Actuarial Report

on the

PENSION PLAN FOR THE ROYAL CANADIAN MOUNTED POLICE

As at 31 March 1999

Office of the Superintendent of Financial Institutions
Bureau du surintendant des institutions financières

Office of the Chief Actuary
Bureau de l'actuaire en chef

Canada

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22 September 2000

The Honourable Lucienne Robillard, P.C., M.P.
President of the Treasury Board
Ottawa, Canada
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Dear Minister:

Pursuant to section 6 of the *Public Pensions Reporting Act*, I am pleased to submit the report on the actuarial review as at 31 March 1999 of the pension plan established under the *Royal Canadian Mounted Police Superannuation Act*.

Yours sincerely,

Jean-Claude Ménard

Jean-Claude Ménard, F.S.A., F.C.I.A.
Chief Actuary
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I- Executive Summary

A - Purpose of this Actuarial Report

This actuarial report on the pension plan established under the *RCMP Superannuation Act* (RCMPSA) was made as at 31 March 1999 pursuant to the *Public Pensions Reporting Act* (PPRA). The previous review was made as at 31 March 1996. The date of the next periodic review contemplated by the PPRA is 31 March 2002.

In accordance with accepted actuarial practice, the main purpose of this actuarial report is to show realistic estimates of:

- the balance sheet of the pension plan as at the valuation date, i.e. its assets, its liabilities, and the surplus or deficit as at that date;
- the annual amount to amortise over a period of years any surplus or deficit revealed as at the valuation date, and
- the projected cost of the plan for each of the next three plan years[1] following the valuation date.

B - Scope of the Report

The previous valuation report was based on the plan provisions as they stood after the enactment of Bill C-55 on 29 September 1992. There were no further changes to the plan provisions until Bill C-71 and Bill C-78 were enacted on 17 June 1999 and 14 September 1999, respectively. The significant plan changes resulting from these two bills are fully described in Appendix 1. This valuation report is based on the plan provisions shown in Appendix 2, which fully reflects the changes brought about by Bill C-71 and Bill C-78 even though both of them were enacted after the valuation date of 31 March 1999.

C - Main Findings

- As at 31 March 1999, the plan had a surplus of $2.43 billion resulting from the difference between the assets of $9.87 billion and the liabilities of $7.44 billion.
- The $2.43 billion surplus could be amortised in 15 equal annual instalments of $300 million beginning on 30 September 2000, based upon the yield shown in Appendix 6.

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1 Any reference to a given *plan year* in this report should be taken as the 12-month period ending 31 March of the given year.

- The $2.43 billion surplus could also be partially amortised in 15 equal annual instalments of $250 million beginning on 30 September 2000. Under this scenario, the surplus remaining at the end of 15 years is equal to 10% of the liabilities.
- For the plan year ending 31 March 2000, the estimated normal cost of the plan is 22.11% of pensionable payroll[1], that is $216.7 million.
- For the plan year 2001, the normal cost is estimated to decrease to 20.54% of pensionable payroll. This is mainly the result of a higher assumed rate of investment earnings from the new Fund compared with the Account.
- For the plan year 2002, the normal cost is estimated to decrease marginally to 20.50% of pensionable payroll. Further marginal decreases are expected in subsequent years as the demographic profile of the Force changes.

[1] As defined in Appendix 2 section D-1.

II- Financial Position of the Plan

A - Balance Sheet as at 31 March 1999

The balance sheet was prepared using the assets described in Appendix 3, the data described in Appendix 4, the methodology described in Appendix 5, and the assumptions described in Appendices 6 and 7.

Assets		**$ millions**
Balance in RCMP Superannuation Account		9,852.6
Present value of future contributions in respect of elected prior service		
Members	6.4	
Government	8.3	
		14.7
Total Assets		**9,867.3**
Liabilities		
For benefits accrued to, and in respect of contributors:		
• **Regular Members**	3,527.8	
• **Civilian Members**	331.6	
		3,859.4
For benefits payable to, and in respect of:		
• **Regular Members**		
Retirement pensioners	3,051.9	
Disability pensioners	168.6	
Surviving dependants	131.5	
		3,352.0
• **Civilian Members**		
Retirement pensioners	144.5	
Disability pensioners	20.3	
Surviving dependants	13.1	
		177.9
Administrative expenses to be charged to the RCMP Superannuation Account		47.7
Total Liabilities		**7,437.0**
Surplus		**2,430.3**

B - Cost Certificate

The normal costs, assets and liabilities were computed using the assets described in Appendix 3, the data described in Appendix 4, the methodology described in Appendix 5, and the assumptions described in Appendices 6 and 7. Emerging experience, differing from the corresponding assumptions, will result in gains or losses to be revealed in subsequent reports.

1. Normal Cost for Plan Year 2000

Plan year 2000 is the last year in which member and government contributions (except for past service elections made prior to 1 April 2000) will be credited to the Account and for which benefits accrued will be paid from the Account. The normal cost for plan year 2000 reflects the projected yields on the Account.

The normal cost for plan year 2000 was 22.11% of projected pensionable payroll or $216.7 million.

2. Normal Costs from Plan Year 2001

The following normal costs are expressed as a dollar amount as well as a percentage of the projected pensionable payroll in each given plan year.

Plan Year	% of Pensionable Payroll	Millions of Dollars
2001	20.54	207.9
2002	20.50	213.5
2003	20.50	219.0
2004	20.49	225.0
2005	20.45	231.3
2006	20.37	238.6
2011	19.71	284.5
2016	19.24	353.2

There is a decrease in normal cost from plan year 2000 to 2001 because the projected 7.25% yield on the new Fund exceeds the projected average yield on the Account. The effect was offset somewhat by the partial transition of the other economic assumptions from their select to ultimate values. This latter effect continues until plan year 2006 when the ultimate economic assumptions are all reached.

3. Allocation of Normal Costs

The foregoing normal costs are borne jointly by the contributors and the government. Contributors make required contributions in accordance with a prescribed formula (see Appendix 2), with the government covering the balance of the normal cost.

The following table shows the allocation of the normal cost expressed as a percentage of pensionable payroll, as well as the ratio of the cost borne by the government to that borne by the contributors. The allocation of normal costs between the government and members is shown only to plan year 2003 because member contribution rates are known with certainty only to 31 December 2003.

Plan	Allocation of Normal Costs		
Year	Government	Members	Ratio
	%	%	
2000	16.74	5.37	3.12
2001	15.26	5.28	2.89
2002	15.18	5.32	2.85
2003	15.16	5.34	2.84

4. Normal Cost by Type of Contributor

The normal cost for the plan is the weighted average of the separate normal costs for Regular Members and Civilian Members. For example, in the 2001 plan year the overall normal cost of 20.54% of pensionable payroll is the composite of 20.94% for Regular Members and 17.42% for Civilian Members. The difference in normal costs is chiefly attributable to the more advantageous early retirement provisions available only to Regular Members.

5. Summary Balance Sheet

The assets of the plan were $9.87 billion as at 31 March 1999. The total liabilities as at the same date are estimated at $7.44 billion, leaving a surplus of $2.43 billion. If this surplus were to be amortised over 15 years it would involve annual instalments of approximately $300 million beginning on 30 September 2000, which was estimated using the projected yields of the Account shown in Appendix 6-D.

If this surplus were to be partially amortised over 15 years such that the surplus remaining at the end of 15 years equals 10% of the liabilities, it would involve annual instalments of approximately $250 million beginning on 30 September 2000.

C - Sensitivity of Normal Costs to Variations in Key Assumptions

The results below measure the effect on the plan year 2006 normal costs if key economic assumptions are increased or decreased by one percentage point per annum. The increase or decrease of 1% in the economic assumption starts in plan year 2000. The Fund ultimate assumptions are reached in plan year 2006.

Revised economic assumptions	Ultimate Investment Yield	Ultimate Level of Inflation	Ultimate Productivity	Change in plan year 2006 normal costs (from current basis)	Revised plan year 2006 normal costs
Current basis	7.25%	3.00%	1.00%	N/A	20.37%
Return on investments	8.25%	3.00%	1.00%	-3.90%	16.47%
	6.25%	3.00%	1.00%	5.27%	25.64%
Level of inflation	7.25%	4.00%	1.00%	2.65%	23.02%
	7.25%	2.00%	1.00%	-2.15%	18.22%
Productivity	7.25%	3.00%	2.00%	2.10%	22.47%
(difference between wages and inflation)	7.25%	3.00%	0.00%	-1.83%	18.54%
Level of inflation and return on investments	6.25%	2.00%	1.00%	0.14%	20.51%

The supplementary estimates shown above indicate the degree to which the valuation results shown in the Cost Certificate depend on some of the key assumptions. The differences between the results above and those shown in the Cost Certificate can also serve as a basis for approximating the effect of other numerical variations in a key assumption, to the extent that such effects are indeed linear.

III– Reconciliation of Results with Previous Report

This section describes the various factors reconciling the surplus and normal cost of this valuation with the corresponding items of the previous valuation. Figures in brackets indicate negative amounts. The main items in the table below are explained in the following pages.

	Surplus ($ millions)	Surplus (% of liabilities as at 31 March 1999)	Normal Cost (% of pensionable payroll)
(as at 31 March 1996)	**1,911**	**25.7**	
(for plan year 1997)			**19.34**
Data corrections	(32)	(0.4)	0.01
Interest on surplus and above adjustments	618	8.3	
Cost/contributions difference	(40)	(0.5)	-
Experience gains and losses	(1)	0.0	0.13
Changes in assumptions and methodology	(47)	(0.6)	0.35
Expected normal cost change	-	-	2.34
Developments occurring after the valuation date	21	0.3	(0.06)
(as at 31 March 1999)	**2,430**	**32.7**	
(for plan year 2000)			**22.11**

Explanations of the Above Reconciliation

1. Data Corrections

The correction of errors (such as coding of status and pension amounts) in the 1995 data resulted in a decrease in the surplus of $32 million.

2. Interest on Surplus and Adjustments

Interest of $618 million was earned for the intervaluation period on the surplus (including the item 1 above).

3. Cost/Contributions Difference

A decrease in the surplus of $40 million resulted from the actual government contributions in the three fiscal years of the intervaluation period being less than the government portion of the normal cost shown in the previous report cost certificate. This amount includes interest accumulation on that difference to 31 March 1999.

4. Experience Gains and Losses and Effect of Changes in Assumptions and Methodology

The financial analysis of these items, which resulted in a decrease of surplus of $47 million, is shown in Appendix 8.

5. Expected Normal Cost Change

The gradual increase of 2.34% of pensionable payroll in the normal cost from plan years 1996 to 1999 projected in the previous report mainly reflects a partial transition from current to ultimate economic assumptions.

6. Changes to the Plan Provisions

The following developments occurred after the valuation date:

- The effect of adopting a five-year averaging period for both the annual pensionable earnings and the Year's Maximum Pensionable Earnings is to increase the liability by $112 million and the normal cost by 0.61% of pensionable payroll.
- The effect of capitalising administrative expenses expected to be charged to the Account from 1 April 2000 has been to increase the liability by $48 million.
- Liabilities have been increased by $7 million and the normal cost by 0.02% of pensionable payroll for extending payment of survivor benefits to a same-sex spouse.

- With the establishment of the new Fund to accept contributions after plan year 2000, the projected yields on the Account were increased to reflect the fact that it will no longer receive new money to be invested at an assumed rate (6% per annum) lower than the portfolio rate. Accordingly, the plan surplus rose by $202 million and the normal cost for plan year 2000 decreased by 0.78% of pensionable payroll.
- Improvements to the RCMP compensation package have increased the liabilities by $14 million and increase the normal cost for plan year 2000 by 0.09% of pensionable payroll.

IV- Actuarial Opinion and Peer Review

In our opinion, considering that this report was prepared pursuant to the *Public Pensions Reporting Act,*

- the valuation input data on which it is based are sufficient and reliable;
- the assumptions that have been used are, in aggregate, appropriate;
- the methodology employed is appropriate; and
- the value of assets exceeds the wind-up liabilities at the valuation date.

This report has been prepared, and our opinions given, in accordance with accepted actuarial practice, and particularly with the Canadian Institute of Actuaries' Standard of Practice for the Valuation of Pension Plans.

Mario Mercier
Actuary
Office of the Chief Actuary
Fellow of the Canadian Institute of Actuaries
Fellow of the Society of Actuaries

Jean-Claude Ménard
Chief Actuary
Office of the Chief Actuary
Fellow of the Canadian Institute of Actuaries
Fellow of the Society of Actuaries

Peer Review

I have reviewed this report, and believe that the actuarial assumptions are appropriate for the purposes of the valuation and the methods used are appropriate for the purposes of the valuation. In my opinion, the report has been prepared, and the actuaries' opinions given, in accordance with accepted actuarial practice.

Lou Cornelis
Principal Actuary
Office of the Chief Actuary
Fellow of the Canadian Institute of Actuaries
Fellow of the Society of Actuaries

Ottawa, Canada
22 September 2000

APPENDICES

Appendix 1 - Developments Occurring After 31 March 1999

The following important developments occurred after the valuation date of 31 March 1999 but were appropriately taken into account (unless noted otherwise) in the determination of both the accrued liabilities and the normal costs.

1. Bill C-71

Bill C-71, which received Royal Assent on 17 June 1999, includes the following provisions:

(a) For members terminating their employment on or after that date, benefits will be based on the highest average annual pensionable earnings over any consecutive five years; previously this was over six years.

(b) For members whose pensions had not been reduced by that date, the reduction in pension plan benefits at age 65 (earlier if the plan member becomes entitled to Canada Pension Plan disability benefits) will be based on the five-year average of the Year's Maximum Pensionable Earnings (YMPE) rather than a three-year average.

2. Bill C-78

Bill C-78, which received Royal Assent on 14 September 1999, includes the following provisions:

(a) Employee contribution rate changes
For calendar years 2000 to 2003 inclusive, employee contribution rates for both the Public Service Superannuation Act and the RCMP Superannuation Act are 4% of salary up to YMPE and 7.5% of salary above. Thereafter, the RCMP Superannuation Act employee contributions rates cannot exceed the corresponding Public Service Superannuation Act rates that Treasury Board can set as necessary subject to two limitations. The first is that no single contribution rate increase will exceed 0.4% of salary in any given year, and the second is that rates will not increase past the point where employees are paying 40% of the current Public Service Superannuation Act service costs.

(b) RCMP Pension Fund
Beginning on 1 April 2000, employer and employee contributions to the RCMP Superannuation Act pension plan will no longer be credited to the RCMP Superannuation Account. Rather, they will be deposited in the newly created RCMP Pension Fund to be invested in the financial markets.

For investment purposes, the amended legislation includes a provision to establish the Public Sector Pension Investment Board (PSPIB). The PSPIB will operate at arm's length from the Government and plan members. The PSPIB will be responsible for investing employer and employee contributions in the financial markets with a view to achieving maximum rates of return without undue risk.

(c) Superannuation Account Surpluses
The amended legislation gives the government the authority to debit the current surplus from the RCMP Superannuation Account in instalments over a period of up to 15 years. The legislation also allows maintaining a surplus equal to 10% of the liabilities at the end of the period.

(d) RCMP Pension Fund Surpluses
The amended legislation gives Treasury Board the authority to deal with any surpluses in the new RCMP Pension Fund as they occur, either by reducing employee and/or employer contributions or by withdrawing amounts from the Fund.

(e) Pension Deficits
The Government will continue to assume sole responsibility for deficits in the RCMP Superannuation Account and the RCMP Pension Fund.

(f) Administrative Expenses
Effective 1 April 2000, expenses attributable to program management and delivery will be charged to the Account and the Fund in proportion to plan members' service acquired before and after that date.

(g) Beneficiary Changes
The amended plan permits payment of survivor benefits to a same-sex survivor as if that person were an opposite-sex partner in a common-law relationship.

(h) The Bill includes authorities for Treasury Board to amend the RCMP SA to provide for improved vesting and portability arrangements. However, no regulations have been set yet and these benefits are not taken into account in this valuation.

(i) The Pay Equity Agreement was signed on 21 June 2000. It affects only few Civilian Members. The effect on the liability is trivial and there is no change in the normal cost. Consequently no adjustments were made to the liabilities.

Appendix 2 - Summary of Plan Provisions

Pensions for members of the Royal Canadian Mounted Police (the *Force*) were provided under the *Royal Canadian Mounted Police Act* until the *Royal Canadian Mounted Police Pension Continuation Act* and the *Royal Canadian Mounted Police Superannuation Act* (RCMPSA) were enacted in 1959. The current provisions of the pension plan established under the latter Act are summarised in this Appendix. However, the Act shall prevail if there is a discrepancy between it and the summary.

A - Membership

Membership in the plan is compulsory for all members of the Force regardless of length of service. Continued membership in the plan became optional for members of the Force who transferred to the Canadian Security Intelligence Service when it was established in 1984.

B - Contributions

1. Members

During the first 35 years of pensionable service, contributors make required contributions as follows:

- up to 31 December 1999, 7.5% of pensionable earnings minus their contributions to the CPP;
- for calendar years 2000 to 2003 inclusive, 4% of pensionable earnings up to the YMPE and 7.5% of salary above; and
- from calendar year 2004, at rates not exceeding the corresponding Public Service Superannuation Act rates set by Treasury Board. The Public Service Superannuation Act rates are subject to the limitations that no single contribution rate increase will exceed 0.4% of salary in any given year and that rates will not increase past the point where employees are paying 40% of the Public Service Superannuation Act current service costs.

After 35 years of pensionable service, contributors make required contributions of 1% of pensionable earnings. If eligible, a contributor may elect to contribute for prior service.

2. Government

(a) Current Service

The Government determines its normal monthly contribution as that amount, which when combined with the required contributions by contributors in respect of current service, is sufficient to cover the cost, as estimated by the President of the Treasury Board, of all future benefits that have accrued in respect of pensionable service during that month.

(b) Elected Prior Service

The Government credits to the Account in respect of elected prior service are analogous to those already described in respect of current service, except that from 1 April 2000 the Government will match member contributions made to the Account for prior service elections.

(c) Surpluses

Bill C-78, which received Royal Assent on 14 September 1999, gives the government the authority to:

- debit surpluses from the RCMP Superannuation Account in instalments over a period of up to 15 years; and,
- deal with any surpluses in the new RCMP Pension Fund as they occur, either by reducing employee and/or employer contributions or by withdrawing amounts from the Fund.

(d) Unfunded Liability

If an unfunded actuarial liability is identified through a triennial statutory actuarial report, the RCMP Superannuation Account and/or the RCMP Pension Fund are to be credited with such annual amounts that in the opinion of the President of the Treasury Board will fully amortise this deficit over a period not exceeding 15 years.

C - Summary Description of Benefits

The pension plan established under the RCMP Superannuation Act mainly aims at providing an employment earnings-related lifetime retirement pension to the eligible members of the RCMP. The plan also provides benefits to members in case of disability and to the spouse and children in case of death.

Subject to its integration with the pensions paid by the Canada Pension Plan, the initial rate of retirement pension is equal to 2% of the highest average of annual pensionable earnings over any period of six[1] consecutive years, multiplied by the number of years of pensionable service not exceeding 35. Once in pay, the pension is indexed annually with the Consumer Price Index. Such indexation also applies to deferred pensions during the deferral period.

Entitlement to benefits depends on either service in the Force or pensionable service, as defined in Notes 2 and 3 of section D below. The explanatory notes referred to in this summary description are given in section D.

[1] If the number of years of pensionable service is less than six, then the averaging is over the entire period of pensionable service. Note that for members retiring after 16 June 1999 the six years become five.

Detailed notes on the following overview are provided in the following section.

1. Regular Members

Type of Termination	Service in the Force[1]	Benefit
Retirement because of age (Note 5)	Under 10 years 10 or more years	Greater of: • return of contributions (Note 6), or • cash termination allowance (Note 7) Immediate annuity (Note 8)
Compulsory retirement to promote economy or efficiency in the Force	Under 10 years 10 to 19 years 20 or more years	Return of contributions Choice of: • return of contributions • deferred annuity (Note 9), or • reduced immediate annuity (Note 10) Immediate annuity
Compulsory retirement because of misconduct	Any period	At the discretion of the Treasury Board (Note 11)
Voluntary retirement	Under 10 years 10 to 19 years 20 years to exactly 24 years 24 years and at least one day	Return of contributions Choice of: • return of contributions, or • deferred annuity Annual allowance (Note 12) Immediate annuity
Type of Termination	**Pensionable Service**	**Benefit**
Compulsory retirement because of disability	Under 10 years 10 or more years	Greater of: • return of contributions, or • cash termination allowance Immediate annuity
Death leaving no eligible survivor	Under 5 years 5 or more years	Return of contributions to nominated beneficiary, otherwise to estate Minimum death benefit (Note 15)
Death leaving eligible survivor(s) (Notes 13 and 14)	Under 5 years 5 or more years	Greater of: • return of contributions, or • one month of pay per year of pensionable service Annual allowance to eligible survivor(s) (Note 16)

[1] Regardless of years of service in the Force, the benefit is only a return of contributions if pensionable service is less than 10 years.

2. Civilian Members

Type of Termination	Pensionable Service	Benefit
Voluntary retirement at age 60 or over	Under 5 years 5 or more years	Return of contributions (Note 6) Immediate annuity (Note 8)
Compulsory retirement because of misconduct	Under 5 years 5 or more years	Return of contributions At the discretion of the Treasury Board (Note 11)
Voluntary retirement before age 60	Under 5 years 5 to 29 years 30 to 34 years • under age 55 • age 55 or over 35 or more years	Return of contributions Choice of • return of contributions, • deferred annuity (Note 9), or • annual allowance (Note 17) As for 5 to 29 years Immediate annuity Immediate annuity
Compulsory retirement because of disability	Under 5 years 5 or more years	Greater of: • return of contributions, or • cash termination allowance (Note 7) Immediate annuity
Death leaving no eligible survivor	Under 5 years 5 or more years	Return of contributions to nominated beneficiary, otherwise to estate Minimum death benefit (Note 15)
Death leaving eligible survivor(s) (Notes 13 and 14)	Under 5 years 5 or more years	Greater of: • return of contributions, or • one month of pay per year of pensionable service Annual allowance to eligible survivor(s) (Note 16)

3. Benefits Paid after the Death of a Pensioner

Type of Termination	Benefit
Death leaving no eligible survivor	Minimum death benefit (Note 15)
Death leaving eligible survivor(s)	Annual allowance to eligible survivor(s) (Note 16)

D - Explanatory Notes

1. Pensionable Earnings

Pensionable earnings mean the annual employment earnings (excluding overtime but including pensionable allowances such as bilingual bonuses) of a contributor, subject for tax purposes to a prescribed yearly maximum from 23 February 1995 onward. The maximum is $99,300 for the 2000 calendar year.

Pensionable payroll means the aggregate pensionable earnings of all contributors with less than 35 years of pensionable service.

2. Indexation

(a) Level of Indexation Adjustments

All immediate and deferred annuities (pensions and allowances) are adjusted every January to the extent warranted by the increase, as at 30 September of the previous year, in the 12-month average Consumer Price Index. If the indicated adjustment is negative, annuities are not decreased for that year; however, the next following adjustment is diminished accordingly.

(b) First Indexation Adjustment

Indexation adjustments accrue from the end of the month in which employment terminates. The first annual adjustment following termination of employment is prorated accordingly.

(c) Commencement of Indexation Payments

The indexation portion of a retirement, disability or survivor pension normally starts being paid when the pension is put into pay. However, regarding a Regular Member retirement pension, the pensioner must be either

- at least 55 years old provided the sum of age and pensionable service is at least 85 years; or
- at least 60 years old.

3. Service in the Force

Service in the Force normally includes any period during which a person made required contributions to the Account or Fund, regardless of whether such contributions were subsequently withdrawn. As well, it includes any period of service as a member of any other police force subsequently taken over by the Force.

4. Pensionable Service

Pensionable service includes any period of service in the Force in respect of which a contributor either (1) made contributions that remain in the Account or Fund or (2) elected to contribute. It also includes any period of prior service with another employer in respect of which a contributor has elected to contribute in accordance with the provisions of the Act.

5. Retirement Because of Age

Retirement because of age means ceasing to be a Regular Member on or after reaching age 60, for reason other than disability or misconduct. Regular Members who joined the Force before July 1988 may elect to retain the prescribed retirement ages (56 for ranks up to corporal, 57 for sergeants, and 58 for staff sergeants and majors) in effect at that time.

6. Return of Contributions

Return of contributions means the payment of an amount equal to the accumulated current and prior service contributions paid or transferred by the contributor into the Account or Fund. Interest is credited at the rate of 4% per annum each 31 December on the accumulated contributions with interest as at the prior 31 December.

7. Cash Termination Allowance

Cash termination allowance means an amount equal to one month's salary, at the rate authorised to be paid to the contributor at the date of termination, multiplied by the number of years of pensionable service to the credit of the contributor, minus the total reduction in previous contributions to the Account or Fund by virtue of the integration of the plan with the CPP.

8. Immediate Annuity

Immediate annuity means an unreduced pension (see item 9 below) that becomes payable immediately upon a pensionable retirement or pensionable disability. The annual amount is equal to 2% of the highest average of annual pensionable earnings (calculated without reference to the yearly maximum described in Note 1) of the contributor over any period of six[1] consecutive years, multiplied by the number of years of pensionable service not exceeding 35. However, if such highest six-year earnings average exceeds the yearly maximum prescribed for the calendar year in

[1] If the number of years of pensionable service is less than six, then the averaging is over the entire period of pensionable service. Note that for members terminating employment after 16 June 1999 the six years become five.

which service is terminated, then the annual amount is reduced by 2% of such excess, multiplied by the number of years of pensionable service after 22 February 1995. For contributors with periods of part-time pensionable service, earnings used in the six-year average are based on a full-time scheduled work week but the resulting average is multiplied by the number (divided by 37.5) of hours worked per week averaged over the entire pensionable service.

When a pensioner attains age 65 or becomes entitled to a disability pension from the CPP, the annual amount of pension is reduced by 0.7% of the *indexed CPP annual pensionable earnings*[1] (or, if lesser, the indexed six-year pensionable earnings average on which the immediate annuity is based), multiplied by the *years of CPP pensionable service*[2].

Annuities are payable in equal monthly instalments in arrears until the end of the month in which the pensioner dies or when the disabled pensioner recovers from disability. Upon the death of the pensioner, either a survivor allowance (Note 16) or a residual benefit (Note 15) may be payable.

9. Deferred Annuity

Deferred annuity means an annuity that normally becomes payable to a former contributor who reaches age 60. The annual payment is determined as for an immediate annuity (Note 8) but is also adjusted to reflect the indexation (paragraph D-2 above) from date of termination to the commencement of benefit payments.

The deferred annuity becomes an immediate annuity during any period of disability beginning before age 60. If the disability ceases before age 60, the immediate annuity reverts to the original deferred annuity unless the pensioner elects an annual allowance (Notes 12 and 17) that is a prescribed actuarial equivalent to the deferred annuity.

10. Reduced Immediate Annuity

Reduced immediate annuity means an immediate annuity for which the annual amount of annuity determined as described in Note 8 is reduced until age 65 by 5% for each full year, not exceeding six, by which the period of service in the Force is less than 20 years. This type of annuity may be chosen by a Regular Member who has completed between 10 and 20 years of service in the Force upon being compulsorily retired

[1] *Indexed CPP annual pensionable earnings* means the average of the YMPE, as defined in the CPP, over the last three years of pensionable service, increased by indexation proportionate to that accrued in respect of the immediate annuity.

[2] *Years of CPP pensionable service* means the number of years of pensionable service after 1965 or after attaining age 18, whichever is later, but not exceeding 35.

- on account of a reduction in the Force, or
- to promote economy or efficiency (offered only at the discretion of the Treasury Board).

11. Retirement Because of Misconduct

Upon compulsory retirement because of misconduct, a contributor is entitled to

- a return of contributions, or
- a greater benefit as specified by the Treasury Board but not exceeding that available in the absence of misconduct.

12. Annual Allowance for Regular Members

Annual allowance means, for a Regular Member, an immediate annuity reduced by 5% for each full year by which

- the period of service in the Force is less than 25 years, or
- the age at retirement is less than the applicable retirement age,

whichever is the lesser.

13. Eligible Surviving Spouse

Eligible surviving spouse means the surviving spouse (includes a common-law or same-sex partner) of a contributor or pensioner except if:

- the contributor or pensioner died within one year of commencement of the spousal union, unless the Treasury Board is satisfied that the health of the contributor or pensioner at the time of such commencement justified an expectation of surviving for at least one year;
- the pensioner married at age 60 or over, unless after such marriage the pensioner either:
  - became a contributor again, or
  - made an optional survivor benefit election within 12 months following marriage to accept a reduced pension so that the new spouse would be eligible for a survivor benefit. This reduction is reversed if and when the new spouse predeceases the pensioner or the spousal union is terminated for reason other than death; or

- the pensioner is a female who retired before 20 December 1975 and did not make an optional survivor benefit election within the one-year period ending 6 May 1995.

14. Eligible Surviving Children

Eligible surviving children includes all children of the contributor or pensioner who are under age 18, and any child of the contributor or pensioner who is age 18 or over but under 25, in full-time attendance at a school or university, having been in such attendance substantially without interruption since he or she reached age 18 or the contributor or pensioner died, whichever occurred later.

15. Minimum Death Benefit

If a contributor or a pensioner dies leaving no eligible survivor, there is paid a lump sum equal to the greater of

- the return of contributions, and
- five times the annual amount of the immediate annuity to which the contributor would have been entitled, or the pensioner was entitled, at the time of death,

less all amounts already paid to the pensioner. Indexation adjustments are excluded from these calculations.

The same formula is used to determine the lump sum payable upon the death of an eligible survivor, except that all amounts (excluding indexation adjustments) already paid to the survivor are also subtracted.

16. Annual Allowance for Eligible Survivors

Annual allowance means, for the eligible surviving spouse and children of a contributor or pensioner, an annuity that becomes payable immediately upon the death of that individual. The amount of the allowance is determined with reference to a *basic allowance* equal to 1% of the highest average of annual pensionable earnings, without regard to the yearly maximum (Note 1), of the contributor over six[1] consecutive years, multiplied by the number of years of pensionable service not exceeding 35.

The annual allowance for a spouse is equal to the basic allowance unless the spouse became eligible as a result of an optional survivor benefit election, in which case it is

[1] If the number of years of pensionable service is less than six, then the averaging is over the entire period of pensionable service. Note that for members terminating employment after 16 June 1999 the six years become five.

equal to the percentage of the basic allowance specified by the pensioner making the election.

The annual allowance for an eligible surviving child is equal to 20% of the basic allowance, subject to a reduction if there are more than four eligible surviving children in the same family. The annuity otherwise payable to an eligible surviving child is doubled if the child is an orphan.

Annual allowances are not integrated with the CPP and are payable in equal monthly instalments in arrears until the end of the month in which the survivor dies or otherwise loses eligibility. If applicable, a residual benefit (Note 15) is payable to the estate upon the death of the last survivor.

17. Annual Allowance for Civilian Members

Annual allowance means, for a Civilian Member, an annuity payable immediately on retirement or upon attaining age 50, if later. The amount of the allowance is equal to the amount of the deferred annuity to which the Civilian Member would otherwise be entitled, reduced by 5% of such annuity multiplied by the difference between 60 and the age when the allowance becomes payable. However, if the Civilian Member is at least 50 years old, and has at least 25 years of pensionable service, then the difference is reduced to the greater of

- 55 minus the age, and
- 30 minus the number of years of pensionable service.

The Treasury Board can waive all or part of the reduction for Civilian Members who are involuntarily retired at ages 55 and over with at least ten years of service in the Force.

If a former Civilian Member entitled to an annual allowance commencing at age 50 becomes disabled before then, the entitlement changes to an immediate annuity (Note 8). If disability ceases before age 60, then the entitlement changes to a deferred annuity (Note 9) unless the pensioner elects an annual allowance that is the prescribed actuarial equivalent to the deferred annuity.

18. Division of Pension with Former Spouse

In accordance with the *Pension Benefits Division Act*, upon the breakdown of a spousal union (including common-law), a lump sum can be transferred by court order or by mutual consent from the plan assets to the credit of the former spouse of a contributor or pensioner. The maximum transferable amount is half the value, calculated as at the transfer date, of the retirement pension accrued by the contributor or pensioner during the period of cohabitation. If the member's benefits are not vested, the maximum transferable amount corresponds to half the member's contributions made during the period subject to division, accumulated with interest at the rate applicable on a refund of contributions. The benefits of the contributor or pensioner are then reduced accordingly.

Appendix 3 – Plan Assets

A - RCMP Superannuation Account

Until 31 March 2000, the plan was entirely financed through the RCMP Superannuation Account, which forms part of the Public Accounts of Canada. The Account is:

- credited with all contributions made by members and the Government up to 31 March 2000 (and prior service contributions made for elections made prior to 1 April 2000 or leave without pay contributions for periods before 1 April 2000 but remitted after that date);
- charged with the benefit payments made in respect of service earned under the Account; and,
- credited with investment earnings as though net cash flows were invested quarterly in 20-year Government of Canada bonds issued at prescribed interest rates and held to maturity. No formal debt instrument is issued to the Account by the Government in recognition of the amounts therein. Investment earnings are credited every three months to the Account on the basis of the actual average yield for the same period on the combined Superannuation Accounts of the Public Service, Canadian Forces and RCMP pension plans.

B - RCMP Pension Fund

Beginning on 1 April 2000, Government and member contributions (except for prior service elections made prior to 1 April 2000) to the pension plan were no longer credited to the RCMP Superannuation Account. Rather, they are deposited in a newly created RCMP Pension Fund to be invested in the financial markets with a view to achieving maximum rates of return without undue risk. The new Fund is charged with the benefit payments and administrative expenses in respect of service since 1 April 2000.

1. Reconciliation of Balances in the RCMP Superannuation Account

		(in millions of dollars)		
Account Balance as at 31 March 1996				7,527.7
Plan year	**1997**	**1998**	**1999**	**1997-1999**
Public Accounts opening balance	7,527.7	8,260.5	9,032.0	7,527.7
INCOME				
Investment Earnings	764.0	819.1	866.7	2,449.8
Employer Contributions	120.1	125.7	140.5	386.3
Employee Contributions	54.4	53.5	52.9	160.8
Transfers Received	0.5	0.6	0.2	1.3
Subtotal	939.0	998.9	1,060.3	2,998.2
EXPENDITURES				
Annuities	191.0	216.1	225.7	632.8
Pension Divisions	12.7	8.2	11.5	32.4
Return of Contributions	2.4	1.9	2.2	6.5
Transfers Sent	0.1	1.0	0.3	1.4
Cash Termination Allowances	0.0	0.2	0.0	0.2
Subtotal	206.2	227.4	239.7	673.3
Public Accounts Closing Balance	8,260.5	9,032.0	9,852.6	9,852.6
Account balance as at 31 March 1999			9,852.6	9,852.6

The above table shows the reconciliation of the assets in the RCMP Superannuation Account between the last valuation date and the current valuation date. Since the last valuation, the Account balance has grown by $2.3 billion (a 31% increase) to reach $9.9 billion as at 31 March 1999. The net growth in the Account balance is to a large extent the result of interest credits made.

2. Rates of Return

The following rates of return on the Account by plan year were calculated using the foregoing entries. These results will differ somewhat from those shown in the future actuarial reports as at 31 March 1999 and 2000, respectively, on the Public Service and Canadian Forces pension plans even though the quarterly yields used to compute actual investment earnings are identical for all three plans. The main reasons for this discrepancy are that:

(a) the uniform quarterly yields are applied only to the opening balance of the Accounts, thereby ignoring the cash flows during the quarter, and

(b) the results below were computed assuming a uniform distribution of cash flows during the plan year by imputing to them one-half year of interest.

Plan Year	Return
1997	10.17%
1998	9.94%
1999	9.62%

3. Sources of Asset Data

The Account entries shown in item 1 above were taken from the Public Accounts of Canada. In accordance with section 8 of the *Public Pensions Reporting Act*, the Office of the Comptroller General of Canada provided a certification of the assets of the plan as at 31 March 1999.

4. Account Projection

The following table shows a projection of the Account over 16 years commencing 1 April 1999. This projection is based on the assumption that the surplus will be withdrawn in equal instalments over 15 fiscal years beginning on 30 September 2000.

Account Projection with no Surplus at the End of 16 Years
($ billion)

Plan Year	Beginning Account Balance	Beginning Net Liabilities[1]	Beginning Surplus	Account Payments	Investment Earnings	Instalment Payments
2000	9.85	7.42	2.43	0.04[2]	0.91	0.00
2001	10.72	8.07	2.65	0.28	0.94	0.30
2002	11.08	8.50	2.58	0.31	0.95	0.30
2003	11.42	8.93	2.49	0.33	0.94	0.30
2004	11.73	9.34	2.39	0.36	0.94	0.30
2005	12.01	9.74	2.27	0.39	0.94	0.30
2006	12.26	10.12	2.14	0.42	0.93	0.30
2007	12.47	10.48	1.99	0.45	0.92	0.30
2008	12.64	10.81	1.83	0.48	0.92	0.30
2009	12.78	11.12	1.66	0.51	0.91	0.30
2010	12.88	11.40	1.48	0.55	0.89	0.30
2011	12.92	11.65	1.27	0.58	0.87	0.30
2012	12.91	11.86	1.05	0.61	0.83	0.30
2013	12.83	12.02	0.81	0.64	0.81	0.30
2014	12.70	12.15	0.55	0.66	0.78	0.30
2015	12.52	12.25	0.27	0.69	0.76	0.30
2016	12.29	12.29	-			

[1] The net liabilities are the plan liabilities net of the present value of future contributions in respect of elected prior service.

[2] In the first year, the amount shown is the difference between the benefits paid from and the contributions credited to the Account. For the future years the contributions will be deposited in a newly created pension fund to be invested in the financial markets.

The following table is similar to the first except that the surplus remaining at the end of 16 years is equal to 10% of the liabilities.

Account Projection
with Surplus Equal to 10% of Liabilities at the End of 16 Years
($ billion)

Plan Year	Beginning Account Balance	Beginning Net Liabilities[1]	Beginning Surplus	Account Payments	Investment Earnings	Instalment Payments
2000	9.85	7.42	2.43	0.04[2]	0.91	0.00
2001	10.72	8.07	2.65	0.28	0.94	0.25
2002	11.13	8.50	2.63	0.31	0.95	0.25
2003	11.52	8.93	2.59	0.33	0.95	0.25
2004	11.89	9.34	2.55	0.36	0.96	0.25
2005	12.24	9.74	2.50	0.39	0.96	0.25
2006	12.56	10.12	2.44	0.42	0.96	0.25
2007	12.85	10.48	2.37	0.45	0.95	0.25
2008	13.10	10.81	2.29	0.48	0.95	0.25
2009	13.32	11.12	2.20	0.51	0.95	0.25
2010	13.51	11.40	2.11	0.55	0.94	0.25
2011	13.65	11.65	2.00	0.58	0.92	0.25
2012	13.74	11.86	1.88	0.61	0.89	0.25
2013	13.77	12.02	1.75	0.64	0.87	0.25
2014	13.75	12.15	1.60	0.66	0.85	0.25
2015	13.69	12.25	1.44	0.69	0.83	0.25
2016	13.58	12.29	1.29			

1 The net liabilities are the plan liabilities net of the present value of future contributions in respect of elected prior service.
2 In the first year, the amount shown is the difference between the benefits paid from and the contributions credited to the Account. For the future years the contributions will be deposited in a newly created pension fund to be invested in the financial markets.

Appendix 4 – Membership Data

A - Sources of Membership Data

The individual data in respect of contributors, pensioners, and eligible survivors were provided as at 31 March 1998, and are shown in the summaries of data in this Appendix.

The Classification and Compensation Branch of the Royal Canadian Mounted Police provided relevant valuation input data on contributors while the RCMP Services Section of Public Works and Government Services Canada did so in respect of pensioners and survivors.

These data were projected to the 31 March 1999 valuation date generally using the demographic assumptions of the current valuation and the actual economic experience (1.6% indexation increase for pensioners and 4.5% general pay increases for contributors) for the relevant one-year projection period.

B - Validation of Membership Data

The principal validation tests applied to the valuation input data were as follows:

- reconciling the membership data with the data used in the previous valuation report (see tables 4A, 4B and 4C of Appendix 4);
- comparing the membership with that published in the Report on the Administration of the RCMP Superannuation Account for the year ending 31 March 1998;
- checking that the salary of a contributor is within a certain range and reasonably consistent in comparison with the salary of that contributor in the previous valuation report;
- verifying that the pensionable service of a contributor is reasonably consistent in relation to the attained age; and
- comparing the initial pension of each contributor retiring during the April 1995 to March 1998 period with the expected pension based on the 31 March 1998 valuation data, taking into account any changes arising from service after 31 March 1995; and
- comparing pension of each pensioner and survivor with the amount actually being paid according to the Report on the Administration of the RCMP Superannuation Account as at 31 March 1998.

Based on the omissions and discrepancies identified by these and other tests, appropriate adjustments were made to the basic data after consulting with the data providers.

Table 4A

Reconciliation of Membership

The following table, derived from the basic data, shows pertinent statistics concerning contributors, pensioners, and survivors during the period from April 1995 to March 1998 inclusive. Tables 4B and 4C show further details on reconciliations, by sex and type, of the contributors and the pensioners.

	Contributors	Retirement Pensioners	Disability Pensioners	Eligible Surviving Spouses	Eligible Surviving Children
As at 31 March 1995	18,152	5,471	307	740	251[1]
Data corrections	(2)	(18)	12	20	
New members	2,070	-	-	-	
Re-engagements	0	0	-	-	
Nonvested terminations	(358)	-	-	-	
Pensionable disabilities	(207)	-	207	-	
Pensionable retirements	(1,969)	1,969	-	-	
Emerging survivors	-	-	-	208	
Deaths	(62)	(187)	(25)	(34)	
Transfers to other plans	0	(1)	0	-	-
As at 31 March 1998	17,624	7,234	501	934	229[1]

[1] The available data were insufficient to allow the reconciliation of the change in the population of eligible surviving children.

Table 4B

Detailed Reconciliation of Contributors

	Regular Members		Civilian Members	
	Male	Female	Male	Female
As at 31 March 1995	14,367	1,610	1,211	964
Data corrections	13	(1)	(15)	1
New members	1,246	495	156	173
Re-engagements	0	0	0	0
Nonvested terminations	(162)	(59)	(63)	(74)
Pensionable disabilities	(150)	(20)	(19)	(18)
Pensionable retirements	(1,791)	(35)	(102)	(41)
Deaths	(47)	(2)	(9)	(4)
As at 31 March 1998	13,476	1,988	1,159	1,001

Table 4C

Detailed Reconciliation of Pensioners

A – Retirement Pensioners

	Former Regular Members		Former Civilian Members	
	Male	Female	Male	Female
As at 31 March 1995	5,011	9	302	149
Data corrections	(18)	0	0	0
Re-engagements	0	0	0	0
New pensioners	1,791	35	102	41
Deaths	(163)	-	(20)	(4)
Transfers to other plans	0	0	(1)	0
As at 31 March 1998	6,621	44	383	186

B – Disability Pensioners

	Former Regular Members		Former Civilian Members	
	Male	Female	Male	Female
As at 31 March 1995	233	18	24	32
Data corrections	9	0	1	2
New pensioners	150	20	19	18
Deaths	(19)	0	(5)	(1)
As at 31 March 1998	373	38	39	51

Table 4D

Male Regular Members as at 31 March 1998

Number of Contributors and Average Annual Pensionable Earnings[1]

Age Last Birthday	0-4	5-9	10-14	15-19	20-24	25-29	30-34	All Years of Service
	Completed Years of Pensionable Service							
To 24	172	-	-	-	-	-	-	172
	$38,900	-	-	-	-	-	-	$38,900
25-29	658	349	9	-	-	-	-	1,016
	$41,700	$51,200	$51,600	-	-	-	-	$45,100
30-34	359	1,047	625	26	-	-	-	2,057
	$44,200	$51,600	$52,700	$52,400	-	-	-	$50,700
35-39	119	405	758	1,245	52	-	-	2,579
	$45,700	$51,500	$53,100	$54,700	$55,000	-	-	$53,300
40-44	55	93	227	935	1,757	85	-	3,152
	$48,700	$51,700	$53,000	$54,700	$57,500	$59,800	-	$56,100
45-49	17	23	98	193	965	1,529	69	2,894
	$51,400	$51,400	$52,800	$54,100	$57,300	$61,800	$65,500	$59,400
50-54	11	8	54	46	179	388	691	1,377
	$48,400	$49,900	$52,800	$53,500	$56,000	$61,700	$68,000	$63,300
55-59	1	1	18	15	26	20	60	141
	*	*	$52,900	$52,200	$58,900	$54,100	$69,200	$61,000
60-64	-	-	-	-	-	1	-	1
	-	-	-	-	-	*	-	*
All ages	1,392	1,926	1,789	2,460	2,979	2,023	820	13,389[2]
	$42,800	$51,500	$52,900	$54,600	$57,300	$61,600	$67,900	$55,200

Average age last birthday: 40.5 years
Average pensionable service last anniversary: 16.9 years
Annualised pensionable payroll: $745,332,000

1 As defined in Note 1 in section D of Appendix 2.
2 There are 87 additional contributors who have completed the maximum 35 years of pensionable service.
* Not shown to protect the privacy of contributors.

Table 4E

Female Regular Members as at 31 March 1998

Number of Contributors and Average Annual Pensionable Earnings[1]

Age Last Birthday	Completed Years of Pensionable Service 0-4	5-9	10-14	15-19	20-24	25-29	30-34	All Years of Service
to 24	127	-	-	-	-	-	-	127
	$37,900	-	-	-	-	-	-	$37,900
25-29	294	159	3	-	-	-	-	456
	$41,600	$51,600	$51,600	-	-	-	-	$45,200
30-34	88	288	209	4	-	-	-	589
	$42,600	$51,600	$52,600	$52,400	-	-	-	$50,600
35-39	24	67	182	168	7	-	-	448
	$43,700	$51,500	$52,900	$53,700	$51,600	-	-	$52,500
40-44	7	24	47	93	92	1	-	264
	$43,500	$51,300	$51,700	$53,100	$55,700	*	-	$53,300
45-49	2	5	12	25	32	7	-	83
	$32,100	$51,600	$52,000	$53,000	$56,700	$54,200	-	$53,800
50-54	-	2	-	2	13	2	1	20
	-	$51,600	-	$52,800	$55,600	$52,800	*	$54,500
55-59	-	-	-	-	1	-	-	1
	-	-	-	-	*	-	-	*
All ages	542	545	453	292	145	10	1	1,988
	$41,000	$51,600	$52,600	$53,400	$55,700	$52,500	*	$49,500

Average age last birthday: 33.5 years
Average pensionable service last anniversary: 9.1 years
Annualised pensionable payroll: $98,406,000

[1] As defined in Note 1 in section D of Appendix 2.
* Not shown to protect the privacy of contributors.

Table 4F

Male Civilian Members as at 31 March 1998

Number of Contributors and Average Annual Pensionable Earnings[1]

Age Last	Completed Years of Pensionable Service							All Years
Birthday	0-4	5-9	10-14	15-19	20-24	25-29	30-34	of Service
To 24	13	-	-	-	-	-	-	13
	$37,000	-	-	-	-	-	-	$37,000
25-29	44	25	-	-	-	-	-	69
	$39,600	$41,800	-	-	-	-	-	$40,400
30-34	39	56	19	3	-	-	-	117
	$44,700	$45,700	$46,900	$47,700	-	-	-	$45,600
35-39	26	44	73	42	-	-	-	185
	$44,200	$48,300	$53,900	$50,400	-	-	-	$50,400
40-44	20	17	38	96	56	6	-	233
	$42,200	$47,500	$53,300	$55,100	$53,400	$48,500	-	$52,600
45-49	14	17	21	33	76	58	6	225
	$53,300	$48,900	$52,100	$50,900	$57,600	$57,400	$58,800	$55,200
50-54	8	11	16	26	41	62	35	199
	$56,000	$46,800	$48,000	$56,300	$56,600	$58,900	$51,300	$55,100
55-59	2	5	12	16	18	14	12	79
	$77,600	$40,500	$44,900	$47,200	$52,400	$61,500	$63,600	$53,400
60-64	2	3	3	5	6	3	-	22
	$66,200	$61,400	$38,700	$48,600	$52,700	$50,500	-	$52,000
65-69	-	-	-	-	1	2	-	3
	-	-	-	-	*	$53,600	-	$53,000
All ages	168	178	182	221	198	145	53	1,145[2]
	$44,300	$46,500	$51,500	$52,900	$55,600	$57,900	$54,900	$51,600

Average age last birthday: 43.4 years
Average pensionable service last anniversary: 15.4 years
Annualised pensionable payroll: $59,704,000

[1] As defined in Note 1 in section D of Appendix 2.
[2] There are 14 additional contributors who have completed the maximum 35 years of pensionable service.
* Not shown to protect the privacy of contributors.

Table 4G

Female Civilian Members as at 31 March 1998

Number of Contributors and Average Annual Pensionable Earnings[1]

Age Last	Completed Years of Pensionable Service							All Years of
Birthday	0-4	5-9	10-14	15-19	20-24	25-29	30-34	Service
To 24	17	-	-	-	-	-	-	17
	$38,400	-	-	-	-	-	-	$38,400
25-29	39	28	1	-	-	-	-	68
	$40,700	$38,200	$35,100	-	-	-	-	$39,600
30-34	52	73	29	2	-	-	-	156
	$42,500	$42,300	$41,800	$42,000	-	-	-	$42,300
35-39	31	47	66	53	5	-	-	202
	$38,200	$43,500	$46,600	$43,700	$41,000	-	-	$43,700
40-44	24	33	32	78	56	2	-	225
	$39,600	$40,300	$45,000	$47,000	$47,300	$42,300	-	$45,000
45-49	10	20	25	30	54	35	6	180
	$48,000	$40,000	$41,800	$45,600	$48,200	$50,400	$49,400	$46,400
50-54	9	14	19	19	14	16	15	106
	$44,500	$46,900	$44,800	$45,100	$43,800	$55,600	$53,300	$47,800
55-59	1	3	3	7	13	9	2	38
	$49,800	$49,300	$45,400	$53,000	$46,400	$48,600	$47,600	$48,400
60-64	-	-	-	3	2	1	-	6
	-	-	-	$41,800	$40,400	*	-	$43,000
65-69	-	-	-	-	1	-	1	2
	-	-	-	-	*	-	*	$47,300
All ages	183	218	175	192	145	63	24	1,000[2]
	$41,100	$41,900	$44,500	$45,800	$46,900	$51,200	$51,500	$44,500

Average age last birthday: 40.8 years
Average pensionable service last anniversary: 12.9 years
Annualised pensionable payroll: $44,498,000

[1] As defined in Note 1 in section D of Appendix 2.
* Not shown to protect the privacy of contributors.
[2] There is 1 contributor who has completed the maximum 35 years of pensionable service.

Table 4H

Male Regular Member Pensioners as at 31 March 1998

Number of Pensioners by Type and Amounts of Annual Pension[1]

Age Last	Retirement Pensioners			Disability Pensioners		
Birthday	Number	Average	Total	Number	Average	Total
35-39	5	$12,600	$63,000	10	$15,600	$156,000
40-44	165	$21,700	$3,573,000	57	$18,500	$1,056,000
45-49	812	$26,500	$21,515,000	84	$21,500	$1,806,000
50-54	1,392	$30,700	$42,724,000	95	$23,200	$2,201,000
55-59	1,684	$34,000	$57,273,000	53	$25,600	$1,355,000
60-64	1,316	$32,700	$43,059,000	35	$26,500	$929,000
65-69	924	$27,500	$25,455,000	23	$18,100	$416,000
70-74	178	$24,300	$4,319,000	9	$20,200	$182,000
75-79	81	$26,200	$2,123,000	4	$16,800	$67,000
80-84	42	$20,500	$862,000	3	$15,700	$47,000
85-89	18	$22,800	$411,000	-	-	-
90-94	4	$21,000	$84,000	-	-	-
All Ages	6,621	$30,427	$201,461,000	373	$22,023	$8,059,000

Retirement Pensioners	Disability Pensioners
Average age last birthday	**Average age last birthday**
At 31 March 1998: 57.6 years	At 31 March 1998: 52.5 years
At retirement: 48.3 years	At retirement: 45.2 years

[1] Equals initial amounts of pension plus all accrued indexation to and including 1 January 1998, reduced by any CPP and PBDA offsets in effect as at 31 March 1998. All pensions are in pay except for 13 retirement pensions deferred to age 60. All accrued indexation is in pay except that in respect of retirement pensioners who have not yet satisfied at least one of the relevant criteria for receiving indexation payments.

Table 4I

Male Civilian Member Pensioners as at 31 March 1998

Number of Pensioners by Type and Amounts of Annual Pension[1]

Age Last	Retirement Pensioners			Disability Pensioners		
Birthday	Number	Average	Total	Number	Average	Total
30-34	-	-	-	3	$8,700	$26,000
35-39	-	-	-	1	*	*
40-44	-	-	-	2	$15,000	$30,000
45-49	4	$21,300	$85,000	5	$20,600	$103,000
50-54	10	$21,900	$219,000	7	$23,400	$164,000
55-59	63	$29,500	$1,860,000	3	$15,700	$47,000
60-64	95	$26,600	$2,527,000	8	$18,100	$145,000
65-69	105	$17,600	$1,850,000	9	$12,200	$110,000
70-74	58	$16,400	$953,000	-	-	-
75-79	33	$14,500	$480,000	1	*	*
80-84	13	$16,800	$219,000	-	-	-
85-89	1	*	*	-	-	-
90-94	1	*	*	-	-	-
All Ages	383	$21,487	$8,229,000	39	$17,039	$666,000

Average age last birthday
At 31 March 1998: 65.7 years
At retirement: 58.1 years

Average age last birthday
At 31 March 1998: 55.9 years
At retirement: 49.3 years

[1] As defined in table 4H. All pensions are in pay except for 8 retirement pensions deferred to age 60.
* Not shown to protect the privacy of contributors.

Table 4J

Female Regular Member Pensioners as at 31 March 1998

Number of Pensioners by Type and Amounts of Annual Pension[1]

Age Last Birthday	Retirement Pensioners			Disability Pensioners		
	Number	Average	Total	Number	Average	Total
30-34	2	$7,500	$15,000	1	*	*
35-39	5	$13,400	$67,000	8	$13,400	$107,000
40-44	18	$18,400	$332,000	15	$14,700	$221,000
45-49	13	$21,100	$274,000	8	$16,100	$129,000
50-54	4	$19,800	$79,000	4	$15,300	$61,000
55-59	-	-	-	-	-	-
60-64	2	$13,000	$26,000	2	$7,500	$15,000
All Ages	44	$17,988	$793,000	38	$14,333	$543,000

Average age last birthday
At 31 March 1998: 44.3 years
At retirement: 42.4 years

Average age last birthday
At 31 March 1998: 44.0 years
At retirement: 40.3 years

1 As defined in Table 4H.
* Not shown to protect the privacy of contributors.

Table 4K

Female Civilian Member Pensioners as at 31 March 1998

Number of Pensioners by Type and Amounts of Annual Pension[1]

Age Last Birthday	Retirement Pensioners Number	Average	Total	Disability Pensioners Number	Average	Total
25-29	-	-	-	2	$4,500	$9,000
30-34	-	-	-	1	*	*
35-39	-	-	-	3	$10,000	$30,000
40-44	1	*	*	8	$11,500	$92,000
45-49	2	$18,500	$37,000	12	$13,300	$159,000
50-54	5	$16,000	$80,000	6	$14,300	$86,000
55-59	27	$15,100	$409,000	5	$8,800	$44,000
60-64	52	$22,100	$1,148,000	3	$13,700	$41,000
65-69	38	$13,900	$529,000	6	$7,500	$45,000
70-74	32	$13,600	$434,000	1	*	*
75-79	17	$13,900	$237,000	4	$11,500	$46,000
80-84	7	$12,100	$85,000	-	-	-
85-89	4	$13,000	$52,000	-	-	-
90-94	1	*	*	-	-	-
All Ages	186	$16,345	$3,039,000	51	$11,030	$562,000

Retirement Pensioners	Disability Pensioners
Average age last birthday	**Average age last birthday**
At 31 March 1998: 66.3 years	At 31 March 1998: 52.3 years
At retirement: 57.9 years	At retirement: 45.3 years

1 As defined in table 4H. All pensioners are in pay except for 8 retirement pensions deferred to age 60.
* Not shown to protect the privacy of contributors.

Table 4L

Eligible Survivors as at 31 March 1998

Number of Eligible Widow(er)s and Children and Amounts of Annual Allowance[1]

Age Last Birthday	Number	Average	Total
25-29	1	*	*
30-34	9	$6,300	$57,000
35-39	20	$6,000	$120,000
40-44	49	$8,000	$391,000
45-49	82	$9,500	$775,000
50-54	87	$11,700	$1,019,000
55-59	111	$12,600	$1,395,000
60-64	163	$13,100	$2,131,000
65-69	150	$11,500	$1,724,000
70-74	83	$9,900	$820,000
75-79	67	$10,600	$708,000
80-84	65	$9,600	$623,000
85-89	37	$9,500	$353,000
90-94	7	$6,600	$46,000
95-99	2	$8,000	$16,000
100-104	1	*	*
Widow(er)s[2]	**934**	**$10,915**	**$10,195,000**
Children	**229**	**$1,824**	**$418,000**

Average age last birthday
At 31 March 1998: 62.8 years
At death of contributor: 52.7 years

1 Equals initial amounts of annual allowance plus all indexation to and including 1 January 1998.
2 All but 16 are widows.
* Not shown to protect the privacy of contributors.

Appendix 5 - Methodology

A - Assets

The assets of the plan consist essentially of the recorded balance in the RCMP Superannuation Account, which forms part of the Public Accounts of Canada. These assets are shown at the book value of the underlying notional bond portfolio described in Appendix 3. For consistency, both the normal costs for plan year 2000 and the liabilities are determined using the projected Account yields, described in Appendix 6, that fully reflect the earning power of the assets. If a market value approach had been taken, the resulting higher asset value would have been largely offset by the higher liabilities attributable to discounting at market new money interest rates, which were lower than the projected yields assumed for this valuation.

The only other plan asset consists of the discounted value of future member contributions, and government credits in respect of prior service elections. There are two changes in methodology from the previous valuation, as follows.

- A discount rate of 6.0% per annum is used. The rate previously used was the projected yield on the Account.
- All future government credits were previously assumed to be 281% of member contributions. In this valuation, the government was assumed to contribute at 312% of member contributions for plan year 2000, and to match member contributions from plan year 2001.

B - Normal Costs

The projected accrued benefit actuarial cost method (also known as the projected unit credit method) was used to compute normal costs. Under this method, the normal cost computed in respect of a given year corresponds to the value, discounted in accordance with the projected yields described in section D below and shown in Appendix 6, of all future benefits considered to accrue in respect of that year's service. Consistent with this cost method, pensionable earnings are projected up to retirement using the assumed annual increases in average pensionable earnings (including seniority and promotional increases). The method used for projecting future employment earnings in excess of the prescribed yearly maximum pensionable earnings is described in section C-2 below.

C - Liabilities

1. Contributors

Consistent with the projected accrued benefit actuarial cost method employed to estimate normal costs, the plan's liabilities in respect of contributors as at the valuation date correspond to the value, discounted in accordance with the projected yields on the Account described in D below and shown in Appendix 6, of all future benefits accrued as at that date in respect of all previous years' service.

2. Salary Cap for Active Contributors

A yearly maximum salary cap is now prescribed for RCMP Superannuation Act purposes. Benefits earned on and after 23 February 1995 will be limited by this salary rate. For calendar year 2000, the prescribed yearly salary cap is $99,300. The cost effect of the salary cap is applied as an offset to the liabilities and normal costs calculated.

3. Pensioners and Survivors

Consistent with accepted actuarial practice and standards, the plan's liabilities as at the valuation date in respect of pensioners (including deferred annuitants) and survivors correspond to the value, using the projected yields described in section D below and shown in Appendix 6, of all future benefits.

D - Projected Yields

The projected yields (shown in Appendix 6) assumed in computing the present value of benefits involved in estimating the normal costs for plan year 2000 and the liabilities specified in sections B and C above are the projected annual yields on the combined book value of the Superannuation Accounts of the pension plans established under the *Public Service, Canadian Forces, and RCMP Superannuation Acts*. The normal costs from plan year 2001 are based on the expected Fund yield of 7.25% per annum.

The projected Account yields were determined by an iterative process involving the actual investment earnings on the combined existing assets of the three Accounts as at the valuation date, the assumed future new money interest rates (also shown in Appendix 6), and all future contributions until 31 March 2000 as well as all future expected benefits payable in respect of all pension entitlements accrued up to 31 March 2000.

Because interest is neither charged or credited to any cash flow during a quarter, we have made a further minor adjustment of either 0.03% per annum up to and including plan year 2014 and 0.04% per annum thereafter to the projected yields on the Account. Note that this adjustment is not shown in Appendix 6-D in the column “Yield Projected on Account”. This is a change in methodology from the previous report.

In the previous report, the Account yields were determined using the open-group approach, meaning that all expected future contributions (including those of future new entrants) to the plans were taken into account. As a result of the new pension Fund commencing 1 April 2000, the open-group approach is no longer appropriate.

E - Membership Data

For valuation purposes, individual data on each member were used.

The member data shown in Appendix 4 were provided as at 31 March 1998, which is one year earlier than the valuation date of this report. These data were accordingly projected to the 31 March 1999 valuation date generally using the demographic assumptions of the current valuation and the actual economic experience for the relevant one-year projection period.

Appendix 6 - Economic Assumptions

A- Key Economic Assumptions

The following key economic assumptions are required for valuation purposes:

1. Level of Inflation

The ultimate level of inflation was assumed at 3% per annum. Given the prospects of stable, moderate inflation for the foreseeable future and the average Canadian experience over the last 75[1] years (3.10% per annum), this seems appropriate. Current lower levels of inflation were assumed to trend to 3% per annum over a five-year select period.

2. Real Increases in Average Earnings

The assumed ultimate productivity rate (i.e. real increase in average employment earnings in excess of inflation) was assumed at 1% per annum. This lies about midway between the average Canadian experience of the past 25[1] years (0.40% per annum) and 75[1] years (1.53 % per annum). Low current real increases in average earnings were assumed to rise gradually over a five-year select period to reach an ultimate level of 1% per annum.

3. Real Rate of Return on Long-Term Government of Canada Bonds

The ultimate real rate of return on long-term Government of Canada bonds was assumed at 3% per annum. This appears reasonable considering the average experience of the last 75[1] years (2.92% per annum). Current higher real rates of return were assumed to trend to 3% per annum over a five-year select period.

4. Real Rate of Return on Fund

It was assumed that the ultimate real return on the Fund would be 4.25% per annum. This is based on the Fund holding a diversified mixture of assets. This appears reasonable considering the average experience over 25[1] years for diversified portfolios of Canadian pension plans (5.6% per annum) and current real rate of return assumptions used in actuarial reports of other Canadian pension plans. Current higher real rates of return were assumed to trend to 4.25% per annum over a five-year select period.

[1] For the period ending December 1998, according to the Canadian Institute of Actuaries Report on Canadian Economic Statistics 1924-1998.

Note that all of the real rates of return referred to in this report are actually real-return differentials, i.e., the difference between the effective annual rate of return on investments and the rate of increase in prices. This differs from the technical definition of the real rate of return, which, in the case of the ultimate Fund assumption, would be (1.0725 ÷ 1.03) – 1 = 4.126% rather than 4.25%.

Period of Years Ending 1998	25	50	75
Level of Inflation	5.40%	4.13%	3.10%
Real[1] Increases in Average Earnings	0.40%	1.58%	1.53%
Real[1] Return on Long-Term Canada Bonds	5.19%	2.53%	2.92%
Average Real[1] Return on Diversified Portfolios	5.60%	4.53%[2]	N/A

B - Derived Economic Assumptions

The following assumptions were derived from the key economic assumptions:

1. Projected Yields on Account

These yields are required for the computation of present values of benefits to determine the plan's liabilities and normal costs. The methodology used to determine the projected yields on the Account is described in Appendix 5-D.

2. Projected Yields on Fund

These yields are assumed at 7.25% per annum from fiscal year 2001, derived from the assumed future level of inflation and the real return on the Fund.

3. Increase in the Year's Maximum Pensionable Earnings (YMPE)

The YMPE is involved in the valuation process because the plan is integrated with the Canada Pension Plan. The assumed increase in the YMPE for a given year was derived, in accordance with the *Canada Pension Plan Act*, to correspond to the increase in the assumed Industrial Aggregate of Average Weekly Earnings over successive 12-month periods ending on 30 June.

[1] These real rates are calculated after the level of inflation is removed geometrically.
[2] Average over the last 35 years.

4. Increase in Pension Indexing Factor

The year's pension indexing factor is involved in the valuation process by virtue of its role in the pension inflation adjustments. It was derived by applying the indexation formula described in Appendix 2, which relates to the assumed Consumer Price Index increases over successive 12-month periods ending on 30 September.

C - Margin Against Adverse Fluctuations

The economic assumptions used in this valuation contain a measure of prudence, as is the norm for other pension plans in Canada.

D - Summary of Key and Derived Economic Assumptions

	Inflation		Employment Earnings Increase			Interest		
Plan Year	CPI Increase	Pension Indexing[1]	Industrial Aggregate	YMPE	Average Pensionable Earnings[2]	New Money Interest	Yield Projected on Account	Yield Projected on Fund
	%	%	%	%	%	%	%	%
2000	2.2	**1.5**[3]	1.4	**0.5**	3.8	6.0	9.28	N/A
2001	2.1	2.2	2.8	2.1	3.8	6.0	8.99	7.25
2002	2.4	2.3	2.8	2.8	3.9	6.0	8.75	7.25
2003	2.6	2.5	3.2	2.9	3.9	6.0	8.46	7.25
2004	2.8	2.7	3.6	3.3	4.0	6.0	8.23	7.25
2005	3.0	2.9	3.9	3.7	4.0	6.0	8.01	7.25
2006	3.0	3.0	4.0	4.0	4.0	6.0	7.78	7.25
2007	3.0	3.0	4.0	4.0	4.0	6.0	7.60	7.25
2008	3.0	3.0	4.0	4.0	4.0	6.0	7.44	7.25
2009	3.0	3.0	4.0	4.0	4.0	6.0	7.27	7.25
2010	3.0	3.0	4.0	4.0	4.0	6.0	7.10	7.25
2011	3.0	3.0	4.0	4.0	4.0	6.0	6.93	7.25
2012	3.0	3.0	4.0	4.0	4.0	6.0	6.62	7.25
2013	3.0	3.0	4.0	4.0	4.0	6.0	6.48	7.25
2014	3.0	3.0	4.0	4.0	4.0	6.0	6.36	7.25
2015	3.0	3.0	4.0	4.0	4.0	6.0	6.26	7.25
2016	3.0	3.0	4.0	4.0	4.0	6.0	6.12	7.25
2017	3.0	3.0	4.0	4.0	4.0	6.0	6.03	7.25
2018	3.0	3.0	4.0	4.0	4.0	6.0	5.98	7.25
2019	3.0	3.0	4.0	4.0	4.0	6.0	5.98	7.25
2020	3.0	3.0	4.0	4.0	4.0	6.0	5.99	7.25
2021+	3.0	3.0	4.0	4.0	4.0	6.0	6.00	7.25

[1] Assumed to be effective as at 1 January.
[2] Exclusive of seniority and promotional increases.
[3] Bold figures denote actual experience.

Appendix 7 - Demographic Assumptions

Except where otherwise noted, all demographic assumptions were determined from the plan's own experience as was done in the past. Where applicable, assumptions of the previous valuation were updated to reflect the available intervaluation experience of April 1995 to March 1998. Assumptions related to causes of termination of employment and the assumed benefit election are described below:

Termination Cause	Rate Basis	Comments	Benefit Election Assumed	Rates Shown
Termination with nonvested rights	Service, Sex, Type	Giving partial credibility to the 1996-1998 experience, the rates for Regular Members are generally lower (from 10% to 25% when service is less than 10 years) than the previous valuation and the rates for Civilian Members are on average higher (less than 5% on average) than the previous valuation.	Return of contributions	7B
Pensionable retirement	Age, Service and Type	No select period rates since the ERI program has expired. Rates were increased 2% from the previous valuation assumed ultimate rates, giving partial credibility to the known number of new retirees from April 1998 to March 2000.	Pension commencing immediately	7D, 7E
Pensionable disability	Age, Sex and Type	The disability incidence rates were revised to reflect the intervaluation period experience from 1996 to 1998. Rates for Regular Members were increased 50% from the previous valuation. We also recognise for the first time that disability incidence differs between Regular Members and Civilian Members.	Disability pension	7C
Mortality	Age, Sex, Year and Type	Rates deemed applicable at the contributor ages are generally close to those projected in the previous valuation. Mortality improvement was based on a 25-year select period with an ultimate mortality improvement of 0.5% at all ages. The first year was based on annual Canadian mortality improvement experience since 1985.	Survivor annual allowance, if eligible	7F 7G

Assumptions related to benefits are described in the table below:

Benefit	**Related Assumptions**	**Rate Basis**	**Comments**	**Rates shown**
Pension	Mortality	Age, Sex, Year and Type	Rates for male Regular Member retirement pensioners are generally higher. Rates for Civilian Member and female Regular Member pensioners were slightly modified giving partial credibility to the 1996-1998 experience. Mortality improvement as mortality in service.	7F 7G
Disability pension	Disabled life mortality	Age, Sex and Year	Rates for disability pensioner are a multiple of assumed mortality rates for healthy members, grading uniformly from 3.4 at age 30 to 1.4 age 70 and then 1.0 at age 90.	7F
	Canada Pension Plan/ disability benefits		30% of new disabilities, previous valuation used 33%.	
Surviving spouse Annual allowance	Probability that a member will have an eligible surviving spouse at death	Member's Age, Sex	For the first time, we recognise that the probability of having an eligible surviving spouse at death differs between Regular Members and Civilian Members. This benefit is being extended to same-sex couples. As a result, the revised valuation rates were increased by 1.5 % up to age 60 and by 0.5% after age 60 .	7H
	Average age of spouse at death of member	Member's Age, Sex	No change from the previous valuation.	7I, 7J
	Spouse mortality	Member's Age, Sex and Year	Rates have decreased slightly from those projected in the previous valuation. Mortality improvement was the same as for mortality-in-service.	7F 7G
Surviving children annual allowance	Average number of children at death of member	Member's Age, Sex	No change in rates from the previous valuation.	7I, 7J
	Average age of children at death of member	Member's Age, Sex	No change in rates from the previous valuation.	7I, 7J
	Proportions of children remaining eligible for allowances over age 17	Age of Child	No change in rates from the previous valuation.	

Other Demographic Assumptions

Considering their negligible effect on liabilities and normal costs, the following rates were assumed to be zero:

- disability incidence rates for non-disabled pensioners; and
- recovery rates for disabled pensioners.

(a) Seniority and Promotional Salary Increases

Based on the experience for plan years 1996 to 1998, the rates for Regular Members are unchanged. However, they were modified to reflect increases in senior constable and service pay allowances effective 1 April 2000.

The rates for Civilian Members were revised based on the experience for plan year 1996 to 1998. They are 8% lower than the previous ones.

(b) Age, Sex and Employment Earnings of New Contributors

It was assumed that the number, sex, and type of new contributors would be such that the population of each subgroup of contributors changes annually as follows:

	Plan years	
	2000-2005	2006+
	%	%
Male Regular Members	(2)	1
Female Regular Members	6	1
Male Civilian Members	(1)	(1)
Female Civilian Members	2	2

For each subgroup, the age distribution of new contributors was based on that of the actual new contributors during the 1998 plan year. The initial salary of new Civilian Members in a given age-sex cell in the 2000 plan year was assumed to be the same as the corresponding experience in the 1998 plan year but increased by 4.5 %. For all new Regular Members it was assumed to be in accordance with the salary schedule effective 1 January 1998. Initial salary is assumed to increase in future plan years in accordance with the assumption for contributors' average earnings increase.

Other Assumptions

(a) Pension Benefits Division/Optional Survivor Benefit / Leave Without Pay

Pension benefits divisions have almost no effect on the valuation results because the plan liabilities are reduced on average by roughly the amount paid to the credit of the former spouse. Consequently, no future pension benefits divisions were assumed in estimating normal costs and liabilities. However, past pension benefits divisions were fully reflected in liabilities.

Two other provisions, namely the optional survivor benefit and the suspension of membership while on leave without pay, were also treated like pension benefits divisions for the same reason.

(b) Minimum Death Benefit

This valuation does not take into account the minimum death benefit, described in Note 15, section D of Appendix 2, in respect of deaths occurring after retirement. The resulting understatement of accrued liability and normal cost is not material because a majority of the relatively few pensioners who die in the early years of retirement do leave an eligible survivor.

(c) Maximum Pensionable Earnings and Survivor Benefits

The tax-related limit of $99,300 prescribed for the 2000 calendar year was assumed to rise very slowly until 1 January 2005, and to rise thereafter in accordance with the assumed increase in the Industrial Aggregate of Average Weekly Earnings, as prescribed under the current legislation. Very few members are affected by this assumption; consequently, the effect is negligible.

In accordance with the *Income Tax Act*, the survivor benefits have been limited to 66 2/3% of the member's pension. It has been taken into account in the liabilities but the effect is minor. The excess is now payable from Retirement Compensation Arrangement.

(d) Administrative Expenses

From 1 April 2000 administrative expenses are to be charged to the plan. It is estimated that expenses will be 0.3% of pensionable payroll and that in the first plan year the Account will be charged with 99% of the total expenses. The percentage charged to the Account is expected to decrease by an annual factor of

- 2% for plan years 2001 to 2010 inclusive

- 4% for plan years 2011 to 2020 inclusive
- 5% for plan years 2021 to 2030 inclusive
- 6% for plan years 2031 to 2040 inclusive
- 7% for plan years 2041 to 2050 inclusive
- 8% thereafter.

The future expenses expected be charged to the Account have been capitalised and shown as a liability on the balance sheet, whereas the expenses to the Fund have been added to the normal cost for the year being expensed.

(e) Funding of Elected Prior Service

The government credits to the Account in the plan year 2000 in respect of prior service elections are assumed to be 312% of the corresponding contribution made by the contributors making the elections. Thereafter, the multiple is assumed to be 100%.

(f) Outstanding Terminations

Payments owing to former contributors as at 31 March 1999 were ignored in this valuation. The consequent understatement of liability is negligible because there were very few such cases and the average amount owing was modest.

Table 7A

Assumed Seniority and Promotional Salary Increases (expressed as a percentage of annual earnings)

Pensionable Service[1]	Regular Members[2]			Civilian Members
2000+	2000	2001	2002+	2000+
0	23.5%	23.5%	23.5%	4.6%
1	12.3	12.3	12.3	4.1
2	6.6	6.6	6.6	3.6
3	1.3	1.3	1.3	2.5
4	0.9	1.1	1.0	2.2
5	0.7	0.8	0.7	1.9
6	0.6	4.5	4.4	1.7
7	0.4	4.1	0.3	1.6
8	0.4	3.9	0.3	1.4
9	0.5	4.0	0.5	1.3
10	2.2	3.5	0.3	1.2
11	0.3	1.8	0.3	1.1
12	0.5	1.9	0.4	1.0
13	0.7	2.0	0.4	0.9
14	0.8	2.2	0.6	0.8
15	0.7	1.9	0.5	0.8
16	0.7	1.9	0.5	0.7
17	0.7	1.8	0.6	0.7
18	0.7	1.7	0.6	0.7
19	0.8	1.9	0.8	0.7
20	0.7	1.6	0.6	0.7
21	0.7	1.5	0.6	0.6
22	0.7	1.4	0.6	0.6
23	0.7	1.3	0.6	0.6
24	0.8	1.5	0.8	0.6
25	0.7	1.1	0.7	0.6
26	0.7	1.0	0.7	0.6
27	0.7	1.0	0.7	0.6
28	0.7	1.0	0.7	0.6
29	0.8	1.3	0.9	0.6
30	0.7	1.1	0.7	0.6
31	0.7	1.1	0.7	0.6
32	0.7	1.1	0.7	0.6
33	0.7	1.1	0.7	0.6
34	0.8	1.3	0.9	0.6
35+	0.7	1.1	0.7	0.6

[1] Expressed in completed years, as calculated at the beginning of the indicated plan year.
[2] Includes 0.2% attributable to service pay allowance increases on every fifth anniversary of engagement and 3.8% at duration six for Senior Constable allowances.

Table 7B

Assumed Rates of Termination with Nonvested Rights[1] (per 1,000 people)

Pensionable	Regular Members[3]		Civilian Members[4]	
Service[2]	Male	Female	Male	Female
0	37	55	45	68
1	22	34	29	50
2	15	28	27	44
3	14	27	26	44
4	14	26	26	43
5	13	23	24	37
6	9	21	16	30
7	8	19	13	26
8	8	18	11	25
9	7	16	9	24
10	7	16	9	23
11	6	16	7	22
12	5	15	6	20
13	5	13	6	18
14	4	9	5	14
15	3	6	3	9
16	2	5	2	7
17	2	3	2	4
18	1	2	1	3
19	1	2	1	2
20	1	1	1	2
21	-	1	-	1

1 Includes all terminations resulting in a lump sum payment, other than deaths leaving no eligible survivor(s) and occurring after at least five years of pensionable service.
2 Expressed in completed years.
3 Rates at durations ten and over do not apply from age 56 onward.
4 Rates at durations five and over do not apply from age 50 onward.

Note: Rates are halved for the plan year in which footnote 3 or 4 first appear.

Table 7C

Assumed Rates[1] of Pensionable Disability (per 1,000 people)

Age Last Birthday	Regular Members Male	Regular Members Female	Civilian Members Male	Civilian Members Female
28	.2	.2	.3	.4
29	.2	.5	.3	.4
30	.2	.8	.3	.5
31	.2	1.1	.3	.6
32	.3	1.4	.4	.6
33	.5	2.0	.4	.7
34	.6	2.7	.5	.8
35	.9	3.6	.6	1.1
36	1.1	4.1	.8	1.3
37	1.2	4.4	1.1	1.5
38	1.4	5.0	1.3	1.7
39	1.5	5.4	1.4	1.9
40	1.7	6.0	1.5	2.1
41	2.0	6.5	1.6	2.2
42	2.3	6.9	1.8	2.4
43	2.7	7.4	1.9	2.6
44	3.2	8.0	2.1	2.9
45	3.8	8.6	2.3	3.3
46	4.2	9.0	2.4	3.6
47	4.7	9.5	2.6	4.0
48	5.3	10.1	3.2	4.5
49	5.9	10.5	3.7	5.0
50	6.6	11.1	4.2	5.6
51	7.7	12.2	4.7	6.2
52	8.7	13.4	5.3	6.8
53	10.1	14.6	5.8	7.6
54	11.6	15.9	6.3	8.4
55	13.2	17.4	7.0	9.3
56	15.0	19.2	7.9	10.4
57	17.0	21.2	8.9	11.4
58	19.4	23.4	10.0	12.6
59	21.9	25.8	11.1	13.9

[1] Rates apply only if at least ten years of pensionable service have been completed (five years, if a Civilian Member), but not if the sum of the age (minimum 55 years) and the years of pensionable service is at least 85. Rates are halved for the plan year in which these criteria are first met or ceased to be met.

Table 7D

Assumed Rates[1] of Pensionable Retirement for Regular Members
(per 1,000 people)

Age Last	Completed Years of Pensionable Service							
Birthday	9-18	19	20-22	23	24-28	29-33	34	35+
37	-	2	-	-	-	-	-	-
38	-	3	4	-	-	-	-	-
39	-	8	9	-	-	-	-	-
40	-	11	14	-	-	-	-	-
41	-	14	18	42	-	-	-	-
42	-	16	21	48	46	-	-	-
43	-	19	24	53	52	-	-	-
44	-	21	28	57	54	-	-	-
45	-	22	28	63	56	-	-	-
46	-	23	30	69	56	-	-	-
47	-	25	33	73	61	65	-	-
48	-	26	33	75	64	68	-	-
49	-	28	36	82	80	78	-	-
50	-	29	38	88	78	83	-	-
51	-	33	41	99	89	94	-	-
52	-	39	50	120	112	113	196	-
53	-	54	68	166	151	153	294	198
54	-	78	103	243	221	198	398	313
55	82	192	128	297	275	258	476	355
56	10	201	124	302	286	247	506	368
57	20	190	116	292	267	241	499	359
58	31	181	113	277	259	242	471	347
59+	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

[1] Rates shown for duration 19 up to age 54 and for duration 9 are halved in practice to recognise that pensionable retirement can occur only after 20 or 10 years of service, respectively, have been completed.

Table 7E

Assumed Rates[1] of Pensionable Retirement for Civilian Members (per 1,000 people)

Age Last	Completed Years of Pensionable Service							
Birthday	4-8	9-13	14-18	19-23	24-28	29-33	34	35+
49	4	9	13	13	9	33	-	-
50	4	9	13	13	9	33	-	-
51	4	9	13	13	11	49	-	-
52	4	9	13	13	13	64	95	-
53	4	9	13	13	13	84	96	112
54	21	42	62	63	61	260	567	834
55	21	43	62	63	62	102	328	551
56	21	42	62	63	63	203	381	556
57	21	42	64	64	63	307	429	561
58	21	43	62	62	62	406	472	556
59	287	287	285	295	703	716	716	716
60	193	190	191	195	473	478	478	478
61	97	97	95	96	239	239	239	239
62	97	96	97	99	239	241	239	239
63	239	239	239	241	592	597	597	597
64	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

1 Rates shown for duration 4 and for age 49 are halved in practice to recognise that pensionable retirement can occur only after 5 years of service have been completed or age 50 has been attained according to the previous report, respectively.

Table 7F

Assumed Rates of Mortality for 2000 Plan Year (per 1,000 people)

Age Last	Regular Members[1]		Civilian Members[1]		Surviving Spouses	
Birthday	Male	Female	Male	Female	Male	Female
20	.5	.2	.7	.2	1.0	.3
25	.6	.3	.8	.3	1.0	.3
30	.7	.3	1.0	.3	1.3	.4
35	.8	.4	1.0	.5	1.6	.6
40	1.1	.6	1.3	.7	1.8	1.0
45	1.5	.8	1.8	.9	2.4	1.5
50	2.4	1.2	2.8	1.4	3.7	2.4
55	4.0	1.9	4.9	2.3	6.3	4.0
60	7.2	3.6	9.1	4.4	10.9	6.4
65	12.9	7.0	16.3	7.9	17.9	10.0
70	21.6	11.2	26.9	13.5	28.4	16.1
75	35.2	18.5	43.6	22.5	45.7	26.2
80	57.5	32.4	72.1	38.9	75.2	44.9
85	92.4	56.0	116.9	67.0	119.4	78.0
90	143.3	97.9	186.0	114.3	180.0	132.4
95	210.0	157.1	281.2	184.6	258.5	210.2
100	287.3	234.0	372.3	276.2	358.6	318.5
105	371.2	327.7	425.8	382.7	454.9	432.4
110	439.9	412.1	459.1	467.9	493.0	484.4
115	500.0	500.0	500.0	500.0	500.0	500.0

[1] Rates apply only to contributors and retirement pensioners. Rates for disability pensioners are a multiple of these rates, grading uniformly from 3.4 at age 30 to 1.4 at age 70 and then to 1.0 at age 90.

Table 7G

Sample of Assumed Longevity Improvement Factors for 2000 Plan Year

	Annual % of Mortality Reduction[1]			
Age	Male		Female	
Last Birthday[2]	2001	2026+	2001	2026+
20	2.50	0.50	1.50	0.50
25	1.50	0.50	1.25	0.50
30	0.50	0.50	1.00	0.50
35	0.25	0.50	1.25	0.50
40	1.00	0.50	1.25	0.50
45	2.00	0.50	1.50	0.50
50	2.50	0.50	1.25	0.50
55	2.25	0.50	1.00	0.50
60	2.25	0.50	1.00	0.50
65	2.00	0.50	1.25	0.50
70	2.00	0.50	1.50	0.50
75	1.75	0.50	1.25	0.50
80	1.25	0.50	1.25	0.50
85	1.00	0.50	1.00	0.50
90	0.75	0.50	0.75	0.50
95	0.50	0.50	0.50	0.50
100	0.25	0.50	0.25	0.50
105+	0	0.50	0	0.50

[1] Mortality improvement is based on a 25-year select period with an ultimate annual mortality improvement of 0.5% at all ages. During the select period, the annual mortality reduction is linearly interpolated between 2001 and 2026.
[2] Expressed in completed years calculated at the beginning of the plan year.

Table 7H

Assumed Probability[1] a Member will have an Eligible Surviving Spouse[2] at Death

Age Last Birthday at Death	Regular Member Male	Regular Member Female	Civilian Member Male	Civilian Member Female
25	.42	.36	.34	.57
30	.70	.49	.43	.57
35	.84	.53	.48	.57
40	.90	.53	.57	.57
45	.92	.53	.67	.57
50	.93	.52	.74	.57
55	.94	.51	.79	.57
60	.94	.48	.80	.52
65	.89	.42	.79	.47
70	.83	.36	.77	.40
75	.77	.29	.72	.32
80	.69	.21	.64	.22
85	.57	.13	.53	.13
90	.43	.07	.40	.06
95	.27	.03	.25	.02
100	.14	.01	.10	.00
105	.06	.00	.01	.00
110	.02	.00	.00	.00

1 Does not apply if the deceased member was a contributor with less than five years of pensionable service.
2 Assumed to be of the opposite sex.

Table 7I

Assumptions for Survivor Allowances[1] in Respect of Female Members

Age Last Birthday at Death	Eligible Spouse Age Difference[2]	Eligible Children Average Number	Eligible Children Average Age
25	1	0.12	2
30	2	0.76	3
35	2	1.09	7
40	2	1.15	11
45	2	1.01	15
50	3	0.61	19
55	3	0.24	21
60	3	0.06	23
65	2	0.02	24
70	2	-	-
75	1	-	-
80	1	-	-
85	0	-	-
90	(2)	-	-
95	(4)	-	-
100	(6)	-	-

1 Payable unless the deceased member was a contributor with less than five years of pensionable service.
2 Age of spouse less age of member, both calculated at death of member.

Table 7J

Assumptions for Survivor Allowances[1] in Respect of Male Members

Age Last Birthday at Death	Eligible Spouse Age Difference[2]	Eligible Children Average Number	Eligible Children Average Age
25	(1)	0.23	3
30	(1)	1.18	4
35	(1)	1.61	8
40	(1)	1.63	12
45	(1)	1.52	16
50	(2)	1.00	19
55	(2)	0.40	20
60	(3)	0.18	21
65	(3)	0.06	22
70	(3)	0.03	23
75	(3)	0.02	24
80	(4)	-	-
85	(4)	-	-
90	(5)	-	-
95	(6)	-	-
100	(8)	-	-
105	(11)	-	-
110	(14)	-	-
115	(18)	-	-

1 Payable unless the deceased member was a contributor with less than five years of pensionable service.
2 Age of spouse less age of member, both calculated at death of member.

Appendix 8 - Experience Gains and Losses and Effect of Changes in Assumptions and Methodology (in millions of dollars)

	Effect of Experience Gains and Losses		Comments	Effect of Changes in Assumptions & Methods	
	Surplus	Normal Cost		Surplus	Normal Cost
Economic					
Interest	(6.0)	-	The projected yields from the open-group approach are lower than the corresponding yields used in the previous valuation.	(138.0)	.48
Pension Indexing	40.0	-	The assumed pension indexation increases up to and including the 2005 plan year are lower than the corresponding assumption in the previous valuation.	84.5	(.03)
Average Earnings & YMPE Increases	(6.0)	.03	Assumed salary increases are higher than the corresponding assumption in the previous valuation. Assumed YMPE increases are lower than the corresponding assumption in the previous valuation.	(32.7)	.21
Discount rate and government future contributions in respect of elected prior service	N/A	N/A	Discount rate changed to 6% per annum from Account yield. Previous valuation assumed government would contribute at a constant 183% of member prior service contributions.	(11.5)	-
Demographic					
Seniority and promotional salary increases	16.7	(.02)	The seniority salary increases freeze which began in June 1994 and extended for two years, expired during the intervaluation period; liability and normal cost estimates were included in the previous valuation results.	3.2	(.02)
Mortality base year and mortality improvement factors	2.2	-	The mortality improvement factors were modified and it had a significant effect on the valuation results.	64.6	(.28)
Termination other than death	(19.7)	(.02)	The plan experienced losses for pensionable retirements, pensionable disabilities and terminations with nonvested rights.	(25.2)	.10
Miscellaneous	(27.9)	.14		8.5	(.11)
Totals	(0.7)	.13		(46.6)	.35

Appendix 9 - Acknowledgements

The Office of the Comptroller General of Canada provided a certification of the assets of the plan as at 31 March 1999.

The Classification and Compensation Branch of the Royal Canadian Mounted Police provided relevant valuation input data on contributors while the RCMP Services Section of Public Works and Government Services Canada did so in respect of pensioners and survivors.

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The following people assisted in the preparation of this report:

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