



Department of Insurance
Canada

Département des assurances
Canada

Ottawa, Canada
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REGULAR FORCE DEATH BENEFIT ACCOUNT

ACTUARIAL REPORT

AS AT DECEMBER 1980

TABLE OF CONTENTS

	PAGE
I. Introduction and Summary	1
II. Data	2
III. Cost of Benefit subject to Uniform Monthly Contributions	2
IV. Balance Sheet and projection of Contribution Stabilization Reserve	5
V. Actuarial Opinion	6
Appendix 1: Valuation Assumptions (text)	7
2-7: Valuation Assumptions (tables)	11
8: Terms of the Supplementary Death Benefit Plan	18

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Canadian Forces Superannuation Act - Part II

Report on Actuarial Examination of the Regular Force Death Benefit Account in the Consolidated Revenue Fund as at December 31, 1980

I. Introduction and Summary

Pursuant to section 40 of the Canadian Forces Superannuation Act (hereinafter the "Act"), we have made an actuarial examination of the Regular Force Death Benefit Account in the Consolidated Revenue Fund as at December 31, 1980 and have the honour to report thereon.

Section II of this report presents a summary of the membership data. Section III sets out the estimated monthly cost of benefits subject to uniform contributions, both currently and in the long term. Section IV presents a statement of assets and liabilities for the Account as at December 31, 1980. Section V contains the actuarial opinion as regards the data, the actuarial assumptions and the actuarial method upon which the examination is based. The actuarial assumptions entering into the calculations are described in Appendix 1 and a summary of the terms of the plan is given in Appendix 8.

The total benefit coverage for all participants as at December 31, 1980 was approximately \$1.95 billion.

Based on the assumptions described in Appendix 1, the current average cost for elective and non-elective participants is estimated to be approximately \$0.27 per month per \$1,000 benefit. The average monthly cost per \$1,000 benefit is expected to increase gradually to approximately \$0.34 around 1995 and thereafter to decrease gradually to an ultimate cost of approximately \$0.30 after 2030. These changes in estimated costs arise primarily from expected changes in the age composition of the insured population.

The contribution stabilization reserve in the Regular Force Death Benefit Account was \$36,229,000 as at December 31, 1980, or about 5.3 times the expected amount of benefits payable from the Account in 1981. Without any changes in the benefits and financing provision of the Plan, the income including interest is expected to exceed charges until about 2036. The contribution stabilization reserve under these circumstances is expected to be substantially more than adequate to cushion adverse experience fluctuations for at least sixty years.

II. Data

Data for participants who were members of the forces on December 31, 1980, and for elective participants were provided by the Department of National Defence. The following schedule shows pertinent statistics (including paid-up coverage) derived from the data.

Participants as at December 31, 1980

<u>Class</u>	<u>Number</u>	<u>Total Benefit ('000)</u>	<u>Average Benefit</u>
<u>Non-Elective Participants</u>			
(a) Officers: Male	14,334	\$ 372,303,500	\$25,973
Female	824	16,629,500	20,181
(b) Other Ranks: Male	59,904	998,878,000	16,675
Female	5,227	67,959,000	13,002
Sub-Totals	<u>80,289</u>	<u>\$1,455,770,000</u>	<u>\$18,132</u>
<u>Elective Participants</u>			
(a) entitled to an immediate annuity under the Act			
Male	42,486	\$ 490,981,295	\$11,556
Female	205	2,664,950	13,000
(b) not entitled to an immediate annuity under the Act	108	625,800	5,794
Sub-Totals	<u>42,779</u>	<u>\$ 494,272,045</u>	<u>\$11,549</u>
Grand Totals	123,008	\$1,950,042,045	\$15,843

III. Cost of Benefit subject to Uniform Monthly Contributions

A. Current Cost

As described in Appendix 8, non-elective participants and elective participants entitled to an immediate annuity on ceasing to be employed in the regular force contribute to the Regular Force Death Benefit Account at a monthly rate of 20 cents per \$1,000 of benefit regardless of age (except for the 10 cents reduction after age sixty-five in respect of the \$500 of benefit paid-up by the employer).

For these participants the benefit cost expected to be experienced in the few years following December 31, 1980 was estimated by applying the mortality rates described in Appendix 1 to the benefit coverage of participants of the plan as at December 31, 1980. The results are shown in the following table:

<u>Current Cost per \$1000 Benefit</u>	
<u>Class</u>	<u>Monthly Cost</u>
Non-elective participants	\$0.140
Elective participants entitled to an immediate annuity	\$0.688
Combined	\$0.271

The above table gives an indication of the current level (including the margins in the mortality rates described in Appendix 1) of the direct monthly benefit cost for non-elective participants and elective participants entitled to an immediate annuity. There could be indirect costs in the event that benefits provided for elective participants not entitled to an immediate annuity and the \$500 paid-up benefit at age 65 for elective participants entitled to an immediate annuity are not operated on a self-supporting basis.

In group insurance contracts, it is normally provided that a member of the group may, upon termination of employment, convert group coverage to an individual life insurance policy from the company at standard premium rates without submitting evidence of insurability. Persons who take advantage of this option often exercise selection against the company and the mortality experience of converted policies is normally unfavourable. Under the Regular Force Death Benefit plan a similar situation exists with respect to elective participants without entitlement to an immediate annuity. However, the relative number of cases is too small to have a measurable effect on the monthly cost noted above.

In view of the foregoing comments, the figures set out in the above table may be accepted as reflecting the total current average monthly cost including the margins noted in Appendix 1, which is seen to be about 27 cents per \$1,000 benefit for non-elective participants and participants entitled to an immediate annuity combined. The average monthly cost net of the margins is approximately 24.6 cents per \$1,000 benefit; and this level of cost is given support by statistics included in the published annual reports on the administration of the Canadian Forces Superannuation Act for the six years ending March 31, 1985 which indicate current average monthly claim payments per \$1,000 benefit of between 22.3 cents and 26.2 cents.

Since monthly contributions from participants together with government credits equal to one-sixth of benefits paid* currently total about 24 cents per \$1,000 benefit for these two classes of participants, the benefit payments are expected to slightly exceed the contribution income based on the assumptions noted previously. Nevertheless interest credits to the Account will result in the Account remaining in a very healthy position for the foreseeable future. Observations on the future state of the Account follow the balance sheet presentation on page 5.

B. Long Term Cost

Long term benefit costs were estimated according to the valuation bases described in Appendix 1 and are shown in the following table.

Long Term Cost (monthly) per \$1000 Benefit

<u>Class</u>	<u>1995</u>	<u>Calendar Year</u>		<u>Ultimate</u>
		<u>2010</u>	<u>2025</u>	
Non-elective participants	\$0.136	\$0.138	\$0.133	\$0.134
Elective participants entitled to an immediate annuity	0.834	0.836	0.863	0.827
Combined	0.342	0.332	0.314	0.302

The ultimate proportion of coverage on female non-elective participants and elective participants entitled to an immediate annuity increases very modestly compared to current levels, from 6% to 7% and from 9% to 10% respectively.

The ultimate age distribution of non-elective participants compared to the current distribution is weighted more heavily at the younger ages in the case of males and more heavily at the older ages in the case of females. The net effect of these shifts in the age profile of the non-elective population is the primary factor responsible for the decrease in the estimate of the monthly cost ultimately compared to current levels in respect of non-elective participants.

In the case of elective participants entitled to an immediate annuity the age distribution for both males and females is weighted more heavily at older ages compared to the current distribution and is the primary factor responsible for the increase in the estimate of the monthly cost from the current to the ultimate levels.

*In respect of participants who at the time of death were members of the forces or were entitled to an immediate annuity under Part I of the Act or the D.S.P.C.A. on which contributions were being paid by the participant at the time of death.

The estimated ultimate monthly cost for non-elective and elective participants combined is expected to be about 11.4% higher than the estimated current (1980) monthly cost. This change is the net result of

- (i) the change in the age distribution of the insured population noted in the preceding paragraphs resulting in an increase in monthly costs of approximately 12%,
- (ii) the change in the male/female distribution of the insured population resulting in a decrease in the monthly costs of approximately 2%, and
- (iii) other factors, including a minimal change in the proportion of total coverage on elective participants versus non-elective participants, resulting in an increase of approximately 1.5%.

IV. Balance Sheet and Contribution Stabilization Reserve Projection

The following balance sheet shows the state of the Regular Force Death Benefit Account as at December 31, 1980.

Assets

Balance of account	\$37,762,000
Due and accrued Government contributions	232,000
Contributions due from participants	<u>290,000</u>
Total Assets	\$38,284,000

Liabilities

Actuarial present value of \$500 paid-up benefit for participants above age 64 who are entitled to an immediate annuity	\$ 1,053,000
Actuarial liability for elective participants not entitled to an immediate annuity	28,000
Reserve for claims incurred but unreported or reported but not paid	974,000
Contribution stabilization reserve	<u>36,229,000</u>
Total Liabilities	\$38,284,000

The contribution stabilization reserve of \$36,229,000 shown in the above statement is equal to about 5.3 times the expected benefits payable from the Account in 1981. For the existing plan, this reserve is expected to grow gradually until 2036 and to decrease thereafter. The ratio of the projected stabilization reserve to the expected claims in the following year increases

gradually until 1993 at which time its expected value is about six, and thereafter decreases gradually as illustrated in the following table.

Projected Ratio of Contribution Stabilization
Reserve to Annual Benefit Payments in the Following Year

<u>Year</u>	<u>Ratio</u>
1995	6.0
2010	5.3
2025	3.7
2045	1.4
2050	0.6

V. Actuarial Opinion

In our opinion

- (a) the data upon which the calculations have been based are sufficient for the purpose of the report,
- (b) the assumptions used are reasonable and appropriate for the purpose of the report,
- (c) the methods employed are consistent with sound actuarial principles, and
- (d) this report conforms with the recommendations adopted by the Canadian Institute of Actuaries for the valuation of self-insured benefit plans.

Respectfully submitted,



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Actuary



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July 2, 1986

APPENDIX 1

Valuation Assumptions

A. Interest

Currently the Regular Force Death Benefit Account is credited quarterly with interest calculated on the balance in the Account in accordance with Section 55 of the Canadian Forces Superannuation Regulations. The rates specified in the regulations are the same as those at which interest credits in respect of the Canadian Forces Superannuation Account are calculated. These rates are based on notional investments of cash flow in long term government securities similar to those prescribed for purposes of the Canada Pension Plan and they vary from quarter to quarter. The quarterly rates applicable to various portions of the balance in the Account during the calendar year 1980 were equivalent to an annual rate of approximately 8.5% per annum.

Although interest plays a minor role in the operation of this Account, it was considered appropriate for purposes of calculating the required actuarial reserves to change the assumed rate from 4% to 6.5% per annum. However, for the purpose of projecting the contingency reserve, interest credits were calculated in accordance with projected fund yields developed for purposes of Appendix 1 to the Actuarial Report on the Canadian Forces Superannuation Account* as at December 31, 1980, which are as follows:

1981-1990(%): 9.1, 10.1, 10.6, 10.8, 11.2, 11.3, 11.2, 11.0, 10.7, 10.3
1991-2000(%): 9.9, 9.6, 9.3, 9.0, 8.7, 8.5, 8.3, 8.1, 7.9, 7.7,
2001-2007(%): 7.3, 7.1, 7.0, 6.9, 6.7, 6.6, 6.6
After 2007: 6.5%

B. Mortality

(1) Non-Elective Participants

Active contributors under Part I of the Act comprise a group largely identical with that of the non-elective participants under Part II. We have, therefore, adopted rates equal to the rates assumed for purposes of the Actuarial Report on the Superannuation Account as at December 31, 1980. The latter rates largely reflect the 1976-80 experience and provide an effective margin of approximately 10% when weighted by the amount of insurance at individual ages. The rates are shown in Appendix 2.

* see page 26 of that report

(2) Elective participants entitled to an immediate annuity

A large proportion of participants who became entitled to immediate annuities upon ceasing to be employed in the regular force between January 1, 1955 and July 14, 1960, did not become elective participants. This situation changed largely as the result of the 1960 amendments to the Act.

Since July 14, 1960, it has no longer been necessary for a participant who becomes an annuitant to take positive action to retain the death benefit coverage. In fact, the only action such participant may now take is to elect to reduce coverage to \$500.

For mortality purposes, this class of elective participants is divided into two separate groups, depending on whether participants became entitled to an immediate annuity under the Canadian Forces Superannuation Act because of disability or for other reasons.

For elective participants entitled to an immediate annuity for reasons other than disability, the rates used for purposes of this report are derived from a linear transformation* of the 1980-82 Canada Life Tables**. These rates reflect the experience of the 1976-1980 period including a margin of approximately 10%. The rates are shown in Appendix 3.

For elective participants entitled to an immediate annuity because of disability the bases adopted are as follows:

- (a) for participants in respect of whom two or more years have elapsed from date of retirement the rates are based on 200% of the 1980-82 Canada Life Tables.
- (b) for participants within the first and second year after date of retirement the rates are 175% and 150%, respectively, of the ultimate rates described in (a) above.

The ultimate rates described in (a) above are shown in Appendix 4. These rates in respect of disabled annuitants provide an effective margin of about 10% over the 1976-1980 experience.

* The linear transformation generates mortality rates which when multiplied by the lives exposed to risk during the 1976-1980 period results in the expected number of death and expected total of the ages at death, equal to 110% of the actual results for the period.

**Statistics Canada: Life tables, Canada and provinces 1980-82

(3) Participants entitled to \$500 paid-up benefit coverage

All participants entitled to the \$500 paid-up benefit coverage at age 65 or over are included in the group described in (2) above. For purposes of determining the actuarial reserve in respect of the paid-up benefit the mortality rates used are those of the 1980-82 Canada Life Tables which are illustrated in Appendix 5.

(4) Elective participants who do not become entitled to an immediate annuity on ceasing to be employed in the regular force

The mortality bases used to compute the actuarial reserve are the same as those described in (2)(a) above for elective participants entitled to an immediate annuity because of disability in respect of whom two or more years have elapsed from the date of retirement. These rates are shown in Appendix 4.

C. Other Assumptions

For purposes of the long term projections it was assumed that

- (1) the distribution of lives by rank and sex among non-elective participants will remain constant and equal to the distribution at December 31, 1980;
- (2) the age and relative salary distribution of persons becoming non-elective participants in each future year will be the same as
 - (a) the age distribution of persons who became contributors under Part I of the Act during the 1976-80 period,
 - (b) the relative salary distribution as at December 31, 1980 of those who became contributors under Part I during 1980,respectively (see Appendices 6A and 6B);
- (3) the probabilities of withdrawal, disability and retirement for non-elective participants will be the same as the corresponding probabilities assumed for purposes of the examination of the Canadian Forces Superannuation Account as at December 31, 1980;
- (4) participants will experience mortality in accordance with the bases described in B above;
- (5) the probability of a non-elective participant who upon ceasing to be a member of the regular force is entitled under Part I of the Act or under the D.S.P.S.A. to an immediate annuity electing to reduce the coverage to the minimum (\$500) is five per cent if the cause of release is disability and fifteen per cent if the cause of release is other than disability (These factors are approximately five percentage points less than the average experience for the 1976-1980 period.);

- (6) non-elective participants will receive promotional increases in salary from December 31, 1980, or on the date at which participation commences if later, on the basis of the promotional salary scales used for purposes of the examination of the Canadian Forces Superannuation Account as at December 31, 1980 (see Appendix 7);
- (7) in addition to promotional increases in salaries referred to in (6) above, economic increases in salaries are:
- | | | |
|--------------|--------------|-------------------------------------|
| officers: | 1981-1987(%) | 14.1, 9.3, 5.6, 4.3, 3.6, 4.0, 4.5 |
| | after 1987 | 5.0% |
| other ranks: | 1981-1987(%) | 15.6, 11.5, 5.9, 4.7, 3.6, 4.0, 4.5 |
| | after 1987 | 5.0%; |
- (8) non-elective participants who cease to be employed without entitlement to an immediate annuity and become elective participants will not be a source of significant gain or loss.

These assumptions are very broad but are believed to produce reasonably safe estimates of the cost of benefit coverage in the long term.

With regard to (8) above, it seems unlikely that more than a very small proportion of contributors who cease to be employed without entitlement to an immediate annuity will become or remain elective participants, because the death benefit coverage is not permanent insurance and has no cash or loan value, contribution rates are not lower than could be obtained by healthy persons from an insurance company, election is not automatic, and contributions are only rarely payable automatically as a deduction from "annuitant" cheques.

APPENDIX 2

Rates of mortality for non-elective participants

<u>Age</u>	<u>Males</u>		<u>Females</u>
	<u>Officers</u>	<u>Other Ranks</u>	<u>Officers and Other Ranks</u>
17	.00070	.00136	.00045
18	.00070	.00156	.00046
19	.00070	.00164	.00047
20	.00080	.00164	.00047
21	.00080	.00158	.00047
22	.00080	.00150	.00047
23	.00090	.00143	.00048
24	.00090	.00136	.00049
25	.00100	.00131	.00050
26	.00100	.00126	.00052
27	.00100	.00122	.00053
28	.00110	.00118	.00055
29	.00110	.00113	.00056
30	.00120	.00107	.00057
31	.00120	.00101	.00060
32	.00130	.00097	.00063
33	.00140	.00094	.00069
34	.00150	.00095	.00075
35	.00160	.00100	.00082
36	.00170	.00109	.00090
37	.00180	.00122	.00099
38	.00190	.00137	.00109
39	.00200	.00153	.00120
40	.00210	.00170	.00132
41	.00220	.00185	.00145
42	.00230	.00201	.00160
43	.00240	.00216	.00176
44	.00250	.00234	.00192
45	.00263	.00258	.00210
46	.00270	.00290	.00231
47	.00281	.00334	.00254
48	.00301	.00392	.00280
49	.00337	.00467	.00308
50	.00395	.00540	.00338
51	.00477	.00600	.00371
52	.00584	.00660	.00407
53	.00708	.00710	.00445
54	.00840	.00760	.00485
55	.00967	.00820	.00528
56	.01078	.00890	.00575
57	.01163	.00970	.00627
58	.01221	.01060	.00682
59	.01221	.01160	.00740

APPENDIX 3

Rates of mortality for
elective participants entitled to an immediate annuity
for reasons other than disability

<u>Age</u>	<u>Males</u>	<u>Females</u>
30	.001346	.000470
31	.001347	.000495
32	.001366	.000519
33	.001394	.000561
34	.001455	.000618
35	.001517	.000676
36	.001597	.000742
37	.001703	.000816
38	.001827	.000907
39	.001943	.000989
40	.002103	.001088
41	.002273	.001204
42	.002495	.001319
43	.002738	.001451
44	.003009	.001583
45	.003327	.001724
46	.003675	.001913
47	.004054	.002086
48	.004482	.002308
49	.004944	.002539
50	.005430	.002786
51	.005990	.003067
52	.006588	.003355
53	.007245	.003669
54	.007955	.003991
55	.008713	.004354
56	.009549	.004733
57	.010480	.005170
58	.011472	.005631
59	.012532	.006101
60	.013677	.006629
61	.014945	.007206
62	.016349	.007891
63	.017893	.008657
64	.019538	.009457
65	.021325	.010347
66	.023269	.011345
67	.025375	.012466
68	.027605	.013678
69	.029948	.014956

APPENDIX 4

Rates of mortality for elective participants who are
a) in receipt of an immediate annuity for at
least two years because of disability, or
b) not entitled to an immediate annuity

<u>Age</u>	<u>Males</u>	<u>Females</u>	<u>Age</u>	<u>Males</u>	<u>Females</u>
25	.00296	.00100	50	.01256	.00676
26	.00286	.00104	51	.01388	.00742
27	.00278	.00106	52	.01536	.00814
28	.00272	.00110	53	.01696	.00890
29	.00268	.00112	54	.01866	.00970
30	.00264	.00114	55	.02052	.01056
31	.00264	.00120	56	.02254	.01150
32	.00268	.00126	57	.02478	.01254
33	.00278	.00138	58	.02720	.01364
34	.00290	.00150	59	.02976	.01480
35	.00306	.00164	60	.03256	.01608
36	.00326	.00180	61	.03562	.01750
37	.00350	.00198	62	.03902	.01914
38	.00378	.00218	63	.04276	.02098
39	.00410	.00240	64	.04678	.02294
40	.00446	.00264	65	.05112	.02512
41	.00490	.00290	66	.05580	.02752
42	.00542	.00320	67	.06092	.03024
43	.00602	.00352	68	.06634	.05316
44	.00668	.00384	69	.07202	.03626
45	.00744	.00420			
46	.00828	.00462			
47	.00922	.00508			
48	.01024	.00560			
49	.01134	.00616			

APPENDIX 5

Rates of mortality used for
valuation of \$500 paid-up benefit coverage

<u>Age</u>	<u>Males</u>	<u>Females</u>
65	.02555	.01255
66	.02791	.01376
67	.03046	.01512
68	.03317	.01659
69	.03601	.01814
70	.03907	.01983
71	.04242	.02177
72	.04617	.02402
73	.05026	.02648
74	.05460	.02914
75	.05930	.03208
76	.06441	.03545
77	.07002	.03939
78	.07607	.04382
79	.08252	.04866
80	.08939	.05401
81	.09685	.05994
82	.10480	.06656
83	.11338	.07378
84	.12245	.08155
85	.13205	.09000
86	.14224	.09915
87	.15322	.10913
88	.16471	.11983
89	.17691	.13128
90	.18982	.14354
91	.20330	.15659
92	.21770	.17065
93	.22331	.17546
94	.21997	.17104
95	.22214	.17242
96	.24443	.19534
97	.30109	.25473
98	.41247	.37345
99	.56942	.54102
100	.74275	.72398
101	.90141	.88798
102	1.00000	1.00000

APPENDIX 6A

New Entrant Assumptions: Males

Age	Officers		Other Ranks	
	Distribution	Average Salary	Distribution	Average Salary
16.5	.000203	\$ 6,514	-	-
17.5	.070531	6,514	.044479	\$ 7,605
18.5	.196798	6,871	.255751	7,691
19.5	.199434	7,603	.234102	7,737
20.5	.117146	8,171	.156210	7,796
21.5	.077625	9,541	.104750	7,960
22.5	.062829	10,469	.067313	8,233
23.5	.062829	11,068	.046095	8,732
24.5	.062019	12,152	.032772	8,775
25.5	.044994	13,666	.022041	9,424
26.5	.029591	14,069	.010975	10,936
27.5	.014390	13,993	.005152	14,074
28.5	.006891	17,591	.003292	13,532
29.5	.007499	19,758	.002988	16,325
30.5	.004662	26,448	.003171	14,921
31.5	.007296	14,808	.001707	17,224
32.5	.003243	22,848	.001646	17,580
33.5	.005067	19,632	.001219	17,580
34.5	.005472	25,968	.001067	17,580
35.5	.002837	26,259	.000640	17,916
36.5	.001824	26,259	.000274	17,580
37.5	.001013	26,259	.000122	17,580
38.5	.000608	26,259	.000213	17,076
39.5	.001216	26,259	.000213	19,596
40.5	.001216	26,259	.000152	17,088
41.5	.000405	26,259	.000244	18,113
42.5	.000608	26,259	.000335	18,796
43.5	.001013	26,259	.000213	18,822
44.5	.000405	26,259	.000213	18,822
45.5	.000405	26,259	.000518	18,822
46.5	.000203	26,259	.000305	18,900
47.5	.001824	26,259	.000183	18,900
48.5	.002837	26,259	.000335	19,712
49.5	.001419	26,259	.000152	19,712
50.5	.001419	26,259	.000244	20,118
51.5	.001013	26,259	.000457	18,744
52.5	.000811	26,259	.000244	20,716
53.5	.000405	26,259	.000183	24,660
54.5	-	-	.000030	24,660

Average age: Officers: 21.8 Other Ranks: 20.6
 Average salary: Officers: \$ 9,747 Other Ranks: \$ 8,152

APPENDIX 6B

New Entrant Assumptions: Females

<u>Age</u>	<u>Officers</u>		<u>Other Ranks</u>	
	<u>Distribution</u>	<u>Average Salary</u>	<u>Distribution</u>	<u>Average Salary</u>
17.5	.033217	\$ 6,348	.016275	\$ 7,459
18.5	.124121	6,696	.185654	7,633
19.5	.115385	6,519	.232267	7,658
20.5	.073427	7,772	.202130	7,871
21.5	.045455	9,948	.122564	7,949
22.5	.050699	11,046	.084187	8,048
23.5	.080420	14,609	.061684	8,525
24.5	.089161	13,590	.041792	7,907
25.5	.090909	14,706	.024915	9,043
26.5	.075175	14,801	.011654	8,770
27.5	.050699	15,408	.004621	11,040
28.5	.033217	14,808	.004822	16,612
29.5	.024476	16,008	.001406	16,711
30.5	.038462	15,208	.002813	16,908
31.5	.017483	14,808	.000201	15,662
32.5	.012238	12,378	.000804	15,662
33.5	.013986	16,008	.001005	15,662
34.5	.012238	14,388	.000603	13,794
35.5	.008741	15,093	.000603	17,580
36.5	.003497	15,093	-	-
37.5	.003497	17,208	-	-
38.5	.003497	18,408	-	-

Average age: Officers: 23.9 Other Ranks: 20.8
Average salary: Officers: \$11,583 Other Ranks: \$ 7,996

APPENDIX 7

Age	Promotional salary scales		Salary scales incorporating both promotional and general* increases	
	Officers	Other Rank	Officers	Other Ranks
20	.200	.392	.028	.056
21	.230	.435	.034	.065
22	.286	.482	.045	.075
23	.380	.527	.062	.087
24	.476	.566	.082	.098
25	.534	.594	.097	.108
26	.572	.614	.109	.117
27	.605	.630	.121	.126
28	.631	.645	.132	.135
29	.654	.657	.144	.145
30	.674	.668	.156	.155
31	.692	.677	.168	.164
32	.709	.687	.181	.175
33	.722	.696	.193	.186
34	.734	.705	.206	.198
35	.745	.714	.220	.211
36	.754	.722	.234	.224
37	.763	.731	.248	.238
38	.771	.740	.264	.253
39	.780	.749	.280	.269
40	.788	.758	.297	.286
41	.797	.768	.315	.304
42	.805	.779	.334	.324
43	.814	.792	.355	.346
44	.823	.804	.377	.368
45	.831	.817	.400	.393
46	.841	.831	.425	.420
47	.853	.846	.452	.449
48	.868	.862	.483	.480
49	.886	.877	.518	.513
50	.905	.891	.556	.547
51	.922	.905	.594	.583
52	.940	.920	.636	.623
53	.955	.936	.679	.665
54	.968	.953	.722	.711
55	.978	.967	.766	.758
56	.984	.977	.810	.804
57	.990	.985	.855	.851
58	.993	.994	.901	.902
59	.997	.997	.950	.950
60	1.000	1.000	1.000	1.000

* assumed general increases in salaries are equal to 5%, i.e. the ultimate assumption noted in paragraph (7) on page 10.

APPENDIX 8

Terms of the Supplementary Death Benefits Plan

A. Participants

Members and former members of the forces who are eligible for benefits under Part II of the Act are termed "participants". They are divided into non-elective and elective participants.

(1) Non-Elective Participants

For purposes of this report "non-elective participants" means

- (a) members of the regular force on December 31, 1980; and
- (b) members of the reserve force* on December 31, 1980 who are on full-time service, with the approval of the Chief of the Defence Staff, in positions in regular force establishments or as supernumeraries to regular force establishments.

(2) Elective Participants

For the purpose of this report "elective participants" means all participants who have ceased to be members in the regular force and have elected to continue as participants under Part II of the Act. The right of election is limited to participants who, at the time they cease to be members, have at least five continuous years of service in the regular force or have been participants under the plan for at least five continuous years. Election must be made either within one year before ceasing to be a member of the regular force or within thirty days afterwards. In the case of a participant not entitled to an immediate annuity on cessation of employment, the death benefit coverage is extended for thirty days after the date of cessation whether or not the participant exercises his right of election. A participant who becomes entitled to an immediate annuity under Part I of the Act or the Defence Services Pension Continuation Act (D.S.P.C.A.) upon ceasing to be a member of the regular force is deemed to have elected to continue as a participant, but such person may elect to have the amount of his benefit reduced to \$500.

An elective participant, who becomes a participant in the Public Service Supplementary Death Benefits Plan, ceases to be entitled to benefits under this plan. However, if on ceasing to be a participant under the latter plan he is not entitled to an immediate annuity under the Public Service Superannuation Act but is entitled to an immediate annuity or pension under Part I of the Act or the D.S.P.C.A., he is deemed to have elected to become a participant again under this plan.

* This class of participant was added by an amendment to the Act in December 1975.

B. Benefits

The basic benefit with respect to a participant means the salary of the participant if it is a multiple of two hundred and fifty dollars or the nearest multiple of two hundred and fifty dollars above such salary, subject to a reduction of one-tenth of that amount for every year of age in excess of sixty attained by the participant. Notwithstanding the foregoing, in the case of an elective participant who, upon ceasing to be member of the regular force or upon ceasing to be employed in the Public Service, was entitled under Part I of the Act or under the D.S.P.C.A. to an immediate annuity or pension, the basic benefit shall not be less than five hundred dollars.

Where the basic benefit of an elective participant, who upon ceasing to be a member of the regular force was entitled under Part I of the Act or under the D.S.P.C.A. to an immediate annuity or pension, exceeds five hundred dollars, the amount shall be reduced to five hundred dollars, if the participant so elects. Such an election is irrevocable.

For the purposes of determining the amount of basic benefit, salary of a participant means the greater of his pay expressed in terms of an annual rate and \$3,000, if his rank is lower than warrant officer or \$5,000, if his rank is warrant officer or higher. Prior to August 1, 1966, these amounts of \$3,000 and \$5,000 had been the basic benefits (subject to reduction above age 60) for all participants in the two respective groups based on rank regardless of their rates of pay. The pay of an elective participant means his rate of pay at the time he ceased to be a member of the regular force.

C. Contributions by Participants

On August 1, 1966, the same date as the basic benefit was changed, the contribution rate for non-elective participants was reduced from 10 cents to 5 cents per month for each \$250 of benefit.

For elective participants entitled to an immediate annuity, the rate of contribution is the same as that for non-elective participants except that upon attaining age 65 the total contribution is reduced by 10 cents per month in recognition of the fact that \$500 of the benefit is paid-up for the remaining lifetime of the participant by means of a single premium credited to the Account by the Government at that time.

For elective participants not entitled to an immediate annuity under Part I of the Act or the D.S.P.C.A., the rate of contribution is dependent upon the age of the participant on the thirtieth day immediately following the date on which he ceases to be a member of the regular force. The following schedule shows the applicable rates for quinquennial ages:

<u>Age Last Birthday</u>	<u>Annual Contribution per \$1,000 Benefit</u>	<u>Monthly Contribution per \$1,000 Benefit</u>
25	\$ 9.70	\$0.82
30	11.42	0.97
35	13.58	1.15
40	16.29	1.39
45	19.72	1.67
50	24.11	2.05
55	29.80	2.53
60	37.65	3.20

D. Credits by Government

In respect of participants who at the time of death were members of the forces or were entitled to an immediate annuity under Part I of the Act or the D.S.P.C.A., the Government credits to the Account one-sixth of the benefit paid on which contributions were being paid by the participant at the time of death.

In respect of elective participants who attain age 65 and are entitled to an immediate annuity under Part I of the Act or the D.S.P.C.A., the Government credits to the Account an amount representing the single premium for the \$500 of benefit for life, calculated on the basis of the Canadian Life Tables 1950-1952 and interest at 4% per annum. At the same time, the participants cease to pay contributions on the first \$500 of basic benefit.

The Government also credits to the Account, at the end of each quarter of the fiscal year, an amount representing interest calculated by applying to the balance in the Account at the end of the preceding quarter the same rate of interest that is determined each quarter for the purpose of crediting interest in respect of the Canadian Forces Superannuation Account. More details are given on page 7.