



Office of the Superintendent of
Financial Institutions Canada

Office of the Chief Actuary

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ACTUARIAL REPORT

on the Pension Plan for the
**ROYAL
CANADIAN
MOUNTED
POLICE**

as at 31 March 2012

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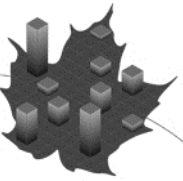
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10 May 2013

The Honourable Tony Clement, P.C., M.P.
President of the Treasury Board
Ottawa, Canada
K1A 0R5

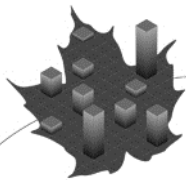
Dear Minister:

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 2012 of the Royal Canadian Mounted Police pension plan. This actuarial review is in respect of pension benefits and contributions which are defined by Parts I, III, and IV of the *Royal Canadian Mounted Police Superannuation Act*, the *Special Retirement Arrangements Act* and the *Pension Benefits Division Act*.

Yours sincerely,

A handwritten signature in cursive script that reads "Jean-Claude Ménard". The signature is written in a dark ink and is positioned above the printed name and title of the signatory.

Jean-Claude Ménard, F.S.A., F.C.I.A.
Chief Actuary
Office of the Chief Actuary



ACTUARIAL REPORT

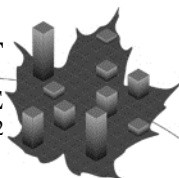
Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

TABLE OF CONTENTS

	Page
I. Executive Summary	7
A. Purpose of Actuarial Report.....	7
B. Valuation Basis	7
C. Main Findings	8
II. Valuation Results	10
A. RCMPSA - Financial Position	10
B. RCMPSA – Reconciliation of the Changes in Financial Position	11
C. RCMPSA - Cost Certificate	15
D. RCMPSA - Sensitivity to Variations in Key Assumptions.....	17
E. RCA - Valuation Results.....	18
F. Summary of Estimated Government Costs	19
III. Actuarial Opinion.....	20

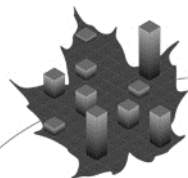
APPENDICES

Appendix 1 – Summary of Pension Benefit Provisions	21
Appendix 2 – Retirement Compensation Arrangement Benefit Provisions.....	30
Appendix 3 – Assets, Accounts and Rates of Return	31
Appendix 4 – Membership Data.....	34
Appendix 5 – RCMPSA Valuation Methodology	36
Appendix 6 – RCMPSA Economic Assumptions	39
Appendix 7 – RCMPSA Demographic and Other Assumptions.....	48
Appendix 8 – RCA Valuation Methodology and Assumptions	55
Appendix 9 – Superannuation Account Projection	56
Appendix 10 – Pension Fund Projection	57
Appendix 11 – Uncertainty of Results	58
Appendix 12 – Detailed Membership Data	63
Appendix 13 – Mortality Table for the Calculation of Instalments	73
Appendix 14 – Acknowledgements.....	74



TABLES

	Page
Table 1	Ultimate Best-Estimate Economic Assumptions.....8
Table 2	RCMPSA Current Service Cost on a Calendar Year Basis.....9
Table 3	State of the Superannuation Account.....10
Table 4	Balance Sheet – Pension Fund11
Table 5	Reconciliation of RCMPSA Financial Position12
Table 6	Experience Gains and Losses.....13
Table 7	Revision of Actuarial Assumptions14
Table 8	Current Service Cost for Plan Year 2013.....15
Table 9	Reconciliation of RCMPSA Current Service Cost.....15
Table 10	Projection of Current Service Cost16
Table 11	Estimated Contributions and Costs for Prior Service.....17
Table 12	Sensitivity of Valuation Results.....17
Table 13	State of the RCA Account.....18
Table 14	Estimated Total Government Costs.....19
Table 15	Reconciliation of Balances in Superannuation Account31
Table 16	Reconciliation of Balances in Pension Fund.....32
Table 17	Reconciliation of Balances in RCA Account.....33
Table 18	Summary of Membership Data34
Table 19	Reconciliation of Membership.....35
Table 20	Reconciliation of Contributors.....35
Table 21	Reconciliation of Retirement Pensioners35
Table 22	Reconciliation of Disability Pensioners35
Table 23	Actuarial Value of Pension Fund Assets.....36
Table 24	Asset Mix41
Table 25	Real Rate of Return by Asset Type.....44
Table 26	Rates of Return on Assets of the Pension Fund45
Table 27	Economic Assumptions.....46
Table 28	Assumed Seniority and Promotional Salary Increases.....48
Table 29	Assumed Annual Increases in Number of Contributors.....49
Table 30	Assumed Rates of Pensionable Retirement - Regular Members.....49
Table 31	Assumed Rates of Pensionable Retirement - Civilian Members.....50
Table 32	Assumed Rates of Pensionable Disability50
Table 33	Assumed Withdrawal Rates51
Table 34	Assumed Rates of Mortality.....51
Table 35	Assumed Longevity Improvement Factors52
Table 36	Assumptions for Survivor Spouse Allowances53
Table 37	Assumptions for Survivor Children Allowances53
Table 38	Superannuation Account and Actuarial Liability Projections.....56
Table 39	Pension Fund and Actuarial Liability Projections.....57
Table 40	Impact of Various Investment Policies59
Table 41	Tail Event Portfolio Returns61
Table 42	Sensitivity of the Projected Surplus/(Deficit) as at 31 March 2015.....61
Table 43	Impact on the Superannuation Account and the Pension Fund of Prolonged Low Bond Yields.....62
Table 44	Male Regular Member Contributors63
Table 45	Female Regular Member Contributors.....64
Table 46	Male Civilian Member Contributors65
Table 47	Female Civilian Member Contributors.....66
Table 48	Male Former Regular Member Retirement Pensioners.....67
Table 49	Male Former Regular Member Disability Pensioners.....67



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

Table 50	Female Former Regular Member Retirement Pensioners	68
Table 51	Female Former Regular Member Disability Pensioners	68
Table 52	Male Former Civilian Member Retirement Pensioners.....	69
Table 53	Male Former Civilian Member Disability Pensioners.....	69
Table 54	Female Former Civilian Member Retirement Pensioners	70
Table 55	Female Former Civilian Member Disability Pensioners	70
Table 56	Female Eligible Spouses	71
Table 57	Male Eligible Spouses and Children	71
Table 58	RCA Pensioners	72
Table 59	Assumed Rates of Mortality for the Calculation of Instalments	73



I. Executive Summary

This actuarial report on the pension plan for the Royal Canadian Mounted Police (RCMP) was made pursuant to the *Public Pensions Reporting Act* (PPRA).

This actuarial valuation is as at 31 March 2012 and is in respect of pension benefits and contributions defined by Parts I, III, and IV of the *Royal Canadian Mounted Police Superannuation Act* (RCMPSA), the *Special Retirement Arrangements Act* (SRAA), which covers the Retirement Compensation Arrangement (RCA) and by the *Pension Benefits Division Act* (PBDA).

The previous actuarial report was made as at 31 March 2011. The date of the next periodic review is scheduled to occur no later than 31 March 2015.

A. Purpose of Actuarial Report

The purpose of this actuarial valuation is to determine the state of the RCMP Superannuation Account, Pension Fund and Retirement Compensation Arrangements (RCA) Account, as well as to assist the President of the Treasury Board in making informed decisions regarding the financing of the government's pension benefit obligation.

B. Valuation Basis

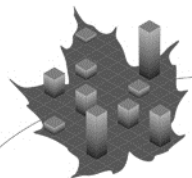
Changes were made to the plan provisions that improve portability options effective 1 September 2012. These amendments to the RCMPSA Regulations have no material impact on this valuation. Adopted increased member contribution rates for 2013, 2014 and 2015 are taken into account in this report. There were no other changes to the plan provisions since the last valuation. This report is based on pension benefit provisions enacted by legislation, summarized in Appendices 1 and 2.

The financial data on which this valuation is based are composed of invested assets (Pension Fund) which the government has earmarked for the payment of benefits for service since 1 April 2000 and accounts available for benefits established to track government's pension benefit obligations such as the Superannuation Account, for service prior to 1 April 2000, and the RCA Account for benefits in excess of those that can be provided under the *Income Tax Act* limits for registered pension plans. These pension assets and accounts available for benefits are summarized in Appendix 3. The membership data is summarized in Appendix 4.

The valuation was prepared using accepted actuarial practices in Canada, methods and assumptions which are summarized in Appendices 5 to 8.

All actuarial assumptions used in this report are best-estimate assumptions. They are individually reasonable for the purposes of the valuation at the date of this report.

Actuarial assumptions used in the previous report were revised based on economic trends and demographic experience. A complete description of the assumptions is shown in Appendices 6 to 8. The following table presents a summary of the ultimate economic assumptions used in this report and a comparison with those used in the previous report.



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

Table 1 Ultimate Best-Estimate Economic Assumptions

	31 March 2012 Valuation	31 March 2011 Valuation
Assumed level of inflation	2.2%	2.3%
Real increase in average pensionable earnings	1.0%	1.2%
Real rate of return for the Pension Fund	4.1%	4.1%
Real rate of return for the Superannuation Account	2.8%	2.7%

C. Main Findings

The proposed amounts to be credited to (or debited from) the Accounts and the Pension Fund are shown on a calendar year basis in this section beginning with calendar year 2014 which is the first calendar year that follows the expected tabling of this report. Valuation results on a plan year¹ basis are shown in Section II.

1) RCMPSA - Superannuation Account (Service prior to 1 April 2000)

As at 31 March 2012, the total of the amounts available for benefits under the Account is \$13,024 million and the actuarial liability for service prior² to 1 April 2000 is \$13,141 million. The total of the amounts available for benefits is less than the corresponding actuarial liability; it is 99.1% of the actuarial liability. The actuarial liability exceeds the total of the amounts available for benefits by \$117 million.

Beginning on 31 March 2014, 15 equal annual installments of \$12 million could be credited to the Superannuation Account to better track the actuarial liability. The time, manner and amount are to be determined by the President of the Treasury Board.

2) RCMPSA - Pension Fund (Service since 1 April 2000)

a) Current Service Cost³

The RCMPSA total current service cost, borne jointly by the contributors and the government, is \$452 million for calendar year 2014. The estimated members' contributions are \$168 million and the estimated government contributions are \$284 million for calendar year 2014. Administrative expenses are estimated at \$3 million (included in the total current service cost) for calendar year 2014. The following table shows the projected current service cost expressed as a percentage of the expected pensionable payroll⁴ for the three calendar years following the expected laying date of this report. The ratio of government current service cost to contributor current service cost is also shown.

Projected current service costs shown in this table are based on the member contribution rates shown in Section II-C-2.

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.

² The actuarial liability for service prior to 1 April 2000 refers to the actuarial liability for service accrued prior to that date except for service elections since 1 April 2000 that are deemed to be service accrued since that date.

³ Also called normal cost.

⁴ Pensionable payroll means the aggregate of pensionable earnings of all contributors with less than 35 years of service.

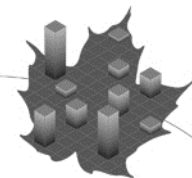


Table 2 RCMPSA Current Service Cost on a Calendar Year Basis

Calendar Year	Current Service Cost As a percentage of pensionable payroll			Ratio of Government to Contributors Current Service Cost
	Contributors	Government	Total	
2014	8.42	14.20	22.62	1.69
2015	9.07	13.47	22.54	1.49
2016	9.71	12.74	22.45	1.31

b) Financial position and amortization of surplus (deficit)

As at 31 March 2012, the smoothed actuarial value of assets is \$4,526 million and the actuarial liability is \$5,307 million, resulting in an actuarial deficit of \$781 million.

In accordance with the RCMPSA, the deficit of \$722¹ million could be amortized in 15 equal annual special payments of \$71 million beginning on 31 March 2014, taking into account a special payment of \$57 million to be made on 31 March 2013 in accordance with the previous special payments schedule. The time, manner, and amount are to be determined by the President of the Treasury Board.

c) Non-permitted surplus

If there exists in the opinion of the President of the Treasury Board a non-permitted surplus² in the Pension Fund, any future contributions to the Fund may be reduced in a manner determined by the President or the non-permitted surplus may be paid out of the Fund and into the Consolidated Revenue Fund. Based on the results of this valuation, a non-permitted surplus does not exist as at 31 March 2012.

3) RCA

As at 31 March 2012, the total of the amounts available for benefits under the RCA is \$61 million and the actuarial liability is \$43 million resulting in an actuarial excess of \$18 million.

The SRAA does not allow for an adjustment to be made to the RCA Account to track the actuarial liability when there is an actuarial excess.

The RCA total current service cost, borne jointly by the contributors and the government, is \$1 million per year for calendar years 2014, 2015 and 2016. The estimated members' contributions are \$160,000 per year and the estimated government costs are 5 times the members' contributions, i.e. \$800,000 per year for the next three years.

¹ The actuarial smoothing adjustment of \$59 million is ignored to calculate the amortization payments. More information is provided on page 11.

² A non-permitted surplus exists when the amount by which the value of assets exceeds liabilities for service since 1 April 2000 is greater than the lesser of (a) and (b), where:

(a) is 20% of the amount of liabilities for service since 1 April 2000, and

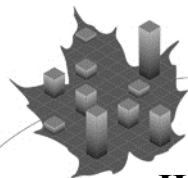
(b) is the greater of (i) and (ii) where:

(i) is twice the estimated amount, for the calendar year following the date of that report, of the total of

(A) the current service cost contributions that would be required of contributors, and

(B) the current service cost contributions that would be required of the government, and

(ii) is 10% of the amount of liabilities for service since 1 April 2000.



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

II. Valuation Results

This report is based on pension benefit provisions enacted by legislation, summarized in Appendices 1 and 2, and the financial and membership data, summarized in Appendices 3 and 4. The valuation was prepared using accepted actuarial practices in Canada, methods and assumptions summarized in Appendices 5 to 8. Emerging experience, differing from the corresponding assumptions, will result in gains or losses to be revealed in subsequent reports.

Projections of the Superannuation Account and Pension Fund and their financial components are shown in Appendices 9 and 10, respectively.

A. RCMPA - Financial Position

Beginning on 1 April 2000, government costs and employee contributions under the RCMP pension plan are no longer credited to the RCMP Superannuation Account. Rather, they are credited to the RCMP Pension Fund, and an amount equal to contributions net of the benefits paid and the administration expenses is transferred to the Public Sector Pension investment Board (PSPIB) and invested in the financial markets. The valuation results of this section show the financial position for both RCMPA financing arrangements as at 31 March 2012. The results of the previous valuation are also shown for comparison purposes.

Table 3 State of the Superannuation Account
(Service prior to 1 April 2000)
(\$ millions)

	As at 31 March 2012	As at 31 March 2011
Recorded Account Balance	13,016	12,847
Present value of prior service contributions	<u>8</u>	<u>9</u>
Total	13,024	12,856
Actuarial Liability		
Regular Members		
Contributors	3,265	3,380
Retirement pensioners	7,546	7,060
Disability pensioners	774	694
Surviving dependants	460	400
Civilian Members		
Contributors	331	315
Retirement pensioners	530	480
Disability pensioners	80	72
Surviving dependants	25	27
Administrative expenses	78	90
Pension modernization cost	<u>52</u>	<u>56</u>
Total Actuarial Liability	13,141	12,574
Actuarial Excess/(Shortfall)	(117)	282

Beginning on 31 March 2014, 15 equal annual installments of \$12 million could be credited to the Superannuation Account to better track the actuarial liability. The time, manner and amount are to be determined by the President of the Treasury Board.

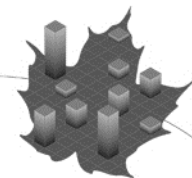


Table 4 Balance Sheet – Pension Fund
(Service since 1 April 2000)
(\$ millions)

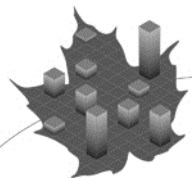
	As at 31 March 2012	As at 31 March 2011
Assets		
Market value of assets	4,570	4,114
Actuarial smoothing adjustment	(59)	(70)
Present value of prior service contributions	<u>15</u>	<u>16</u>
Total	4,526	4,060
Actuarial Liability		
Regular Members		
Contributors	3,598	3,234
Retirement pensioners	855	694
Disability pensioners	168	128
Surviving dependents	18	13
Civilian Members		
Contributors	513	427
Retirement pensioners	107	84
Disability pensioners	19	14
Surviving dependants	2	1
Pension modernization cost	<u>27</u>	<u>28</u>
Total Actuarial Liability	5,307	4,623
Actuarial Surplus/(Deficit)	(781)	(563)

The actuarial smoothing adjustment to the market value of assets is not taken into account to calculate the special payment to amortize the actuarial deficit. Therefore, the actuarial deficit of \$722 million could be amortized in 15 equal annual payments of \$71 million beginning on 31 March 2014 such that the projected value of assets would be equal to the projected value of liabilities in 15 years. The annual special payment was calculated taking into account that a special payment of \$57 million, determined by the President of the Treasury Board following the laying of the 2011 actuarial valuation, will be made as at 31 March 2013.

The actuarial smoothing adjustment of \$59 million will disappear over the next five years as the unrecognized investment gains will be gradually recognized.

B. RCMPA – Reconciliation of the Changes in Financial Position

This section reconciles the changes in the financial position in respect of the Superannuation Account and the Pension Fund shown in this valuation using the main elements responsible for the changes. The items shown are explained afterward.



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

Table 5 Reconciliation of RCMPA Financial Position
(\$ millions)

	Superannuation Account Actuarial Excess/ (Shortfall)	Pension Fund Surplus/ (Deficit)
As at 31 March 2011	282	(563)
Recognized investment gains as at 31 March 2011	-	70
Expected interest on initial financial position	17	(27)
Data corrections	(78)	(25)
Senior Constable and Service Pay allowances improvements	(7)	(12)
Actuarial smoothing adjustment	-	(59)
Experience gains and losses	(7)	(121)
Revision of actuarial assumptions	(324)	(40)
Change in pension modernization cost	-	(4)
As at 31 March 2012	(117)	(781)

1. Recognized Investment Gains as at 31 March 2011

An actuarial asset valuation method that minimizes the impact of short-term fluctuations in the market value of assets is used, causing the actuarial value of the Pension Fund assets to be \$70 million less than their market value in the previous valuation report.

2. Expected Interest on Financial Position

The expected interest to 31 March 2012 on the Account actuarial excess of \$282 million as at 31 March 2011 amounted to \$17 million. The expected interest to 31 March 2012 on the resulting Pension Fund actuarial deficit of \$493 million, after considering the recognized investment gains items, as at 31 March 2011 amounted to \$27 million. These amounts of interest were based on the Account and Fund yields projected in the previous report for the one-year interval valuation period.

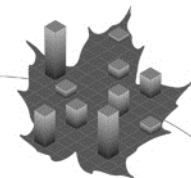
3. Data Corrections

The correction of data, in particular corrections to the member's credited years of service, upon which the 2011 report was based, resulted in an increase of \$78 million to the Superannuation Account actuarial liability and an increase of \$25 million to the Pension Fund actuarial liability as at 31 March 2012.

4. Senior Constable and Service Pay Allowances Improvements

The Senior Constable provisional allowance will increase from 4% to 5% effective 1 January 2014. These improvements have increased the Account actuarial liability by \$7 million and the Fund actuarial liability by \$12 million.

The Service Pay Allowance is granted on every fifth service anniversary (1.5% for every five years of service, up to and including 35 years of service). Effective 1 April 2013, the Service Pay Allowance will be granted after 4 years of service (with additional 1.5% increases unchanged at durations 10, 15, 20, 25, 30 and 35); this improvement has no material impact on the results of this valuation.



5. Actuarial Smoothing Adjustment

An asset valuation method that minimizes the impact of short-term fluctuations is used to determine the value of the Pension Fund assets. Appreciation of investment gains or losses is recognized at the rate of 20% per year. The smoothing adjustment as at 31 March 2012 decreases the surplus by \$59 million.

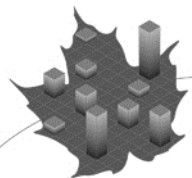
6. Experience Gains and Losses

Since the previous valuation, experience gains and losses have decreased the Superannuation Account actuarial excess by \$7 million and have increased the Pension Fund actuarial deficit by \$121 million. The main items are described in the following table.

Table 6 Experience Gains and Losses
(\$ millions)

	Superannuation Account	Pension Fund
Demographic assumptions(i)		
Retirements	15	10
Mortality	(13)	(4)
Seniority and promotional increases	(1)	8
Withdrawals	(2)	6
Disability	2	3
Probability of an eligible spouse	2	-
New Entrants	-	1
	3	24
Interest and investment earnings (ii)	(3)	(112)
Cost/Contributions difference (iii)	-	(20)
Salary increases (iv)	(5)	(9)
PBDA payments (v)	(3)	(2)
Miscellaneous	1	(2)
Net experience gains (losses)	(7)	(121)

- (i) The net impact of the demographic experience decreased the Account actuarial liability by \$3 million and also decreased the Fund actuarial liability by \$24 million. The most important items are as follows:
- The number of retirements was much lower than expected during the intervalation period (about 30% less than expected for Regular Members). The Account actuarial liability decreased by \$15 million and the Fund actuarial liability decreased by \$10 million.
 - Mortality experience was 15% lower than expected (40% for disabled pensioners). The Account actuarial liability increased by \$13 million and the Fund actuarial liability increased by \$4 million.
 - Seniority and promotional salary increases were close to expected except for Civilian Members (0.15% less than expected). The Account actuarial liability increased by \$1 million and the Fund actuarial liability decreased by \$8 million.
- (ii) The rates of interest credited to the Account were marginally less than the corresponding projected Account yields in the previous valuation; consequently the experience loss was \$3 million. The actual return on the Fund was 2.5% less than the expected return of 5.5% in plan year 2012; consequently the experience loss was \$112 million.



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

- (iii) As the government contributions are based on the cost certificate of the 2008 valuation report for plan year 2012, a decrease of \$20 million to the Fund actuarial surplus resulted from the actual government contributions in plan year 2012 being less than the government portion of the current service cost shown in the cost certificate of the previous report of 2011.
- (iv) A general salary increase of 1.75% was granted to Regular Members as at 1 January 2012 which was 0.25% more than projected in the previous valuation. This higher salary increase caused the Account actuarial liability to increase by \$5 million and the Fund actuarial liability to increase by \$9 million.
- (v) The underlying assumptions used for the valuation of the payments made under the PBDA being different than those used for funding purposes caused an experience loss of \$3 million for the Account and an experience loss of \$2 million for the Fund.

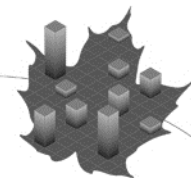
7. Revision of Actuarial Assumptions

Actuarial assumptions were revised based on economic trends and demographic experience as described in Appendices 6 and 7. This revision has increased the Superannuation Account actuarial liability by \$324 million and increased the Pension Fund actuarial liability by \$40 million. The impact of these revisions is shown in the following table and the most important items are discussed thereafter.

Table 7 Revision of Actuarial Assumptions
(\$ millions)

Assumptions	Superannuation Account	Pension Fund
Economic assumptions (i)	(285)	(65)
Mortality of widow(er)s (ii)	(63)	(10)
Pensionable retirements (iii)	20	36
Seniority and promotional (iv)	4	13
Disability (v)	2	(11)
Mortality of healthy members (vi)	(7)	(3)
Population growth	9	-
Mortality of disabled members	(4)	(1)
Withdrawals	-	1
Net impact of revisions	(324)	(40)

- (i) By far, the most important change to the Account economic assumptions is the new money rate assumption that has been significantly lowered in the next eight years following valuation date causing the real rate of interest projected on the Account to be on average 0.2% per year lower for the next 23 years following the valuation date (the ultimate real rate of return was increased from 2.7% to 2.8%); consequently the actuarial liability for service prior to 1 April 2000 has increased by \$285 million. The ultimate real rate of return on the Fund is unchanged (4.1%) but the select real rate of return was lowered on average by 0.4% per year over the next six years following the valuation date and the Fund actuarial liability has increased by \$65 million.
- (ii) Mortality rates for surviving spouses used for valuation purposes are the same as those from the actuarial report on the pension plan for the Public Service of Canada. These rates were revised significantly in the most recent actuarial report for the Public Service of Canada; they are much lower than in the previous valuation. The revised mortality rates for surviving spouses have increased the Account liability by \$63 million and the Fund liability by \$10 million.



- (iii) Pensionable retirement rates for Regular Members were decreased in this valuation to reflect that Regular Members are delaying retirement. These revised pensionable retirement rates decreased the Account liability by \$20 million and decreased the Fund liability by \$36 million.
- (iv) The seniority and promotional salary increase assumption for Civilian Members was lowered, on average by 0.15%. This revised assumption decreased the Account liability by \$4 million and the Fund liability by \$13 million.
- (v) Disability rates for Regular Members were increased significantly by as much as 50% at certain ages. This revised assumption decreased the Account liability by \$2 million and increased the Fund liability by \$11 million.
- (vi) Mortality rates for Civilian Members are the same as those from the actuarial report on the pension plan for the Public Service of Canada. These rates were revised and are lower than in the previous valuation. The revised mortality rates for Civilian Members have increased the Account liability by \$7 million and the Fund liability by \$3 million.

C. RCMPSA - Cost Certificate

1. Current Service Cost

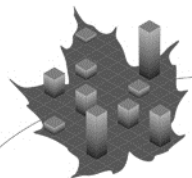
The details of the current service cost for plan year 2013 and reconciliation with the 2012 current service cost are shown below.

Table 8 Current Service Cost for Plan Year 2013
(\$ millions)

Member required contributions	143
Government current service cost	<u>297</u>
Total current service cost	440
Expected pensionable payroll	1,943
Total current service cost as % of expected pensionable payroll	22.65%

Table 9 Reconciliation of RCMPSA Current Service Cost
(% of pensionable payroll)

For plan year 2012	22.48
Expected current service cost change	0.03
Data corrections	0.02
Senior constable and service pay improvements	0.10
Experience gains and losses	
New entrants	0.02
Retirement	0.03
Seniority and promotional	(0.01)
Miscellaneous	(0.01)
Changes in assumptions	
Economic assumptions	0.12
Pensionable retirements	(0.19)
Seniority and promotional	(0.10)
Disability	0.08
Mortality	0.07
Withdrawals	0.01
For plan year 2013	<u>22.65</u>



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

The RCMPSPA current service cost is the weighted average of the separate current service costs for Regular Members and Civilian Members. For plan year 2013, the current service cost of 22.65% of pensionable payroll is composed of 22.99% for Regular Members and 20.63% for Civilian Members. The difference in current service costs is mainly attributable to the more advantageous early retirement provisions available to Regular Members.

2. Projection of Current Service Cost

The current service cost is borne jointly by the members and the government. The member contribution rates have been changed since the last valuation, they are as follows:

Member Contribution Rates

Calendar Year	Below YMPE	Above YMPE
2012	6.20%	8.60%
2013	6.85%	9.20%
2014	7.50%	9.80%
2015	8.15%	10.40%
2016	8.80%	11.00%
2017	9.47%	11.58%

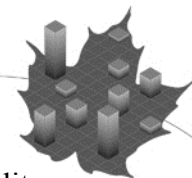
The following RCMPSPA current service costs in dollar amount are also expressed as a percentage of the projected pensionable payroll in each given plan year. Current service costs are shown below on a plan year basis; member contributions and the government current service costs are also shown on a calendar year basis in the Executive Summary.

Table 10 Projection of Current Service Cost

Plan Year	Current Service Cost (\$ millions)			Current Service Cost As a % of Pensionable Payroll			Portion borne by Members : Government
	Members	Government	Total	Members	Government	Total	
2013	143	297	440	7.36	15.29	22.65	32% : 68%
2014	157	289	446	7.98	14.68	22.66	35% : 65%
2015	172	282	454	8.57	14.04	22.61	38% : 62%
2016	190	273	463	9.24	13.27	22.51	41% : 59%
2017	209	266	475	9.87	12.56	22.43	44% : 56%
2022	263	315	578	10.31	12.35	22.66	45% : 55%
2027	313	387	700	10.27	12.69	22.96	45% : 55%

3. Administrative Expenses

Based upon the assumptions described in section B of Appendix 7, the Fund administrative expenses are included in the total current service costs. As for the previous report, the expected administration expenses exclude the PSPIB operating expenses as these are recognized implicitly through a decrease in the real rate of return. The Fund administrative expenses are estimated to be \$2.5 million for plan year 2013, increasing to \$2.7 and \$2.9 million for plan years 2014 and 2015, respectively.



The Account administrative expenses have been capitalized and increase the liability for service prior to 1 April 2000.

4. Contributions and Costs for Prior Service Elections

Contributions and Costs for prior service elections are based upon the valuation data and the assumptions described in section B of Appendix 7, they were estimated as follows:

Table 11 Estimated Contributions and Costs for Prior Service
(\$ millions)

Plan Year	Account		Fund	
	Members Contributions	Government Cost	Members Contributions	Government Cost
2013	0.6	0.6	1.2	2.6
2014	0.6	0.6	1.3	2.5
2015	0.5	0.5	1.5	2.4

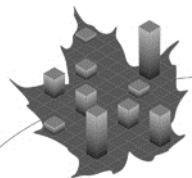
D. RCMPSA - Sensitivity to Variations in Key Assumptions

The information required by statute, which is presented in the main report, has been derived using best-estimate assumptions regarding future demographic and economic trends. The key best-estimate assumptions, i.e. those for which changes within a reasonable range have the most significant impact on the long-term financial results, are described in Appendices 6 and 7. Given the length of the projection period and the number of assumptions required, it is unlikely that the actual experience will develop precisely in accordance with best-estimate assumptions that underlie the actuarial estimates. Individual sensitivity tests have been performed that consist of projections of the pension plan's liabilities and current service cost using alternative assumptions.

The following table measures the effect on the plan year 2013 current service cost, the liabilities for service prior to 1 April 2000 and for service since that date, if key economic assumptions are varied by one percentage point per annum from plan year 2013 onward.

Table 12 Sensitivity of Valuation Results

Assumption(s) Varied	Current Service Cost as a percentage of pensionable payroll		Actuarial Liability (\$ million)			
	2013	Effect	Service prior to 1 April 2000	Effect	Service since 1 April 2000	Effect
None (i.e. current basis)	22.65	None	13,141	None	5,307	None
Investment yield						
- if 1% higher	17.91	(4.74)	11,495	(1,646)	4,387	(920)
- if 1% lower	29.18	6.53	15,204	2,063	6,540	1,233
Inflation						
- if 1% higher	25.78	3.13	14,941	1,800	6,031	724
- if 1% lower	20.07	(2.58)	11,657	(1,484)	4,720	(587)
Salary, YMPE and MPE						
- if 1% higher	25.15	2.50	13,272	131	5,662	355
- if 1% lower	20.49	(2.16)	13,019	(122)	5,001	(306)
All economic assumptions						
- if 1% higher	22.33	(0.32)	13,064	(77)	5,233	(74)
- if 1% lower	23.01	0.36	13,221	80	5,391	84



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

The differences between the results above and those shown in the valuation can also serve as a basis for approximating the effect of other numerical variations in one of the key assumptions to the extent that such effects are linear.

E. RCA - Valuation Results

The valuation result of this section show the financial position of the RCA financing arrangements as at 31 March 2012. The results of the previous valuation are also shown for comparison purposes.

1. RCA – Financial Position

Table 13 State of the RCA Account
(\$ millions)

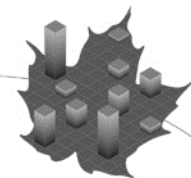
	As at 31 March 2012	As at 31 March 2011
Recorded Account balance	31	29
Tax credit (CRA refundable tax)	<u>30</u>	<u>29</u>
Total	61	58
Actuarial liability		
Contributors	15	17
Pensioners	<u>28</u>	<u>21</u>
Total actuarial liability	43	38
Actuarial Excess/(Shortfall)	18	20

The sum of the recorded balance of the RCA Account and the tax credit (CRA refundable tax) is \$61 million; it exceeds the actuarial liability of \$43 million by 42% as at 31 March 2012 (53% as at 31 March 2011). The SRAA does not allow for an adjustment to be made to the RCA Account to track the actuarial liability when there is an actuarial excess.

2. RCA Current Service Cost

The projected current service cost, borne jointly by the contributors and the government, of 0.06% for plan year 2013 calculated in the previous valuation has decreased by 0.01% to 0.05% of pensionable payroll in this valuation.

The RCA current service cost is estimated to remain constant at 0.05% of pensionable payroll for the next three plan years, with the members contributing \$160,000 every year and the government cost being 5 times this amount for a total amount of \$800,000 per year.



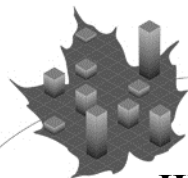
F. Summary of Estimated Government Costs

The following table summarizes the estimated total government costs on a plan year basis.

Table 14 Estimated Total Government Costs
(\$ millions)

Plan Year	Government Current Service Cost		Total Prior Service Cost	Special Payments and Credits	Total Government Cost
	RCMPSA	RCA			
2013	297	1	3	57 ¹	358
2014	289	1	3	83	376
2015	282	1	3	83	369

¹ As determined by the President of Treasury Board following the laying of the 2011 valuation report.



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

III. Actuarial Opinion

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

- the valuation input data on which the valuation is based are sufficient and reliable for the purposes of the valuation;
- the assumptions that have been used are, individually and in aggregate, appropriate for the purposes of the valuation;
- the methods employed are appropriate for the purposes of the valuation; and
- this report has been prepared, and our opinions given, in accordance with accepted actuarial practice in Canada.

In particular, this report was prepared in accordance with the Standards of Practice (General Standards and Practice – Specific Standards for Pension Plans) published by the Canadian Institute of Actuaries.

To the best of our knowledge, after inquiring with the Royal Canadian Mounted Police, there were no subsequent events between the valuation date and the date of this report that would have a material impact on the results of this valuation.

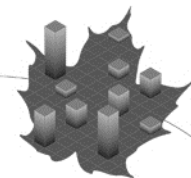
The payment of accrued pension benefits being the responsibility of the government, the likelihood of the plan being wound-up and its obligation not being fulfilled is practically nonexistent; also the Act does not define the benefits payable upon wind-up. Therefore, a hypothetical wind-up valuation has not been performed.

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

Mario Mercier, F.S.A., F.C.I.A.
Actuary

Michel Rapin, F.S.A., F.C.I.A.
Senior Actuary

Ottawa, Canada,
10 May 2013



Appendix 1 – Summary of Pension Benefit 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. Benefits are also provided to members of the Force under the *Special Retirement Arrangements Act*. Benefits may be modified in accordance with the *Pension Benefits Division Act* if there is a breakdown of a spousal union.

The previous valuation report was based on the pension benefit provisions as they stood as at 31 March 2011. Changes were made to the plan provisions that improve portability options effective 1 September 2012. These amendments to the Regulations have no material impact on this valuation as updated portability options will be calculated on an actuarially equivalent basis. Increased member contribution rates adopted in December 2012 are taken into account in this report. There were no other changes to the plan provisions since the last valuation.

Summary of Pension Benefit Provisions

Summarized in this Appendix are the pension benefits provided under the RCMPSA registered provisions which are in compliance with the *Income Tax Act*. The portion of the benefits in excess of the *Income Tax Act* limits for registered pension plans is provided under the retirement compensation arrangements described in Appendix 2.

The legislation shall prevail if there is a discrepancy between it and this 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, members contribute according to the rates shown in the following table.

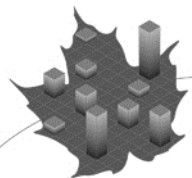
Calendar Year	2012	2013 ⁽¹⁾	2014 ⁽¹⁾	2015 ⁽¹⁾	2016 ⁽²⁾	2017 ⁽²⁾
Contribution rates on earnings up to the maximum covered by the Canada Pension Plan	6.20%	6.85%	7.50%	8.15%	8.80%	9.47%
Contribution rates on any earnings over the maximum covered by the Canada Pension Plan	8.60%	9.20%	9.80%	10.40%	11.00%	11.58%

(1) Approved by Treasury Board

(2) Estimated

The rates beyond 2012 have been changed from the previous report and are consistent with the government objective of moving to a 50:50 current service cost sharing ratio under the Public Service pension plan. Rates beyond 2017 are assumed to remain constant.

After 35 years of pensionable service, members contribute 1% of pensionable earnings.



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

2. Government

a) **Current Service**

The government determines its on-going monthly cost as that amount, which when combined with the required contributions by members 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 and the Fund administrative expenses incurred during that month.

b) **Elected Prior Service**

The government matches member contributions made under the Superannuation Account for prior service elections. Government credits to the Pension Fund in respect of elected prior service are as described for current service.

c) **Actuarial Excess and Surplus**

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

- debit the excess of the balance of the Superannuation Account over the actuarial liability subject to limitations, and
- deal with any actuarial surplus, subject to limitations, in the Pension Fund as they occur, either by reducing employee and/or government contributions or by making withdrawals.

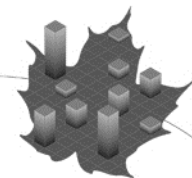
d) **Actuarial Shortfall/Deficit**

If an actuarial shortfall/deficit is identified through a statutory actuarial report, the Superannuation Account and/or the Pension Fund are to be adjusted with such annual amounts that in the opinion of the President of the Treasury Board will fully amortize the actuarial shortfall/deficit at the end of a period not exceeding 15 years.

C. **Summary Description of Benefits**

The objective of the RCMP pension plan is to provide an employment earnings-related lifetime retirement pension to eligible members. Benefits to members in case of disability and to the spouse and children in case of death are also provided.

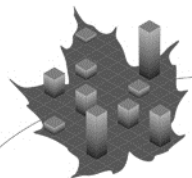
Subject to coordination with the pensions paid by the Canada Pension Plan (CPP), the initial rate of retirement pension is equal to 2% of the highest average annual pensionable earnings over any period of five consecutive years, multiplied by the number of years of pensionable service not exceeding 35. 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 3 and 4 of section D below.



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

1. Regular Members

Type of Termination	Service in the Force	Benefit
Retirement because of age (Note 5)	Under 2 years	Greater of: <ul style="list-style-type: none"> • return of contributions (Note 6), or • cash termination allowance (Note 7)
	2 or more years	Immediate annuity (Note 8)
Compulsory retirement to promote economy or efficiency in the Force	Under 2 years	Return of contributions
	2 to 19 years	Choice of: <ul style="list-style-type: none"> • return of contributions, or • deferred annuity (Note 9), or • reduced immediate annuity (Note 11)
	20 or more years	Immediate annuity
Compulsory retirement because of misconduct	Any period	At the discretion of the Treasury Board (Note 12)
Withdrawal	Under 2 years	Return of contributions
	2 to 19 years	Choice of: <ul style="list-style-type: none"> • return of contributions, or • deferred annuity, or • transfer value if under age 60 (Note 10)
Voluntary retirement	20 years to exactly 24 years	Annual allowance (Note 13)
	24 years and at least one day	Immediate annuity
Type of Termination	Pensionable Service	Benefit
Compulsory retirement because of disability	Under 2 years	Greater of: <ul style="list-style-type: none"> • return of contributions, or • cash termination allowance
	2 or more years	Immediate annuity
Death leaving no eligible survivor	Under 2 years	Return of contributions to nominated beneficiary, otherwise to estate
	2 or more years	Minimum death benefit (Note 16)
Death leaving eligible survivor(s) (Notes 14 and 15)	Under 2 years	Greater of: <ul style="list-style-type: none"> • return of contributions, or • one month of pay per year of pensionable service
	2 or more years	Annual allowance to eligible survivor(s) (Note 18)



ACTUARIAL REPORT

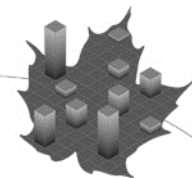
Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

2. Civilian Members

Type of Termination	Pensionable Service	Benefit
Voluntary retirement at age 60 or over	Under 2 years	Return of contributions (Note 6)
	2 or more years	Immediate annuity (Note 8)
Compulsory retirement because of misconduct	Under 2 years	Return of contributions
	2 or more years	At the discretion of the Treasury Board (Note 12)
Withdrawal	Under 2 years	Return of contributions
	2 to 29 years	Choice of <ul style="list-style-type: none"> • return of contributions (Note 6), or • deferred annuity (Note 9), or • transfer value if under age 50 (Note 10), or • annual allowance if aged at least 50 (Note 19)
Voluntary retirement before age 60	30 to 34 years <ul style="list-style-type: none"> • under age 55 • age 55 or over 	As for 2 to 29 years Immediate annuity
	35 or more years	Immediate annuity
Compulsory retirement because of disability	Under 2 years	Greater of: <ul style="list-style-type: none"> • return of contributions, or • cash termination allowance (Note 7)
	2 or more years	Immediate annuity
Death leaving no eligible survivor	Under 2 years	Return of contributions to nominated beneficiary, otherwise to estate
	2 or more years	Minimum death benefit (Note 16)
Death leaving eligible survivor(s) (Notes 14 and 15)	Under 2 years	Greater of: <ul style="list-style-type: none"> • return of contributions, or • one month of pay per year of pensionable service
	2 or more years	Annual allowance to eligible survivor(s) (Note 18)

3. Pensioners

Type of Termination	Benefit
Disability	Immediate annuity
Death leaving no eligible survivor	Minimum death benefit (Note 16)
Death leaving eligible survivor(s)	Annual allowance to eligible survivor(s) (Note 18)



D. Explanatory Notes

1. Pensionable Earnings

Pensionable earnings means the annual employment earnings (excluding overtime but including pensionable allowances such as bilingual bonuses) of a contributor.

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

2. Indexation

a) 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 relative to the corresponding figure one year earlier. If the indicated adjustment is negative, annuities are not decreased for that year; however, it is carried-forward and the next positive 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, indexation payments start only when the pensioner is 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

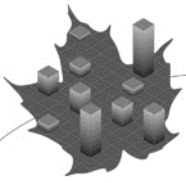
Service in the Force normally includes any period during which a person made required contributions under the RCMPSA, regardless of whether such contributions were subsequently withdrawn. As well, it includes any period of service as a member of any other police force subsequently taken over by the Force.

4. Pensionable Service

Pensionable service includes any period of service in the Force in respect of which a contributor either (1) had to make contributions that remain in the plan 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 RCMPSA.

5. Retirement Because of Age

Retirement because of age means ceasing to be a Regular Member on or after reaching age 60, for a 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 plan. Interest is credited quarterly on returned contributions in accordance with the investment return on the RCMP Pension Fund or in accordance with the interest credited on the Superannuation Account, depending on where contributions were credited.

7. Cash Termination Allowance

Cash termination allowance means an amount equal to one month's salary, as at the date of termination, multiplied by the number of years of pensionable service, minus the total reduction in previous contributions by virtue of its coordination with the CPP.

8. Immediate Annuity

Immediate annuity means an unreduced pension that becomes payable immediately upon a pensionable retirement or pensionable disability. The annual amount is equal to 2% of the highest average annual pensionable earnings of the contributor over any period of five¹ consecutive years, multiplied by the number of years of pensionable service not exceeding 35. For contributors with periods of part-time pensionable service, earnings used in the five-year average are based on a full 37.5-hour workweek but the resulting average is multiplied by the proportion of a full workweek averaged by the contributor over the entire period of pensionable service.

When a pensioner attains age 65 or becomes entitled to a disability pension from the CPP, the annual pension amount is reduced by a percentage of the *indexed CPP annual pensionable earnings*² (or, if lesser, the indexed five-year¹ pensionable earnings average on which the immediate annuity is based), multiplied by the *years of CPP pensionable service*³. The applicable percentage is 0.625%.

Annuities are payable at the end of month until the month in which the pensioner dies or until the disabled pensioner recovers from disability (the last payment would then be pro-rated). Upon the death of the pensioner, either a survivor allowance (Note 18) or a residual death benefit (Note 17) may be payable.

9. Deferred Annuity

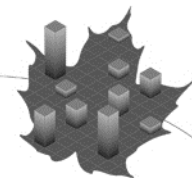
Deferred annuity means an annuity that normally becomes payable to a former contributor who reaches age 60. The annual payment is determined as for an immediate annuity (Note 8) but is also adjusted to reflect the indexation (Note 2) from the date of termination to the commencement of benefit payments.

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 13 and 19) that is the prescribed actuarial equivalent to the deferred annuity.

¹ If the number of years of pensionable service is less than five, then the averaging is over the entire period of pensionable service.

² *Indexed CPP annual pensionable earnings* means the average of the YMPE, as defined in the CPP, over the five calendar years leading up to and including the one in which pensionable service terminated, increased by indexation proportionate to that accrued in respect of the immediate annuity.

³ *Years of CPP pensionable service* mean the number of years of RCMPSA pensionable service after 1965 or after attaining age 18, whichever is later, but not exceeding 35.



10. Transfer Value

Regular Members and Civilian Members who, at their date of termination of pensionable service, are under age 60 and 50, respectively, and who are eligible for a deferred annuity may elect to transfer the commuted value of their benefits, determined in accordance with the regulations, to

- a locked-in Registered Retirement Savings Plan of the prescribed kind; or
- another pension plan registered under the *Income Tax Act*; or
- a financial institution for the purchase of a locked-in immediate or deferred annuity of the prescribed kind.

11. 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

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

12. 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.

13. Annual Allowance for Regular Members

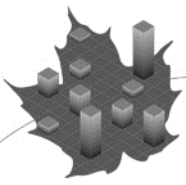
Annual allowance means, for a Regular Member, an immediate annuity reduced by 5% for each full year by which

- the period of service in the Force is less than 25 years, or
- the age at retirement is less than the applicable retirement age (as defined in item 5), whichever is the lesser.

14. Eligible Surviving Spouse

Eligible surviving spouse means the surviving spouse (includes a common-law or same-sex partner recognized under the plan) 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



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

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.

15. Eligible Surviving Children

Eligible surviving children include 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.

16. Minimum Death Benefit

If a contributor or a pensioner dies leaving no eligible survivor, the lump sum normally paid is the excess of 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 any pension payments already received. Indexation adjustments are excluded from these calculations.

17. Residual Death Benefit

The same formula described in Note 16 is used to determine the residual death benefit, which is the lump sum payable upon the death of an eligible survivor but also subtracting all amounts (excluding indexation adjustments) already paid to the survivor.

18. Annual Allowance for Eligible Survivor(s)

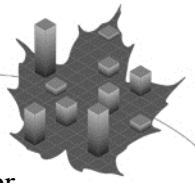
Annual allowance means, for the eligible surviving spouse and children of a contributor or pensioner, an annuity that becomes payable immediately upon the death of that individual. The amount of the allowance is determined with reference to a *basic allowance* equal to 1% of the highest average annual pensionable earnings of the contributor over five 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 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.

Survivor annual allowances are not coordinated with the CPP and are payable in equal monthly instalments at the end of month until the month in which the survivor dies or otherwise loses eligibility. If applicable, a residual benefit (Note 17) is payable to the estate upon the death of the last survivor.

19. Annual Allowance for Civilian Members

Annual allowance means, for a Civilian Member, an annuity payable immediately on retirement or upon attaining age 50, whichever occurs 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% for each year between age 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

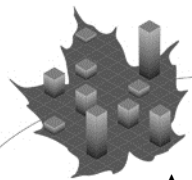
- 55 minus the age, and
- 30 minus the number of years of pensionable service.

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.

20. 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 debited by court order or by mutual consent from, if applicable, the accounts and the Fund 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 2 – Retirement Compensation Arrangement Benefit Provisions

Retirement compensation arrangements (RCAs) are prefunded arrangements not subject to the benefit limitations of registered pension plans and therefore are less tax-advantaged as the fund must transfer a 50% refundable tax to the Canada Revenue Agency (CRA) immediately. Transactions in the RCA Account are made as if the RCMP RCA was a prefunded arrangement. Under the RCMP RCA, a debit is made from the RCA Account such that in total roughly half the recorded balances in the Account are held as a tax credit (CRA refundable tax). This Appendix describes the RCMP pension benefits provided under the SRAA that have a material impact on this valuation rather than those under the registered RCMPSPA provisions.

A. Annual Allowance for Eligible Survivors

If the annual allowance for eligible survivors described in Note 18 of section D of Appendix 1 exceeds the tax-related limits described hereafter for registered plans, then the excess in respect of service from 1 January 1992 onwards is debited from the RCA Account.

1. Tax-related limits on preretirement survivor benefits

The total of all preretirement survivor pensions payable in respect of a deceased member may not exceed the member's projected lifetime retirement benefit and the amount of spouse allowance may not exceed two-thirds of the projected lifetime retirement benefit.

The member's projected lifetime retirement benefit is the greater of:

- a) the deceased member's accrued pension reduced by the CPP coordination offset; and
- b) the lesser of:
 - i) the member's projected retirement benefit at age 65 based on current salary history, and
 - ii) 1.5 times the YMPE in effect during the year of the member's death.

2. Tax-related limits on postretirement survivor benefits

The amount of the spouse allowance provided is limited in any year to a maximum of two-thirds the retirement benefit that would have been payable to the member in that year.

B. Excess Pensionable Earnings

From 23 February 1995 onward, the highest average of pensionable earnings under the RCMPSPA is subject to a prescribed yearly maximum. Because the RCMPSPA is coordinated with the pensions paid by the Canada Pension Plan, the prescribed maximum is derived from both the maximum annual pension benefit (\$2,696.67 for calendar year 2013) payable from a registered defined benefit pension plan for each year of pensionable service and the YMPE. The maximum is \$150,900 for calendar year 2013. To the extent that a member's average earnings at retirement exceed the prescribed yearly maximum, the corresponding excess pension is debited from the RCA Account.



Appendix 3 – Assets, Accounts and Rates of Return

A. Assets and Accounts Available for Benefits

The government has a statutory obligation to fulfill the pension promise enacted by legislation to RCMP members. Since 1 April 2000, the government has earmarked invested assets (Pension Fund) to meet the cost of pension benefits.

With respect to the unfunded portion of the RCMP pension plan, accounts available for benefits were established to track government's pension benefit obligations such as the Superannuation Account, for service prior to 1 April 2000, and the RCA Account for benefits in excess of those that can be provided under the Income Tax Act limits for registered pension plans.

1. RCMP Superannuation Account

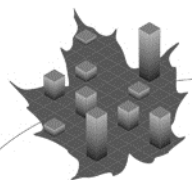
RCMPSA member contributions, government costs, and benefits earned up to 31 March 2000 are tracked entirely through the RCMP Superannuation Account, which forms part of the Public Accounts of Canada.

The Account was credited with all RCMPSA member contributions and government costs prior to 1 April 2000, as well as with prior service contributions/costs for elections made prior to 1 April 2000 and leave without pay contributions/costs for periods before 1 April 2000 but credited after that date. It is charged with both the benefit payments made in respect of service earned under the Account and the allocated portion of the plan administrative expenses.

The Account is credited with interest 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. Interest is credited every three months on the basis of the average yield for the same period on the combined Superannuation Accounts of the Public Service, Canadian Forces and RCMP pension plans.

Table 15 Reconciliation of Balances in Superannuation Account
(\$ millions)

Plan year	2012
Public Accounts opening balance	12,846.6
RECEIPTS AND OTHER CREDITS	
Interest	750.4
Government costs	0.7
Employee contributions	0.7
Actuarial liability adjustments	-
<i>Subtotal</i>	751.8
PAYMENTS AND OTHER CHARGES	
Annuities	555.5
Pension divisions	11.7
Transfer values	1.2
Return of contributions and cash allowances	0.6
Administrative expenses	13.5
<i>Subtotal</i>	582.5
Public Accounts closing balance	13,015.9



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

Since the last valuation, the Account balance has grown by \$169 million (a 1.3% increase) to reach \$13,016 million as at 31 March 2012.

2. RCMP Pension Fund

Since 1 April 2000 RCMPSPA contributions (except for prior service elections made prior to 1 April 2000) have been credited to the RCMP Pension Fund. The Fund is invested in the financial markets with a view to achieving maximum rates of return without undue risk.

The Fund has been credited with all RCMPSPA contributions since 1 April 2000, as well as with prior service contributions in respect of elections made since that date and leave without pay contributions for periods after that date. The Fund is also credited with the net investment returns generated by the capital assets managed by PSPIB. It is charged with both the benefit payments made in respect of service earned and prior service elections made since 1 April 2000 and the allocated portion of the plan administrative expenses.

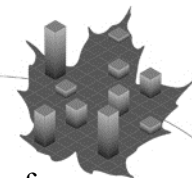
Table 16 Reconciliation of Balances in Pension Fund
(\$ millions)

Plan year	2012
Opening balance	4,114.1
RECEIPTS AND OTHER CREDITS	
Gross investment earnings	133.0
Government contributions	274.1
Employee contributions	134.6
Transfers received	4.8
<i>Subtotal</i>	<i>546.5</i>
PAYMENTS AND OTHER CHARGES	
Annuities	64.3
Transfer values	5.0
Pension divisions	5.8
Return of contributions and cash allowances	0.1
Transfers sent	0.2
Administrative expenses	5.7
PSPIB investment expenses	10.0
<i>Subtotal</i>	<i>91.1</i>
Closing balance	4,569.5

Since the last valuation, the Fund balance has increased by \$456 million (an 11% increase) to reach \$4,570 million as at 31 March 2012.

3. RCA Account

The amount in the RCA account available for benefits is composed of the recorded balance in the Retirement Compensation Arrangements Account, which forms part of the Public Accounts of Canada, and a tax credit (CRA refundable tax). Each calendar year, a debit is made from the RCA Account such that in total roughly half the recorded balances in the Account are held as a tax credit (CRA refundable tax).



No formal debt instrument is issued to the Account by the government in recognition of the amounts therein. Interest is credited every three months on the basis of the average yield for the same period on the combined Superannuation Accounts of the Public Service, Canadian Forces and RCMP pension plans.

Table 17 Reconciliation of Balances in RCA Account
(\$ millions)

Plan year	2012
Opening balance	29.2
RECEIPTS AND OTHER CREDITS	
Interest	1.8
Government costs	1.4
Employee contributions	0.2
<i>Subtotal</i>	<i>3.4</i>
PAYMENTS AND OTHER CHARGES	
Benefits paid	0.7
Debited transfer to CRA	1.4
<i>Subtotal</i>	<i>2.1</i>
Closing balance	30.5
Tax credit (CRA refundable tax)	30.2

Since the last valuation, the RCA Account balance has increased by 5% to reach \$31 million as at 31 March 2012 and the tax credit (CRA refundable tax) has increased by 5% to reach \$30 million as at 31 March 2012.

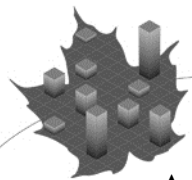
B. Rate of Interest/Return

The rate of interest in respect of the Superannuation Account is calculated using the foregoing entries. The result was computed using the dollar-weighted approach and assumes that cash flows occur in the middle of the plan year (except for actuarial liability adjustments, if any, which occur on 31 March). The Fund rate of return is from the Public Sector Pension Investment Board (PSPIB) 2012 Annual Report.

Plan Year	Superannuation Account	Pension Fund
2012	6.0%	3.0%

C. Sources of Asset and Accounts Data

The Royal Canadian Mounted Police Superannuation Account, RCA Account and Royal Canadian Mounted Police Pension Fund entries shown in Section A above were taken from the Public Accounts of Canada and the financial statements of the Public Sector Pension Investment Board.



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

Appendix 4 – Membership Data

A. Sources and Validation of Membership Data

The individual data in respect of contributors, pensioners, and eligible survivors were provided as at 31 March 2012. The data includes benefits debited from the RCA Account.

The firm Morneau Shepell which is responsible for the administration of the plan provided relevant valuation input data on contributors, pensioners and eligible survivors.

Certain tests of consistency with the data used in the previous valuation, with respect to membership reconciliation, basic information (date of birth, date of hire, date of termination, sex, etc.), pensionable service, salary levels and pensions to retirees and survivors. 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 provider.

B. Summary of Membership Data

A summary of the valuation data as at 31 March 2012 and the reconciliation of contributors, pensioners, and survivors during the period from April 2011 to March 2012 inclusive are shown in this section. Average pensions shown in the following table include benefits debited from the RCA Account. Relevant detailed statistics on contributors, pensioners and survivors are shown in Appendix 12.

Table 18 Summary of Membership Data

	As at 31 March 2012	As at 31 March 2011
Contributors		
· Number	23,075	23,218
· Average Pensionable Earnings	\$85,800	\$83,700
· Average Age	40.6	40.3
· Average Service	13.1	12.6
Retirement Pensioners		
· Number	12,957	12,602
· Average Pension	\$42,600	\$41,400
· Average Age	65.5	65.0
Disability Pensioners		
· Number	1,911	1,775
· Average Pension	\$33,100	\$31,800
· Average Age	58.4	58.0
Eligible Surviving Spouses		
· Number	1,951	1,852
· Average Pension	\$18,100	\$17,300
· Average Age	70.0	69.6
Eligible Surviving Children		
· Number	158	141
· Average Pension	\$3,200	\$2,200

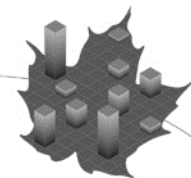


Table 19 Reconciliation of Membership

	Contributors	Retirement Pensioners	Disability Pensioners	Surviving Spouses	Surviving Children ¹
As at 31 March 2011	23,218	12,602	1,775	1,852	141
Data corrections	(25)	(16)	16	25	
New members	685	-	-	-	
Withdrawals	-	-	-	-	
Lump sums	(136)	-	-	-	
Deferred annuities	(14)	14	-	-	
Pensionable disabilities	(136)	-	136	-	
Pensionable retirements	(492)	492	-	-	
Emerging survivors	-	-	-	122	
Deaths	(25)	(135)	(16)	(48)	
As at 31 March 2012	23,075	12,957	1,911	1,951	158

Table 20 Reconciliation of Contributors

	<u>Regular Members</u>		<u>Civilian Members</u>	
	Male	Female	Male	Female
As at 31 March 2011	15,498	3,907	1,888	1,925
Data corrections	(13)	-	(4)	(8)
New members	406	109	85	85
Withdrawals				
Lump sums	(79)	(17)	(12)	(28)
Deferred annuities	(3)	(2)	(3)	(6)
Pensionable disabilities	(93)	(27)	(5)	(11)
Pensionable retirements	(380)	(37)	(34)	(41)
Deaths	(20)	-	(5)	-
As at 31 March 2012	15,316	3,933	1,910	1,916

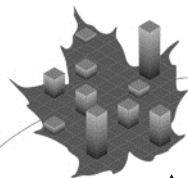
Table 21 Reconciliation of Retirement Pensioners

	<u>Former Regular Members</u>		<u>Former Civilian Members</u>	
	Male	Female	Male	Female
As at 31 March 2011	11,057	339	752	454
Data corrections	(8)	-	(8)	-
New deferred pensioners	3	2	3	6
New pensioners	380	37	34	41
Deaths	(119)	-	(10)	(6)
As at 31 March 2012	11,313	378	771	495

Table 22 Reconciliation of Disability Pensioners

	<u>Former Regular Members</u>		<u>Former Civilian Members</u>	
	Male	Female	Male	Female
As at 31 March 2011	1,142	143	82	138
Data corrections	42	6	(3)	(2)
New pensioners	183	58	12	28
Deaths	(46)	(2)	(3)	(3)
As at 31 March 2012	1,321	205	88	161

¹ The valuation data with respect to eligible surviving children were not detailed enough to allow the reconciliation of the change in the population.



Appendix 5 – RCMPSA Valuation Methodology

A. Pension Assets and Accounts

1. RCMP Superannuation Account (Service prior to 1 April 2000)

Amounts available for benefits in the RCMP Superannuation Account consist essentially of the recorded balance of the RCMP Superannuation Account in the Public Accounts of Canada. The underlying notional bond portfolio described in Appendix 3 is shown at the book value.

The only other Account-related amount available for benefits consists of the discounted value of future member contributions and government costs in respect of prior service elections. The discounted value of future member contributions was calculated using the projected Account yields; the government cost is assumed to be equal to these future contributions.

2. RCMP Pension Fund (Service since 1 April 2000)

For valuation purposes, an adjusted market value method is used to determine the actuarial value of assets in respect of the Pension Fund. The method is unchanged from the previous valuation.

Under the adjusted market value method, the difference between the observed investment returns during a given plan year and the expected investment returns for that year based on the previous report assumptions is spread over five years, subject to a 10% corridor. As a result, the actuarial value of assets is a five-year smoothed market value where the appreciation of investment gains or losses is recognized at the rate of 20% per year. The value produced by this method is related to the market value of the assets but is more stable than the market value.

The only other Fund-related asset consists of the discounted value of future member and government contributions in respect of prior service elections. The discounted value of future member contributions was calculated using the assumed rates of return on the Pension Fund; the government is assumed to contribute in the same proportion as for the RCMPSA current service cost.

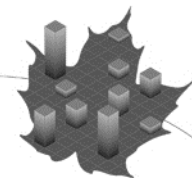
The actuarial value of the assets, determined as at 31 March 2012, under the adjusted market value method is \$4,526 million and was determined as follows:

Table 23 Actuarial Value of Pension Fund Assets

As at 31 March 2012

(\$ millions)

Plan Year	2008	2009	2010	2011	2012
Actual net investment return (A)	(19)	(685)	533	490	123
Expected investment return (B)	169	177	155	207	235
Investment gains (losses) (A-B)	(188)	(862)	378	283	(112)
Gains (losses) recognized immediately	-	-	-	-	-
Investment gains (losses) to be amortized	(188)	(862)	378	283	(112)
Unrecognized percentage	0%	20%	40%	60%	80%
<i>Unrecognized investment gains (losses)</i>	-	(172)	151	170	(90)
Market value as at 31 March 2012					4,570
<i>Plus</i> Present value of prior service contributions					15
<i>Less</i> Total unrecognized investment gains					59
Actuarial value as at 31 March 2012					4,526



B. Actuarial Cost Method

As benefits earned in respect of current service will not be payable for many years, the purpose of an actuarial cost method is to assign costs over the working lifetime of the members.

As in the previous valuations, the *projected accrued benefit actuarial cost method* (also known as the projected unit credit method) was used to determine the current service cost and actuarial liability. 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 yearly maximum salary cap and other benefit limits under the *Income Tax Act* described in Appendix 2 were taken into account to determine the benefits payable under the RCMPSPA and those payable under the RCA.

1. Current Service Cost

Under the *projected accrued benefit actuarial cost method*, the current service cost, also called normal cost, computed in respect of a given year is the sum of the value, discounted in accordance with the actuarial assumptions for the Pension Fund, of all future payable benefits considered to accrue in respect of that year's service.

Under this method, the current service cost for an individual member will increase each year as the member approaches retirement. However, all other things being equal, the current service cost for the total population, expressed as a percentage of total pensionable payroll, can be expected to remain stable as long as the average age and service of the total population remain constant. The Pension Fund administrative expenses are included in the total current service cost.

For a given year, the government current service cost is the total current service cost reduced by the members' contributions during the year.

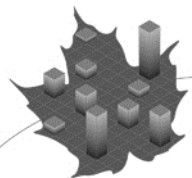
2. Actuarial Liability

The actuarial liability with respect to contributors corresponds to the value, discounted in accordance with the actuarial assumptions, of all future payable benefits accrued as at the valuation date in respect of all previous service. For pensioners and survivors, the actuarial liability corresponds to the value, discounted in accordance with the actuarial assumptions, of future payable benefits.

3. Actuarial Surplus(Deficit)

It is unlikely that the actual experience will conform to the assumptions that underlie the actuarial estimates. Thus a balancing item must be calculated under this cost method to estimate the necessary adjustments. Adjustments may also be necessary if the terms of the pension benefits enacted by legislation are modified or if assumptions need to be updated.

The actuarial surplus or deficit is the difference between the total value of assets and the actuarial liability. An actuarial deficit may be amortized over a period not exceeding 15 years through special payments and the disposition of any actuarial surplus is defined in the RCMPSPA.



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

The state of the RCMP Superannuation Account is determined by comparing amounts available for benefits with the actuarial liability for service prior to 1 April 2000. The resulting actuarial excess/shortfall is dealt with in accordance with the RCMPSPA.

4. Government Contributions

The recommended government contribution corresponds to the sum of:

- a) the government current service cost;
- b) the government contributions for prior service; and
- c) as applicable, special payments in respect of a deficit or as the case may be, actuarial surplus credits.

C. Projected Yields

The projected yields (shown in Appendix 6) used to calculate future interest credits to the Superannuation Account are the projected annual yields on the combined book value of the Superannuation Accounts of the Public Service, Canadian Forces, and RCMP pension plans.

The projected Account yields were determined by an iterative process involving the following:

- the combined notional bond portfolio of the three Accounts as at the valuation date,
- the assumed future new money interest rates (also shown in Appendix 6),
- the expected future benefits payable in respect of all pension entitlements accrued up to 31 March 2000,
- the expected future contributions and costs for prior service elections, and
- the expected future administrative expenses,

taking into account that the quarterly interest credited to an Account is calculated as if the principal at the beginning of a quarter remains unchanged during the quarter.

The present value of the benefits accrued or accruing with respect to the Pension Fund was calculated using the expected future investment returns to be added to the Pension Fund on the basis of a diversified portfolio of assets held by the PSPIB. The projected rates of return are shown in Appendix 6.

D. Membership Data

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

The member data shown in Appendices 4 and 12 were provided as at 31 March 2012. This valuation is based on the member data as at the valuation date.



Appendix 6 – RCMPSA Economic Assumptions

The payment of accrued pension benefits is the responsibility of the government, therefore the likelihood of the plan being wound-up and its obligation not being fulfilled is practically nonexistent, consequently all of the assumptions used in this report are best-estimate assumptions, i.e. they reflect our best judgement of the future long-term experience of the plan and do not include margins.

A. Inflation-Related Assumptions

1. Level of Inflation

Price increases, as measured by changes in the Consumer Price Index (CPI), tend to fluctuate from year to year. In 2011, the Bank of Canada and the Government renewed their commitment to keep inflation between 1% and 3% until the end of 2016. Therefore, a price increase rate of 2.0% is assumed for plan years 2013 to 2019. For plan years 2020 and 2021, the CPI is assumed to increase from 2.0% to 2.2% and to remain at 2.2% thereafter. The ultimate rate of 2.2% is 0.1% lower than the assumed rate in the previous valuation.

2. Increase in Pension Factor

The year's pension indexing factor is required in the valuation process by virtue of its role in maintaining the purchasing power of pensions. It was derived by applying the indexation formula described in Appendix 1, which relates to the assumed Consumer Price Index increases over successive 12-month periods ending on 30 September.

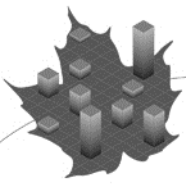
B. Employment Earnings Increases

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

The YMPE is required in the valuation process because the plan is coordinated with the Canada Pension Plan. The assumed increase in the YMPE for a given calendar year is derived, in accordance with the *Canada Pension Plan*, to correspond to the increase in the average weekly earnings (AWE), as calculated by Statistics Canada, over successive 12-month periods ending on 30 June. The AWE, and thus the YMPE, is deemed to include a component for seniority and promotional increases. The YMPE is equal to \$51,100 for calendar year 2013. Future increases in the YMPE correspond to the assumed real¹ increase in the AWE plus assumed increases in the CPI.

The real-wage differential is developed taking into account historical trends, a possible labour shortage, and an assumed moderate economic growth for Canada. Considering the relatively high unemployment rate in 2013, a real-wage differential of 0.7% is assumed for 2014. The real-wage differential is assumed to gradually increase to the ultimate assumption of 1.2% by 2019 (1.3% in the previous valuation). The ultimate real-wage differential assumption combined with the ultimate price increase assumption results in an assumed annual increase in nominal wages of 3.4% in 2021 and thereafter. Thus, the ultimate rate of increase for the YMPE is 3.4%, resulting from a 1.2% increase in the real AWE and a 2.2% increase in the CPI.

¹ Note that all of the real rates presented in this report are actually differentials, i.e. the difference between the effective annual rate and the rate of increase in prices. This differs from the technical definition of a real rate of return, which, for example in the case of the ultimate Fund assumption would be 4.0% (derived from 1.063/1.022) rather than 4.1%.



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

2. Increase in Average Pensionable Earnings

Average pensionable earnings are applicable to RCMP pension plan members only, whereas the YMPE applies to the general working population in Canada. In addition, increases in average pensionable earnings are exclusive of seniority and promotional increases, which are considered under a separate demographic assumption. Thus, the annual increase in average pensionable earnings is assumed to be 0.2% lower than the corresponding increase in the YMPE. The ultimate increase in average pensionable earnings is 3.2%.

3. Increase in Maximum Pensionable Earnings (MPE)

Since the plan is coordinated with the Canada Pension Plan, the tax-related maximum pensionable earnings were derived from both the maximum annual pension accrual under a registered defined benefit plan and the YMPE. The maximum annual pension accrual of \$2,646.67 for 2012 will increase to \$2,696.67 for 2013, in accordance with Income Tax Regulations. Thereafter, the maximum annual pension accrual increases in accordance with the increase in the YMPE, which is the same as the assumed increase in the AWE.

Beginning with calendar year 2012, the coordination factor is 0.625%. The MPE is \$150,900 for calendar year 2013.

C. Investment-Related Assumptions

1. New Money Rate

The new money rate is the nominal yield on long-term Government of Canada bonds and is set for each year in the projection period. The real yield on long-term federal bonds is equal to the new money rate less the assumed rate of inflation.

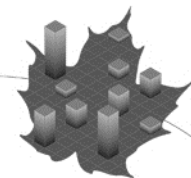
Recognizing recent experience, the annual real yield on long-term federal bonds is assumed to be 0.6% at the beginning of plan year 2013, and is assumed to increase gradually to its ultimate level of 2.8% first attained at the end of plan year 2018. This increase is consistent with the average of private sector forecasts. The ultimate real yield is 0.1% greater than assumed in the previous valuation, which was 2.7%. The ultimate real yield on long-term bonds is based on historical yields.

2. Projected Yields on Superannuation Account

These yields are required for the computation of present values of benefits to determine the liability for service prior to 1 April 2000. The methodology used to determine the projected yields on the Account is described in Appendix 5-C. The methodology is unchanged from previous valuations.

3. Rate of Return on assets of the Pension Fund

The expected annual nominal rates of return on the Fund are required for the computation of present values of benefits to determine the liability for service since 1 April 2000 and the current service cost. The following sections describe how the rates of return on the Fund are determined.



a) Investment Strategy

Since 1 April 2000, invested assets resulting from transferred amount equal to the government and employee contributions, net of benefit payments and administrative expenses, are invested in capital markets through the Public Sector Pension Investment Board (PSPIB). PSPIB invests funds to maximize returns without undue risk of loss according to the investment policy set and approved by its Board of Directors that take into account the needs of contributors and beneficiaries, as well as financial market constraints. For the purpose of this report, the investments have been grouped into three broad categories: equities, fixed income securities and real return assets. Equities consist of Canadian, foreign developed market and emerging market equities. Fixed income securities consist of bonds which are usually a mix of federal, provincial, corporate and real return bonds. Real return assets include such categories as real estate and infrastructure.

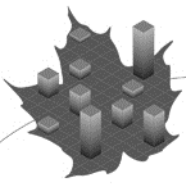
As at 31 March 2012, PSPIB assets consisted of 61% equity, 22% fixed income securities (including world inflation-linked bonds) and 17% real return assets (including asset classes such as real estate, infrastructure and renewable resources). PSPIB has developed a long-term target Policy Portfolio (approved by its Board of Directors on 29 March 2012 and subject to an annual review), which consists of 54% equity, 18% fixed income securities and 28% real return assets. The Policy Portfolio asset mix weights represent long-term targets. Therefore, the initial asset mix is derived using the actual investments reported by PSPIB as at 31 March 2012.

As PSPIB Policy Portfolio reflects long-term expectations, it is assumed that the asset mix will converge slowly toward the Policy Portfolio. The ultimate asset mix is reached in plan year 2018 and consists of 55% equity, 20% fixed income securities (including 2% cash) and 25% real return assets. Net cash flows (contributions less expenditures) are expected to become negative during plan year 2032 and a portion of investment income will therefore be required to pay benefits. Changes to the assumed asset mix may be required in the future to reduce funding risks and to take into account the maturity of the plan.

Table 24 shows the assumed asset mix for each plan year throughout the projection period.

Table 24 Asset Mix
(in percentage)

Plan Year	Fixed Income Securities	Cash	Canadian Equity	U.S. and Foreign Equity	Emerging Market Equity	Real Estate & Infrastructure
2013	20	2	25	29	7	17
2014	19	2	25	28	7	19
2015	19	2	23	28	7	21
2016	19	2	21	28	7	23
2017	19	2	20	28	7	24
2018+	18	2	20	28	7	25



b) Real Rates of Return by Asset Type

Real rates of return are required in order to discount benefits payable in the future for the determination of the actuarial liability and current service cost. They are assumed for each year of the projection period and for each of the main asset categories in which Pension Fund assets are invested. All of the real rates of return described in this section include an allowance for rebalancing and diversification and are shown prior to the reduction for investment expenses. Subsection c) describes how the returns are adjusted for investment expenses.

The real rates of return were developed by looking at historical returns (expressed in Canadian dollars) and adjusting the returns upward or downward to reflect expectations that differ from the past. It is assumed that currency variations will impact the real rates of return over the projection period, creating gains and losses. However, as the projection period is long, these gains and losses are expected to offset each other over time. Hence, it is assumed that currency variations will not have an impact on the long-term real rates of return.

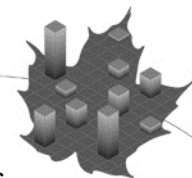
With the exception of fixed income securities and cash, real rates of return for all asset classes are assumed to be constant for the entire projection period. The current context of extremely low yields and the general expectations that yield will increase over the coming years are reflected in the expected fixed income securities' short-term real rates of return. A constant real rate of return is assumed for more volatile asset classes, reflecting the difficulty to predict yearly market returns.

Fixed Income Securities

PSPIB currently has 22% of its portfolio invested in fixed income securities, including Canadian fixed income, world government bonds, world inflation-linked bonds and cash. PSPIB Policy Portfolio assumes a long-term target weight for fixed income securities of 18% (including world inflation-linked bonds). Thus, it is assumed that the proportion invested in fixed income securities will slightly decrease in order to follow the Policy Portfolio. It is assumed that by plan year 2018, 20% of Pension Fund assets will be invested in fixed income securities.

It is assumed that, excluding cash, fixed income securities consist of 45% federal bonds, 15% provincial bonds, 15% corporate bonds and 25% inflation-linked bonds.

The assumed real yield on long-term federal bonds is expected to increase from 0.6% at the beginning of plan year 2013 to an ultimate of 2.8% at the end of plan year 2018. This increase in real yield is consistent with the average private sector forecasts. The initial spreads over the long-term federal bond real yield are assumed to be 95 basis points for long-term provincial bonds and 160 basis points for corporate bonds. These spreads are higher than in the last report and reflect the current economic environment. The ultimate spreads for provincial and corporate bonds are assumed to be 50 basis points and 90 basis points, respectively, and are reached at the end of plan year 2017. Corporate bond spreads are net of the expected default rate. Real return bonds, on the other hand, have a lower real yield than long-term federal bonds, since the real return is guaranteed and will not vary with inflation. Thus, the spread on inflation-linked bonds is assumed to be -20 basis points initially and will reach its ultimate value of -40 basis points at the end of plan year 2016.



In the previous report, it was assumed that fixed income securities would consist of long-term bonds only. However, since the current PSPIB policy portfolio is not only composed of long-term bonds, but of bonds of all duration (universe), it is assumed that fixed income securities are initially composed of universe bonds, with the exception of real return bonds, and will transition to long-term bonds by plan year 2019 once the ultimate yield is reached. Since bonds with shorter duration are less affected by an increase in yield, this results in slightly higher fixed income rates of return over the first five years than it would have been assuming long-term bonds for the entire projection period.

Due to their shorter duration, the yield on universe bonds is lower than the yield on long-term bonds. The initial spread between the long-term federal bonds and the universe of federal bonds is assumed to decrease from 85 basis points at the beginning of plan year 2013 to 50 basis points at the beginning of plan year 2016. Spreads between universe federal bonds and universe provincial, or universe corporate bonds are assumed to be similar to spreads between long-term bonds.

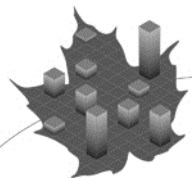
The expected real rates of return for individual bonds take into account the coupons and market value fluctuations due to the expected movement of their respective yield rates. As the economy continues to strengthen (following the 2008-2009 economic downturn), the long-term federal bond yield is assumed to increase between plan years 2013 and 2018 and only stabilize at the end of plan year 2018. Therefore, bond returns are quite low for the first six years of the projection. The assumed ultimate real rate of return for long-term federal bonds is 2.8% starting in plan year 2019. An ultimate fixed income real rate of return of 3.1% is assumed for 2019 and thereafter.

Equity

Currently, the assets of the pension fund are mostly invested in equity, specifically in developed world equity and emerging markets equity. In the derivation of the real rates of return for these equity investments, consideration was given to the long-term equity risk premiums for these equity classes. The rates of return also include dividends from the equities and market value fluctuations. No distinction is made between realized and unrealized capital gains.

Consistent with the assumption that risk taking must be rewarded, equity returns are developed by adding an equity risk premium to the long-term federal bond real rate of return. The historical equity risk premium over bonds for 19 countries, representing almost 90% of global stock market value, for the 112-year and 50-year periods ending in 2011 were 3.5% and 0.4% respectively (3.4% and 0.8% for Canada)¹. Historical equity risk premiums over the 112-year period were higher than expected due to several non-repeatable factors (mainly diversification and globalization). As a result, the long-term expected equity risk premium is assumed to be lower than what was realized in the past 112 years. However, the equity risk premium is assumed to be higher in the first six years of the projection (averaging 7.1%), reflecting assumed low bond returns over the same period, before reaching its ultimate rate of 2.2% for Canadian and foreign developed markets. The equity risk premium for emerging market equities is expected to be 1.0% higher than for Canadian and foreign

¹ Source: Elroy Dimson, Paul Marsh and Mike Staunton, Credit Suisse Global Investment Returns Yearbook 2012.



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

developed market equities, reflecting the additional risk inherent with investments in emerging countries. As described in the previous section, the long-term federal bond real yield is set at 2.8% for plan years 2019 and thereafter, resulting in a long-term federal bond real rate of return of 2.8% for plan years 2019 and thereafter.

Real rates of return for developed market equity investments are projected at 5.0% (6.0% for emerging markets) throughout the projection period.

Real Return Assets

Real return assets such as real estate and infrastructure are considered to be a hybrid of fixed income and equity. If these assets are considered to behave 60% like fixed income and 40% like developed market equities, then the assumed return should be composed of 60% of the return on fixed income and 40% of the return on developed market equities. Considering the inherent difficulties in modelling short-term returns for volatile assets, real return assets are projected at 3.8% throughout the projection period.

Table 25 summarizes the assumed real rates of return by asset type throughout the projection period, prior to reduction for investment expenses.

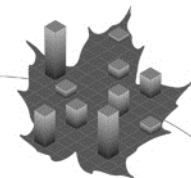
Table 25 Real Rate of Return by Asset Type
(in percentage)

Plan Year	Fixed Income Securities	Cash	Canadian Equity	U.S. and Foreign Equity	Emerging Market Equity	Real Estate & Infrastructure
2013	(2.5)	(1.0)	5.0	5.0	6.0	3.8
2014	(1.9)	(0.7)	5.0	5.0	6.0	3.8
2015	(1.5)	(0.4)	5.0	5.0	6.0	3.8
2016	(0.8)	(0.2)	5.0	5.0	6.0	3.8
2017	(0.6)	0.2	5.0	5.0	6.0	3.8
2018	1.3	0.6	5.0	5.0	6.0	3.8
2019+	3.1	0.8	5.0	5.0	6.0	3.8

c) Investment Expenses

Over the last three plan years, PSPIB's operating and asset management expenses have decreased from 0.74% to 0.61% of average net assets. It is assumed that going forward PSPIB investment expenses will average 0.60% of average net assets. The majority of those investment expenses were incurred through active management decisions.

The active management objective is to generate returns in excess of those from the policy portfolio, after reduction for additional expenses. Thus, the additional returns from a successful active management program should equal at least the cost incurred to pursue active management. In seven of the past nine years, PSPIB's additional returns from active management exceeded related expenses. For the purpose of this valuation, it is assumed that additional returns due to active management will equal additional expenses related to active management. Those expenses are assumed to be the difference between total investment expenses of 0.6% and the assumed expenses of 0.2% that would be incurred for passive management of the portfolio considering that part of the portfolio is invested in real estate and infrastructure.



The next section shows the overall rate of return on the fund net of investment expenses.

d) Overall Rate of Return on assets of the Pension Fund

The best-estimate rate of return on total assets is derived from the weighted average assumed rate of return on all types of assets, using the assumed asset mix proportions as weights. The best-estimate rate of return is further increased to reflect additional returns due to active management and reduced to reflect all investment expenses. The ultimate real rate of return is developed as follow:

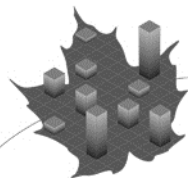
	<u>Nominal</u>	<u>Real</u>
Weighted average rate of return	6.5%	4.3%
Additional returns due to active management	0.4%	0.4%
Expected investment expenses		
Expenses due to passive management	-0.2%	-0.2%
Additional expenses due to active management	<u>-0.4%</u>	<u>-0.4%</u>
Total expected investment expenses	-0.6%	-0.6%
Net rate of return	6.3%	4.1%

The resulting nominal and real rates of return for each projection year are shown in Table 26.

Table 26 Rates of Return on Assets of the Pension Fund
(in percentage)

Plan Year	Nominal	Real
2013	5.1	3.1
2014	5.2	3.2
2015	5.3	3.3
2016	5.4	3.4
2017	5.4	3.4
2018	5.8	3.8
2019	6.1	4.1
2020	6.2	4.1
2021+	6.3	4.1
2013-2017	5.3	3.3
2013-2022	5.7	3.7

It is assumed that the ultimate real rate of return on investments will be 4.1%, net of all investment expenses. The ultimate real rate of return is unchanged from the previous valuation. The real rates of return over the first six years of the projection are on average 0.5% lower than assumed in the previous valuation. The real rate of return on assets takes into account the assumed asset mix as well as the assumed real rate of return for all categories of assets. The nominal returns projected for the Pension Fund are simply the sum of the assumed level of inflation and the real return.



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

4. Transfer Value Real Interest Rate

Commuted values are calculated in accordance with the Standards of Practice published by the Canadian Institute of Actuaries. In particular, the real interest rates to be used for the computation of commuted values as at a particular date are as follows:

First 10 years: $r_7 + 0.90\%$

After 10 years: $r_L + 0.5 \times (r_L - r_7) + 0.90\%$

Where $r_7 = r_L \times (i_7/i_L)$

r_L is the long-term real-return Government of Canada bond yield, annualized

i_L is the long-term Government of Canada benchmark bond yield, annualized and

i_7 is the 7-year Government of Canada benchmark bond yield¹, annualized

The obtained rates of interest are rounded to the next multiple of 0.10%.

For example, for plan year 2013, the assumed real rates of interest are 1.4% for the first 10 years and 1.5% thereafter. These rates were derived from the assumed 2013 CPI increase and the assumed 2013 long-term Government of Canada benchmark bond yield which corresponds to the new money rate in this valuation.

The economic assumptions used in this report are summarized in the following table.

5. Summary of Economic Assumptions

Table 27 Economic Assumptions²
(As a percentage)

Plan Year	Inflation		Employment Earning Increases			Interest		
	CPI Increase	Pension Indexing ³	YMPE	Average Pensionable Earnings ⁴	Maximum Pensionable Earnings ⁵	New Money Rate	Yield Projected on Account	Return Projected on Fund
2013	2.0	1.9	1.9	1.5	1.9	2.6	5.7	5.1
2014	2.0	2.0	2.7	2.0	2.7	3.0	5.4	5.2
2015	2.0	2.0	2.8	2.6	2.8	3.4	5.1	5.3
2016	2.0	2.0	2.9	2.7	2.9	3.8	4.8	5.4
2017	2.0	2.0	3.0	2.8	3.0	4.2	4.6	5.4
2018	2.0	2.0	3.1	2.9	3.1	4.6	4.5	5.8
2019	2.0	2.0	3.2	3.0	3.2	4.8	4.4	6.1
2020	2.1	2.0	3.3	3.1	3.3	4.9	4.3	6.2
2021	2.2	2.1	3.4	3.2	3.4	5.0	4.2	6.3
2022	2.2	2.2	3.4	3.2	3.4	5.0	4.2	6.3
2025	2.2	2.2	3.4	3.2	3.4	5.0	4.1	6.3
2030	2.2	2.2	3.4	3.2	3.4	5.0	4.1	6.3
2035	2.2	2.2	3.4	3.2	3.4	5.0	4.8	6.3
2040+	2.2	2.2	3.4	3.2	3.4	5.0	5.0	6.3

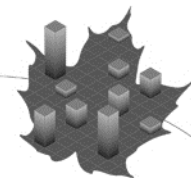
¹ It was deemed to be equal to 90% of the long-term Government of Canada benchmark bond yield.

² Bold figures denote actual experience.

³ Assumed to be effective as at 1 January.

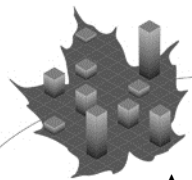
⁴ Assumed to be effective as at 1 January. Exclusive of seniority and promotional increases.

⁵ Calendar year 2013 Maximum Pensionable Earnings is \$150,900.



As a reference, for periods ending December 2011, the following table was prepared based on the Canadian Institute of Actuaries Report on Canadian Economic Statistics 1924-2011.

Period of Years Ending 2011	15	25	50
Level of Inflation	2.0%	2.4%	4.2%
Real Increases in Average Earnings	0.5%	0.4%	0.9%
Real Yield of Long-Term Canada Bonds	2.8%	4.1%	3.3%
Real Return on Long-Term Canada Bonds	6.3%	7.1%	3.9%
Average Real Return on Diversified Portfolios	4.3%	5.6%	4.0%



Appendix 7 – RCMPSA Demographic and Other Assumptions

A. Demographic Assumptions

Given the size of the population subject to the RCMPSA and the somewhat unique characteristics of the pension benefit provisions, the plan's own experience, except where otherwise noted, was deemed to be the best model to determine the demographic assumptions. Assumptions from the previous valuation were updated to reflect past experience to the extent it was deemed credible.

The determination of some demographic assumptions also takes into account general or specific information provided by the RCMP.

1. Seniority and Promotional Salary Increases

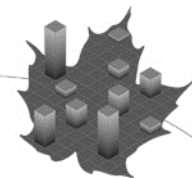
Seniority means length of service and *promotion* means moving to a higher rank.

Minor adjustments were made to the seniority and promotional salary increase assumption for Regular Members. The assumption fully recognizes the Service Pay Allowance granted on every fifth service anniversary (1.5% for every five years of service, up to and including 35 years of service) and the 4% Senior Constable Provisional Allowance granted after seven completed years of service. Improvements to these allowances, adopted on 30 March 2012, are also recognized in this valuation. Effective 1 April 2013, the first Service Pay Allowance will be granted one year earlier at duration 4 instead of 5 with additional 1.5% increases unchanged at durations 10, 15, 20, 25 and 35. The Senior Constable Provisional Allowance will increase from 4% to 5% effective 1 January 2014.

The assumption for Civilian Members was changed from the previous valuation. It was decreased at most durations; the decrement is on average 0.15% by duration.

Table 28 Assumed Seniority and Promotional Salary Increases
(Percentage of annual earnings)

Regular Members		Civilian Members	
Completed Years of Service in the Force	Increase	Completed Years of Pensionable Service	Increase
0	23.0	0	5.4
1	8.0	1	4.8
2	7.0	2	4.0
3	2.0	3	3.4
4	0.4	4	3.2
5	0.4	5	2.5
6	5.4	6	2.4
7	0.7	7	2.3
8	0.7	8	2.1
9	2.2	9	2.1
10	0.7	10	1.6
15	0.8	15	1.4
20	1.0	20	1.1
25	0.8	25	0.9
30	0.6	30	0.8



2. New Contributors

The new contributor assumption was changed from the previous valuation. The projected number of Regular Members was split between males and females to recognize that the proportion of female Regular Members is increasing.

Table 29 Assumed Annual Increases in Number of Contributors (Percentage)

Plan Year	Regular Members		Civilian Members	
	Male	Female	Male	Female
2013	(1.5)	1.0	(1.0)	(1.0)
2014	(0.5)	1.0	(0.2)	(0.2)
2015	(1.2)	1.0	(0.7)	(0.7)
2016	0.7	1.0	0.8	0.8
2017	0.7	1.0	0.8	0.8
2022+	0.5	0.5	0.5	0.5

For each subgroup, the age distribution of new contributors is based on the distribution of actual new contributors during the intervaluation period. As demographic characteristics at entry and qualifications are constantly evolving, short-term experience was deemed a better model to determine the demographics of new entrants.

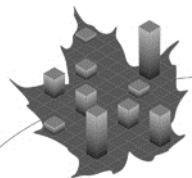
The initial salary of new Civilian Members in a given age-sex cell in plan year 2013 is assumed to be the same as the corresponding experience in plan year 2012 increased by 1.5% (assumed salary increase for plan year 2013). The initial salary for Regular Members is \$48,946. Initial salary is assumed to increase in future plan years in accordance with the assumption for average earnings increases.

3. Pensionable Retirement

As in the previous valuations, assumed rates of pensionable retirement for Regular Members were again updated for this valuation. Experience analysis shows that Regular Members have been delaying retirement. The average service in the force at retirement has increased by 2.3 years in the last 10 years (the average age at retirement has increased by 3.8 years). The average service in the force for Regular Members who retired in the intervaluation period is 32.0 years (with an average age of 55.3); it was 31.8 in the previous valuation (with an average age at retirement of 55.0). Pensionable retirement rates for Regular Members were decreased in this valuation to reflect this trend and are, on average, 5% lower than previous valuation retirement rates.

Table 30 Assumed Rates of Pensionable Retirement - Regular Members (Per 1,000 individuals)

Age Last Birthday	Completed Years of Service in the Force						
	19	20-22	23	24-28	29-33	34	35+
40	10	10	-	-	-	-	-
45	10	10	40	40	-	-	-
50	20	20	50	50	60	-	-
55	40	50	130	140	160	400	500
60	600	600	600	600	600	600	600
64	1,000	1,000	1,000	1,000	1,000	1,000	1,000



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

Based on the intervaluation experience, assumed rates of pensionable retirement for Civilian Members were also changed for this valuation. They are on average 40% lower at durations 14 to 28 for ages 54 to 58.

Table 31 Assumed Rates of Pensionable Retirement - Civilian Members
(Per 1,000 individuals)

Age Last Birthday	Completed Years of Pensionable Service							
	1-8	9-13	14-18	19-23	24-28	29-33	34	35
50	10	10	10	10	10	40	-	-
55	10	20	30	30	40	100	500	500
60	100	200	200	200	200	200	500	500
64	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

4. Disability Retirement

Disability retirement rates for Regular Members were increased significantly beginning with the 1999 valuation when the experience showed many more disabilities than expected. This finding was investigated with the RCMP and a change of policy was confirmed. Based on the intervaluation experience, it appears appropriate to again increase disability rates for this valuation. Assumed rates for Regular Members are on average 30% higher.

Disability retirement rates for Civilian Members were also changed for this valuation; they are on average 30 % higher after age 49.

As in the previous valuation, it is assumed that 25% of future new disability pensioners will receive a CPP disability pension.

Table 32 Assumed Rates¹ of Pensionable Disability
(Per 1,000 individuals)

Age Last Birthday	Regular Members	Civilian Members
30	3.0	0.5
40	5.0	2.0
50	30.0	10.0
59	90.0	20.0

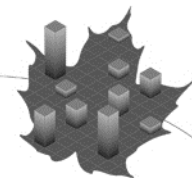
5. Withdrawal

Withdrawal means ceasing to be employed for reasons other than death or retirement with an immediate annuity or an annual allowance.

Rates for Regular Members are, on average, 35% lower at service durations 3 to 9 years of service and rates for Civilian Members are, on average, 20% lower than those used in the previous valuation at early service durations (0 to 6 years of service).

In previous valuations, vested Regular Members (with at least two years of service) under age 60 and vested Civilian Members under age 50 were assumed to choose to transfer the commuted value of the deferred annuity. In this valuation, 50% of all members who

¹ Rates do not apply 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 this criterion is first met or ceased to be met.



withdraw with at least five years of service are assumed to choose the deferred annuity option.

Table 33 Assumed Withdrawal Rates
(Per 1,000 individuals)

Completed Years of Service	Regular Members	Civilian Members
0	20	25
1	15	23
5	5	20
10	5	15
15	3	5
20+	0	0

6. Mortality

Mortality rates for male and female Regular Members are as projected in the previous valuation.

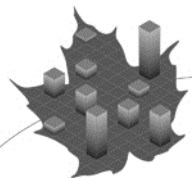
Mortality rates for Civilian Members, surviving spouses and disabled pensioners were changed. They are the same as those from the most recent actuarial report (31 March 2011) on the pension plan for the Public Service of Canada projected to plan year 2013. Given the size of the population of the pension plan for the Public Service of Canada, it was deemed to be a more appropriate model to determine the mortality assumptions for these groups.

Mortality rates for both male and female Civilian Members are on average 7% lower than those projected in the previous valuation. Mortality rates for widows are on average 9% lower and mortality rates for widowers are on average 7% lower than those projected in the previous valuation. Mortality rates for male disabled members are on average 3% lower; mortality rates for female disabled pensioners are on average 2% lower than those projected in the previous valuation.

Table 34 Assumed Rates of Mortality
For 2013 Plan Year (per 1,000 individuals)

Age Last Birthday	<u>Regular Members</u>		<u>Civilian Members</u>		<u>Surviving Spouses</u>		<u>Disabled</u>	
	Male	Female	Male	Female	Male	Female	Male	Female
30	0.5	0.3	0.4	0.3	1.2	0.4	6.9	5.9
40	0.9	0.6	0.7	0.4	2.6	0.9	12.2	6.9
50	1.9	1.0	1.9	1.3	4.4	2.5	15.2	8.9
60	4.6	3.1	5.5	4.0	8.1	5.3	22.4	13.7
70	14.0	9.5	17.1	11.7	20.3	12.6	40.3	23.6
80	49.8	28.2	54.9	36.9	61.4	34.9	88.5	62.4
90	143.5	92.6	158.3	119.2	154.4	109.3	194.6	167.0
100	280.0	230.0	343.9	303.8	352.2	317.1	466.5	455.4
110+	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0

As shown in the 25th Actuarial Report on the Canada Pension Plan, life expectancy in Canada has been increasing constantly over the years. This trend is also observed with the Royal Canadian Mounted Police membership as supported by analysis of past



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

mortality experience. Mortality rates are reduced in the future in accordance with the same longevity¹ improvement assumption used in the 25th Actuarial Report on the Canada Pension Plan. For both males and females, the longevity improvement factors are higher than those used in the previous valuation except at advanced ages. Factors shown in the 25th Actuarial Report of the Canada Pension Plan are based on calendar years. These factors have been interpolated to obtain plan year longevity improvement factors.

The ultimate longevity improvement factors for plan years 2031 and thereafter were established by analysing the trend by age and sex of the Canadian experience over the period 1921 to 2006. Improvement factors for plan year 2012 are assumed to be those experienced on average over the 15-year period 1991 to 2006. After plan year 2012, the factors are assumed to reduce gradually to their ultimate level by plan year 2031.

A sample of assumed longevity improvement factors is shown in the following table.

Table 35 Assumed Longevity Improvement Factors

Age Last Birthday	Initial and Ultimate Plan Year Mortality Reductions ² (%)			
	Male		Female	
	2013	2031+	2013	2031+
30	2.66	0.80	1.51	0.80
40	2.04	0.80	1.29	0.80
50	1.78	0.80	1.23	0.80
60	2.22	0.80	1.34	0.80
70	2.40	0.80	1.42	0.80
80	1.94	0.70	1.41	0.70
90	1.11	0.44	0.67	0.44
100	0.34	0.30	0.12	0.30
110+	0.03	0.30	0.03	0.30

7. Family Composition

Assumptions for the proportion of members leaving, upon death, a spouse eligible for a survivor pension is unchanged from the previous valuation. The age assumption for new survivors is also unchanged.

¹ In this report 'longevity improvement assumption' is equivalent to the 'mortality improvement assumption' discussed in the 25th Actuarial Report on the Canada Pension Plan.

² The mortality rate reduction applicable during any plan year within the 19-year select period is found by linear interpolation between the figures for plan years 2013 and 2031.

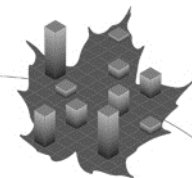


Table 36 Assumptions¹ for Survivor Spouse Allowances

Age Last Birthday at Death	Male		Female	
	Probability of an Eligible Spouse at Death of member	Spouse Age Difference	Probability of an Eligible Spouse at Death of member	Spouse Age Difference
30	0.70	(1)	0.50	2
40	0.85	(1)	0.55	2
50	0.85	(2)	0.55	3
60	0.85	(3)	0.50	3
70	0.80	(3)	0.40	2
80	0.65	(3)	0.30	2
90	0.40	(5)	0.10	0
100	0.15	(8)	0.00	(3)

All assumptions regarding eligible children are not changed from the previous valuation. As in the previous valuation, to determine the value of pensions payable to eligible children, the rates of pension termination were assumed to be zero prior to age 17 and 15% per annum thereafter until expiry of the benefit on the 25th birthday.

Table 37 Assumptions for Survivor Children Allowances²

Age Last Birthday at Death	Male		Female	
	Average Number of Children	Average Age of Children	Average Number of Children	Average Age of Children
30	0.9	4	0.8	3
40	1.3	12	1.2	11
50	0.8	19	0.6	19
60	0.1	21	0.1	23
70+	0.0	-	0.0	-

B. Other Assumptions

1. Pension Benefits Division / Optional Survivor Benefit / Leave Without Pay

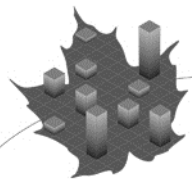
The division of pension benefits has almost no effect on the valuation results because the liability is reduced, on average, by approximately the amount paid to the credit of the former spouse. Consequently, no future pension benefits divisions were assumed in estimating the current service cost and liability. However, past pension benefits divisions were fully reflected in the liability. 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.

2. Minimum Postretirement Death Benefit

This valuation does not take into account the minimum death benefit described in Note 16 of section D of Appendix 1, with respect to deaths occurring after retirement. The resulting understatement of the accrued liability and current service cost is not material since the majority of the relatively few pensioners who die in the early years of retirement leave an eligible survivor.

¹ Does not apply if the deceased member was a contributor with less than two years of pensionable service.

² Payable unless the deceased member was a contributor with less than two years of pensionable service.



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

3. Administrative Expenses

In the previous report, PSPIB operating expenses were implicitly recognized through a reduction in the real return on the Fund. In this report, the operating expenses of the PSPIB are still recognized implicitly.

As in the previous valuation, it is estimated that administrative expenses will be 0.40% of pensionable payroll. As in the previous valuation, in plan year 2013 the Account is assumed to be charged with 68% of the total expenses reducing by 2% each year thereafter. The future expenses expected to be charged to the Account have been capitalized and are shown as a liability, whereas the expenses to the Fund have been added to the normal cost as they occur.

A specific project is underway to bring the administration of the RCMP pension plan at Public Works Government Services Canada. In the previous report, it was expected that the project would be completed by March 2014. The expected completion date has been changed to March 2016 in this report. The project's cost continues to be charged to the Superannuation Account and the Pension Fund. This valuation recognizes the present value of the expected remaining administration expenses associated with the realization of this project. The total of these remaining administration expenses have been estimated to \$87 million.

4. Financing of Elected Prior Service

In accordance with the current prior service financing policy, the government credits to the Account in respect of prior service elections are assumed to be 100% of the resulting contributions made by the contributors; the corresponding figure for the Fund is determined in accordance with the allocation of current service cost where the government is assumed to contribute in the same proportions.

5. Outstanding Terminations

Payments owing to former contributors as at 31 March 2012 are 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.

6. Disability Incidence Rates for Pensioners Under Age 60

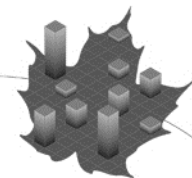
Both deferred pensioners and pensioners receiving an annual allowance while under age 60 are assumed to have a 0% disability rate. The resulting understatement of liability and current service cost is negligible.

7. Recovery Rates for Disability Pensioners

No recoveries are assumed for disability pensioners. The resulting overstatement of liability and current service cost is negligible.

8. Sex of Surviving Spouses

Each eligible surviving spouse is assumed to be of the opposite sex of the member.



Appendix 8 – RCA Valuation Methodology and Assumptions

A. Account Available for Benefits

The amounts available for benefits in respect of the RCA comprise the recorded balance in the Retirement Compensation Arrangements Account, which forms part of the Public Accounts of Canada, as well as a tax credit (CRA refundable tax).

Interest is credited every three months in accordance with the actual average yield on a book value basis for the same period on the combined Superannuation Accounts of the Public Service, Canadian Forces – Regular Force and Royal Canadian Mounted Police pension plans. The actuarial asset value is equal to the book value.

B. Valuation of Liabilities

Described in this appendix are the liability valuation methodologies used and any differences in economic assumptions from those used in the RCMPSPA valuation.

1. RCA Postretirement Survivor Benefits

The limit on the amount of spousal annual allowance that can be provided under the RCMPSPA decreases at the same time the member's pension is reduced due to the CPP coordination offset, which usually occurs at age 65.

This benefit was valued conservatively by assuming the plan limit is always reduced by the CPP coordination offset. The liability overstatement is minor because the probability of the former contributor dying prior to age 65 is small. This overstatement tends to be offset by the understatement of accrued liability caused by terminally funding the preretirement survivor benefit. The projected accrued benefit cost method was used to estimate the liability and current service cost for this RCA benefit.

2. Excess Pensionable Earnings

The projected accrued benefit cost method (described in detail in Appendix 5B) was used to estimate the liability and current service cost for retirement benefits in excess of the Maximum Pensionable Earnings.

3. Administrative Expenses

To compute the liability and current service cost, no provision was made regarding the expenses incurred for the administration of the RCA since these expenses are not debited from the RCA Account.

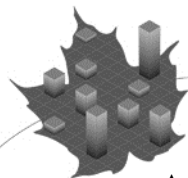
C. Actuarial Assumptions

The valuation economic assumptions are those described in Appendix 6 and shown in Table 27, except that the interest discount rate used to determine the liability and current service cost in respect of the RCA is one-half of the yield projected on the combined Superannuation Accounts.

The demographic assumptions for the RCA valuation are the same as those used for the RCMPSPA valuation as described in Appendix 7.

D. Valuation Data

Pension benefits in payment to be debited from the RCA were provided as at 31 March 2012. Details on the RCA valuation data for current pensioners are shown in Table 57 of Appendix 12.



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

Appendix 9 – Superannuation Account Projection

Prior to 1 April 2000, the RCMP Superannuation Account tracked all government pension benefit obligations related to the RCMPSPA. The Account is now debited only with benefit payments made in respect of service earned before that date and administrative expenses; and it is credited with prior service contributions and costs related to elections made prior to 1 April 2000 and interest.

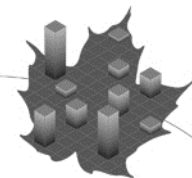
The results of the following projection were computed using the amounts available for benefits described in Appendix 3, the data described in Appendices 4 and 12, the methodology described in Appendix 5 and the assumptions described in Appendices 6 and 7.

The projection shows the expected cash flows and balances of the Superannuation Account if all assumptions are realized. Emerging experience, differing from the corresponding assumptions, will result in gains or losses to be revealed in subsequent valuation reports. Based on the assumptions of this report, the Superannuation Account is expected to start decreasing by plan year 2017.

Table 38 Superannuation Account and Actuarial Liability Projections
(\$ millions)

Plan Year	Present Value of Prior Service Contributions/Costs	Beginning Account Balance	Net Payments ¹	Interest	Special Credits at End of Plan Year	Beginning Actuarial Liability
2013	8	13,016	601	725	-	13,141
2014	7	13,140	645	692	12	13,272
2015	7	13,199	650	657	12	13,324
2016	6	13,218	664	619	12	13,337
2017	5	13,185	680	591	12	13,298
2018	5	13,108	698	574	12	13,214
2019	5	12,996	713	556	12	13,093
2020	4	12,851	727	537	12	12,939
2021	4	12,673	738	517	12	12,754
2022	4	12,464	750	508	12	12,535
2023	3	12,234	762	498	12	12,296
2024	3	11,982	771	476	12	12,035
2025	3	11,699	779	464	12	11,741
2026	3	11,396	787	451	12	11,427
2027	3	11,072	791	438	12	11,094
2028	2	10,731	792	424	12	10,743
2029	2	10,375	791	409	-	10,377
2030	2	9,993	789	394	-	9,995
2040	-	6,138	666	290	-	6,138
2050	-	2,726	401	126	-	2,726

¹ Benefit payments plus administrative and modernization expenses minus prior service contributions/costs.



Appendix 10 – Pension Fund Projection

Starting 1 April 2000, the RCMPSPA is financed through the RCMP Pension Fund. Government and employee contributions, investment earnings and prior service contributions for elections since 1 April 2000 are added to the Fund. Benefit payments made in respect of service earned since that date and administrative expenses are subtracted from the Fund.

The results of the following projection were computed using the data described in Appendices 4 and 12, the methodology described in Appendix 5 and the assumptions described in Appendices 6 and 7.

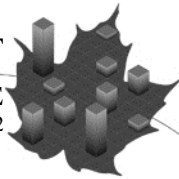
The projection shows the expected growth of the Pension Fund if all assumptions are realized. According to the projection, cash flows are expected to be positive until plan year 2032. Emerging experience, differing from the corresponding assumptions, will result in gains or losses to be revealed in subsequent valuation reports.

Table 39 Pension Fund and Actuarial Liability Projections
(\$ millions)

Plan Year	Expected Investment (Gains)/Losses	Present Value of Prior Service Contributions	Beginning Market Value of Assets	Contributions ¹	Payments ²	Investment Earnings	Special Payment at End of Plan Year	Beginning Actuarial Liabilities
2013	(59)	15	4,570	442	99	242	57	5,307
2014	(122)	12	5,212	449	128	279	71	5,928
2015	(12)	10	5,883	456	139	321	71	6,563
2016	22	9	6,592	465	154	364	71	7,235
2017	-	7	7,338	476	175	404	71	7,943
2018	-	6	8,114	492	201	479	71	8,679
2019	-	6	8,955	513	226	555	71	9,480
2020	-	5	9,868	535	252	620	71	10,352
2021	-	4	10,842	558	282	692	71	11,284
2022	-	4	11,881	579	315	757	71	12,278
2023	-	3	12,973	601	352	825	71	13,323
2024	-	3	14,118	624	391	897	71	14,418
2025	-	2	15,319	648	434	972	71	15,566
2026	-	2	16,576	674	482	1,050	71	16,767
2027	-	2	17,889	700	533	1,132	71	18,021
2028	-	2	19,259	727	588	1,218	71	19,329
2029	-	1	20,687	754	650	1,307	-	20,688
2030	-	1	22,098	782	716	1,394	-	22,099
2040	-	-	38,246	1,064	1,680	2,390	-	38,246
2050	-	-	57,960	1,540	2,825	3,611	-	57,960

¹ Total current service cost plus prior service contributions.

² Benefit payments plus modernization and administrative expenses.



Appendix 11 – Uncertainty of Results

A. Introduction

The financial status of the Pension Fund depends on many demographic and economic factors, including new contributors, average earnings, inflation, level of interest rates and investment returns. The projected long-term financial status of the Pension Fund is based on best-estimate assumptions; the objective of this section is to present alternative scenarios. The alternatives presented illustrate the sensitivity of the long-term projected financial position of the Pension Fund to changes in the future economic outlook. In this appendix, any references, in sections B and C, to assets, liabilities, surplus/(deficit), annual special payments and service cost relate to the Pension Fund.

Section B examines the sensitivity of the Pension Fund to different asset allocations. Five alternative investment portfolios are described, along with the volatility of each portfolio and the resulting impact on the Pension Fund's funding ratio and current service cost. The impact of financial market volatility on the financial status of the Pension Fund is explored in section C, where severe one-time financial shocks are applied to three investment portfolios with the purpose of quantifying the impact on the funding ratio over the short term. Lastly, the impacts of prolonged low bond yields on the Superannuation Account and on the Pension Fund due to slower than expected economic growth are analyzed in section D.

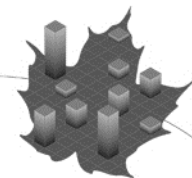
B. Sensitivity of Investment Policy

A major risk all pension plans face is funding risk – the risk that pension assets are insufficient to meet benefit obligations. If funding deficiencies or surpluses continue for an extended period of time, risk is transferred from one generation to another and may ultimately take the form of an increase or a decrease in the contribution rate.

The RCMPSPA represents a long-term obligation to pay pension benefits. Thus, a long-term approach must be taken to fund these obligations. Long-term Government of Canada bonds are considered risk-free and their yields are considered low. The real yield on long-term federal bonds was around 0.6% in March 2012. This is significantly below the required real return on assets of 4.1% that is needed to sustain the plan at the current contribution rates.

By investing solely in risk-free long-term federal bonds, all funding risk could be eliminated with an excessive cost and then at the detriment of current and future contributors who will have to contribute more unless benefits were decreased. If PSPIB were to switch from the current portfolio of fixed and variable income securities to a portfolio that consists of only long-term Government of Canada bonds, the current service cost of the plan would have to increase substantially in order to maintain the current funding status or benefits would have to be reduced. Neither of these is a desirable option.

The Government created the PSPIB to invest amounts equal to contributions in excess of benefits and administrative expenses with respect to service since 1 April 2000 with the purpose of maximizing investment returns without undue risk of loss. The current service cost is less than it would have been if the investment policy had been restricted to long-term



government bonds. Diversifying the portfolio into a mix of fixed and variable income securities accomplishes this.

The current service cost is reduced by investing in securities that offer a higher rate of return than risk-free long-term federal bonds, but that also have a higher degree of risk or volatility. That is, funds can be invested in a mix of investments, such as equities and bonds, with the expected rate of return equal to the yield required to meet the plan's funding requirements. By investing in riskier assets, investors hope to realize the equity risk premium as their reward for taking on additional risk. An equity risk premium is the difference between the expected return on the risky asset (equity) and the expected return on a risk-free asset, such as the Government of Canada long-term bond mentioned above.

Of course, these higher returns are expected but not guaranteed, creating the very real possibility that the market will not perform as expected and liabilities will grow at a faster rate than assets for an extended period of time. This is known as market risk. Since investing solely in risk-free long-term federal bonds will not produce a return sufficient to maintain the plan at status quo, it is necessary to take some risk in order to increase the probability of earning a sufficient return. Even if investment returns materialize as expected, other assumptions may not, causing liabilities to grow at a faster rate than assets. For example, salaries or inflation may increase at a higher rate than expected. The amount of risk assumed by the plan sponsor depends on many factors, including the current funding status and economic outlook, among other things. Thus, the investment policy must balance the plan sponsor's desire for a high real rate of return with its tolerance or capacity for taking risk.

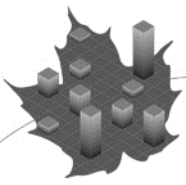
The following table shows the impact that various asset mixes would have on the funding ratio and the long-term service cost, as well as their relative volatility.

Table 40 Impact of Various Investment Policies

Portfolio	Asset Mix			Ultimate Real Rate of Return	1 year Standard Deviation	Funding Ratio as at 31 March 2012	Annual Special Payment (\$ millions)	Long-term Service Cost
	Fixed Income	Equity	Real Return					
#1	100%	0%	0%	2.8%	9.0%	51%	329	31.1%
#2	100%	0%	0%	3.0%	7.6%	56%	288	29.6%
#3	80%	15%	5%	3.4%	7.5%	64%	219	26.7%
#4	50%	35%	15%	3.8%	9.2%	75%	141	24.1%
Best-Estimate	20%	55%	25%	4.1%	12.0%	86%	71	22.4%
#5	0%	100%	0%	4.6%	17.2%	98%	6	20.0%

Portfolio #1 is invested in long-term federal bonds. This portfolio does not result in a feasible scenario due to its prohibitive cost; however, its volatility is low when compared to some of the other portfolios considered.

Portfolio #2 is invested in a fixed income portfolio consisting of federal, provincial, corporate and real return bonds. This diversification increases the real rate of return and reduces the volatility compared to the first portfolio since the four bond asset categories are



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

not perfectly correlated. Although this portfolio produces a higher real rate of return compared to Portfolio #1, it is still not sufficient to ensure the plan remains fully funded while maintaining a lower current service cost. This is also a low risk, low return portfolio. Thus, a portfolio with greater diversification in variable income assets is required in order to keep funding cost to a lower level.

The following portfolios are diversified portfolios that combine equity and real return assets, such as real estate and infrastructure, to fixed income securities. Portfolio #3 and portfolio #4 are more diversified than the first two portfolios and are invested 15% and 35%, respectively, in equity. This diversification increases the real rate of return earned on these portfolios and keeps their volatility comparable to the first two portfolios since the three broad asset categories are not perfectly correlated. However, despite an increased real return and similar risk, these portfolios are still not sufficient to maintain the current funded ratio. Thus, an increase in the plan's current service cost would be required with both portfolios.

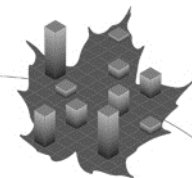
Portfolio #5 is considered riskier because it is entirely invested in equity which has much more volatile returns than bonds. This portfolio is likely to result in higher than necessary returns, resulting in either an improvement to the plan's funding ratio or a decrease to the current service cost. However, the volatility of this portfolio is quite high. By investing in a less risky portfolio, a reasonable current service cost can still be achieved along with lower volatility, and therefore, a lower probability of significant losses and large unforeseen additional contributions.

The best-estimate portfolio is invested 20% in fixed income securities, 55% in equity and 25% in real return assets in the long-term, which is very close to PSPIB's current long term asset-mix objective. Such a portfolio produces an ultimate annual real return of 4.1% net of all investment expenses (assumed to total 0.20% of assets) with a standard deviation of 12.0%. By observing the volatility of each of the portfolios in Table 40, it can be concluded that a certain degree of risk must be undertaken in order to earn a sufficient return. Thus, an asset allocation such as the best-estimate portfolio shows that an average real return of 4.1% can be achieved with some degree of risk.

C. Financial Market Tail Events

This section focuses on the volatility present in the best-estimate portfolio and the extreme outcomes that could result. During plan year 2009, the nominal return on PSPIB assets was (22.7%) due to the economic slowdown. Such an event could be characterized as low probability (also referred to as a "tail event"). However, when these events do occur, the impact on the funding ratio is significant. This section analyzes the impacts that tail events returns would have on the Pension Fund's funding ratio. To illustrate this, returns other than the best-estimate are assumed to occur in plan year 2015. Two alternative portfolios were selected from section B to show the potential variation in tail returns of a less risky (Portfolio 4: 35% equity, 15% real estate and infrastructure, 50% fixed income) and a more risky (Portfolio 5: 100% equity) portfolio in relation to the best-estimate portfolio.

It is assumed that the returns of the three portfolios follow a normal distribution. The long-term mean and annual standard deviation for each portfolio is given in Table 40. Two probability levels were selected to analyze: 1/10 and 1/50. These levels can be thought of as



the probabilities of earning a given return once every 10 and 50 years, respectively. Since the normal distribution has two tails, a left tail and a right tail, both were examined. The left tail event is the occurrence of a nominal return such that the probability of earning that return or less is equal to 1/10 (or 1/50). The right tail event is the occurrence of a nominal return such that the probability of earning that return or more is equal to 1/10 (or 1/50).

For each portfolio a nominal return is calculated at the two probability levels. The nominal returns are given in the following table.

Table 41 Tail Event Portfolio Returns

Probability of return ¹	Tail	Portfolio 4: 35% Equities/ 50% Fixed Income/ 15% Real Estate & Infrastructure	Best-Estimate Portfolio: 55% Equities/ 20% Fixed Income/ 25% Real Estate & Infrastructure	Portfolio 5: 100% Equities/
		Nominal Return	Nominal Return	Nominal Return
1/10	Left	(5.6%)	(8.6%)	(14.0%)
	Right	18.0%	22.2%	30.1%
1/50	Left	(12.7%)	(17.8%)	(27.2%)
	Right	25.1%	31.5%	43.4%

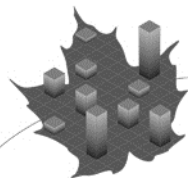
Table 42 shows the impact on the projected Surplus/(Deficit) as at 31 March 2015 (the expected date of the next actuarial review) if the nominal return for plan year 2015 happens to be equal to the returns presented in Table 41 for the best-estimate scenario. Following the various portfolio returns in plan year 2015, it is assumed that the return revert back to its best-estimate value for plan year 2016.

Table 42 Sensitivity of the Projected Surplus/(Deficit) as at 31 March 2015
(\$ millions)

Assumption(s) Varied	Market Value of Assets	Liability	Surplus/ (Deficit)	Annual Special Payments ²
None (i.e. current basis)	6,601	7,235	(634)	62
Investment return				
- Left Tail event at 1/10th probability	5,760	7,235	(1,475)	154
- Right Tail event at 1/10th probability	7,619	7,235	384	-
- Left Tail event at 1/50th probability	5,203	7,235	(2,032)	214
- Right Tail event at 1/50th probability	8,180	7,235	945	-

¹ The probability of earning the positive returns in the table corresponds to the probability that the annual return is greater than or equal to the indicated return. Similarly, the probability of earning the negative returns in the table corresponds to the probability that the annual return is less than or equal to the indicated return.

² Equal annual special payments required to amortize the deficit over the next 15 years starting 31 March 2017.



D. Impact of Prolonged Low Bond Yields

This section explores the consequences of slower than expected economic growth through a reduction in expected bond yields and variable income securities over the next 10 years. Current bond yields are much lower than their historical averages and, without stronger economic growth, might well remain low over the next few years. Over the last 10 and 50-year periods ending 31 December 2011, the average real yield of long-term Government of Canada bonds was respectively 2.2% and 3.3%. This is much higher than the 0.6% real yield on long-term federal bonds as at March 2012. This section looks at the impact of prolonging the current period of low bond yields until the beginning of plan year 2017.

The best-estimate scenario assumes that the long-term federal bond real yield reaches its ultimate value of 2.8% at the beginning of plan year 2019. This scenario assumes that economic growth will remain weak over the next 4 years and moderate thereafter.

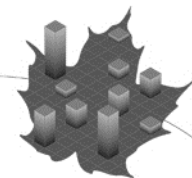
Consequently, the long-term federal bond real yield will remain at its current level for the next four years, before increasing to reach its ultimate value of 2.8% in plan year 2023. As a result, the new money rate will also be affected and will reach its ultimate value later. In addition, returns for equities and real estate and infrastructure would also be lower for the first 4 years. Thus, returns would be lower over the next 5 and 10 years than under the best estimate scenario.

Table 43 shows the impact that such scenario would have on the expected short-term investment returns and new money rate, as well as the impact on accrued liabilities and annual special credits/payments required to fund the Superannuation Account shortfall and the pension fund deficit.

Table 43 Impact on the Superannuation Account and the Pension Fund of Prolonged Low Bond Yields
(\$ millions)

<u>Superannuation Account</u>	<u>Best-Estimate</u>	<u>Low Bond Yields</u>	<u>Difference</u>
2013-2017 Average New Money Rate	3.4%	2.6%	(0.8%)
2013-2022 Average New Money Rate	4.1%	3.2%	(0.9%)
Total Actuarial Liability	13,141	13,719	578
Actuarial Excess/(Shortfall)	(117)	(695)	(578)
Special Credits	12	68	56
 <u>Pension Fund</u>	 <u>Best-Estimate</u>	 <u>Low Bond Yields</u>	 <u>Difference</u>
2013-2017 Average Return Projected on Fund	5.3%	5.0%	(0.3%)
2013-2022 Average Return Projected on Fund	5.7%	5.3%	(0.4%)
Total Actuarial Liability	5,307	5,474	167
Actuarial Surplus/(Deficit)	(781)	(948)	(167)
Special Payments	71	93	22

Prolonging low bond yields, for an additional four years, results in higher actuarial liability and higher special credits/payments for both, the Superannuation Account and the Pension Fund.



Appendix 12 – Detailed Membership Data

Table 44 Male Regular Member Contributors
Number and Average Annual Pensionable Earnings¹ as at 31 March 2012

Age Last Birthday	Completed Years of Service in the Force								All Years of Service
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35	
To 24	401 \$70,148	1 \$81,288	-	-	-	-	-	-	402 \$70,176
25-29	1,466 \$74,201	452 \$81,170	-	-	-	-	-	-	1,918 \$75,844
30-34	1,029 \$74,726	1,249 \$82,381	262 \$87,551	-	-	-	-	-	2,540 \$79,813
35-39	637 \$74,967	989 \$82,907	845 \$88,172	140 \$93,534	-	-	-	-	2,611 \$83,244
40-44	347 \$74,710	543 \$83,083	659 \$88,801	588 \$94,079	355 \$100,971	5 \$102,542	-	-	2,497 \$88,600
45-49	119 \$74,116	166 \$83,142	228 \$88,253	347 \$93,337	1,065 \$100,388	426 \$106,482	36 \$110,620	-	2,387 \$96,936
50-54	33 \$76,530	48 \$82,793	56 \$87,682	106 \$92,872	408 \$95,824	504 \$103,985	774 \$112,042	4 \$130,282	1,933 \$103,466
55-59	9 \$105,317	12 \$83,110	17 \$92,499	22 \$92,239	94 \$96,403	124 \$97,138	430 \$107,613	162 \$114,765	870 \$105,194
60+	-	1 \$88,140	5 \$88,423	3 \$91,220	17 \$91,923	16 \$96,646	43 \$98,361	73 \$108,880	158 \$101,840
All Ages	4,041 \$74,183	3,461 \$82,529	2,072 \$88,325	1,206 \$93,656	1,939 \$99,267	1,075 \$104,068	1,283 \$110,059	239 \$113,227	15,316 \$88,403

Average age: 40.7 years

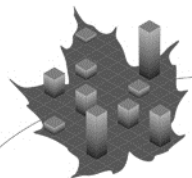
Average service in the force: 13.4 years

Average pensionable service: 13.8 years

Annualized pensionable payroll²: \$1,322.6 million

¹ As defined in Note 1 in Section D of Appendix 1.

² The aggregate pensionable earnings of all contributors with less than 35 years of pensionable service.



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

Table 45 Female Regular Member Contributors
Number and Average Annual Pensionable Earnings¹ as at 31 March 2012

Age Last Birthday	Completed Years of Service in the Force								All Years of Service
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35	
To 24	104 \$68,726	1 \$81,288	-	-	-	-	-	-	105 \$68,845
25-29	362 \$72,695	166 \$81,197	-	-	-	-	-	-	528 \$75,368
30-34	246 \$74,305	444 \$82,265	131 \$86,333	-	-	-	-	-	821 \$80,529
35-39	120 \$74,270	256 \$82,743	352 \$87,424	97 \$91,422	1 \$97,416	-	-	-	826 \$84,544
40-44	56 \$72,912	115 \$82,891	220 \$87,601	202 \$91,068	136 \$96,813	-	-	-	729 \$88,409
45-49	21 \$73,025	49 \$83,297	59 \$87,484	79 \$91,782	233 \$97,874	147 \$104,433	-	-	588 \$95,551
50-54	5 \$64,560	4 \$83,568	16 \$87,148	20 \$88,644	56 \$97,917	91 \$102,099	51 \$104,547	-	243 \$98,480
55-59	-	2 \$82,584	9 \$86,344	8 \$92,472	18 \$94,886	16 \$97,364	23 \$104,137	7 \$130,789	83 \$99,500
60+	-	-	1 \$84,852	1 \$127,224	1 \$86,448	3 \$89,936	4 \$107,076	-	10 \$99,664
All Ages	914 \$72,860	1,037 \$82,335	788 \$87,276	407 \$91,288	445 \$97,408	257 \$102,997	78 \$104,556	7 \$130,789	3,933 \$85,632

Average age: 38.6 years

Average service in the force: 11.8 years

Average pensionable service: 12.0 years

Annualized pensionable payroll²: \$335.9 million

¹ As defined in Note 1 in Section D of Appendix 1.

² The aggregate pensionable earnings of all contributors with less than 35 years of pensionable service.

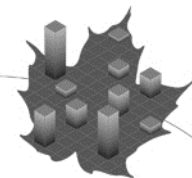


Table 46 Male Civilian Member Contributors
Number and Average Annual Pensionable Earnings¹ as at 31 March 2012

Age Last Birthday	Completed Years of Pensionable Service								All Years of Service
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35	
To 24	11 \$64,628	-	-	-	-	-	-	-	11 \$64,628
25-29	97 \$67,814	45 \$73,659	-	-	-	-	-	-	142 \$69,666
30-34	149 \$68,447	147 \$75,028	47 \$78,498	-	-	-	-	-	343 \$72,645
35-39	86 \$70,689	118 \$75,646	87 \$82,619	14 \$85,715	-	-	-	-	305 \$76,700
40-44	70 \$73,724	75 \$79,305	78 \$81,104	53 \$86,343	16 \$79,386	-	-	-	292 \$79,730
45-49	50 \$75,869	56 \$80,254	49 \$83,377	40 \$87,862	52 \$88,138	32 \$90,851	2 \$86,466	-	281 \$83,812
50-54	34 \$76,256	53 \$79,438	36 \$85,446	26 \$81,040	38 \$88,992	61 \$92,264	45 \$89,729	3 \$84,492	296 \$85,429
55-59	14 \$75,973	17 \$81,954	27 \$80,565	15 \$71,818	14 \$90,255	40 \$91,343	36 \$90,406	6 \$87,236	169 \$85,235
60+	-	13 \$78,258	9 \$79,488	12 \$84,616	6 \$81,346	9 \$80,684	14 \$92,622	8 \$92,441	71 \$84,487
All Ages	511 \$70,797	524 \$76,971	333 \$81,849	160 \$84,315	126 \$87,196	142 \$90,952	97 \$90,330	17 \$89,201	1,910 \$79,286

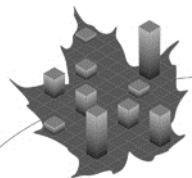
Average age: 43.1 years

Average pensionable service: 11.9 years

Annualized pensionable payroll²: \$149.9 million

¹ As defined in Note 1 in Section D of Appendix 1.

² The aggregate pensionable earnings of all contributors with less than 35 years of pensionable service.



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

Table 47 Female Civilian Member Contributors
Number and Average Annual Pensionable Earnings¹ as at 31 March 2012

Age Last Birthday	Completed Years of Pensionable Service								All Years of Service
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35	
To 24	12 \$58,338	-	-	-	-	-	-	-	12 \$58,338
25-29	125 \$64,577	39 \$68,161	-	-	-	-	-	-	164 \$65,429
30-34	153 \$65,644	161 \$71,078	38 \$72,951	-	-	-	-	-	352 \$68,919
35-39	83 \$66,281	144 \$71,473	128 \$74,623	7 \$75,413	1 \$78,444	-	-	-	363 \$71,492
40-44	70 \$67,828	87 \$70,332	83 \$77,770	36 \$80,395	37 \$72,766	1 \$67,128	-	-	314 \$73,170
45-49	48 \$66,450	52 \$67,869	57 \$76,425	42 \$71,639	60 \$80,003	22 \$77,498	-	-	281 \$73,271
50-54	19 \$63,594	35 \$67,240	32 \$69,407	28 \$70,194	42 \$77,053	36 \$84,183	50 \$77,259	3 \$78,076	245 \$73,927
55-59	8 \$72,810	17 \$72,197	21 \$69,511	21 \$68,008	19 \$70,861	19 \$79,889	25 \$79,761	10 \$85,577	140 \$74,370
60+	2 \$62,310	4 \$71,445	6 \$70,856	7 \$66,247	7 \$78,765	14 \$73,737	4 \$75,006	1 \$91,488	45 \$72,765
All Ages	520 \$65,712	539 \$70,331	365 \$74,633	141 \$72,967	166 \$76,536	92 \$79,923	79 \$77,937	14 \$84,392	1,916 \$71,505

Average age: 41.9 years

Average pensionable service: 11.3 years

Annualized pensionable payroll²: \$135.8 million

¹ As defined in Note 1 in Section D of Appendix 1.

² The aggregate pensionable earnings of all contributors with less than 35 years of pensionable service.

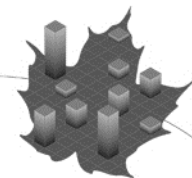


Table 48 Male Former Regular Member Retirement Pensioners
Number and Average Annual Pension¹ as at 31 March 2012

Age Last Birthday	Superannuation Account		Pension Fund	
	Number	Average (\$)	Number	Average (\$)
40-44	5	16,358	5	17,493
45-49	99	23,505	99	15,594
50-54	605	32,637	588	13,256
55-59	2,181	40,626	1,765	12,283
60-64	3,151	44,153	1,884	8,510
65-69	2,125	38,363	536	3,228
70-74	1,496	38,384	24	1,299
75-79	1,033	38,494	-	-
80-84	454	36,886	-	-
85-89	62	31,420	-	-
90-94	12	34,049	-	-
95-99	1	19,116	-	-
All Ages	11,224	39,889	4,901	9,977

Average age² at 31 March 2012: 65.5 years

Average age² at retirement: 51.1 years

Table 49 Male Former Regular Member Disability Pensioners
Number and Average Annual Pension¹ as at 31 March 2012

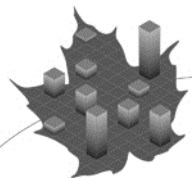
Age Last Birthday	Superannuation Account		Pension Fund	
	Number	Average (\$)	Number	Average (\$)
To 39	1	7,212	16	8,536
40-44	17	12,010	20	11,798
45-49	90	18,254	89	11,820
50-54	250	28,002	230	11,496
55-59	390	31,444	295	9,551
60-64	375	33,683	231	6,956
65-69	176	28,226	51	3,721
70-74	50	33,215	-	-
75-79	22	31,360	-	-
80-84	13	27,230	-	-
85-89	2	25,098	-	-
90-94	1	18,732	-	-
All Ages	1,387	29,914	933	9,307

Average age at 31 March 2012: 59.2 years

Average age at retirement: 49.1 years

¹ Equals initial amounts of all pensions in pay plus all accrued indexation up to and including 1 January 2012, reduced by any CPP coordination and PBDA offsets in effect as at 31 March 2012. 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. There were also 87 male former Regular Members who are entitled to an average deferred pension of \$11,200 payable at age 60, there average age is 40.

² Deferred annuitants are excluded for calculation of the average age.



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

Table 50 Female Former Regular Member Retirement Pensioners
Number and Average Annual Pension¹ as at 31 March 2012

Age Last Birthday	Superannuation Account		Pension Fund	
	Number	Average (\$)	Number	Average (\$)
40-44	7	14,517	7	14,951
45-49	44	23,096	42	15,783
50-54	95	29,513	87	12,406
55-59	135	34,638	109	11,793
60-64	42	37,789	28	10,405
65-69	14	29,550	10	5,310
70-74	-	-	-	-
75-79	2	12,108	-	-
All Ages	340	31,272	283	12,285

Average age² at 31 March 2012: 55.7 years

Average age² at retirement: 49.3 years

Table 51 Female Former Regular Member Disability Pensioners
Number and Average Annual Pension¹ as at 31 March 2012

Age Last Birthday	Superannuation Account		Pension Fund	
	Number	Average (\$)	Number	Average (\$)
To 39	1	3,336	9	10,823
40-44	27	11,735	28	11,923
45-49	45	18,092	43	12,183
50-54	67	23,718	50	11,019
55-59	53	26,603	35	11,255
60-64	21	26,286	11	8,486
65-69	6	18,262	1	5,256
70-74	-	-	-	-
75-79	1	7,632	-	-
All Ages	221	21,731	177	11,291

Average age at 31 March 2012: 52.1 years

Average age at retirement: 44.9 years

¹ Equals initial amounts of all pensions in pay plus all accrued indexation up to and including 1 January 2012, reduced by any CPP coordination and PBDA offsets in effect as at 31 March 2012. 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. There were also 38 female former Regular Members who are entitled to an average deferred pension of \$14,700 payable at age 60, there average age is 41.

² Deferred annuitants are excluded for calculation of the average age.

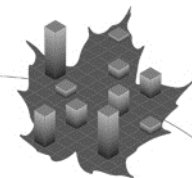


Table 52 Male Former Civilian Member Retirement Pensioners
Number and Average Annual Pension¹ as at 31 March 2012

Age Last Birthday	Superannuation Account		Pension Fund	
	Number	Average (\$)	Number	Average (\$)
55-59	102	39,672	103	16,507
60-64	148	39,934	147	10,463
65-69	182	30,453	113	5,315
70-74	112	28,922	22	2,909
75-79	98	26,277	3	3,376
80-84	59	23,266	1	2,736
85-89	28	20,685	-	-
90-94	7	19,462	1	6,679
All Ages	736	31,796	390	10,057

Average age² at 31 March 2012: 69.4 years

Average age² at retirement: 58.0 years

Table 53 Male Former Civilian Member Disability Pensioners
Number and Average Annual Pension¹ as at 31 March 2012

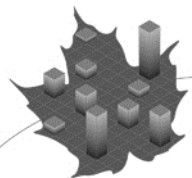
Age Last Birthday	Superannuation Account		Pension Fund	
	Number	Average (\$)	Number	Average (\$)
40-44	2	6,660	2	7,158
45-49	6	11,322	3	5,776
50-54	11	21,655	10	11,980
55-59	18	28,153	14	11,751
60-64	21	29,753	12	5,115
65-69	16	24,070	-	4,821
70-74	10	18,574	-	13,044
75-79	8	15,143	-	-
80-84	5	12,653	-	-
All Ages	97	22,745	46	8,906

Average age at 31 March 2012: 63.1 years

Average age² at retirement: 51.8 years

¹ Equals initial amounts of all pensions in pay plus all accrued indexation up to and including 1 January 2012, reduced by any CPP coordination and PBDA offsets in effect as at 31 March 2012. There were also 30 male former Civilian Members who are entitled to an average deferred pension of \$17,600 payable at age 60, there average age is 44.

² Deferred annuitants are excluded for calculation of the average age.



ACTUARIAL REPORT

Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

Table 54 Female Former Civilian Member Retirement Pensioners
Number and Average Annual Pension¹ as at 31 March 2012

Age Last Birthday	Superannuation Account		Pension Fund	
	Number	Average (\$)	Number	Average (\$)
50-54	4	20,466	4	8,679
55-59	92	31,590	94	12,986
60-64	117	30,906	114	9,411
65-69	69	20,790	56	5,590
70-74	52	19,488	19	3,369
75-79	37	22,544	2	17,895
80-84	20	20,054	1	6,396
85-89	18	18,979	-	-
90-94	3	19,348	-	-
95-99	1	15,876	-	-
All Ages	413	25,915	290	9,474

Average age² at 31 March 2012: 67.0 years

Average age² at retirement: 57.7 years

Table 55 Female Former Civilian Member Disability Pensioners
Number and Average Annual Pension¹ as at 31 March 2012

Age Last Birthday	Superannuation Account		Pension Fund	
	Number	Average (\$)	Number	Average (\$)
To 39	3	628	5	8,746
40-44	7	7,694	6	6,246
45-49	13	9,290	15	6,778
50-54	33	17,762	28	9,090
55-59	45	19,459	30	6,700
60-64	37	22,678	25	6,083
65-69	14	18,258	7	4,325
70-74	5	11,827	2	5,802
75-79	3	18,636	-	-
80-84	4	11,706	-	-
85-89	1	9,456	-	-
90-94	1	8,916	-	-
All Ages	166	17,550	118	7,054

Average age at 31 March 2012: 57.8 years

Average age at retirement: 48.0 years

¹ Equals initial amounts of all pensions in pay plus all accrued indexation up to and including 1 January 2012, reduced by any CPP coordination and PBDA offsets in effect as at 31 March 2012. There were also 77 female former Civilian Members who are entitled to an average deferred pension of \$14,300 payable at age 60, there average age is 46.

² Deferred annuitants are excluded for calculation of the average age.

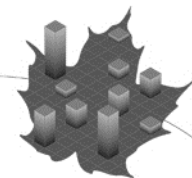


Table 56 Female Eligible Spouses
Number and Average Annual Pension¹ as at 31 March 2012

Age Last Birthday	Superannuation Account		Pension Fund	
	Number	Average (\$)	Number	Average (\$)
To 39	3	2,724	13	4,467
40-44	17	7,404	17	5,561
45-49	60	12,483	38	5,360
50-54	85	14,663	42	4,377
55-59	183	17,676	80	3,599
60-64	253	18,093	55	3,320
65-69	264	19,453	27	1,992
70-74	319	19,870	5	264
75-79	355	18,975	2	2,772
80-84	225	16,520	-	-
85-89	84	14,442	-	-
90-94	33	14,939	-	-
95-99	12	12,632	-	-
100-104	2	16,272	-	-
Widows	1,895	17,815	279	3,840

Average age at 31 March 2012: 70.1 years

Average age at death of contributor: 58.1 years

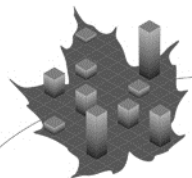
Table 57 Male Eligible Spouses and Children
Number and Average Annual Pension¹ as at 31 March 2012

Age Last Birthday	Superannuation Account		Pension Fund	
	Number	Average (\$)	Number	Average (\$)
To 39	-	-	1	1,020
40-44	1	7,272	1	2,496
45-49	-	-	-	-
50-54	4	7,749	2	1,914
55-59	5	11,273	2	2,106
60-64	13	13,079	4	2,796
65-69	5	12,502	3	4,092
70-74	3	17,832	1	2,928
75-79	4	12,615	-	-
80-84	3	12,608	-	-
85-89	2	6,888	-	-
Widowers	40	12,068	14	2,710
Children	135	2,890	119	1,035

Average age of widowers at 31 March 2012: 65.1 years

Average age of widowers at death of contributor: 54.2 years

¹ Equals initial amounts of annual allowance plus all indexation up to and including 1 January 2012.



ACTUARIAL REPORT

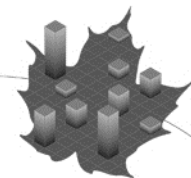
Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE**
As at 31 March 2012

Table 58 RCA Pensioners¹
Number and Average Annual Pension² as at 31 March 2012

Age Last Birthday	Former Regular Members		Former Civilian Members	
	Number	Average (\$)	Number	Average (\$)
50-54	6	2,707	-	-
55-59	33	6,604	6	6,476
60-64	63	4,349	7	1,999
65-69	39	2,606	2	2,908
70-74	9	622	1	1,155
All Ages	150	4,102	16	3,739

¹ All pensioners are male except 6 members. They are all non-disabled pensioners except three members. All pensions are in pay except one that is deferred to age 60.

² Equals initial amounts of pension plus all accrued indexation up to and including 1 January 2012.

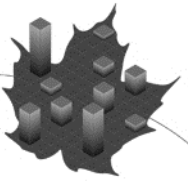


Appendix 13 – Mortality Table for the Calculation of Instalments

For members who elect to buy back prior service, the following mortality rates are used to calculate the monthly instalments required. These mortality rates are combined mortality rates shown in this report for Regular and Civilian Members and were projected to plan year 2017. They are deemed to be the mortality rates applicable for plan years 2013 to 2017 inclusively. After 2017, they are projected in accordance with the assumed longevity improvement factors shown in this report (Table 36).

Table 59 Assumed Rates of Mortality for the Calculation of Instalments
For Plan Years 2013 to 2017 (per 1,000 individuals)

Age Last Birthday	Male	Female
30	0.4	0.3
40	0.8	0.5
50	1.8	1.1
60	4.3	3.2
70	13.1	9.7
80	46.8	29.4
90	139.1	98.7
100	283.2	252.8
110+	500.0	500.0



Appendix 14 – Acknowledgements

Morneau Shepell provided relevant valuation input data on contributors, pensioners and survivors. The co-operation and able assistance received deserve to be acknowledged.

The following individuals assisted in the preparation of this report:

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