11,145	193,449	29,295	45,634	4,976	15,991	76,789	--	<b>467,404</b>
1971	--	26,955	38,413	12,115	7768	9,983	165,643	12,069	45,716	5,304	12,229	42,733	--	<b>378,928</b>
1981	--	17,024	31,838	6,861	5593	9,075	145,002	18,307	53,626	5,975	15,569	57,184	--	<b>366,054</b>
1982	--	15,068	52,318	7,999	9497	13,040	225,776	12,665	59,516	8,515	11,793	46,356	--	<b>462,543</b>
1983	--	18,650	35,018	9,416	7388	11,020	201,040	29,080	60,662	6,314	13,407	39,470	--	<b>431,465</b>
1984	--	20,647	--	11,166	10272	10,740	220,686	56,782	75,803	10,121	14,333	63,366	--	<b>493,916</b>
1985	--	15,525	67,000	5,315	7013	13,107	190,482	45,908	16,036	1,654	6,470	64,508	--	<b>433,018</b>
1986	--	21,879	54,900	9,637	8099	13,142	152,355	46,496	13,312	2,930	3,405	76,502	--	<b>402,657</b>
1987	--	25,602	32,200	5,874	7593	13,762	151,667	47,853	12,068	1,805	5,913	53,425	--	<b>357,762</b>
1988	--	18,728	32,300	5,312	4880	12,050	96,971	27,086	11,808	1,116	2,665	33,683	--	<b>246,599</b>
1989	--	22,469	46,700	6,064	5751	18,553	92,097	21,475	10,540	1,703	4,099	20,731	--	<b>250,182</b>
1990	--	23,876	55,800	4,785	4885	15,230	97,879	24,129	12,027	1,614	2,379	16,324	--	<b>258,908</b>
1991	--	25,303	64,400	5,030	4,970	11,196	116,272	25,444	11,197	935	3,882	19,885	--	<b>288,514</b>
1992	--	22,516	31,700	4,685	3,753	13,333	97,985	21,853	9,580	685	3,071	22,464	--	<b>231,625</b>
1993	--	25,465	56,700	4,808	3,356	11,061	129,173 a	25,464 a	11,055	1,574	3,748	23,286	--	<b>295,690</b>
1994	--	25,800 a	50,000	5,099	4,663	7,284	160,361	29,075	13,674	1,307	3,256	30,041	--	<b>330,560</b>
1995	--	26,455 a	61,600	7,095	6,197	16,467	199,127	12,798	11,324	993	1,734	34,187	--	<b>377,977</b>
1996	--	27,109 a	52,273 a	5,719	5,279	15,320	258,472	41,844	11,208	2,738	3,836	35,784	--	<b>459,582</b>
1997	--	27,764 a	29,260	6,976	6,713	13,651	173,312	28,356	9,964	1,303	2,751	36,433	--	<b>336,483</b>
1998	--	28,418 a	53,061 a	9,244 a	7,707 a	--	204,518	36,949	4,222	2,071	2,425	40,639	--	<b>389,254</b>
1999	--	29,073 a	52,100	11,512	8,700	--	210,996	32,643	9,442	1,838	1,968	32,795	--	<b>391,067</b>
2000	--	29,728	52,600	8,436	6,158	--	184,019 a	30,195 a	7,104	976	2,429	38,637	--	<b>360,282</b>

a = Calculated number based upon average or trend