

October 5, 2007

**Actuarial Valuation Report
As At December 31, 2006
On The Annuities
Underwritten by
The Municipal Employees' Pension Plan**

Prepared and submitted by:

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Eckler Ltd.

Consultants and Actuaries



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Section 1 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 and terminations of employment which occurred on or prior to December 31, 2000.

The Canada 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, 2006.
- (b) To determine how much surplus would be available for increases to the non-indexed annuities on an excess interest basis.
- (c) Provide cash flow projections of the annuities paid from the plan.

The previous valuation report was prepared as of December 31, 2005.

This is the first valuation performed since a funding policy was adopted by the Commission in respect of the defined benefit part of the Plan. Consistent with that funding policy, this report sets forth the results of valuations on both a going-concern and a solvency basis with the going-concern valuation presented on two bases, the minimum and maximum funding valuation.

This report should be read in conjunction with the *Report on the Actuarial Valuation of the Saskatchewan Municipal Employees' Pension Plan as at December 31, 2006* which provides greater detail on the funding policy and the minimum and maximum funding valuations.



RESULTS

Financial Position at December 31, 2006

A comparison of the financial position under the minimum and maximum funding valuations as at December 31, 2006 is as follows:

	<u>(thousands of dollars)</u>	
	<u>Minimum Funding</u>	<u>Maximum Funding</u>
Assets at market value	\$37,212	\$37,212
Liabilities	<u>32,844</u>	<u>35,598</u>
Surplus/Deficit	\$4,368	\$1,614

In addition, the solvency valuation produces a surplus as follows:

	<u>(thousands of dollars)</u>
Assets at market value	\$37,212
Expenses of plan wind-up	<u>(536)</u>
Net assets for solvency purposes	36,676
Total solvency liabilities	<u>35,958</u>
Excess/(Shortfall)	\$718

Canada Revenue Agency will not permit the granting of additional allowances if there is a shortfall or deficit in the part of the fund which supports these annuities. As this is not the case on any basis, an increase may be permitted.

Section 59.1 of *The Municipal Employees' Pension Act* provides that the Commission may pay additional allowances if the Commission determines that the assets of the fund are more than adequate to satisfy the test of solvency prescribed by *The Pension Benefits Act, 1992*. In this case the excess under the solvency valuation would provide an increase of approximately 2.0%.

Funding Requirements

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.



NEXT VALUATION

We recommend that the next valuation of the annuity account for the purposes of filing with regulatory authorities be prepared no later than December 31, 2009. The funding policy indicates that valuations are to be done annually.

Respectfully submitted,

ECKLER LTD.

A. Douglas Poapst, FSA, FCIA

K. Dawn Power, FSA, FCIA

October 5, 2007



Section 2 Asset Data

The annuity fund is kept separate on paper only. The following summarizes the changes in the assets of the annuity fund since the previous valuation:

	<u>(thousands of dollars)</u>
	<u>2006</u>
At start	\$36,709
Transfer-in	--
Annuities paid	(4,281)
Net investment income	4,563
Admin Expenses	<u>(71)</u>
At end	\$36,920

Information about the assets, transfers and annuity payments were provided to us by PEBA in the form of audited financial statements for 2006.

Adjustment for new Annuities in 2006

A number of annuities were established in 2006 from defined benefit contributions under the former plan or excess contributions under the current plan where no corresponding transfer of funds was made to the Retirement Annuity portion of the fund. We have determined that the appropriate amount to be transferred in respect of these annuities is \$292,000 as of December 31, 2006. Therefore, the market value has been adjusted upward to \$37,212,000 to reflect this amount.



Section 3 Minimum Funding Valuation

1. Actuarial Assumptions and Methods

In this section we describe the actuarial assumptions that are specific to the minimum funding valuation. All other assumptions and methods used in the minimum funding valuation are described in Section 8.

Actuarial Assumptions

For the minimum funding valuation we have assumed that future investment returns will be 6.00%.

In the previous funding valuation we also assumed that the investment return would be 6.0%.

2. Financial Position under Minimum Funding Valuation

Based on the asset information from Section 2, the Plan provisions summarized in Section 7, the membership data summarized in Section 9, and the actuarial assumptions and methods outlined in this section, the results of the minimum funding valuation at December 31, 2006 compared with the results of the funding valuation at December 31, 2005 (the effective date of the last full valuation) were as follows:

	<u>(thousands of dollars)</u>	
	<u>December 31, 2006</u>	<u>December 31, 2005</u>
Assets at market value	\$37,212	\$36,709
Liabilities	<u>32,844</u>	<u>35,018</u>
Surplus	\$4,368	\$1,691



3. Summary of Changes in Financial Position

At the previous valuation, the surplus reported was \$1,691,000. At this valuation the surplus under the minimum funding valuation is \$4,368,000. The changes in financial position may be summarized as follows:

Surplus at December 31, 2005	\$1,691,000
Interest on surplus at 6%	101,000
Net investment return greater than 6% ¹	2,416,000
Mortality gain ²	206,000
Liability for members missing at last valuation ³	(80,000)
New retirees in 2006 ⁴	33,000
Miscellaneous gain ⁵	<u>1,000</u>
Excess at December 31, 2006	\$4,368,000

Notes:

1. The investment return on the fund net of all expenses was 12.99% in 2006, compared to the 6% assumed.
2. The liabilities at the valuation are \$206,000 less than they would have been if the mortality experience had been consistent with that projected by the mortality assumption at the previous valuation.
3. The liability for members who were missing in the previous valuation less amounts assumed to be transferred on the valuation date is \$80,000.
4. The liability for new retirees in 2006 and benefits paid to these retirees during 2006 is less than the amount assumed to be transferred on the valuation date.
5. The balancing item of \$1,000 is well within tolerance.



Section 4 Maximum Funding Valuation

1. Actuarial Assumptions and Methods

In this section we describe the actuarial assumptions that are specific to the maximum funding valuation. All other assumptions and methods used in the maximum funding valuation are described in Section 8.

Actuarial Assumptions

We have assumed that future investment returns will be 4.75%.

2. Financial Position under Maximum Funding Valuation

Based on the asset information from Section 2, the Plan provisions summarized in Section 7, the membership data summarized in Section 9, and the actuarial assumptions and methods outlined in this section the results of the maximum funding valuation at December 31, 2006 compared with the results of the funding valuation at December 31, 2005 (the effective date of the last full valuation) were as follows:

	(thousands of dollars)	
	<u>December 31, 2006</u>	<u>December 31, 2005</u>
Assets at market value	\$37,212	\$36,709
Liabilities	<u>35,598</u>	<u>35,018</u>
Surplus (Deficit)	\$1,614	\$1,691



Section 5 Solvency Valuation

1. Actuarial Assumptions, Methods and Reserves

In this section we describe the actuarial assumptions and reserves that are specific to the solvency valuation. All other assumptions and methods used in the solvency valuation are described in Section 8.

a. Assumptions

We assume that annuities would be purchased for all current pensioners. The purchase price for annuities is approximated by assuming mortality in accordance with the UP94@2015 mortality table and a discount rate of 4.6%. This is the basis recommended by the Canadian Institute of Actuaries for the valuation of immediate pensions in solvency valuations at December 31, 2006.

b. Reserves

Expenses required for plan wind-up are assumed to be \$300 per member (in all categories).

2. Financial Position under the Solvency Valuation

Based on the assumptions, and methods described in this section, the Plan provisions summarized in Section 7 and the membership data summarized in Section 8 the results of the solvency valuation are:

	(thousands of dollars)
Assets at market value	\$37,212
Expenses of plan wind-up	<u>(536)</u>
Net assets for solvency purposes	\$36,676
Liabilities	<u>35,958</u>
Excess/(Shortfall)	\$718



Section 6 Cash Flow Projection

The following table shows the projected annual annuity payments for the next 50 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
2007	\$4,094,000	2033	\$273,000
2008	3,934,000	2034	228,000
2009	3,748,000	2035	189,000
2010	3,562,000	2036	156,000
2011	3,364,000	2037	127,000
2012	3,167,000	2038	104,000
2013	2,965,000	2039	83,000
2014	2,768,000	2040	67,000
2015	2,567,000	2041	53,000
2016	2,375,000	2042	42,000
2017	2,182,000	2043	32,000
2018	1,999,000	2044	25,000
2019	1,819,000	2045	19,000
2020	1,648,000	2046	14,000
2021	1,483,000	2047	11,000
2022	1,330,000	2048	8,000
2023	1,186,000	2049	6,000
2024	1,051,000	2050	4,000
2025	926,000	2051	3,000
2026	812,000	2052	2,000
2027	707,000	2053	1,000
2028	612,000	2054	1,000
2029	527,000	2055	1,000
2030	451,000	2056	0
2031	384,000	2057	0



Section 7 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, 2007 is 2.04%. 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.

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 the lesser of 6% and the discount rate used to determine the annuity at retirement, of the rate of return in the immediately preceding year on the assets supporting the annuity liabilities, subject to there being sufficient funds to do so. 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.



Section 8 Actuarial Assumptions and Methods

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 the lesser of 6% and the initial rate for the first 15 years used in the Canadian Institute of Actuaries Transfer Value basis which was effective September 1, 1993 which is consistent with the approach to excess interest increases described in Section 7.

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.

A summary of the actuarial assumptions used in the December 31, 2006 valuation is as follows:

<i>Mortality:</i>	UP94 Projected to 2015
<i>Interest:</i>	
2005 Valuation	Funding valuation: 6.00% Solvency valuation: 4.50%
2006 Valuation	Minimum funding valuation: 6.00% Maximum funding valuation: 4.75% Solvency valuation: 4.60%
<i>Future Indexing (Indexed Annuities):</i>	
2005 Valuation	2.40% on January 1, 2006 (actual) 2.50% on January 1, 2007 and annually thereafter
2006 Valuation	2.50% on January 1, 2008 and annually thereafter
<i>Future Increases (Non-Indexed Annuities):</i>	
2005 and 2006 Valuation	None
<i>Expenses of plan wind-up:</i>	
2005 Solvency valuation	\$250 per member
2006 Solvency valuation	\$300 per member

METHOD

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



Section 9 Membership Data Summary

The relevant data required to carry out this valuation was compiled as of December 31, 2006 by the Public Employees Benefits Agency and included the increase of 2.04% granted to indexed annuities as of January 1, 2007. 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, 2005 valuation data. We also performed a reconciliation of the plan membership from December 31, 2005 to December 31, 2006

The following is a reconciliation of the members from December 31, 2005 to December 31, 2006. A summary of the data follows:

	Annuitants	Survivors	Total
Annuitants at December 31, 2005	1,293	558	1,851
Data adjustments*	6	6	12
New annuitants	6	-	6
Deaths – no further payments	(39)	(30)	(69)
Deaths with survivors	(49)	49	0
Guarantee period expired	0	(2)	(2)
Marriage breakdown	<u>1</u>	<u>-</u>	<u>1</u>
Annuitants at December 31, 2006	1,218	581	1,799

* includes 10 records missing at the previous valuation, the splitting of one previously combined record, and one member who made a decision on excess contributions in 2006



SUMMARY OF DATA AT DECEMBER 31, 2006

	Annuitants	Survivors
Number of annuitants	1,218	581
Total annual payment*	\$3,061,000	\$1,108,000
Average annual payment*	\$2,514	\$1,907
Average age	78.1	78.0
Average period since commencement of annuity	14.6 years	19.6 years

MEMBERSHIP DISTRIBUTION - ANNUITANTS

	Males		Females	
	No.	Annual Annuity*	No.	Annual Annuity*
-54	0	\$ 0	1	\$8,637
55-59	7	15,732	1	287
60-64	11	17,012	8	12,585
65-69	68	162,986	30	46,195
70-74	147	369,183	73	69,857
75-79	294	802,277	83	73,933
80-84	192	490,372	93	152,820
85-89	111	472,635	43	61,573
90-94	30	219,822	17	48,292
95+	<u>7</u>	<u>27,973</u>	<u>2</u>	<u>9,282</u>
	867	\$2,577,993	351	\$483,459

* After increase at January 1, 2007



MEMBERSHIP DISTRIBUTION - SURVIVORS

	Males		Females	
	No.	Annual Annuity*	No.	Annual Annuity*
-54	10	\$27,605	3	\$ 2,081
55-59	1	212	8	15,130
60-64	0	0	22	80,645
65-69	3	8,293	41	80,883
70-74	5	5,270	78	130,440
75-79	5	10,357	124	233,153
80-84	10	3,727	134	256,170
85-89	4	1,412	93	178,300
90-94	1	439	34	69,995
95+	<u>0</u>	<u>0</u>	<u>5</u>	<u>4,031</u>
	39	\$57,314	542	1,050,828

* After increase at January 1, 2007



Section 10 Actuarial Opinion and Cost Certificate

The Municipal Employees' Pension Plan

Forming part of the actuarial report dated October 5, 2007 on a valuation of the annuities underwritten under the Plan as at December 31, 2006.

I hereby certify that:

1. The purpose of this report was to determine the present value, as at December 31, 2006, of the future liabilities for all annuities underwritten by the Municipal Employees' Pension Plan.
2. The Plan's going-concern liabilities for all annuities underwritten at December 31, 2006 equal \$32,844,000, compared to assets at that date of \$37,212,000 or an excess of \$4,368,000.
3. On a solvency basis, the assets exceed the liabilities by \$718,000 at December 31, 2006.
4. If this part of the plan were to be wound-up on December 31, 2006, its assets would exceed its liabilities.

Notwithstanding the foregoing, emerging experience which differs from the assumptions on which this valuation and extrapolation are based, will result in gains or losses which will be revealed in subsequent valuations.



In my opinion, for the purposes of the valuation:

- a. the data on which the valuation is based are sufficient and reliable;
- b. the assumptions used are in, aggregate, appropriate;
- c. the methods employed in the valuation are appropriate;
- d. there are no subsequent events that occurred after the valuation date;

This valuation report has been prepared, and my opinions given, in accordance with accepted actuarial practice.

A. Douglas Poapst,
Fellow of the Society of Actuaries
Fellow of the Canadian Institute of Actuaries

October 5, 2007



Section 11 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, 2006:

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: October 25, 2007

Signed: E. Ireland

Name: Elaine Ireland

Title: Manager, MEPP