

on the Pension Plan for the

# ROYAL CANADIAN MOUNTED POLICE

as at 31 March 2008



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Cat. No. IN3-16/9-2008E-PDF ISBN 978-1-100-11718-8

12 June 2009

The Honourable Vic Toews, 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 2008 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* and the *Special Retirement Arrangements Act*.

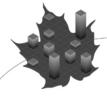
Yours sincerely,

Jean-Claude Ménard, F.S.A., F.C.I.A.

Chief Actuary

Office of the Chief Actuary

Jean-Claude Menard



Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE** as at 31 March 2008

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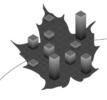
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# Pension Plan for the ROYAL CANADIAN MOUNTED POLICE



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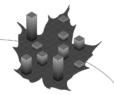
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# I. Executive Summary

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

This actuarial valuation is as at 31 March 2008 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) and by the the *Special Retirement Arrangements Act*, which covers the Retirement Compensation Arrangement (RCA).

The previous actuarial report was made as at 31 March 2005. The date of the next periodic review is scheduled to occur no later than 31 March 2011.

In the previous actuarial report, two new sections were added to examine the impact of alternative investment policies of the pension assets invested in capital markets and the impact of an alternative valuation approach. Only the section that discusses the impact of alternative investment policies on the pension assets invested in capital markets was kept for this valuation.

# 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

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 tangible assets and accounts. The Pension Fund is composed of tangible assets which the government has earmarked for the payment of benefits for service since 1 April 2000. The accounts are the Superannuation Account, established to track its pension benefit obligations for service prior to 1 April 2000, and the RCA Account. These pension assets are summarized in Appendix 3. The membership data is summarized in Appendix 4.

The valuation was prepared using accepted actuarial practices, methods and assumptions which are summarized in Appendices 5 to 7.

This valuation takes into account plan amendments and new salary agreements since the last valuation, which are as follows:

- Beginning in calendar year 2008, the applicable Canada Pension Plan (CPP) coordination factor of 0.7% in the pension benefit formula is reduced gradually until it reaches 0.625% in calendar year 2012.
- A new compensation package has been approved for Regular Members; annual service pay was increased from 0.5% to 1.0% for every five years of service, up to and including 35 years of service. A salary increase of 3.35% was granted as at



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1 January 2008 and salary increases will be 1.5% as at 1 January 2009 and 1 January 2010.

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.

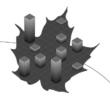
Actuarial assumptions used in the previous report were revised based on economic trends and demographic experience. A complete description of the assumptions is shown in Appendices 6 and 7. The changes to the assumptions are summarized as follows:

- the ultimate assumed level of inflation was revised from 2.5% to 2.4%;
- the short-term real rate of return on the Fund was lowered, from 4.3% to 4.0% for the first four years following valuation date;
- the assumed ultimate real rate of interest on the Account was revised from 2.85% to 2.80%;
- the ultimate real increase in average earnings was increased from 1.0% to 1.1%;
- seniority and promotional salary increases were significantly increased, on average by 10% up to duration 25;
- the projected number of new contributors reflects a long-term forecast made by the RCMP Human Resources Management Service;
- pensionable retirement rates are significantly lower to reflect the trend that Regular Members are delaying retirement;
- disability retirement rates are significantly higher (on average 40% higher for Regular Members);
- withdrawal rates have been reduced, by 20% on average for Regular Members;
- mortality rates for Regular Members are slightly lower, on average;
- mortality rates for Civilian Members, surviving spouses and disabled members are the same as those used in the Actuarial Report on the Pension plan for the Public Service of Canada as at 31 March 2005, projected to plan year 2009;
- longevity improvement factors for both males and females are higher except at advanced ages, and are the same as those used in the 23<sup>rd</sup> Actuarial Report on the Canada Pension Plan;
- changes made to assumptions for surviving spouses and children have a negligible impact on the valuation results.

The Canadian Institute of Actuaries (CIA) has recently adopted a Revised Standards of Practice for Pension Commuted Values, effective 1 April 2009. The financial impact of the revised Standards is reflected in this valuation.

At the time of preparing this report, the global economy and financial markets were going through a difficult period. The significant deterioration and volatility of financial markets may result in a decline in the market value of the funds managed by the Public

as at 31 March 2008



Sector Pension Investment Board (PSPIB). The impact of investment returns after the valuation date will be reflected in the next actuarial valuation which is set to occur no later than 31 March 2011.

#### C. Main Findings

The proposed amounts to be credited or debited to the Accounts and the Pension Fund are shown on a calendar year basis in this section beginning with calendar year 2010 which is the first calendar year that follows the expected tabling of this report. Valuation results on a plan year basis are shown in Section II.

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

As at 31 March 2008, the actuarial value of assets in respect of the Superannuation Account is \$12,002 million and the actuarial liability for service prior<sup>2</sup> to 1 April 2000 is \$11,525 million. The actuarial value of the assets is less than 110% of the corresponding actuarial liability; it is 104% of the actuarial liability. The excess of the actuarial value of assets over the actuarial liability is \$477 million.

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

#### a) Current Service Cost<sup>3</sup>

The RCMPSA total current service cost, borne jointly by the contributors and the government, is \$386 million for calendar year 2010. The estimated members' contributions are \$122 million and the estimated government contributions are \$264 million for calendar year 2010. The Pension Fund administrative expenses are \$1.6 million (included in the total current service cost) for calendar year 2010. The following table shows the projected current service cost expressed as a percentage of the expected pensionable payroll<sup>4</sup> for the three calendar years following the expected laying of this report. The ratio of government current service cost to contributor current service cost is also shown.

RCMPSA Current Service Cost on a Calendar Year Basis

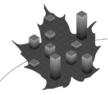
	_	urrent Service Cos	•	Ratio of
Calendar	•			Government to Contributor
Year	Contributors	Government	Total	Current Service Cost
2010	6.67	14.36	21.03	2.15
2011	6.80	14.05	20.85	2.07
2012	7.00	13.68	20.68	1.95

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

The 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.

Also called normal cost.

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



as at 31 March 2008

#### b) Financial position and amortization of surplus (deficit)

As at 31 March 2008, the actuarial value of the assets in respect of the Pension Fund is \$2,821 million and the actuarial liability is \$2,776 million, resulting in an actuarial surplus of \$45 million.

# c) Non-permitted surplus

If there exists in the opinion of the President of the Treasury Board a non-permitted surplus<sup>1</sup> 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. As at 31 March 2008, a non-permitted surplus does not exist.

#### 3) RCA

As at 31 March 2008, the total of the amounts available for benefits payable under the RCA is \$47 million and the actuarial liability is \$34 million resulting in an actuarial excess of \$13 million.

The RCA total current service cost, borne jointly by the contributors and the government, is 0.09% of pensionable payroll for calendar years 2010 to 2012. The following table shows the projected current service costs in \$ millions for the three calendar years following the expected laying of this report.

RCA Current Service Costs on a Calendar Year Basis

Calendar Year	Contributors (\$ millions)	Government (\$ millions)	Total (\$ millions)	Ratio of Government to Contributors Current Service Cost
2010	0.2	1.5	1.7	7.5
2011	0.2	1.7	1.9	8.5
2012	0.2	1.9	2.1	9.5

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

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

<sup>(</sup>b) is the greater of (i) and (ii) where:

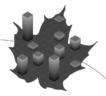
<sup>(</sup>i) is twice the estimated amount, for the calendar year following the date of that report, of the total of

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

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

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

s at 31 March 2008



#### **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, methods and assumptions summarized in Appendices 5 to 7. Emerging experience, differing from the corresponding assumptions, will result in gains or losses to be revealed in subsequent reports.

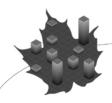
Projections of the assets and liabilities are shown in respect of the Superannuation Account in Appendix 8 and of the Pension Fund in Appendix 9.

#### A. RCMPSA - Financial Position

Beginning on 1 April 2000, employer and employee contributions to the RCMPSA pension plan are no longer credited to the RCMP Superannuation Account. Rather, they are now credited to the RCMP Pension Fund, the net proceed of which is transferred to the PSPIB and invested in the financial markets. The valuation results of this section show the financial position for both RCMPSA financing arrangements as at 31 March 2008. The results of the previous valuation are also shown for comparison purposes.

**Table 1 Balance Sheet – Superannuation Account** (\$ millions)

	As at 31 March 2008	As at 31 March 2005
Actuarial Value of Assets		
Recorded balance in Superannuation Account	11,989	10,891
Present value of prior service contributions	13	18
Total assets	12,002	10,909
Excess of Actuarial Value of Assets over Actuarial Liability		
(Actuarial Excess)	<u>477</u>	963
	11,525	9,946
Actuarial Liability for Service Prior to 1 April 2000		
Regular Members		
· Contributors	3,697	3,857
· Retirement pensioners	6,040	4,702
· Disability pensioners	553	351
· Surviving dependants	309	229
Civilian Members		
· Contributors	364	396
· Retirement pensioners	374	271
· Disability pensioners	57	41
· Surviving dependants	21	20
Administrative Expenses	110	79
Total Actuarial Liability for Service Prior to 1 April 2000	11,525	9,946



Pension Plan for the  $\bf ROYAL$   $\bf CANADIAN$   $\bf MOUNTED$   $\bf POLICE$ 

as at 31 March 2008

**Table 2 Balance Sheet – Pension Fund** (\$ millions)

	As at 31 March 2008	As at 31 March 2005
Actuarial Value of Assets		
Market value of assets	2,798	1,442
Actuarial smoothing adjustment	4	(73)
Present value of prior service contributions	<u> </u>	6
Total Assets	2,821	1,375
Actuarial Liability for Service Since 1 April 2000		
Regular Members		
· Contributors	2,040	1,139
· Retirement pensioners	353	121
· Disability pensioners	70	14
· Surviving dependants	6	3
Civilian Members		
· Contributors	263	146
· Retirement pensioners	37	11
· Disability pensioners	6	2
· Surviving dependants	1_	<u>-</u> _
Total Actuarial Liability	2,776	1,436
Actuarial Surplus/(Deficit) for Service Since 1 April 2000	45	(61)

# B. RCMPSA – 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.

**Table 3 Reconciliation of RCMPSA Financial Position** (\$ millions)

	Superannuation Account Actuarial Excess	Pension Fund Surplus
As at 31 March 2005	963	(61)
Data corrections	(139)	(9)
Expected interest on corrected excess	202	(14)
Expected assets smoothing adjustment	<del>_</del>	<u>86</u>
	1,026	2
Pension benefit formula and service pay improvements	(213)	(81)
Experience gains and losses	(188)	138
Revision of actuarial assumptions	(91)	(14)
Amounts debited	(57)	-
As at 31 March 2008	477	45

#### Pension Plan for the ROYAL CANADIAN MOUNTED POLICE

as at 31 March 2008



#### 1. Data Corrections

The correction of data (such as coding of status and pension amounts) upon which the 2005 report was based resulted in an increase to the Superannuation Account actuarial liability of \$139 million and an increase to the Pension Fund actuarial liability of \$9 million as at 31 March 2005.

#### 2. Expected Interest on Corrected Excess

After adjusting the initial excess for data corrections, expected interest on the new value was calculated for the three year period to 31 March 2008. The expected interest to 31 March 2008 on the Account actuarial excess amounted to \$202 million. The expected interest to 31 March 2008 on the Pension Fund deficit amounted to \$14 million. These interest amounts are based on the Account and the Fund yields projected in the previous report for the three-year intervaluation period.

#### 3. Expected Assets Smoothing Adjustment

An actuarial asset valuation method that minimizes the impact of short-term fluctuations in the market value of assets is used to determine the actuarial value of Pension Fund assets. Appreciation of investment gains or losses is recognized at the rate of 20% per year. The expected increase in assets was \$86 million.

#### 4. Pension Benefit Formula and Service Pay Improvements

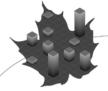
Beginning with calendar year 2008, the applicable coordination factor of 0.7% at age 65 in the pension benefit formula is revised and reduced gradually until the ultimate coordination factor of 0.625% is attained by calendar year 2012. This improvement to the pension benefit provisions has increased the Account actuarial liability by \$113 million and the Fund actuarial liability by \$31 million.

There were improvements in annual service pay from 0.5% to 1.0% for every five years of service, up to and including 35 years of service. These improvements have increased the Account actuarial liability by \$100 million and the Fund actuarial liability by \$50 million.

In aggregate, these improvements to the benefits have increased the Account actuarial liability by \$213 million and the Fund actuarial liability by \$81 million.

#### 5. Experience Gains and Losses

Since the previous valuation, experience gains and losses have decreased the Superannuation Account actuarial excess by \$188 million and have increased the Pension Fund expected actuarial surplus by \$138 million. The main items are described in the following table.



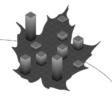
Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE** as at 31 March 2008

Table 4	<b>Experience Gains and Losses</b>
	(\$ millions)

	Superannuation Account	Pension Fund
Interest and investment earnings (i)	(12)	168
Seniority and promotional increases	(66)	(25)
Salary increases (ii)	(59)	(23)
PBDA payments (iii)	(16)	(2)
Disability	(15)	(2)
Retirement	14	2
Mortality	(11)	(4)
Cost/contributions difference (iv)	(7)	8
YMPE increases (v)	5	3
Change in assets smoothing adjustment	<u>-</u>	8
Pension indexation (vi)	(6)	-
Withdrawals	(1)	(3)
Miscellaneous	(14)	8
Net experience gains (losses)	(188)	138

- (i) The rates of interest credited to the Account were in aggregate just slightly lower than the corresponding projected Account yields in the previous valuation; consequently the experience loss was \$12 million. Except for plan year 2008, financial markets made significant gains in plan years 2006 and 2007. Over three years, the actual return was 12% more than expected and the Pension Fund gained \$168 million.
- (ii) A general salary increase of 3.35% was granted to Regular Members as at 1 January 2008, and was 0.65% more than projected in the previous valuation. This one unforeseen salary increase caused the Account actuarial liability to increase by \$59 million and the Fund actuarial liability to increase by \$23 million.
- (iii) The market-related interest assumptions to be used in the calculation of payments under the PBDA were significantly lower than the interest valuation assumptions used to discount liabilities and resulted in a total loss of \$18 million.
- (iv) The government contributions for prior service in the Account were less than the actual cost of benefits, causing the actuarial excess to decrease by \$7 million. An increase of \$8 million to the Fund actuarial surplus resulted from the actual government contributions in plan years 2006, 2007 and 2008 being more than the government portion of the current service cost shown in the cost certificate of the previous report. These amounts include interest accumulation on the differences up to 31 March 2008.
- (v) Over the three-year intervaluation period the Year's Maximum Pensionable Earnings (YMPE) were, in aggregate, 1.3% higher than assumed in the previous valuation.
- (vi) Over the three-year intervaluation period pension indexation was in aggregate just slightly higher (0.1%) than assumed in the previous valuation.

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## 6. Revision of Actuarial Assumptions

Actuarial assumptions were revised based on economic trends and demographic experience as described in Appendix 6. This revision has decreased the Superannuation Account actuarial excess by \$91 million and increased the Pension Fund actuarial deficit by \$14 million. The impact of these revisions is described in the following table.

**Table 5** Revision of Actuarial Assumptions (\$ millions)

Assumption	Superannuation Account	Pension Fund
Granted salary increases of 1.5% for 2009 and 2010	68	47
Real rate of interest (return)	(56)	(37)
Mortality	(43)	(2)
Pensionable retirements	16	17
Granted indexation as at 1 January 2009	(27)	(2)
Real increase in average pensionable earnings	(17)	(21)
New entrants	(21)	-
Seniority and promotional	(5)	(9)
Disability	(1)	(5)
Withdrawals	(1)	(4)
Other assumptions	(4)	2
Net impact of revisions	(91)	(14)

#### 7. Amounts Debited from the Superannuation Account

Legislative provisions grant authority to debit the amount from the Superannuation Account that is in excess of 110% of the actuarial liability. The actuarial liability represents the present value of the future payable benefits accrued as at the valuation date and administrative expenses to be debited from the Superannuation Account. A withdrawal of \$49 million on 31 March 2006 reduced the Superannuation Account by \$57 million after taking interest into account.

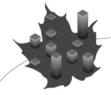
#### C. RCMPSA - Cost Certificate

#### 1. Current Service Cost

The details of the current service cost for plan year 2009 and reconciliation with the 2006 current service cost are shown below.

Table 6 Current Service Cost for Plan Year 2009
(\$ millions)

(\$ minons)	
Member required contributions	107
Government current service cost	<u>242</u>
Total current service cost	349
Expected pensionable payroll	1,664
Total current service cost as % of expected pensionable payroll	20.97%



Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE** as at 31 March 2008

Table 7 Reconciliation of RCMPSA Current Service Cost (% of pensionable payroll)

(70 of pensionable payron)	
For plan year 2006	20.56
Data corrections	-
Expected current service cost change	(0.15)
Pension benefit formula and service pay improvements	
Improved CPP coordination factors	0.24
Improvements in annual service pay	0.23
Experience gains and losses	
New entrants	(0.12)
Disability	(0.06)
Retirement	0.05
Seniority and promotional increases	0.04
Miscellaneous	0.03
Changes in assumptions	
Granted salary increases of 1.5% for 2009 and 2010	(0.42)
Real increase in average earnings	0.27
Real rate of return on the Fund (short-term changes)	0.24
Pensionable retirements	(0.15)
Seniority and promotional	0.09
Withdrawals	0.06
CIA transfer values	(0.05)
Disability	0.04
Mortality	0.03
Other changes in assumptions	0.04
For plan year 2009	20.97

The RCMPSA current service cost is the weighted average of the separate current service costs for Regular Members and Civilian Members. For plan year 2009, the current service cost of 20.97% of pensionable payroll is composed of 21.17% for Regular Members and 19.16% 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 following RCMPSA current service costs are expressed as a dollar amount as well as a percentage of the projected pensionable payroll in each given plan year. The current service cost is borne jointly by the members and the government. The member contribution rate on salary up to the Year's Maximum Pensionable Earnings (YMPE) of the Canada Pension Plan is 4.9% for calendar year 2008 and increases gradually to the ultimate rate of 6.4% first attained in calendar year 2013. The member contribution rate on salary above the YMPE is 8.4%.

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.

s at 31 March 2008

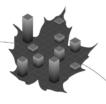


Table 8 Projection of Current Service Cost

Plan	Current Service Cost			Cur as a % o	Portion Borne by the			
<u>Year</u>	Members	Government	<u>Total</u>	-	Members Members	Government	Total	Government
2009	107	242	349		6.43	14.54	20.97	69%
2010	115	254	369		6.55	14.48	21.03	69%
2011	125	267	392		6.71	14.32	21.03	68%
2012	137	280	417		6.83	13.96	20.79	67%
2013	152	293	445		7.05	13.59	20.64	66%
2018	205	380	585		7.18	13.30	20.48	65%
2023	264	506	770		7.17	13.75	20.92	66%

The decrease in the portion of the current service cost borne by the government from plan year 2009 to 2013 mainly reflects increased plan contributions by members and the partial transition of economic assumptions from their select to ultimate values.

#### 3. Administrative Expenses

Based upon the assumptions described in section C of Appendix 6, the Fund administrative expenses are included in the total current service costs shown above and are estimated to be \$1.2 million for plan year 2009, increasing to \$1.4 and \$1.6 million for plan years 2010 and 2011, respectively.

The Account administrative expenses have been capitalized and are shown as a liability in the balance sheet.

#### 4. Contributions for Prior Service Elections

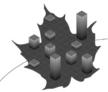
Contributions for prior service elections are based upon the valuation data and the assumptions described in sections B and C of Appendix 6.

Member contributions for prior service related to the Account are estimated to be \$1 million for plan year 2009 and will decrease by 10% every year thereafter; the government is assumed to match the contributions.

Member contributions for prior service related to the Fund are estimated to be \$0.6 million for plan year 2009 and increase to \$0.8 and \$0.9 million for the next two plan years. The government is assumed to contribute in the same proportions as those shown in the Section C.2. above (Projection of Current Service Cost).

#### D. RCMPSA - Sensitivity to Variations in Key Assumptions

The following table measures the effect on the plan year 2009 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 2009 onward.



as at 31 March 2008

**Table 9 Sensitivity of Valuation Results** 

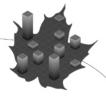
	Current Ser	vice Cost (%)	A	ctuarial Liab	oility (\$ millions)	
Assumption(s) Varied	2009	Effect	Service prior to April 2000	Effect	Service since April 2000	Effect
None (i.e. current basis)	20.97	None	11,525	None	2,776	None
Investment yield						
- if 1% higher	16.59	(4.38)	10,025	(1,500)	2,285	(491)
- if 1% lower	27.04	6.07	13,421	1,896	3,431	655
Inflation						
- if 1% higher	23.86	2.89	13,100	1,575	3,149	373
- if 1% lower	18.63	(2.34)	10,231	(1,294)	2,472	(304)
Salary, YMPE and MPE						
- if 1% higher	23.26	2.29	11,703	178	2,967	191
- if 1% lower	18.98	(1.99)	11,360	(165)	2,609	(167)
All economic assumptions						
- if 1% higher	20.56	(0.41)	11,457	(68)	2,727	(49)
- if 1% lower	21.39	0.42	11,598	73	2,826	50

The foregoing estimates indicate the degree to which the RCMPSA valuation results depend on some of the key assumptions. 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.

The following table shows the impact on the projected Pension Fund surplus as at 31 March 2011 (the expected date of the next actuarial review) if investment returns are different than assumed in this valuation. Projected actuarial surpluses are shown if annual investment returns are 2% higher or lower than the best estimate assumption and if the investment return in plan year 2009 is negative 20% before returning to the best estimate assumption of 6% per annum for the following two plan years.

**Table 10** Sensitivity of Projected Pension Fund Surplus as at 31 March 2011 (\$ millions)

	Projected	Projected	Projected
	Actuarial Value	Actuarial Value	Actuarial
Assumption(s) Varied	of Assets	Of Liability	Surplus
None (i.e. current basis)	4,410	4,327	83
Investment return			
- if 2% higher annually for next 3 years	4,501	4,327	174
- if 2% lower annually for next 3 years	4,321	4,327	(6)
- if minus 20% for plan year 2009	3,657	4,327	(670)



#### E. RCA - Valuation Results

The current service cost, assets and liabilities presented in this section were computed using the data, methodology and assumptions described in Appendix 7.

#### 1. RCA Balance Sheet

**Table 11 RCA Balance Sheet** (\$ millions)

	As at 31 March 2008	As at 31 March 2005
Assets		
RCA Account	24	20
Refundable tax	23	18
Excess of assets over actuarial liability	1 <u>3</u> 34	<u>22</u> 16
Actuarial liability		
Contributors	16	14
Pensioners	<u>18</u>	<u>2</u>
Total actuarial liability	34	16

The sum of the assets in respect of the RCA Account and the refundable tax is \$47 million; it exceeds the actuarial liability of \$34 million by 38% as at 31 March 2008. As at 31 March 2005, the sum of the assets was more than twice the estimated actuarial liability. This change in the RCA financial position is due mainly to data corrections that have increased the pensioner liability by \$6 million and adjustments made to contributors' salaries for mismatches between the valuation data and 2008 recorded contributions in respect of the RCA Account.

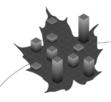
#### 2. RCA Current Service Cost

The projected current service cost, borne jointly by the contributors and the government, of 0.08% for plan year 2009 calculated in the previous valuation has increased by 0.01% to 0.09% of pensionable payroll in this valuation. The RCA current service cost for plan year 2009 is estimated to remain constant at 0.09% of pensionable payroll for plan years 2010 and 2011.

The following table shows the estimated RCA current service cost for the next three plan years in millions of dollars.

**Table 12 RCA Current Service Cost** (\$ millions)

Plan Year	Contributors	Government	Total
2009	0.3	1.2	1.5
2010	0.2	1.4	1.6
2011	0.2	1.5	1.7



Pension Plan for the ROYAL CANADIAN MOUNTED POLICE as at 31 March 2008

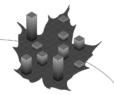
**F.** Summary of Estimated Government Costs

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

**Table 13 Estimated Total Government Costs** (\$ millions)

		rnment ervice Cost	Total	Total
Plan Year	RCMPSA	RCA	Prior Service Contributions	Government Cost
2009	242	1.2	2.4	245.6
2010	254	1.4	2.6	258.0
2011	267	1.5	2.7	271.2

as at 31 March 2008



# **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 determining the financial status as at 31 March 2008 of the Royal
  Canadian Mounted Police Superannuation Account, Pension Fund and Retirement
  Compensation Arrangements Account, and assisting the President of the Treasury Board
  in making informed decisions regarding the financing of the government's pension
  benefit obligation;
- the methodology employed is appropriate for the purposes of determining the financial status as at 31 March 2008 of the Royal Canadian Mounted Police Superannuation Account, Pension Fund and Retirement Compensation Arrangements Account, and assisting the President of the Treasury Board in making informed decisions regarding the financing of the government's pension benefit obligation; and
- this report has been prepared, and our opinions given, in accordance with accepted actuarial practice.

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.

At the time of preparing this report, the global economy and financial markets were going through a difficult period. Should the deterioration of financial markets continue, the impact on the Pension Fund will be reflected in the next actuarial valuation which is set to occur no later than 31 March 2011. To the best of our knowledge, after inquiring with the Royal Canadian Mounted Police and the Treasury Board of Canada Secretariat, there were no other 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 solvency valuation has not been performed.

Jean-Claude Ménard, F.S.A., F.C.I.A.

Chief Actuary

Jean-Claude Menard

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

Actuary

Ottawa, Canada, 12 June 2009

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

Michel Ropin

# ACTUARIAL REPORT Pension Plan for the ROYAL CANADIAN MOUNTED POLICE as at 31 March 2008

# **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.

# Changes since the last valuation

The previous valuation report was based on the pension benefit provisions as they stood as at 31 March 2005. Bill C-13, which received Royal Assent on 22 June 2006, amended the RCMPSA and improved the benefits payable by revising downward the coordination factor of 0.7%. Beginning with calendar year 2008, the applicable coordination factor is reduced gradually until the ultimate coordination factor of 0.625% is attained by calendar year 2012.

#### **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.

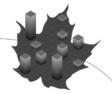
#### B. Contributions

#### 1. Members

During the first 35 years of pensionable service, members contribute according to the rates shown in the following table. After 35 years of pensionable service, members contribute only 1% of pensionable earnings.

Calendar Year	2008	2009	2010	2011	2012	2013+
Contribution rates on earnings <b>up to</b> the maximum covered by the CPP	4.9%	5.2%	5.5%	5.8%	6.1%	6.4%
Contribution rates on any earnings <b>over</b> the maximum covered by the CPP	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%

as at 31 March 2008



#### 2. Government

#### a) Current Service

The government determines its normal monthly contribution 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 to 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) Excess Notional Assets and Actuarial Surplus

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

- debit the excess of assets over the actuarial liability from the Superannuation Account 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 employer contributions or by making withdrawals.

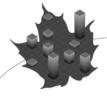
#### d) Actuarial Deficit

If an actuarial deficit is identified through a triennial statutory actuarial report, the Superannuation Account and/or the Pension Fund are to be credited with such annual amounts that in the opinion of the President of the Treasury Board will fully amortize the actuarial deficit over 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.



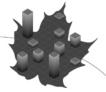
Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE** as at 31 March 2008

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: • return of contributions (Note 6), or • cash termination allowance (Note 7)
	2 or more years	Immediate annuity (Note 8)
Compulsory retirement to	Under 2 years	Return of contributions
promote economy or efficiency in the Force	2 to 19 years	Choice of: • 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: • 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: • 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: • 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)

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# 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 • return of contributions (Note 6), or • deferred annuity (Note 9), or • transfer value if under age 50 (Note 10), or • annual allowance (Note 19)
Voluntary retirement before age 60	30 to 34 years • 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: • 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:     • 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)



Pension Plan for the ROYAL CANADIAN MOUNTED POLICE

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#### **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

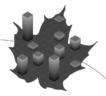
Service in the Force normally includes any period during which a person made required contributions under the RCMPSA, regardless of whether such contributions were subsequently withdrawn. As well, it includes any period of service as a member of any other police force subsequently taken over by the Force.

#### 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 five 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.

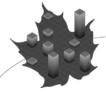
When a pensioner attains age 65 or becomes entitled to a disability pension from the CPP, the annual pension amount is reduced by a percentage of the *indexed CPP annual* pensionable earnings<sup>2</sup> (or, if lesser, the indexed five-year<sup>1</sup> pensionable earnings average on which the immediate annuity is based), multiplied by the years of CPP pensionable service<sup>3</sup>. The applicable percentage (it was 0.7% before 1 January 2008) depends on the year the pensioner attains age 65 or becomes entitled to a disability pension. The following table shows the applicable percentage:

	Calendar Years						
·	2008 2009 2010 2011 2012+						
Coordination Percentage	0.685%	0.670%	0.655%	0.640%	0.625%		

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

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.

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.



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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.

#### 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

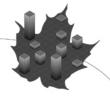
- on account of a reduction in the Force, or
- to promote economy or efficiency in the force (only at the discretion of the Treasury Board).

#### 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.

as at 31 March 2008



#### 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 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

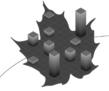
Eligible surviving children include all children of the contributor or pensioner who are under age 18, and any child of the contributor or pensioner who is age 18 or over but under 25, in full-time attendance at a school or university, having been in such attendance substantially without interruption 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.



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#### 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.

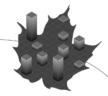
If a former Civilian Member entitled to an annual allowance commencing at age 50 becomes disabled before then, the entitlement changes to an immediate annuity (Note 8). If disability ceases before age 60, then the entitlement changes to a deferred annuity (Note 9) unless the pensioner elects an annual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

#### Pension Plan for the ROYAL CANADIAN MOUNTED POLICE

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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.

# ACTUARIAL REPORT Pension Plan for the ROYAL CANADIAN MOUNTED POLICE



# **Appendix 2 – RCA Benefit Provisions**

RCAs are pension plans not subject to the benefit limitations of registered pension plans and therefore are less tax-advantaged. This Appendix describes the RCMP pension benefits financed through retirement compensation arrangements (RCAs) rather than through the registered RCMPSA provisions that have a material impact on this valuation.

# 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.

#### 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.

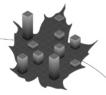
## 2. Tax-related limits on postretirement survivor benefits

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 RCMPSA is subject to a prescribed yearly maximum. Because the RCMPSA is coordinated with the pensions paid by the Canada Pension Plan, the prescribed maximum is derived from both the maximum annual pension benefit (\$2,333.33 for calendar year 2008) payable from a registered defined benefit pension plan for each year of pensionable service and the YMPE. The maximum was \$132,100 for calendar year 2008. 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.

s at 31 March 2008



# Appendix 3 – Assets and Rates of Return

#### A. Assets

The pension promise to RCMP members enacted by legislation encompasses government assets, accounts and liabilities. The assets the government uses to finance the pension promise are composed of tangible assets (Pension Fund) which the government has earmarked for the payment of benefits, and accounts (Superannuation and RCA accounts) established to track its pension benefit obligations.

# 1. RCMP Superannuation Account

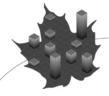
RCMPSA benefits earned up to 31 March 2000 are financed entirely through the RCMP Superannuation Account, which forms part of the Public Accounts of Canada.

The Account was credited with all RCMPSA contributions made by members and the government prior to 1 April 2000, as well as with prior service contributions for elections made prior to 1 April 2000 and leave without pay contributions for periods before 1 April 2000 but remitted 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 earnings as though net cash flows were invested quarterly in 20-year Government of Canada bonds issued at prescribed interest rates and held to maturity. No formal debt instrument is issued to the Account by the government in recognition of the amounts therein. Interest earnings are 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 14 Reconciliation of Balances in Superannuation Account** (\$ millions)

(ψ ππποπο)				
Plan year	2006	2007	2008	2006-2008
Public Accounts opening balance	10,890.5	11,255.5	11,640.6	10,890.5
INCOME				
Interest earnings	834.9	833.4	833.4	2,501.7
Government contributions	1.4	1.2	1.1	3.7
Employee contributions	1.4	1.2	1.2	3.8
Transfers received	0.3	0.0	0.0	0.3
Actuarial liability adjustments	(49.0)	0.0	0.0	(49.0)
Subtotal	789.0	835.8	835.7	2,460.5
EXPENDITURES				
Annuities	402.7	432.0	461.6	1,296.3
Pension divisions	11.0	10.7	14.7	36.4
Transfer values	4.9	3.3	2.9	11.1
Return of contributions and cash allowances	0.1	0.0	0.1	0.2
Transfers sent	0.1	0.2	0.2	0.5
Administrative expenses	5.2	4.5	7.6	17.3
Subtotal	424.0	450.7	487.1	1,361.8
Public Accounts closing balance	11,255.5	11,640.6	11,989.2	11,989.2



as at 31 March 2008

Since the last valuation, the Account balance has grown by \$1.1 billion (a 10.1% increase) to reach \$11,989 million as at 31 March 2008.

#### 2. RCMP Pension Fund

Since 1 April 2000 RCMPSA 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 RCMPSA 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 15 Reconciliation of Balances in Pension Fund** (\$ millions)

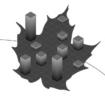
(\$ minons)				
Plan year	2006	2007	2008	2006-2008
Opening balance	1,441.8	2,017.0	2,536.5	1,441.8
INCOME				
Gross investment earnings	300.3	251.0	(10.0)	541.3
Employer contributions	219.7	211.0	221.2	651.9
Employee contributions	76.5	86.0	93.6	256.1
Transfers received	1.3	2.4	1.2	4.9
Subtotal	597.8	550.4	306.0	1,454.2
EXPENDITURES				
Annuities	12.7	19.0	26.4	58.1
Transfer values	2.3	2.3	3.2	7.8
Pension divisions	0.8	1.5	2.4	4.7
Return of contributions and cash allowances	0.1	0.1	0.1	0.3
Transfers sent	0.0	0.1	0.3	0.4
Administrative expenses	0.9	0.9	1.9	3.7
PSPIB investment expenses	5.8	7.0	10.0	22.8
Subtotal	22.6	30.9	44.3	97.8
Closing balance	2,017.0	2,536.5	2,798.2	2,798.2

Since the last valuation, the Fund balance has increased by \$1.4 billion to reach \$2,798 million as at 31 March 2008.

#### 3. RCA Account

The assets in respect of the RCA are composed of the recorded balance in the Retirement Compensation Arrangements Account, which forms part of the Public Accounts of Canada, and a refundable tax. Each calendar year, a cash transfer is made

s at 31 March 2008



to the Canada Revenue Agency (CRA) such that in total roughly half the assets are held by the CRA as a refundable tax.

No formal debt instrument is issued to the Account by the government in recognition of the amounts therein. Interest earnings are 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 16 Reconciliation of Balances in RCA Account** (\$ millions)

Plan year	2006	2007	2008	2006-2008
Opening balance	19.5	21.0	22.3	19.5
INCOME				
Interest earnings Employer contributions Employee contributions	1.6 2.0 0.2	1.6 1.0 0.2	1.6 1.3 0.2	4.8 4.3 0.6
Subtotal	3.8	2.8	3.1	9.7
EXPENDITURES Benefits paid Amount transferred to CRA Subtotal	0.2 2.1 2.3	0.3 1.2 1.5	0.3 1.4 1.7	0.8 4.7 5.5
Closing balance	21.0	22.3	23.7	23.7
Refundable tax	20.5	21.8	23.1	23.1

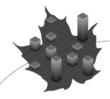
Since the last valuation, the RCA Account balance has increased by 22% to reach \$24 million as at 31 March 2008 and the refundable tax has increased by 13% to reach \$23 million as at 31 March 2008.

#### **B.** Rates of Interest (Return)

The rates of interest in respect of the Superannuation Account were calculated using the foregoing entries. The Account yields are based on book values since the notional bonds are deemed to be held to maturity. The results were computed using the dollar-weighted approach and assume that cash flows occur in the middle of the plan year (except for actuarial liability adjustments, which occur on 31 March).

The Fund yields are those from the PSPIB 2008 Annual Report.

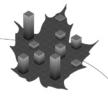
Plan Year	Superannuation Account	Pension Fund
2006	7.8%	19.1%
2007	7.6%	11.3%
2008	7.3%	(0.3)%



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# C. Sources of Asset Data

The Superannuation Account, RCA Account and 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.



# 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 2008. The data includes benefits debited from the RCA Account.

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

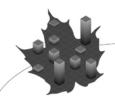
Certain tests of internal consistency were performed, as well as tests of consistency with the data used in the previous valuation, with respect to membership reconciliation, basic information (date of birth, date of hire, date of termination, sex, etc), pensionable service, salary levels and pensions 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 2008 and the reconciliation of contributors, pensioners, and survivors during the period from April 2005 to March 2008 inclusive are shown in this section. Average pensions shown in Table 17 include benefits debited from the RCA Account. Relevant detailed statistics on contributors, pensioners and survivors are shown in Appendix 11.

Table 17 Summary of Membership Data

	As at	As at
	31 March 2008	31 March 2005
Contributors		
· Number	21,212	19,110
· Average Pensionable Earnings	\$78,600	\$71,700
· Average Age	40.3	41.1
· Average Service	13.4	14.9
Retirement Pensioners		
· Number	11,482	10,170
· Average Pension	\$38,800	\$34,800
· Average Age	63.3	61.8
<b>Disability Pensioners</b>		
· Number	1,505	1,001
· Average Pension	\$29,500	\$25,200
· Average Age	56.3	55.5
Eligible Surviving Spouses		
· Number	1,556	1,332
· Average Pension	\$16,100	\$14,300
· Average Age	67.7	67.5
Eligible Surviving Children		
· Number	169	216
· Average Pension	\$3,000	\$2,800



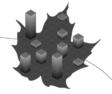
Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE** as at 31 March 2008

**Table 18 Reconciliation of Membership** 

	Contributors	Retirement Pensioners	Disability Pensioners	Surviving Spouses	Surviving Children <sup>1</sup>
As at 31 March 2005	19,110	10,170	1,001	1,332	216
Data corrections	8	(121)	159	11	
New members	4,705	-	-	-	
Re-engagements	4	(4)	-	-	
Withdrawals	(418)	-	-	-	
Pensionable disabilities	(383)	-	383	-	
Pensionable retirements	(1,774)	1,774	-	-	
Emerging survivors	-	-	-	306	
Deaths	(40)	(337)	(38)	(93)	
As at 31 March 2008	21,212	11,482	1,505	1,556	169

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

as at 31 March 2008



# Appendix 5 - RCMPSA Valuation Methodology

#### A. Plan Assets

## 1. Superannuation Account

Assets in respect of the Superannuation Account consist essentially of the recorded balance of the Superannuation Account in the Public Accounts of Canada. These assets are shown at the book value of the underlying notional bond portfolio described in Appendix 3. For consistency, the liabilities are determined using the projected Account yields, shown in Appendix 6, that reflect the interest credited to the Superannuation Account.

The only other Account-related asset consists of the discounted value of future member contributions and government credits in respect of prior service elections (\$13 million). The discounted value of future member contributions was calculated using the projected Account yields; the government is assumed to match these future contributions.

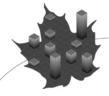
#### 2. Pension Fund

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, subject to a 10% corridor, is spread over five years. 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 contributions and government credits in respect of prior service elections. The discounted value of future member contributions was calculated using the assumed yield 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 2008, under the adjusted market value method is \$2,821 million and was determined as follows:



as at 31 March 2008

Table 19 Actuarial Value of Pension Fund Assets
As at 31 March 2008
(\$ millions)

Plan Year	2004	2005	2006	2007	2008	
Actual net investment return (A)	184	97	295	244	(19)	
Expected investment return (B)	<u>48</u>	<u>76</u>	<u>103</u>	<u>136</u>	<u>169</u>	
Investment gains (losses) (A-B)	136	21	192	108	(188)	
Gains (losses) recognized immediately	-	-	-	=	-	
Investment gains (losses) to be amortized	136	21	192	108	(188)	
Unrecognized percentage	0%	20%	40%	60%	80%	
Unrecognized investment gains (losses)	=	4	77	65	(150)	
Market value as at 31 March 2008						2,798
Plus						
Present value of prior service contributions						19
Less						
Total unrecognized investment gains						(4)
Actuarial value as at 31 March 2008						2,821

#### **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.

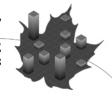
As in the previous valuations, the *projected accrued benefit actuarial cost method* (also known as the projected unit credit method) was used to determine the current service cost and actuarial liability. Consistent with this cost method, pensionable earnings are projected up to retirement using the 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 RCMPSA 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 remains constant. The Pension Fund administrative expenses are deemed to be included in the total current service cost.

as at 31 March 2008



The government current service cost is the total current service cost reduced by the members' contributions.

#### 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 Excess (Deficit)

It is very 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 excess or deficit is the difference between the actuarial value of assets and the actuarial liability. A new 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 RCMPSA.

#### 4. Government Contributions

The recommended government contribution corresponds to the sum of:

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

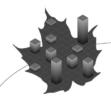
#### C. Projected Yields

The projected yields (shown in Appendix 6) assumed for computing the present value of accrued benefits to be credited from the Superannuation Account (i.e. the Account liability) 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 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.



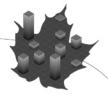
Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE** as at 31 March 2008

The projected yields (shown in Appendix 6) assumed for computing the present value of the benefits accrued or accruing to be credited to the Pension Fund (i.e. the Fund liability and the current service cost) were developed on the basis that the Fund holds a diversified mix of assets.

# D. Membership Data

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

The member data shown in Appendices 4 and 11 were provided as at 31 March 2008. This valuation is based on the member data as at the valuation date.



## Appendix 6 – RCMPSA Actuarial 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.

#### A. Economic Assumptions

## 1. Key Economic Assumptions

## a) Level of Inflation

Price increases, as measured by changes in the Consumer Price Index, tend to fluctuate from year to year. Based on the renewed commitment of the Bank of Canada and the Government to keep inflation between 1% and 3% until 2011, a rate of price increase of 2.0% has been assumed for plan years 2009 to 2011. Recognizing past experience, the rate of price increase is assumed to increase from 2.0% for plan year 2012 to 2.4% for 2016. The ultimate rate of 2.4% is 0.1% lower than the assumed ultimate rate from the previous valuation.

## b) Real<sup>1</sup> Increase in Average Earnings

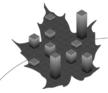
Salary increases consist of a combination of inflation, productivity growth (i.e. increase in average employment earnings in excess of inflation) and seniority and promotional increases. Seniority and promotion are strongly service-based and are therefore considered to be demographic assumptions rather than economic assumptions.

The assumed ultimate productivity rate of 1.1% per annum is 0.1% higher than the assumed ultimate rate from the previous valuation. One of the key elements underlying the productivity rate assumption is the expected labour shortage due to the aging of the Canadian population and the retirement of the baby boom generation between 2010 and 2030. A growing labour shortage, especially after 2010, is assumed to force higher real wage growth. Labour force growth will weaken as the working age population expands at slower pace. Real increases in average earnings are assumed to rise gradually from 0.8% in plan year 2011 to reach the ultimate 1.1% per annum in 2013.

## c) Real Rate of Return on Long-Term Government of Canada Bonds

Recognizing recent experience, the real rate of return on long-term Government of Canada bonds is assumed to be 2.4% for plan years 2009 to 2012. The rate then increases by 0.1% in each of the next four years and reaches its ultimate rate of 2.8% per annum in 2016. The long-term Government of Canada return is based on historical returns and in the previous valuation, its ultimate rate was 2.85%.

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 4.2% (derived from 1.067/1.024) rather than 4.3%.



as at 31 March 2008

#### d) Real Rate of Return on Fund

For PSPIB assets, it is assumed that the ultimate real rate of return on investments will be 4.3% net of investment expenses (the ultimate level of inflation being 2.4%). The ultimate real rate of return is unchanged from the previous valuation. The real rate of return on PSPIB assets takes into account the assumed asset mix of investments as well as the assumed real rate of return for all categories of PSPIB assets. Based on this assumed asset mix of investments, the real rate of return is 4.0% for the next four years, and increases gradually to reach the ultimate 4.3% per annum in plan year 2014.

For the period ending December 2007, the following table was prepared based on the Canadian Institute of Actuaries Report on Canadian Economic Statistics 1924-2007.

Period of Years Ending 2007	15	25	50
Level of Inflation	1.88%	2.77%	4.12%
Real Increases in Average Earnings	0.12%	0.16%	0.97%
Real Return on Long-Term Canada Bonds <sup>1</sup>	6.93%	7.39%	3.11%
Average Real Return on Diversified Portfolios	7.52%	7.40%	$4.71\%^{2}$

## 2. Derived Economic Assumptions

Table 20 Economic Assumptions<sup>3</sup>
(As a percentage)

	Inf	lation	Employment Earning Increases				Interest		
Plan Year	CPI Increase	Pension Indexing <sup>4</sup>	IAAWE	YMPE	Average Pensionable Earnings <sup>4,5</sup>	Maximum Pensionable Earnings	New Money Rate	Yield Projected on Account	Return Projected on Fund
2009	2.0	2.5	3.0	3.1	1.5	4.8	4.4	7.1	6.0
2010	2.0	2.0	2.7	2.6	1.5	2.6	4.4	6.8	6.0
2011	2.0	2.0	2.9	2.8	2.8	2.8	4.4	6.6	6.0
2012	2.0	2.0	3.1	3.0	3.0	3.0	4.4	6.1	6.0
2013	2.1	2.0	3.2	3.2	3.2	3.2	4.7	5.9	6.3
2014	2.2	2.1	3.4	3.3	3.3	3.3	5.0	5.7	6.5
2015	2.3	2.2	3.5	3.5	3.4	3.5	5.1	5.5	6.6
2016	2.4	2.3	3.6	3.6	3.5	3.6	5.2	5.3	6.7
2017	2.4	2.4	3.6	3.6	3.5	3.6	5.2	5.2	6.7
2018	2.4	2.4	3.6	3.6	3.5	3.6	5.2	5.1	6.7
2023	2.4	2.4	3.6	3.6	3.5	3.6	5.2	4.9	6.7
2028	2.4	2.4	3.6	3.6	3.5	3.6	5.2	4.9	6.7
2033	2.4	2.4	3.6	3.6	3.5	3.6	5.2	5.2	6.7
2038+	2.4	2.4	3.6	3.6	3.5	3.6	5.2	5.2	6.7

Real returns were calculated after the level of inflation is removed geometrically before 1992.

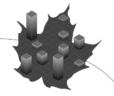
This average is over the last 48 years.

Bold figures denote actual experience.

Assumed to be effective as at 1 January. Salary increases of 1.5% were announced for 2009 and 2010.

Exclusive of seniority and promotional increases.

as at 31 March 2008



## a) Projected Yields on Superannuation Account

These yields are required for the computation of the present value 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. This is the same methodology as used in previous valuations.

## b) Projected Yields on Pension Fund

These yields are derived from the assumed future level of inflation and the real return on the Fund which were both changed for this valuation. These yields are required for the computation of the present value of benefits to determine the current service cost and liability for service since 1 April 2000. The assumed yield of 6.0% per annum for plan year 2009 is assumed to increase gradually to the ultimate level of 6.7 % per annum by plan year 2016. The assumed yield is net of investment expenses debited to the Pension Fund.

## c) 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 year is derived, in accordance with the Canada Pension Plan, to correspond with the increase in the assumed Industrial Aggregate of Average Weekly Earnings (IAAWE) over successive 12-month periods ending on 30 June. The IAAWE is deemed to include a component for seniority and promotional increases; consequently, the ultimate increase in the YMPE is assumed to be 0.1% higher (beginning with plan year 2015) than the corresponding increase in average pensionable earnings. The YMPE increase was 0.2% higher than the corresponding increase in average pensionable earnings in the previous valuation.

#### d) Maximum Pensionable Earnings

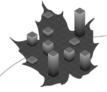
Since the plan is coordinated with the Canada Pension Plan, the tax-related maximum pensionable earnings are derived from both the maximum annual pension accrual under a registered defined benefit plan and the YMPE. The maximum annual pension accrual of \$2,333.33 for calendar year 2008 will increase to \$2,444.44 for 2009, in accordance with the 2005 Federal Budget; thereafter, the maximum annual pension accrual is assumed to increase in accordance with the assumed increase in the IAAWE which is 0.1% lower than in the previous valuation. The maximum pensionable earnings were \$132,100 for calendar year 2008.

#### e) Increase in Pension Indexing 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.

## f) Transfer Value Real Interest Rate

The Canadian Institute of Actuaries has recently adopted the Revised Standards of Practice for Pension Commuted Values, effective 1 April 2009. The financial impact of the Revised Standards has been reflected in this valuation. The real



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interest rates to be used for the computation of commuted values as at 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  $r_7 = r_L x (i_7/i_L)$ 

 $r_L$  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<sub>7</sub> is the 7-year Government of Canada benchmark bond yield<sup>1</sup>, annualized.

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

For example, for plan year 2010, the real rates of interest are 3.0% for the first 10 years and 3.4% thereafter. These rates were derived from the assumed 2010 CPI increase and the assumed 2010 long-term Government of Canada benchmark bond yield which corresponds to the new money rate in this valuation.

## **B.** 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

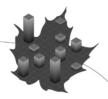
Seniority means length of service and promotion means moving to a higher rank.

The seniority and promotional salary increase assumption for Regular Members was changed from the previous valuation. It was increased significantly at durations 4 to 25 but is slightly lower at higher durations. The assumption fully recognizes the Service Pay Allowance granted on every fifth service anniversary (1% 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.

The assumption for Civilian Members is unchanged from the previous valuation.

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

s at 31 March 2008



**Table 21 Assumed Seniority and Promotional Salary Increases** (Percentage of annual earnings)

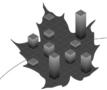
		<i>U</i> ,		
Regular Mem	bers		Civilian Mem	bers
Completed Years of Service in the Force	- <u>-</u>		Completed Years of Pensionable Service	Increase
0	23.0	<del>-</del>	0	6.0
1	8.0		1	5.2
2	7.0		2	4.5
3	1.3		2 3	3.9
4	1.3		4	3.5
5	0.4		5	3.2
6	4.4		6	2.9
7	0.5		7	2.7
8	0.5		8	2.4
9	1.5		9	2.2
10	0.5		10	2.0
15	0.7		15	1.5
20	0.8		20	1.3
25	0.8		25	1.0
30	0.6		30	1.0

#### 2. New Contributors

The new contributor assumption was changed from the previous valuation. The number of new contributors was based on a long-term forecast made by the RCMP Human Resources Management Service. This forecast was done by type of member only (Regular and Civilian) over a 20-year period. It was applied as provided, except that the projected number of Regular Members was split between males and females to recognize that the proportion of female Regular Members is increasing. By plan year 2028 it is assumed that female Regular Members would represent 25% of the Regular Members population (the current proportion of female Regular Members is 20%). In accordance with the projected annual increase for the Canadian population for plan year 2028, it is assumed that the ultimate level of population increase would be 0.3% for plan year 2028 and thereafter.

**Table 22** Assumed Annual Increases in Number of Contributors (Percentage)

Plan	<u>Regular</u>	<u>Members</u>	<u>Civilian</u>	<u>Members</u>
Year	Male	Female	Male	Female
2009	4.3	6.0	8.3	8.3
2010	4.5	5.7	8.0	8.0
2011	4.7	5.4	7.8	7.8
2012	4.5	5.1	7.7	7.7
2013	3.7	4.9	6.4	6.4
2018	0.7	3.4	2.7	2.7
2023	0.7	2.0	2.3	2.3
2028+	0.3	0.3	0.3	0.3



as at 31 March 2008

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 2009 is assumed to be the same as the corresponding experience in plan year 2008 with an economic salary increase for plan year 2009. The initial salary for Regular Members is \$46,003. 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 valuation, 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 for Regular Members who retired in the intervaluation period is 31.3 years (with an average age of 54.0); it was 30.6 in the previous valuation and 29.7 in the 2002 valuation (with an average age at retirement of 51.5 in the 2002 valuation). Pensionable retirement rates for Regular Members were decreased in this valuation to reflect this trend and are, on average, 8% lower than previous valuation rates.

Assumed rates of pensionable retirement for Civilian Members were also changed for this valuation; although adjustments made at different durations have a negligible impact on the valuation results.

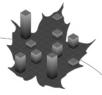
The following tables provide sample rates of pensionable retirement.

**Table 23 Assumed Rates of Pensionable Retirement - Regular Members** (Per 1,000 individuals)

Age Last		Completed Years of Service in the Force									
Birthday	19	20-22	23	24-28	29-33	34	35+				
40	15	15	-	-	-	-	-				
45	20	20	45	50	-	-	-				
50	20	25	65	60	80	-	-				
55	50	70	170	180	190	400	400				
59	1,000	1,000	1,000	1,000	1,000	1,000	1,000				

**Table 24 Assumed Rates of Pensionable Retirement - Civilian Members** (Per 1,000 individuals)

Age Last			Comple	ted Years of	Pensionable	Service		
Birthday	1-8	9-13	14-18	19-23	24-28	29-33	34	35
50	10	10	20	20	20	40	-	-
55	20	40	60	60	60	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. It appears appropriate to again increase disability rates significantly for this valuation. Assumed rates for Regular Members are on average 40% higher and rates for Civilian Members are up to 5% higher than in the previous valuation. Rates differ only by type of member (Regular or Civilian) in this valuation.

It is assumed that 25% of future new disability pensioners will receive a CPP disability pension. This is 5% lower than what was used in previous valuations.

**Table 25** Assumed Rates<sup>1</sup> of Pensionable Disability (Per 1,000 individuals)

Age Last Birthday	Regular Members	Civilian Members
25	0.5	0.5
35	2.0	1.0
45	7.0	3.5
55	25.0	10.0
59	40.0	16.0

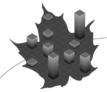
#### 5. Withdrawal

Withdrawal means ceasing to be employed for reasons other than death or retirement with an immediate annuity or an annual allowance. In this valuation, withdrawal rates differ only by type of member (Regular or Civilian). Rates for Regular Members are, on average, 20% lower and rates for Civilian Members are, on average, 15% lower than those used in the previous valuation. Vested Regular Members (with at least two years of service) under age 60 and vested Civilian Members under age 50 are assumed to choose to transfer the commuted value of the deferred annuity.

**Table 26** Assumed Withdrawal Rates (Per 1,000 individuals)

Completed years of Service	Regular Members	Civilian Members
0	25	40
1	15	30
5	10	25
10	5	15
15	3	5
20+	0	0

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 criteria is first met or ceased to be met.



as at 31 March 2008

## 6. Mortality

Mortality rates for male Regular Members, which are based on past experience, have been slightly modified. They are, on average, 3% lower at the younger retirement ages but higher at the older retirement ages (on average 2% higher at ages 85 to 95) than those projected in the previous valuation. Rates for female Regular Members are as projected in the previous valuation.

Mortality rates for Civilian Members, surviving spouses and disabled pensioners were also changed. They are the same as those from the most recent actuarial report (31 March 2005) on the pension plan for the Public Service of Canada projected to plan year 2009. Given the size of the population for 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.

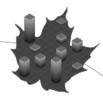
**Table 27 Assumed Rates of Mortality**For 2009 Plan Year (per 1,000 individuals)

Age Last	Regular	Members	Civilian	Members	Survivin	g Spouses	Disa	<u>ıbled</u>
Birthday	Male	Female	Male	Female	Male	Female	Male	Female
30	0.6	0.3	0.6	0.3	1.0	0.4	7.9	6.9
40	1.0	0.6	1.0	0.5	1.5	0.9	12.6	7.8
50	2.0	1.0	1.9	1.4	3.4	2.0	18.4	8.7
60	5.1	3.2	5.9	4.1	10.1	5.3	23.0	13.2
70	15.6	10.0	20.8	13.0	25.7	14.4	49.2	27.9
80	53.4	29.5	65.0	40.9	70.0	41.3	101.0	65.1
90	147.8	94.2	167.5	127.3	175.7	125.5	207.6	178.8
100	282.9	230.4	351.2	315.2	353.6	317.0	476.0	441.7
110+	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0

As shown in the 23<sup>rd</sup> Actuarial Report on the Canada Pension Plan, life expectancy in Canada has been increasing constantly since 1966 for both males and females. This trend is also observed in the RCMP plan population as supported by analysis of past mortality experience. Mortality rates are reduced in the future in accordance with the same mortality improvement assumption used in the 23<sup>rd</sup> Actuarial Report on the Canada Pension Plan. For both males and females, the improvement factors are higher than those used in the previous valuation except at advanced ages.

The ultimate rates of improvement for years 2029 and thereafter were established by analysing the trend by age and sex of the Canadian experience over the last 30 years. Rates of improvement for plan years 2008 and 2009 are assumed to be those experienced on average over the last 15 years (1989 to 2004). After 2009, the rates are assumed to reduce gradually to their ultimate level by year 2029.

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



**Table 28 Assumed Longevity Improvement Factors** 

_	Initial and Ultimate Plan Year Mortality Reductions <sup>1</sup> (%)				
Age Last	M	ale	Fer	male	
Birthday	2009	2029+	2009	2029+	
30	3.25	0.70	1.85	0.70	
40	2.05	0.70	1.25	0.70	
50	1.86	0.70	1.46	0.70	
60	2.24	0.70	1.34	0.70	
70	2.35	0.70	1.25	0.70	
80	1.70	0.70	1.10	0.70	
90	0.60	0.40	0.35	0.40	
100	0.00	0.40	0.00	0.40	
110+	0.00	0.00	0.00	0.00	

## 7. Family Composition

Assumptions for the proportion of members leaving, upon death, a spouse eligible for a survivor pension have changed from the previous valuation. In this valuation they differ only by sex. This change has a negligible impact on the valuation results. The age assumption for new survivors remains unchanged.

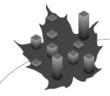
Table 29 Assumptions<sup>2</sup> for Survivor Spouse Allowances

	Male		Female	
Age Last Birthday at Death	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 materially 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 25<sup>th</sup> birthday.

The mortality rate reduction applicable during any plan year within the 20-year select period is found by linear interpolation between the figures for plan years 2009 and 2029.

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



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Table 30 Assumptions for Survivor Children Allowances<sup>1</sup>

Age	Male	e	Female		
Last Birthday at Death	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	-	

## C. 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.

#### 3. Administrative Expenses

As in the previous valuation, administrative expenses are assumed to be 0.4% of pensionable payroll. In plan year 2009 the Account is assumed to be debited with 82% of the total expenses, reducing by 2% each year thereafter. Expenses expected to be debited to the Account in the future have been capitalized and are shown as a liability on the balance sheet, whereas the expenses to the Fund are shown on an annual basis as they occur.

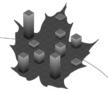
## 4. Financing of Elected Prior Service

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 the service cost where the government is assumed to contribute in the same proportions.

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

## Pension Plan for the ROYAL CANADIAN MOUNTED POLICE

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## 5. Outstanding Terminations

Payments owing to former contributors as at 31 March 2008 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

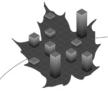
Both deferred pensioners and pensioners receiving an annual allowance while under age 60 are assumed to have a 0% disability rate. The resulting understatement of liability and current service cost is negligible.

## 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.



Pension Plan for the ROYAL CANADIAN MOUNTED POLICE

Appendix 7 – RCA Valuation Methodology and Assumptions

#### A. Valuation of Assets

Assets 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 refundable tax. Each calendar year a cash transfer is made to the Canada Revenue Agency (CRA) such that in total roughly half of the assets are held by CRA as a 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 and Royal Canadian Mounted Police pension plans. The actuarial asset value is equal to the book value.

#### **B.** Valuation of Liabilites

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

## 1. RCA Postretirement Survivor Benefits

The limit on the amount of spousal annual allowance that can be provided under the RCMPSA 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 counter-balanced 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 (MPE).

## 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. These expenses, which are not debited to the RCA Account, are borne entirely by the government and are combined with all other government expenses.

## C. Actuarial Assumptions

The valuation economic assumptions are those described in Appendix 6 and shown in Table 20, 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.

## Pension Plan for the ROYAL CANADIAN MOUNTED POLICE

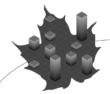
as at 31 March 2008



The demographic assumptions for the RCA valuation are those used for the RCMPSA valuation as described in section B of Appendix 6.

## D. Valuation Data

Pension benefits in payment to be credited from the RCA were provided as at 31 March 2008. Details on the RCA valuation data for current pensioners are shown in Table 55 of Appendix 11.



Pension Plan for the ROYAL CANADIAN MOUNTED POLICE as at 31 March 2008

# **Appendix 8 – Superannuation Account Projection**

Prior to 1 April 2000, the RCMPSA was entirely financed through the RCMP Superannuation Account. 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 related to elections made prior to 1 April 2000 and interest earnings.

The results of the following projection were computed using the assets described in Appendix 3, the data described in Appendices 4 and 11, the methodology described in Appendix 5 and the assumptions described in Appendix 6.

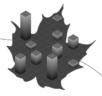
The projection shows the expected cash flows and balance of the Superannuation Account if all assumptions are realized. If the Account balance exceeds 110% of the liability, an actuarial excess reduction is triggered to bring the balance down to 110% and is reflected in this projection. Emerging experience, differing from the corresponding assumptions, will result in gains or losses to be revealed in subsequent valuation reports.

**Table 31 Superannuation Account Projection** (\$ millions)

	(\$ IIIIIIOIIS)					
Plan Year	Beginning Account Balance	Beginning Liability	Beginning Actuarial Excess	Actuarial Excess Reduction	Net Payments <sup>1</sup>	Interest Earnings
2009	12,002	11,525	477	0	497	835
2010	12,340	11,819	521	0	530	821
2011	12,631	12,067	564	0	559	815
2012	12,887	12,280	607	0	586	768
2013	13,069	12,421	648	0	609	753
2014	13,213	12,522	691	0	632	735
2015	13,316	12,582	734	0	654	715
2016	13,377	12,599	778	0	675	691
2017	13,393	12,571	822	0	696	679
2018	13,376	12,510	866	0	716	664
2020	13,240	12,282	958	0	747	644
2025	12,455	11,250	1,205	80	804	575
2030	10,772	9,721	1,051	79	812	515
2035	8,842	7,970	872	75	769	436
2040	6,768	6,092	676	67	681	331
2045	4,740	4,259	481	55	553	229
2050	3,644	3,268	376	49	463	175

Benefit payments plus administrative expenses minus prior service contributions.

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## **Appendix 9 – Pension Fund Projection**

Starting 1 April 2000, the RCMPSA is financed through the RCMP Pension Fund. The Fund is credited with government and employee contributions, investment earnings and with prior service contributions for elections since 1 April 2000. The Fund is debited with benefit payments made in respect of service earned since that date and administrative expenses.

The results of the following projection were computed using the data described in Appendices 4 and 11, the methodology described in Appendix 5 and the assumptions described in Appendix 6. The actuarial value of assets was \$2,821 million at the beginning of plan year 2009. As a large portion of the assets, earmarked for the payment of accrued pension benefits financed through the Pension Fund are invested in the volatile capital markets, the assets are set equal to the liability for projection purposes.

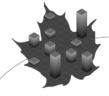
The projection shows the expected growth of the Pension Fund if all assumptions are realized. Emerging experience, differing from the corresponding assumptions, will result in gains or losses to be revealed in subsequent valuation reports.

**Table 32 Pension Fund Projection** (\$ millions)

	y mmmons)				
Plan Year	Beginning Assets	Beginning Liability	Contributions <sup>1</sup>	Benefit Payments	Investment Earnings
2009	2,776	2,776	351	44	173
2010	3,256	3,256	371	57	202
2011	3,772	3,772	394	72	233
2012	4,327	4,327	419	87	268
2013	4,927	4,927	446	104	320
2014	5,589	5,589	474	123	374
2015	6,314	6,314	501	143	427
2016	7,099	7,099	528	165	486
2017	7,948	7,948	554	190	544
2018	8,856	8,856	586	217	604
2020	10,875	10,875	658	273	740
2025	17,327	17,327	856	471	1,173
2030	26,095	26,095	1,083	787	1,757
2035	37,308	37,308	1,314	1,304	2,500
2040	50,599	50,599	1,557	2,064	3,372
2045	65,575	65,575	1,847	3,007	4,355
2050	75,401	75,401	2,063	3,613	5,001

-

<sup>&</sup>lt;sup>1</sup> Total current service cost plus prior service contributions.



## Appendix 10 – Investment Risk of a Diversified Portfolio

## A. Investment Assumptions

## 1. Investment Strategy

Since 1 April 2000, tangible assets resulting from government and employee contributions are invested in capital markets through the PSPIB. The PSPIB invests funds according to its own investment policies, which take into account the needs of contributors and beneficiaries, as well as financial market constraints. The investments have been grouped into three broad categories: equity, fixed income securities and real return assets. Equities consist of Canadian, U.S. and foreign 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 2008, the PSPIB's asset mix consisted of 61% equity, 25% fixed income securities, including inflation-linked bonds, and 14% real return assets. The assumed asset mix for plan year 2009 consists of 58% equity, 25% fixed income securities and 17% real return assets. The short-term asset mix of the Plan is assumed to consist of 55% equity, 25% fixed income securities and 20% real return assets and will be maintained for plan years 2010 through 2012. The 55% equity component consists of 25% Canadian equity and 30% U.S. and foreign equity.

As the Plan matures and plan members age and become more risk averse, it is assumed that the Plan will increase its fixed income securities component. For this reason, the long-term assumed asset mix is 50% equity, 30% fixed income and 20% real return assets. It is assumed that the 50% invested in equity is composed of 20% Canadian equity and 30% U.S. and foreign equity. The long-term asset mix is achieved in plan year 2014 and is preceded by a two-year transition from the short-term asset mix.

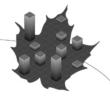
When deriving the future assumed PSPIB asset mix, consideration was given to the asset mix policies of other major Canadian pension plans and how they have evolved over the last five years. Table 33 shows the assumed asset mix at the end of the year throughout the projection period.

Table 33 Asset Mix (In percentage)

Plan Year	Fixed Income Securities	Canadian Equity	U.S. and Foreign Equity	Real Estate & Infrastructure
2009	25.0	28.0	30.0	17.0
2010	25.0	25.0	30.0	20.0
2011	25.0	25.0	30.0	20.0
2012	25.0	25.0	30.0	20.0
2013	27.0	23.0	30.0	20.0
2014+	30.0	20.0	30.0	20.0

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#### 2. Real Rates of Return

Real rates of return are required for the projection of revenue arising from invested assets. They are assumed for each year in the projection period and for each of the main asset categories in which pension assets are invested. All of the real rates of return described in this subsection are net of PSPIB expenses, which include both operating expenses and external investment management fees. Over the last three plan years, expenses have been, on average, equal to about 0.35% of average net assets.

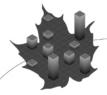
As discussed earlier, PSPIB assets are invested in three broad categories of investments: fixed income securities, equity and real return assets. In determining the annual real rates of return for each asset category, consideration was given to the current economic environment, its future outlook, as well as historical experience. The future outlook is based on the fact that real interest rates are currently lower than their long-term average values. It is expected that these rates will increase slightly in the short-term and return to a level closer to the long-term average. The projected real rates of return for different types of investments also reflect that projections are over a time horizon of more than 75 years and thus, should generally be consistent with the long-term averages of real rates of return.

#### **Fixed Income Securities**

Currently, the PSPIB has 25% of its investment portfolio invested in fixed income securities, including Canadian fixed income, world government bonds, world inflation-linked bonds and cash. Over time, it is assumed that the proportion invested in fixed income securities will slightly increase in order to attain more stability in investment income and decrease the portfolio's potential for loss. This may be achieved by implementing an investment strategy with lower risk. Thus it is assumed that by plan year 2014, 30% of the portfolio will be invested in fixed income securities. After 2030, net cash flows (contributions less expenditures) are expected to become negative and a portion of investment income will therefore be required to cover benefits. Changes to the assumed asset mix may be required in the future to further reduce pension risks and to take into account the maturity of the plan.

It is assumed that the PSPIB's fixed income portfolio consists of federal, provincial, corporate and inflation-linked bonds. Federal long-term bonds are used as a proxy for the risk-free 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 risk-free rate, or the real yield on federal bonds, is equal to the new money rate less the assumed rate of inflation and is used to determine yields on the other bond types. Federal long-term bonds are assumed to yield 2.4% real for the first four years of the projection and then increase by 0.2% in each of the next two years to reach 2.8% in 2014. The rate is then held constant in all subsequent plan years.

The spread over the federal bond yield is assumed to be 40 basis points for provincial bonds and 100 basis points for corporate bonds. Inflation-linked bonds, on the other hand, yield less than long-term federal bonds since the real return is guaranteed and will not vary with inflation. Thus, the yield on real return bonds is assumed to be -40 basis points. The fixed investment portfolio has an assumed mix of 20% federal, 40%



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provincial, 30% corporate and 10% real return bonds. The real rate of return for the fixed income portfolio is calculated for each year using the proportion invested in each bond type and the bond yield. A long-term real rate of return of 3.2% is assumed for the fixed investment portfolio.

#### **Equity**

Most PSPIB assets are currently invested in equity, specifically in developed world equity. In the derivation of the real rates of return for these equity investments, consideration was given to the long-term real rates of return of the S&P/TSX, S&P 500 and MSCI World (excluding U.S.) stock indices.

The equity risk premium is assumed to be constant over the entire projection period at a rate of 2.3%. It is added to the risk-free rate and corresponds to a real return on equity of 4.7% for the first four years of the projection. The real return is then assumed to increase annually by 0.2% until the ultimate rate of 5.1% is reached in 2014. The rate is then held constant for the duration of the projection period.

In comparison, the 35-year historical average annual real rate of return of the S&P/TSX total return index ending 31 December 2008 is 4.7% compared to 6.0% for the S&P 500. When considering the 50-year period ending 31 December 2008, the historical average annual real return is 5.1% for the S&P/TSX and 5.5% for the S&P 500.

#### **Real Return Assets**

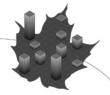
Real return assets such as real estate and infrastructure are considered to be a hybrid of debt and equity, usually in equal proportions. If these assets are considered to be an equal split between debt and equity, then the assumed risk premium should be 50% of that assumed for pure equity. Thus, an equity risk premium of 1.2% for real return assets is added to the risk-free rate. This corresponds to an assumed real return of 3.6% for the first four years of the projection period. The real return is then assumed to increase annually by 0.2% until the ultimate rate of 4.0% is reached in plan year 2014. The rate is then held constant for the duration of the projection. The ICREIM / IPD Canadian Annual Property Index earned an average annual real rate of return of 6.8% over the 36-year period ended 31 December 2008.

Table 34 summarizes the assumed real rates of return by asset type throughout the projection period.

Table 34 Real Rate of Return by Asset Type (In percentage)

Plan Year	Fixed Income Securities	Canadian Equity	U.S. and Foreign Equity	Real Estate & Infrastructure
2009	2.8	4.7	4.7	3.6
2010	2.8	4.7	4.7	3.6
2011	2.8	4.7	4.7	3.6
2012	2.8	4.7	4.7	3.6
2013	3.0	4.9	4.9	3.8
2014+	3.2	5.1	5.1	4.0

as at 31 March 2008



#### B. Overall Rate of Return

The best-estimate rate of return on total assets was derived from the weighted average assumed rate of return on all types of assets, using the assumed asset mix proportions as weights. The resulting rates are shown in the following table.

Table 35 Rates of Return on Assets in Respect of the Pension Fund (As a percentage)

Plan Year	Nominal	Real
2009	6.0	4.0
2010	6.0	4.0
2011	6.0	4.0
2012	6.0	4.0
2013	6.3	4.2
2014	6.5	4.3
2015	6.6	4.3
2016+	6.7	4.3

## C. Investment Risk of a Diversified Portfolio

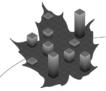
Having described in the previous sections the best-estimate investment portfolio for the RCMP pension plan, this section examines the financial impact of an alternative asset mix. In this appendix, assets refer solely to service since 1 April 2000 corresponding to the date when funds started to be transferred to the PSPIB for investments in capital markets.

#### 1. Investing in Risky Assets

A major risk all pension plans face is funding risk – the risk that assets backing the liabilities are insufficient to meet pension 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 RCMP pension plan is inflation indexed, meaning that benefits increase in line with the CPI in order to maintain their purchasing power. From a risk point of view, the PSPIB's funds would be invested only in securities that exhibit high risk-free real returns in excess of the CPI. However, only the Government of Canada Long-Term Real Return Bond guarantees a risk-free inflation protected return. The yield on this bond is below the required real return on assets of 4.3% that is needed to sustain the legislated pension benefit provisions at the current contribution rate.

By investing solely in risk-free real return bonds, all financing risk could be eliminated with, however, an excessive cost and at the detriment of current and future contributors who would have to pay more unless benefits were decreased. If the PSPIB were to switch from the current portfolio of fixed and variable income securities to a portfolio that consisted only of long-term Government of Canada bonds, the current service cost associated with the current benefit provisions would have to increase substantially in order to maintain the current financing status or benefits would have to be reduced. Neither of these options is desirable.



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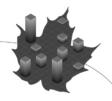
The current service cost can be reduced by investing in securities that offer a higher rate of return than risk-free real return bonds, but that also have a higher degree of risk or volatility. That is, funds can be invested in a mix of investments, such as equities and bonds, with the expected rate of return equal to the liabilities financing 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 Real Return Bond mentioned above.

The Government created the PSPIB to invest the proceeds resulting from pension contributions in excess of benefits and expenses 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 goal. Thus, the government undertakes some risks in order to increase the probability of achieving the long-term investment target of CPI + 4.3%.

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 investments for an extended period of time. This is known as market risk. Since investing solely in risk-free real return 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 underlying assets. An example of this is if salaries increase at a higher rate than expected. The amount of risk that the plan sponsor is willing to take depends on many factors, including the current financing status and economic outlook, among other things. Thus, the investment policy must balance the sponsor's desire for a high real rate of return with its tolerance and capacity for taking risk.

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

s at 31 March 2008



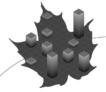
**Table 36** Investment Policy Impact on Liability Financing

		Asset Mix			Stan Devi		Pension Assets	Required Current Service
	Fixed Income	Equity	Real Return	Ultimate Real Rate of Return	1 year	3 years	Financing Ratio as at 31 March 2008	Cost to Maintain Full Funding
Portfolio #1	100%	0%	0%	2.8%	10.2%	5.9%	74%	30.71%
Portfolio #2	100%	0%	0%	3.2%	10.4%	6.0%	80%	27.64%
Portfolio #3	80%	15%	5%	3.5%	9.8%	5.6 %	86%	25.60%
Portfolio #4	55%	35%	10%	4.0%	10.3%	5.9%	95%	22.66%
Best-Estimate Portfolio	30%	50%	20%	4.3%	11.3%	6.5%	102%	20.97%
Portfolio #5	15%	65%	20%	4.6%	12.9%	7.4%	107%	19.65%
Portfolio #6	0%	80%	20%	4.9%	14.4%	8.3%	114%	18.33%

Portfolio #1 is invested in long-term federal bonds assuming the ultimate assumption is reached in plan year 2014. This portfolio does not result in a feasible scenario due to its prohibitive cost; however, its volatility is low when compared to the other portfolios considered. Portfolio #2 is invested in a marketable bond portfolio consisting of federal, provincial, corporate and real return bonds. Although this portfolio produces a higher real rate of return compared to Portfolio #1, it is still not sufficient to ensure 100% pension asstes financing while maintaining an acceptable current service cost. This is also a low risk, low return portfolio. Thus, a more risky portfolio is required in order to achieve an average annual real return of CPI + 4.3%.

The rest of the portfolios discussed are diversified portfolios that consist of equity, fixed income securities and real return assets, such as real estate and infrastructure. 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 reduces their volatility compared to the first two portfolios since the three broad asset categories are not perfectly correlated. However, despite an increased real return and lower risk, these portfolios are still not sufficient to maintain the current financing ratio. Thus, an increase in the current service cost would be required with both portfolios. Since the best-estimate real rate of return of 4.3% corresponds to the sponsor's current risk tolerance objective, it is necessary to invest in a slightly more risky portfolio in order to attain the desirable objective.

Portfolios #5 and #6 are considered more risky portfolios because they are highly invested in equity (65% and 80%, respectively) which has much more volatile returns than fixed income. Both portfolios are likely to result in higher than necessary returns, resulting in either an improvement to the financing ratio or a decrease to the current service cost. However, the volatility in these portfolios is quite high. By investing in a less risky portfolio, the plan's best-estimate real rate of return can still be achieved along with lower volatility.



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The best-estimate portfolio is invested 30% in fixed income securities, 50% in equity and 20% in real return assets in the long-term. Such a portfolio produces an annual real return of 4.3% with a three-year standard deviation of 6.5%. By observing the volatility of each of the portfolios in Table 36, 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 4.3% can be achieved with a moderate degree of risk. More risky portfolios, such as Portfolios #5 and #6, may produce a higher real return, on average, but with a higher degree of risk. Thus, investing in a more volatile portfolio is not necessary in order to achieve the required real return of 4.3%.

## 2. Analysis of Extreme Outcomes for the Best-Estimate Portfolio

Having determined that the best-estimate portfolio is the most appropriate in terms of risk, this section focuses on the volatility present in that portfolio and the extreme outcomes that may result.

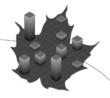
The best-estimate portfolio has an expected annual return of 4.3% real and a three-year standard deviation of 6.5%. The 90% confidence interval for real investment returns over three consecutive years is bounded by the range of -6.4% to 15.0%. That is, the probability of the three-year average real return being less than or equal to -6.4% is 5%, while the probability of the three-year average real return being greater than or equal to 15.0% is 5%. If the average real return earned by the PSPIB over the period 2009-2011 was -6.4%, the pension assets financing ratio would decrease from 101% to 85%, creating an actuarial deficit of \$632 million as at 31 March 2011. Conversely, if the average real return earned by the PSPIB over the period 2009-2011 was 15.0%, the financing ratio would increase from 101% to 117%, creating an actuarial surplus of \$766 million as at the same date.

The probability of this extreme scenario occurring varies depending on how the PSPIB assets are invested. For example, if the assets were invested according to Portfolio #5 rather than the best-estimate, the probability of earning an average three-year real return of -6.4% increases from 5% to 7%. Conversely, the probability of earning an average three-year real return of 15.0% also increases, from 5 to 8%. With a less risky portfolio, such as Portfolio #4, the probability of earning an average three-year real return of -6.4% decreases to 4%. However, the probability of earning an average three-year real return of 15.0% also decreases, from 5% to 3%. Thus, as portfolio risk increases, the probability of earning an extreme average return, either good or bad, also increases, while less risky portfolios will decrease the probability of earning an extreme average return.

3. Impact on Assets in Respect of the Pension Fund of Investing in Riskier Assets
This section highlights in dollar value the cumulative impact of PSPIB active asset
management decisions since 1 April 2000 compared to fictitious investments in risk-free
bonds during the same period. The following table shows the impact of investment
decisions on PSPIB assets. Specifically, the table shows in lines (A) to (D) the
hypothetical value of the fund and of the investment earnings had the fund been invested
entirely in long-term Government of Canada bonds throughout its life. Those figures

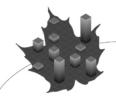
#### Pension Plan for the ROYAL CANADIAN MOUNTED POLICE

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are compared to the actual PSPIB results – lines (E) to (I) – to obtain the net value of the decision to invest in capital markets, in lines (J) and (K).

Even though investment earnings may not be positive each and every year, one can reasonably expect investment earnings above the risk-free rate to be positive in the long-term due to investment decisions, such as asset allocation in line (F) and active management in line (G). The cumulative net impact of investment decisions – line (K) in 2008 – is positive, meaning that since the inception of the Fund, it has been more profitable to invest a portion of the Fund in equities rather than investing solely in risk-free bonds.

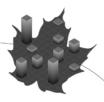


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Table 37 Cumulative Impact of Investment Decisions on PSPIB Assets
As at 31 March 2008
(\$ millions)

	Pension Fund			
	2001-05	2006	2007	2008
Hypothetical Risk-Free Portfolio (100% Government Long-Term Bonds)				
Fictitious Value of Assets, beginning of year (A)	-	1,408	1,755	2,113
Net Contributions Less Disbursements (B)	1,240	280	276	280
Return on Risk-Free Portfolio (C)	168	67	82	98
Fictitious Value of Assets, end of year $(D) = (A)+(B)+(C)$	1,408	1,755	2,113	2,491
Risky Assets Portfolio (PSPIB Actual Figures)				
Market Value of Assets, beginning of year (E)	-	1,442	2,017	2,537
Net Contributions Less Disbursements (B)	1,240	280	276	280
Return on Risky Assets Portfolio				
Selecting Fund's Actual Asset Allocation Policy (F)	188	273	214	23
Active Management (over the benchmark) (G)	14	22	30	(42)
Total Return on Risky Assets Portfolio $(H) = (F)+(G)$	202	295	244	(19)
Market Value of Assets, end of year $(I) = (E)+(B)+(H)$	1,442	2,017	2,537	2,798
<b>Net Impact of Investment Decisions</b>				
Annual $(J) = (H)-(C)$	34	228	162	(117)
Cumulative $(K) = (I)-(D)$	34	262	424	307
<b>Investment Actuarial Gains and Losses</b>				
Expected Investment Earnings <sup>1</sup> (L)	191	103	136	169
Total Return on Risky Assets Portfolio (H)	202	295	244	(19)
Gains/Losses				
Annual $(M) = (H)-(L)$	11	192	108	(188)
Cumulative $(N) = (N)_{prior year} + (M)$	11	203	311	123

In 2008, the \$169 million is based on an expected nominal return of 6.3% (4.2 % real plus 2.1% CPI).



# Appendix 11 – Detailed Membership Data

**Table 38 Reconciliation of Contributors** 

	Regular Members		Civilian Members	
	Male	Female	Male	Female
As at 31 March 2005	13,394	2,939	1,389	1,388
Data corrections	9	6	(5)	(2)
New members	2,965	741	457	542
Re-engagements	2	-	1	1
Withdrawals	(223)	(49)	(61)	(85)
Pensionable disabilities	(300)	(42)	(9)	(32)
Pensionable retirements	(1,463)	(79)	(127)	(105)
Deaths	(37)	(1)	(2)	-
As at 31 March 2008	14,347	3,515	1,643	1,707

**Table 39 Reconciliation of Retirement Pensioners** 

	Former Regu	Former Regular Members		ian Members
	Male	Female	Male	Female
As at 31 March 2005	9,190	140	574	266
Data corrections	(122)	1	19	(19)
New pensioners	1,463	79	127	105
Deaths	(286)	-	(40)	(11)
Re-engagements	(2)	-	(1)	(1)
As at 31 March 2008	10,243	220	679	340

**Table 40 Reconciliation of Disability Pensioners** 

	Former Regu	lar Members	Former Civil	Former Civilian Members		
	Male	Female	Male	Female		
As at 31 March 2005	736	95	62	108		
Data corrections	135	9	14	1		
New pensioners	300	42	9	32		
Deaths	(29)	(3)	(3)	(3)		
As at 31 March 2008	1,142	143	82	138		



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 Table 41
 Male Regular Member Contributors

Number and Average Annual Pensionable Earnings<sup>1</sup> as at 31 March 2008

Age Last			Complete	d Years of	Service in	the Force	;		All Years
Birthday	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35	of Service
To 24	579 \$57,697	-	-	-	-	-	-	-	579 \$57,697
25-29	1,455 \$65,192	274 \$75,847	-	-	-	-	-	-	1,729 \$66,880
30-34	1,096 \$66,694	895 \$76,807	159 \$80,996	-	-	-	-	-	2,150 \$71,962
35-39	671 \$67,691	756 \$77,115	626 \$81,356	301 \$86,282	6 \$87,296	-	-	-	2,360 \$76,756
40-44	224 \$67,167	246 \$77,628	358 \$81,051	1,052 \$86,205	498 \$91,343	7 \$91,370		-	2,385 \$83,846
45-49	63 \$70,322	66 \$78,073	126 \$80,954	445 \$83,897	715 \$89,269	889 \$96,670	19 \$104,513	-	2,323 \$89,914
50-54	17 \$85,880	19 \$78,208	39 \$81,150	121 \$83,733	241 \$85,503	673 \$92,853	814 \$100,574	23 \$107,291	1,947 \$94,337
55+	4 \$76,302	4 \$114,052	13 \$76,498	28 \$81,144	89 \$82,657	112 \$89,137		239 \$103,462	874 \$95,110
All Ages	4,109 \$65,227	2,260 \$76,998	1,321 \$81,138	1,947 \$85,463	1,549 \$88,962	1,681 \$94,618		262 \$103,798	14,347 \$80,891

Average age: 40.7 years

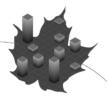
Average service in the force: 14.2 years Average pensionable service: 14.5 years

Annualized pensionable payroll<sup>2</sup>: \$1,133.4 million

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

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

as at 31 March 2008



**Table 42 Female Regular Member Contributors**Number and Average Annual Pensionable Earnings<sup>1</sup> as at 31 March 2008

Age Last			Complete	d Years of	Service in	the Force	;		All Years
Birthday	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35	of Service
To 24	171	-	_	_	_	-	-		- 171
10 24	\$59,869								\$59,869
25-29	483	126	1	-	-	-	-		- 610
23-29	\$66,236	\$75,917	\$78,876						\$68,256
30-34	306	340	114	-	-	-	-		- 760
30-34	\$68,149	\$76,879	\$80,262						\$73,871
35-39	129	216	260	137	1	-	-		- 743
33-39	\$68,121	\$77,369	\$80,363	\$83,280	\$92,448				\$77,921
40-44	57	66	86	263	171	1	-		- 644
40-44	\$70,449	\$77,844	\$80,369	\$84,043	\$88,934	\$81,876			\$83,009
45-49	8	19	26	63	166	96	1		- 379
43-49	\$69,162	\$77,217	\$79,830	\$84,150	\$88,030	\$93,834	\$90,108		\$87,358
50-54	3	8	8	23	34	63	34		- 173
30-34	\$65,020	\$77,514	\$80,139	\$84,985	\$84,201	\$84,943	\$98,831		\$86,621
55+	-	2	1	6	8	11	7		- 35
		\$76,704	\$117,228	\$87,834	\$82,988	\$95,653	\$112,272		\$94,275
All Ages	1,157	777	496	492	380	171	42		- 3,515
All Ages	\$66,236	\$76,955	\$80,381	\$83,935	\$88,000	\$90,605	\$100,864		\$77,031

Average age: 36.9 years

Average service in the force: 10.6 years Average pensionable service: 10.7 years

Annualized pensionable payroll<sup>2</sup>: \$270.8 million

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

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



Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE** as at 31 March 2008

**Table 43** Male Civilian Member Contributors
Number and Average Annual Pensionable Earnings<sup>1</sup> as at 31 March 2008

Age Last			Complete	d Years of	Pensional	ole Service			All Years
Birthday	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35	of Service
To 24	28 \$60,572	-	-	-	-	-	-	-	28 \$60,572
25-29	147 \$61,478	30 \$69,512	-	-	-	-	-	-	177 \$62,840
30-34	139 \$64,369	92 \$72,472	13 \$78,589	-	-	-	-	-	244 \$68,182
35-39	90 \$68,026	86 \$73,914	40 \$74,798	19 \$77,635	-	-	-	-	235 \$72,110
40-44	79 \$67,454	50 \$78,061	37 \$81,098	48 \$79,275	19 \$78,133	1 \$89,220	-	-	234 \$75,263
45-49	66 \$69,667	50 \$77,870	28 \$76,094	41 \$82,222	62 \$83,854	38 \$82,495	-	-	285 \$78,341
50-54	29 \$70,359	27 \$74,986	15 \$76,949	13 \$78,962	36 \$81,967	85 \$86,760	50 \$83,598	3 \$82,372	258 \$81,388
55+	17 \$69,732	22 \$80,084	20 \$74,422	9 \$71,949	21 \$81,092	37 \$80,542	42 \$86,862	14 \$83,757	182 \$80,149
All Ages	595 \$65,472	357 \$74,769	153 \$77,043	130 \$79,426	138 \$82,154	161 \$84,340	92 \$85,088	17 \$83,513	1,643 \$74,209

Average age: 42.6 years

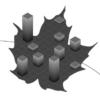
Average pensionable service: 11.5 years

Annualized pensionable payroll<sup>2</sup>: \$120.5 million

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

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

as at 31 March 2008



**Table 44 Female Civilian Member Contributors**Number and Average Annual Pensionable Earnings<sup>1</sup> as at 31 March 2008

Age Last			Complete	d Years of	Pensional	ole Service			All Years
Birthday	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35	of Service
To 24	32	-	-	-	-	-	-	-	32
10 24	\$51,518								\$51,518
25-29	188	18	-	-	-	-	-	-	206
23 2)	\$58,269	\$61,528							\$58,554
30-34	170	122	14	-	-	-	-	-	306
30 31	\$59,826	\$65,579	\$69,438						\$62,559
35-39	125	98	33	29	-	-	-	-	285
33 37	\$61,200	\$69,150	\$70,838	\$65,406					\$65,478
40-44	80	50	42	54	18	-	-	-	244
10 11	\$62,033	\$66,176	\$67,848	\$70,462	\$64,783				\$65,951
45-49	59	41	27	48	45	42	4	-	266
15 17	\$58,310	\$63,793	\$62,864	\$70,774	\$75,668	\$68,909	\$61,128		\$66,519
50-54	35	25	19	25	21	58	50	1	234
2021	\$59,156	\$66,712	\$63,258	\$60,171	\$72,685	\$72,548	\$73,910	\$57,900	\$68,086
55+	14	15	10	21	22	20	27	5	134
	\$65,481	\$60,751	\$86,950	\$67,907	\$69,281	\$70,754	\$66,079	\$85,159	\$69,199
All Ages	703	369	145	177	106	120	81	6	1,707
	\$59,479	\$66,093	\$68,470	\$67,962	\$71,903	\$70,976	\$70,669	\$80,616	\$64,737

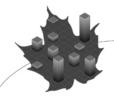
Average age: 41.1 years

Average pensionable service: 10.2 years

Annualized pensionable payroll<sup>2</sup>: \$110.0 million

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

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



Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE** as at 31 March 2008

**Table 45** Male Former Regular Member Retirement Pensioners
Number and Average Annual Pension<sup>1</sup> as at 31 March 2008

Age Last	Superannua	ntion Account	Pensi	on Fund
Birthday	Number	Average (\$)	Number	Average (\$)
To 39	1	11,618	8	3,566
40-44	16	20,332	15	7,326
45-49	230	26,967	221	8,012
50-54	1,141	33,647	839	6,847
55-59	2,560	39,621	1,501	6,869
60-64	2,469	42,933	791	4,091
65-69	1,738	35,944	55	1,603
70-74	1,174	35,698	-	-
75-79	753	34,509	-	-
80-84	114	29,031	-	-
85-89	32	32,256	-	-
90-94	7	25,557	-	-
95-99	1	17,808	-	-
All Ages	10,236	37,834	3,430	6,207

Average age at 31 March 2008: 63.1 years Average age at retirement: 50.3 years

**Table 46** Male Former Regular Member Disability Pensioners
Number and Average Annual Pension<sup>1</sup> as at 31 March 2008

Age Last	Superannua	ation Account	Pensi	on Fund
Birthday	Number	Average (\$)	Number	Average (\$)
To 39	6	9,976	8	6,033
40-44	41	16,184	38	7,662
45-49	132	23,461	121	7,232
50-54	278	28,146	196	6,479
55-59	348	31,250	222	5,507
60-64	206	30,623	69	4,121
65-69	77	29,520	5	670
70-74	28	31,726	-	-
75-79	16	23,097	-	-
80-84	5	28,704	-	-
85-89	2	15,336	-	-
90-94	1	26,760	-	-
All Ages	1,140	28,562	659	6,062

Average age at 31 March 2008: 56.8 years Average age at retirement: 48.5 years

Equals initial amounts of pension plus all accrued indexation up to and including 1 January 2008, reduced by any CPP coordination and PBDA offsets in effect as at 31 March 2008. All pensions are in pay except for 16 Superannuation Account and 12 Pension Fund retirement pensions deferred to age 60. All accrued indexation is in pay except that in respect of retirement pensioners who have not yet satisfied at least one of the relevant criteria for receiving indexation payments.



**Table 47 Female Former Regular Member Retirement Pensioners** Number and Average Annual Pension<sup>1</sup> as at 31 March 2008

Age Last	Superannua	ation Account	Pensi	on Fund
Birthday	Number	Average (\$)	Number	Average (\$)
To 39	5	4,784	8	4,161
40-44	9	13,188	7	6,839
45-49	54	25,128	48	7,620
50-54	83	28,848	55	5,910
55-59	47	32,038	29	6,521
60-64	15	33,590	10	6,269
65-69	1	26,640	1	2,016
70-74	2	11,280	-	-
75-79	-	-	-	-
80-84	1	8,796	-	-
All Ages	217	27,473	158	6,492

Average age at 31 March 2008: 52.5 years Average age at retirement: 46.9 years

**Table 48 Female Former Regular Member Disability Pensioners**Number and Average Annual Pension<sup>1</sup>as at 31 March 2008

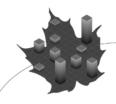
Age Last	Superannua	ation Account	Pension Fund		
Birthday	Number	Average (\$)	Number	Average (\$)	
To 39	8	11,004	9	6,219	
40-44	21	15,939	18	7,739	
45-49	41	20,676	28	5,998	
50-54	40	22,164	19	5,745	
55-59	22	24,247	11	5,176	
60-64	9	22,535	2	6,882	
65-69	-	-	-	-	
70-74	1	7,104	-	-	
All Ages	142	20,425	87	6,243	

Average age at 31 March 2008: 50.4 years

Average age at retirement: 43.6 years

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Equals initial amounts of pension plus all accrued indexation up to and including 1 January 2008, reduced by any CPP coordination and PBDA offsets in effect as at 31 March 2008. All pensions are in pay except for 13 Superannuation Account and 12 Pension Fund retirement pensions deferred to age 60. All accrued indexation is in pay except that in respect of retirement pensioners who have not yet satisfied at least one of the relevant criteria for receiving indexation payments.



Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE** as at 31 March 2008

**Table 49** Male Former Civilian Member Retirement Pensioners
Number and Average Annual Pension<sup>1</sup> as at 31 March 2008

Age Last	Superannua	ation Account	Pensi	on Fund
Birthday	Number	Average (\$)	Number	Average (\$)
To 39	-	-	3	3,236
40-44	1	1,683	1	6,075
45-49	3	16,494	3	4,310
50-54	11	23,876	10	5,898
55-59	105	39,509	99	8,256
60-64	167	36,397	117	5,560
65-69	133	26,956	30	2,206
70-74	105	25,342	6	2,666
75-79	92	20,997	1	2,556
80-84	40	19,364	-	-
85-89	15	17,327	-	-
All Ages	672	29,394	270	6,075

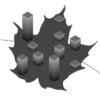
Average age at 31 March 2008: 67.6 years Average age at retirement: 57.5 years

**Table 50** Male Former Civilian Member Disability Pensioners
Number and Average Annual Pension<sup>1</sup> as at 31 March 2008

Age Last	Superannua	ation Account	Pension Fund		
Birthday	Number	Average (\$)	Number	Average (\$)	
To 39	1	8,376	1	2,616	
40-44	5	10,630	2	1,986	
45-49	4	12,066	3	2,972	
50-54	10	27,007	6	7,424	
55-59	17	28,207	10	5,212	
60-64	15	30,502	6	3,924	
65-69	10	13,972	-	-	
70-74	12	16,623	-	_	
75-79	6	13,292	-	-	
80-84	1	7,932	-	-	
85-89	1	8,808	-	-	
All Ages	82	21,373	28	4,847	

Average age at 31 March 2008: 61.6 years Average age at retirement: 51.7 years

Equals initial amounts of pension plus all accrued indexation up to and including 1 January 2008, reduced by any CPP coordination and PBDA offsets in effect as at 31 March 2008. All pensions are in pay except for 19 Superannuation Account and 14 Pension Fund retirement pensions deferred to age 60.



**Table 51 Female Former Civilian Member Retirement Pensioners** Number and Average Annual Pension<sup>1</sup> as at 31 March 2008

Age Last	Superannua	ation Account	Pensi	on Fund
Birthday	Number	Average (\$)	Number	Average (\$)
To 39	3	3,055	6	2,991
40-44	3	9,693	3	3,023
45-49	5	14,557	5	3,826
50-54	18	19,302	20	6,354
55-59	69	32,233	62	7,655
60-64	81	26,661	66	4,998
65-69	49	17,164	22	3,050
70-74	43	20,244	3	3,012
75-79	29	18,711	1	5,964
80-84	22	18,691	-	-
85-89	11	18,672	-	-
90-94	1	14,784	-	-
All Ages	334	23,137	188	5,637

Average age at 31 March 2008: 65.3 years Average age at retirement: 56.3 years

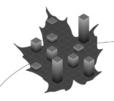
**Table 52 Female Former Civilian Member Disability Pensioners** Number and Average Annual Pension<sup>1</sup> as at 31 March 2008

Age Last Birthday	Superannuation Account		Pension Fund	
	Number	Average (\$)	Number	Average (\$)
To 39	5	4,834	4	4,728
40-44	12	8,435	11	3,574
45-49	13	12,698	8	3,877
50-54	34	16,584	21	3,694
55-59	41	20,864	24	4,612
60-64	13	16,240	8	2,022
65-69	9	12,437	2	5,406
70-74	3	17,352	-	-
75-79	4	10,899	-	-
80-84	-	-	-	-
85-89	1	8,304	-	-
All Ages	135	15,828	78	3,904

Average age at 31 March 2008: 55.3 years Average age at retirement: 46.8 years

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Equals initial amounts of pension plus all accrued indexation up to and including 1 January 2008, reduced by any CPP coordination and PBDA offsets in effect as at 31 March 2008. All pensions are in pay except for 25 Superannuation Account and 26 Pension Fund retirement pensions deferred to age 60.



Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE** as at 31 March 2008

Table 53 Female Eligible Spouses

Number and Average Annual Pension<sup>1</sup> as at 31 March 2008

Age Last	Superannuation Account		Pension Fund	
Birthday	Number	Average (\$)	Number	Average (\$)
To 39	5	7,594	8	3,195
40-44	33	9,779	15	2,726
45-49	60	13,218	27	2,979
50-54	117	14,925	43	2,475
55-59	175	16,225	28	2,371
60-64	202	17,716	22	1,559
65-69	226	18,214	6	986
70-74	269	17,350	2	2,580
75-79	234	15,344	-	- -
80-84	103	13,545	-	-
85-89	54	13,854	-	-
90-94	29	13,481	-	-
95-99	11	13,883	-	-
Widows	1,518	16,060	151	2,418

Average age at 31 March 2008: 67.8 years

Average age at death of contributor: 56.1 years

**Table 54** Male Eligible Spouses and Children
Number and Average Annual Pension<sup>1</sup> as at 31 March 2008

Age Last Birthday	Superannuation Account		Pension Fund	
	Number	Average (\$)	Number	Average (\$)
To 39	1	6,744	1	2,316
40-44	-	-	-	-
45-49	2	9,468	1	2,400
50-54	4	8,115	2	2,238
55-59	7	10,490	2	1,668
60-64	8	11,816	6	1,586
65-69	4	17,769	-	-
70-74	1	21,252	-	-
75-79	5	8,330	-	-
Widowers	32	11,252	12	1,837
Children	161	2,833	98	516

Average age of widowers at 31 March 2008: 62.4 years

Average age of widowers at death of contributor: 54.4 years

Equals initial amounts of annual allowance plus all indexation up to and including 1 January 2008.

as at 31 March 2008

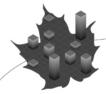


**Table 55** RCA Pensioners<sup>1</sup>
Number and Average Annual Pension<sup>2</sup> as at 31 March 2008

Age Last Birthday	Former Regular Members		Former Civilian Members	
	Number	Average (\$)	Number	Average (\$)
45-49	1	1,500	-	-
50-54	5	3,180	-	-
55-59	49	3,522	4	1,494
60-64	44	2,675	2	3,210
65-69	13	1,398	2	1,272
All Ages	112	2,909	8	1,868

All pensioners are male except two members. They are all non-disabled pensioners except one member. All pensions are in pay.

Equals initial amounts of pension plus all accrued indexation up to and including 1 January 2008.



Pension Plan for the **ROYAL CANADIAN MOUNTED POLICE** as at 31 March 2008

# Appendix 12 - Acknowledgements

Morneau Sobeco 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:

Kimberley Burt Lyse Lacourse Michel Millette, F.S.A., F.C.I.A. Danita Pattemore, F.S.A., F.C.I.A. Arek Rydel, A.S.A.