INTERNATIONALLY MILLIMAN GLOBAL

Eckler Partners Ltd.

Consultants and Actuaries

Actuarial Valuation Report
As At December 31, 2001
On The Annuities
Underwritten by
The Municipal Employees' Pension Plan

Prepared by:

Eckler Partners Ltd.

November 26, 2002

Executive Summary

INTRODUCTION

The Municipal Employee's Pension Plan (MEPP) is a defined contribution plan for service prior to July 1, 1973 (the "Former Plan") and a defined benefit plan for service after that date. This report is concerned with the valuation of the annuities in payment which have been provided in respect of contributions under the Former Plan and those which have been provided in respect of "excess" contributions due to the application of the 50% rule under the defined benefit plan for retirements which occurred on or prior to December 31, 2000.

The Canadian Customs and Revenue Agency has directed that, with effect from January 1, 2002, separate account must be kept of the operation of that part of the MEPP fund under which these annuities are provided. Prior to that date, no separate account of the annuity assets had been kept.

We have therefore been retained by the Municipal Employees' Pension Plan Commission to prepare this report, the purpose of which is to:

(a) Determine the actuarial liabilities of the annuity account as described above at December 31, 2001, and hence, establish an opening balance for the assets attributable to such account at January 1, 2002.

(b) Provide cash flow projections of the annuities paid from the Plan.

The previous valuation report was prepared as of December 31, 2000.

NORMAL ACTUARIAL COST FOR THE PERIOD UNTIL THE NEXT VALUATION

The annuities underwritten by the Plan are funded as each member retires by way of a lump sum transfer of the member's defined contribution account balances.

HIGHLIGHTS

We have used an interest rate of 6.00%. We also used the 1994 Group Annuity Mortality Table (static table). In the previous valuation 6.75% interest and the 1983 GAM Table projected to 2005 were assumed. Our assumptions are described in more detail in Appendix C.

Based on these assumptions, we have determined an actuarial liability of $42,466,000 for the annuities being paid from the Plan as at December 31, 2001. A full reconciliation is provided in Section 1 but the major sources of change from the previous valuation are:

1. A 7% increase in pension made in 2001 and partly retroactive to previous years which increased liabilities by $2.45 million.
2. A change in the actuarial basis which increased liabilities by $1.45 million.
3. A 2% increase at January 1, 2002 which increased liabilities by $0.82 million.

We recommend that the next valuation of the annuity account be prepared no later than December 31, 2004.

A full description of the results of this valuation are included in Section 1 of the report. We have also included a cash flow projection in Section 2 of the report.

Yours very truly,

ECKLER PARTNERS LTD.

John Corp, F.I.A., F.C.I.A.

November 26, 2002

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Section 1: Valuation Results

Actuarial Position at December 31, 2001

The total actuarial liability of all annuities at December 31, 2001 is equal to $42,466,000.

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Liabilities	
Present value of non-indexed annuities	$41,731,000
Present value of indexed annuities	620,000
Present value of annuities certain	115,000
Total Liabilities as at December 31, 2001	$42,466,000

Reconciliation of Liabilities

The actuarial liabilities of the Plan have changed from $39,761,000 as at December 31, 2000 to $42,466,000 as at December 31, 2001 as follows:

	$
Liability at December 31, 2000	$39,761,000
1. Difference resulting from our valuation software	124,000
2. Benefits paid	(5,158,000)
3. Interest at 6.75%	2,536,000
4. Increases during year	2,448,000
5. Mortality loss	38,000
6. New annuities	504,000
7. Change in valuation basis	1,453,000
8. Increase at January 1, 2002	820,000
9. Balancing item	(60,000)
Liability at December 31, 2001	$42,466,000

1. **Difference resulting** from our valuation software represents the difference between the results obtained by the previous plan actuary and those we calculated. The difference, at about 0.3% of liabilities, is, we believe, not material.

2. **Benefits paid** represent the decrease in liability as a result of the payment of annuity benefits from the fund.

3. **Interest at 6.75%** represents the expected increase in liabilities due to interest at 6.75% on the opening liability less half the benefits paid.

4. **Increases during year**. During the year, the annuities arising from accumulations from the old defined contribution plan (but not those arising from excess contributions under the new DB plan) were increased by up to 6.97%.

5. **Mortality loss** indicates that the reduction in annuity liabilities due to member deaths was a little lower than expected.

6. **New Annuities** represent the additional liability incurred from new annuities appearing in the data. Most of these were from 2001 and late 2000 but there were 6 "new" annuitants with earlier retirement dates, which are currently being reviewed.

7. **Change in valuation basis.** The interest assumption was reduced from 6.75% to 6.00% while the mortality assumption was changed from GAM 1983 projected to 2005 to GAM 1994 (Static).

8. **Increase at January 1, 2002**. All non-indexed pensions will be increased by 2% at January 1, 2002. Indexed pensions will be increased by 3.35% but allowance for an increase of that magnitude was already included in the liabilities.

9. **Balancing Item.** This analysis includes some approximations and the difference of $60,000 is less than 0.15% of total liabilities.

Section 2: Cash Flow Projection

The following table shows the projected annual annuity payments for the next 54 years assuming no new annuities are added. These annuity payments include future indexing of the indexed annuities, but no future increases for the non-indexed annuities.

Year Starting Jan 1	Cash Flow	Year Starting Jan 1	Cash Flow
2002	4,809,000	2029	440,000
2003	4,657,000	2030	374,000
2004	4,501,000	2031	315,000
2005	4,329,000	2032	264,000
2006	4,149,000	2033	220,000
2007	3,970,000	2034	182,000
2008	3,786,000	2035	149,000
2009	3,580,000	2036	121,000
2010	3,385,000	2037	98,000
2011	3,184,000	2038	79,000
2012	2,977,000	2039	63,000
2013	2,767,000	2040	50,000
2014	2,570,000	3041	39,000
2015	2,366,000	2042	30,000
2016	2,176,000	2043	23,000
2017	1,992,000	2044	18,000
2018	1,813,000	2045	13,000
2019	1,642,000	2046	10,000
2020	1,479,000	2047	7,000
2021	1,325,000	2048	5,000
2022	1,180,000	2049	4,000
2023	1,044,000	2050	3,000
2024	919,000	2051	2,000
2025	803,000	2052	1,000
2026	697,000	2053	1,000
2027	602,000	2054	1,000
2028	517,000	2055	1,000

Section 3: Actuarial Opinion and Cost Certificate

The Municipal Employees' Pension Plan

Forming part of the actuarial report dated November 26, 2002 on a valuation of the annuities underwritten under the Plan as at December 31, 2001.

I hereby certify that:

1. The purpose of this report was to determine the present value, as at December 31, 2001, of the future liabilities for all annuities underwritten by the Municipal Employees' Pension Plan as at December 31, 2001.

2. The Plan's liabilities for all annuities underwritten at December 31, 2001 equal $42,466,000.

   Notwithstanding the foregoing, emerging experience which differs from the assumptions will result in gains or losses which will be revealed in subsequent valuations.

3. In my opinion:

   a. the data on which the valuation is based are sufficient and reliable for the purposes of the valuation;
   b. the assumptions used are in, aggregate, appropriate for the purposes of the valuation;
   c. the methods employed in the valuation are appropriate for the purposes of this report;
   d. there are no subsequent events that occurred after the valuation date;
   e. this valuation report has been prepared, and our opinions given, in accordance with accepted actuarial practice.

John Corp,
Fellow of the Institute of Actuaries
Fellow of the Canadian Institute of Actuaries

November 26, 2002

Appendix A: Summary of Plan Provisions

This appendix contains a brief summary of the provisions of the Plan that are relevant for valuation purposes:

LIFE ANNUITIES

Life annuities are paid for the life of the annuitant based on:

1. rates of interest offered at the time the annuity commences;

2. the form of the annuity.

FORMS OF ANNUITIES

The following is a brief description of the various forms of annuities currently being paid out of the retirement fund:

Life Annuity

The annuity is payable on a monthly basis in arrears for the life of the annuitant. If the annuitant dies before the end of the guarantee period, the remaining guaranteed payments are paid to the last designated beneficiary. A single member can purchase an annuity guaranteed for 0, 5, 10, or 15 years. A member with a spouse can purchase a single life annuity if the spouse waives the right to a joint annuity.

Joint and Last Survivor Annuity

The annuity is payable on a monthly basis in arrears for the life of the annuitant and the spouse. In the month following the death of the annuitant, monthly benefits are payable to the spouse for the remainder of the spouse's lifetime. The continuing benefits for the spouse are selected at the time of retirement as either 100%, 75%, 60% or 50% of the annuitant's payments. The member may purchase a joint annuity with a 0, 5, 10 or 15-year guarantee on the annuitant's payments. The current annuities being paid include continuing benefits for spouses at percentages equal to 50%, 60%, 75% and 100%.

Upon the death of both the annuitant and the spouse and after any applicable guarantee period, payments cease and no further benefits are payable.

Indexed Annuities

Effective February 28, 1997, the Plan began underwriting annuities that included provisions for indexing at 100% of the increases in the Consumer Price Index (CPI). Increases in the annuity payments for "Indexed Annuities" are granted on each January 1 following the member's retirement date. The increase at January 1, 2002 is 3.35%. The increase for indexing on the first January 1 following a member's date of retirement is provided on a pro-rata basis from the month of retirement.

Members have the option of choosing an annuity that includes future indexing or not.

Increases at January 1, 2002 for Non-Indexed Annuities

All non-indexed annuities in payment will be increased by 2% at January 1, 2002 except that those which commenced in 2001 will receive a proportionally smaller increase.

Excess Interest Increases for Non-Indexed Annuities

With effect from January 1, 2003, annuities, other than indexed annuities, will be increased by the excess over 6% of the rate of return in the immediately preceding year on the assets supporting the annuity liabilities. The rate of return in a particular year will be determined by PEBA using a smoothing technique – this is the same technique which is used to determine the interest credit on members' contribution accounts under the defined benefit plan. The increase in any year will not be greater than the increase in the Consumer Price Index for the previous year.

Appendix B: Underwriting Annuities

The major task involved in underwriting annuities is to convert an amount of accumulated contributions to an annual lifetime pension at the time an annuity commences.

In order to perform this conversion, two major assumptions are necessary The first is the length of time that payments are expected to be made. The second is the amount of investment earnings that the fund can be expected to earn over a long period of time.

For indexed annuities, a third assumption, the expected level of increases in the CPI, is also necessary.

This first assumption regarding the length of time that payments are expected to be made is calculated by using a mortality table that allows the determination of a probability for each potential future payment. Given a large number of people, and assuming the investment earnings assumption is exactly realized, the fund will be extinguished at the time the last member of the group dies. Some in the group will die earlier than expected, thus producing a gain to the fund. Some will die later than expected, producing a loss to the fund. If the mortality assumptions are exactly realized, the gains will offset the losses.

The annuities underwritten by the Plan have, in the past, been issued using an interest rate that is determined based on the yield on investments at the time that the annuity is underwritten. The theory behind this approach is that the equity at the time of conversion could be hypothetically invested to earn the assumed rate of interest which will allow the Plan to make the expected annuity payments for the member and, if applicable for the spouse's lifetime.

From January 1, 2002 on, any non-indexed annuities will be determined using a 6% interest rate which is consistent with the approach to excess interest increases described in Appendix A.

Appendix C: Actuarial Assumptions and Cost Methods

ACTUARIAL ASSUMPTIONS

Assumptions have been adopted in order to estimate the liabilities that have been incurred by the Plan. The true liability of the Plan will emerge only as experience develops, new annuities are added to the Plan, and annuity payments are made. Emerging experience, differing from the assumptions, will result in gains or losses, which will be revealed in future valuations. These assumptions should be reviewed from time to time in order to adequately reflect the experience of the Plan.

The actuarial assumptions used in the December 31, 2000 valuation were modified as follows.

Summary of Assumptions

Demographic Mortality:	
2000 Valuation	GAM 83 Projected to 2005
2001 Valuation	GAM 1994 (Static)
Economic Interest:	
2000	6.75% net of expenses
2001	6.00% net of expenses
Future Indexing (Indexed Annuities):	
2000	2.38% on January 1, 2001 (actual) 3.50% on January 1, 2002 (assumption), and 4.00% on January 1, 2003 and annually thereafter (assumption)
2001	3.35% on January 1, 2002 (actual) 3.00% on January 1, 2003 and annually thereafter (assumption)
Future Increases (Non-Indexed Annuities):	
2000	None
2001	2% on January 1, 2002

COST METHOD

The liability for each annuitant is the actuarial present value of all future payments under the annuity.

Appendix D: Membership

SOURCE OF DATA

The relevant data required to carry out this valuation was received from the offices of the Public Employees Benefits Agency and this data was gathered as of December 31, 2001. The data was checked for consistency between the previous valuation and this valuation. Our tests consisted of verifying that information such as dates of birth, dates of retirement, and forms of pension were internally consistent with the December 31, 2000 valuation data. We also performed a reconciliation of the plan membership from December 31, 2000 to December 31, 2001.

Reconciliation of Membership

The following is a reconciliation of the annuitants from December 31, 2000 to December 31, 2001. A summary of the data follows:

	Non Indexed Annuities	Indexed Annuities	Term Certain Annuities	Total
Annuitants at December 31, 2000	1,991	45	5	2,041
New annuitants (2000/1 retirements)	11	6	0	17
New annuitants (others)	5	0	0	5
Deaths/Guarantee period-payments cease	(48)	0	0	(48)
Deaths with continuing payments	(31)	0	0	(31)
New survivors' pensions	29	0	2	31
Annuitants at December 31, 2001	1,957	51	7	2,015

SUMMARY OF DATA AT DECEMBER 31, 2001

Non-indexed Annuities

Number of annuitants	1,957
Total annual payment*	$4,809,000
Average annual payment*	$2,457
Average age	75.5
Percentage female	41.8%
Average period since commencement of annuity	12.9 years

Indexed Annuities

Number of annuitants	51
Total annual payment*	$41,000
Average annual payment*	$804
Average age	66.1
Percentage female	41.2%
Average period since commencement of annuity	2.8 years

Term-Certain Annuities

Number of annuitants	7
Total annual payment	$38,000
Average annual payment	$5,429
Average period of time remaining to be paid.	38 months

* after increase at January 1, 2002

MEMBERSHIP DISTRIBUTION

1. Non-Indexed Annuities (after increase at January 1, 2002)

	Males		Females	
	No.	**Annual Annuity**	**No.**	**Annual Annuity**
-54	5	8,334	7	21,490
55-59	5	15,021	19	86,834
60-64	48	117,607	31	80,550
65-69	143	390,959	102	154,364
70-74	363	978,597	173	280,521
75-79	275	696,327	228	365,127
80-84	193	699,933	159	229,312
85-89	77	368,474	81	153,540
90-94	23	90,836	16	36,526
95+	6	29,035	3	5,178
	1,138	3,395,125	819	1,413,442

2. Indexed Annuities (after increase at January 1, 2002)

55-59	3	1,287	2	1,785
60-64	5	6,657	4	1,779
65-69	15	12,175	15	8,376
70-74	6	8,704	0	0
75-79	1	238	0	0
80-84	0	0	0	0
	30	29,061	21	11,940

Appendix E: Plan Sponsor Certification

With respect to the Annuities underwritten by the Municipal Employees' Pension Plan, forming part of an actuarial report on a valuation of the Plan as of December 31, 2001:

I hereby certify that, to the best of my knowledge and belief,

(a) The summary of plan provisions contained in this report is a complete and accurate summary of the terms of the plan.

(b) The membership summarized in this report is a complete and accurate description of all persons who are entitled to benefits under the terms of the plan in respect of annuities issued to the date of the valuation.

(c) All events subsequent to the valuation date that may have an impact on the results of the valuation have been communicated to the actuary.

Date: ______________________________

Signed: ______________________________

Name: ______________________________

Title: ______________________________