A Report on the
Actuarial Valuation of the
Saskatchewan Municipal Employees' Pension Plan
as at December 31, 2010

MANAGEMENT VALUATION

Prepared and submitted by:

A. DOUGLAS POAPST, FSA, FCIA
K. DAWN POWER, FSA, FCIA
SUITE 2475 ONE LOMBARD PLACE
WINNIPEG, MB R3B 0X3

July 29, 2011

Eckler

A Report on the
Actuarial Valuation
of the
Saskatchewan Municipal Employees' Pension Plan
as at December 31, 2010

Table of Contents

Section 1 Executive Summary

INTRODUCTION

This report has been prepared at the request of the Saskatchewan Municipal Employees' Pension Commission to meet the requirements of a Funding Policy adopted by the Commission to provide a framework for the sound financial management of the plan, and to guide decisions that will have to be made from time to time to restore or maintain a satisfactory funded status. The Funding Policy enables the Commission to be proactive in managing the financial status of the plan, and will help to facilitate communication with stakeholders on the status of the plan.

The Funding Policy requires the preparation of three valuations:

1. a management valuation – a best estimate going-concern valuation
2. a solvency valuation – prepared in accordance with the requirements of the *Pension Benefits Act, 1992*, and
3. a filing valuation – a strategic valuation that shall be prepared and filed with the Superintendent of Pensions and the Canada Revenue Agency with respect to the decisions or recommendations of the Commission with respect to contribution rates and benefits. The filing valuation shall be prepared at least triennially, as required by the *Pension Benefits Act,1992,* or earlier if required to ensure that the contribution rates are permissible contributions, or to satisfy the minimum funding requirements under the *Pension Benefits Act, 1992* or if filing the valuation is otherwise beneficial in the judgment of the Commission.

This report provides information on the management valuation and the solvency valuation. The most recent valuation filed with the regulatory authorities was effective December 31, 2009. The next valuation required to be filed with the regulatory authorities should therefore be effective no later than December 31, 2012. If the Commission wishes to prepare a filing valuation, a separate report would be prepared as this report is not suitable for filing (see the Comments topic later in this section).

Effective January 1, 2010, the general member contribution rate was increased to 6.4% from 5.4% and the emergency member contribution rate was increased to 8.75% from 7.3%. A similar increase, to 7.4% for general members and to 10.2% for emergency members was effective January 1, 2011. Approval under the Income Tax Act (for contributions exceeding 9%) for emergency member contributions of 10.2% was granted for the four-year period following the December 31, 2007 valuation. An extension has been requested based on the results of the valuation as at December 31, 2009. This valuation assumes that an extension will be granted.

RESULTS

The discount rate for the management valuation has decreased from 6.0% in the previous valuation to 5.75% at December 31, 2010. The assumption for future inflation has also decreased, from 2.5% to 2.25%. Consistent with the assumptions used in the December 31, 2009 valuation, we have assumed real salary increases (i.e., net of inflation) will be at 2% for the first two years following the valuation and 1% thereafter, recognizing that wage increases in Saskatchewan are expected to be higher than average for at least the short-term.

Under the solvency valuation, the basis for lump sum commuted values decreased from 3.9% for the first 10 years, and 5.4% thereafter to 3.3% and 5.0%, respectively. The basis for annuity purchases has remained at 4.5%.

Financial Position at December 31, 2010

The financial position under the management valuation as at December 31, 2010, together with comparable results as at December 31, 2009, is as follows:

Management valuation	(thousands of dollars)	
12/05/2011 14:37	Dec 31, 2010	Dec 31, 2009
Assets at market value	$1,372,574	$1,257,878
Adjustment*	31,432	62,894
Adjusted assets (actuarial value)	$1,404,006	$1,320,772
Liabilities and reserves	$1,344,380	$1,246,922
Surplus/(Deficit)	$59,626	$73,850
Management funded ratio	1.044	1.059

*The adjustment to the assets is the effect of the asset smoothing in accordance with the Funding Policy.

The financial position under the solvency valuation as at December 31, 2010, together with comparable results as at December 31, 2009, is as follows:

Solvency valuation	(thousands of dollars)	
12/05/2011 14:37	Dec 31, 2010	Dec 31, 2009
Assets at market value	$1,372,574	$1,257,878
Adjustment*	0	63,145
Expenses of plan wind-up	(6,487)	(6,472)
Net assetsfor solvency test	$1,366,087	$1,314,551
Total solvency liabilities	$1,433,069	$1,305,448
Excess/(Shortfall)	($66,982)	$9,103
Solvency ratio	0.953	1.007

*The adjustment to the assets is the effect of asset smoothing as permitted under *The Pension Benefits Regulations, 1993*. The Funding Policy at December 31, 2010 provides that the market value of assets will be used for the solvency valuation.

Current Service Cost

The current service cost for 2011 as a percentage of salary and as dollar amounts under the management valuation are shown below, together with comparative results from the valuation as at December 31, 2009 (i.e., the results from the 2009 valuation reflect the increase in contribution rates effective January 1, 2011 and the estimated payroll in 2010).

Current service cost	(% of Salary)	
12/05/2011 14:37	Dec 31, 2010	Dec 31, 2009
Current service cost	15.7%	15.3%
Expected contributions	15.0%	15.0%
Excess normal cost	0.7%	0.3%

	(thousands of dollars)	
	Dec 31, 2010	Dec 31, 2009
Current service cost	$68,476	$63,454
Expected contributions	65,514	62,496
Excess normal cost	2,962	958

INCLUDING THE ANNUITY FUND

The Canada Revenue Agency (CRA) required that, with effect from January 1, 2002, self-insured annuities provided under the former municipal plan should be accounted for separately with annuities being charged to that account. In the period up to December 31, 2001, such annuities were included within and paid from the overall fund as required under *The Municipal Employees' Pension Act* (the Act). The Act itself was not changed as a result of the CRA requirement, and thus annuities continue to be paid from the overall fund. However, in order to satisfy CRA, a notional account specifically for annuities is held as part of the overall fund, and separate actuarial valuations are produced for

a. former plan annuities underwritten in accordance with the Act (valuation report on The Annuities Underwritten by The Municipal Employees' Pension Plan), and

b. all other obligations in accordance with the Act (this valuation report).

Although CRA requires separate accounting within the overall fund and separate actuarial valuations, it is necessary for the Commission to remain aware of the overall financial position, including the annuity fund. The financial position of the total fund, including the annuity fund results presented in our report dated July 29, 2011, under the management valuation as at December 31, 2010 is as follows:

Overall results (management valuation) 12/05/2011 14:37	**(thousands of dollars)**	
	Dec 31, 2010	**Dec 31, 2009**
Assets at market value	$1,397,047	$1,283,192
Adjustment*	32,019	64,160
Adjusted assets (actuarial value)	$1,429,066	$1,347,352
Liabilities and reserves	$1,370,572	$1,274,254
Surplus/(Deficit)	$58,494	$73,098
Management funded ratio	1.043	1.057

*The adjustment to the assets is the effect of the asset smoothing in accordance with the Funding Policy.

The financial position of the total fund, including the annuity fund results presented in our report dated July 29, 2011, under the solvency valuation as at December 31, 2010 is as follows:

Overall results (solvency valuation) 12/05/2011 14:37	**(thousands of dollars)**	
	Dec 31, 2010	**Dec 31, 2009**
Assets at market value	$1,397,047	$1,283,192
Adjustment*	0	64,416
Expenses of plan wind-up	(6,961)	(6,965)
Net assets for solvency test	$1,390,086	$1,340,643
Total solvency liabilities	$1,461,540	$1,335,706
Excess/(Shortfall)	($71,454)	$4,937
Solvency ratio	0.951	1.004

*The adjustment to the assets is the effect of asset smoothing as permitted under *The Pension Benefits Regulations, 1993*. The Funding Policy at December 31, 2010 provides that the market value of assets will be used for the solvency valuation.

COMMENTS

Continuing strong financial returns in 2010 were more than offset by the effect of changes in assumptions on the liabilities, leading to a deterioration of the financial position of the Plan on the management valuation basis and on the solvency valuation basis. The management valuation is still in surplus but the solvency valuation is in a deficit position which would require funding through special payments if this valuation were filed with the regulatory authorities.

As well, the changes in assumptions have increased the contributions necessary to fund accruing benefits to 15.5% for general members and to 21.6% for emergency members. The current fixed contribution rates (14.8% total employee and employer for general members and 20.4% total employee and employer for emergency members) are, therefore, not adequate under *The Pension Benefits Act, 1992,* and *The Pension Benefits Regulations, 1993* to fund accruing benefits.

Under the Funding Policy the minimum contributions required are 9.85% for general members (each of employer and employee) and 13.05% for emergency members (each of employer and employee). These rates represent 105% of the normal actuarial cost plus special payments to fund the solvency deficiency. As increasing contributions may increase benefits payable under the 50% rule (minimum benefits on termination of employment relative to a member's contributions), testing would be required to determine the adequacy of these contribution levels to fund the plan. Emerging experience different than assumed or future changes in assumptions may also change the contributions required to fund the plan.

The contribution levels required under the Funding Policy may not be implemented, however, without approval under the Income Tax Act (as the contributions required under the Funding Policy are in excess of 9%, and in excess of those already approved). In order to obtain approval, however, a report supporting these contributions would have to be filed with the regulatory authorities. To ensure that contributions are permissible, it may be necessary to adjust the assumptions to increase the current service cost in line with the Funding Policy funding target.

Additional information and comments may be found in Section 5, Current Funding Adequacy.

SUBSEQUENT EVENTS

In this valuation we have taken into consideration an increase in member and employer contributions effective January 1, 2011, subject to approval required under the Income Tax Act beyond December 31, 2011. We are not aware of any other subsequent events that are relevant to the valuation.

NEXT VALUATION

The most recent valuation report filed with the regulatory authorities was effective December 31, 2009. The next valuation to be filed with the regulatory authorities should therefore be effective no later than December 31, 2012.The Funding Policy indicates valuations are to be done annually.

OPINION

In our 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 appropriate for the purposes of the valuation, and

c) the methods employed in the valuation are appropriate for the purposes of this valuation.

This report has been prepared and our opinion given in accordance with accepted actuarial practice in Canada.

We look forward to discussing the contents of this report with you at your convenience.

Respectfully submitted,

ECKLER LTD.

A. Douglas Poapst, FSA, FCIA

K. Dawn Power, FSA, FCIA

July 29, 2011

L:\SMP\ACTUARIAL\REPORTS\FINAL REPORTS\SMP01 11 05 DB MANAGEMENT VAL'N AT 12 31 10 FINAL.DOCX

1. Assets at December 31, 2010

At December 31, 2010, based on the audited financial statements provided by the Public Employees Benefits Agency and audited by Deloitte & Touche LLP, the assets of the plan measured at market value were as follows:

Summary of assets	($ 000's)	
12/05/2011 14:36		
Investments		
Short term	$32,548	2.3%
Bonds	244,312	17.6%
Equities	408,882	29.5%
Infrastructure	54,756	3.9%
Pooled funds	644,257	46.4%
Real estate	3,834	0.3%
	$1,388,589	100.0%
Cash	545	
Accrued income	2,598	
Net receivables	5,315	
	$1,397,047	
Assets attributable to annuity fund*	(24,008)	
	$1,373,039	

* The fund assets include those which support self-insured annuities provided under the former municipal plan. The Canada Revenue Agency required that, with effect from January 1, 2002, these assets should be accounted for separately with annuities being charged to that account. In the period up to December 31, 2001, such annuities were paid from the fund. The amount attributable to the annuity fund at December 31, 2001 was determined by a report prepared by us and dated November 26, 2002, and this has been updated to the valuation date by adding interest and the purchase price of new annuities and debiting annuities paid and expenses.

2. Investment Policy

The investment policy provides asset mix guidelines and a benchmark portfolio shown below.

Investment policy asset mix	Minimum	Benchmark	Maximum
12/05/2011 14:36	%	%	%
Equities			
Canadian equities	14%	19%	28%
US equities - large cap	10%	14%	18%
US equities - small/midcap	2%	4%	6%
Non-North American equities	14%	18%	22%
Foreign equities	26%	36%	46%
Total equities	40%	55%	70%
Real estate	3%	5%	8%
Infrastructure	0%	5%	8%
Fixed income			
Canadian bonds	20%	33%	52%
Mortgages	0%		5%
Short-term investments	0%	2%	20%
Total fund		100%	

3. Summary of Change in Net Assets

The following summarizes the changes in net assets for the full year 2010 based on the audited financial statements.

	2010 (thousands of dollars)	
	Defined Benefit	Retirement Annuities
At start	$1,257,878	$25,314
Employee contributions	28,134	
Employer contributions	27,987	
Arrears contributions	55	
Transfers-in	551	
Transfer to annuity fund [1]	(64)	64
Investment income	40,276	755
Change in market value	93,019	1,744
Pensions paid	(41,959)	(3,700)
Transfers, refunds etc.	(24,271)	
Administration costs	(3,973)	(75)
Investment & custodial fees	(4,594)	(94)
At end	$1,373,039	$24,008
Rate of return[2]	10.3%	10.3%

Notes:

1. This amount is in respect of plan members who had some defined contribution liabilities under the former municipal plan. On retirement, these amounts were transferred to the Retirement Annuity portion of the fund.

2. The rate of return is net of investment expenses and assumes that all cash flows, except prior year transfers to the annuity fund, occur on July 1.

4. Actuarial Value of Assets

For the asset value we use a method which smoothes out the investment returns over a period of 5 years. We calculate the expected investment return on the total fund based on the assumed investment earnings net of investment fees each year (the investment return assumption) as indicated below and the balance of the actual investment income is smoothed over 5 years. Essentially, the asset value includes 20% of the excess investment earnings from 2010, 40% from 2009, 60% from 2008 and 80% from 2007.

Investment return	**2007**	**2008**	**2009**	**2010**
12/05/2011 14:36				
Assumed	6.00%	6.00%	6.00%	6.00%
		(thousands of dollars)		
Expected	$82,486	$83,840	$68,138	$76,474
Excess	(27,483)	(315,431)	93,240	54,632
Actual	$55,003	($231,591)	$161,378	$131,106

The actuarial value expressed as a percentage of market value for the total fund is therefore determined as follows:

Actuarial value of total fund (incl. annuity fund)			**(thousands of dollars)**
12/05/2011 14:36			
Market value			$1,397,047
2010 excess	$54,632	-80% unrecognized	(43,706)
2009 excess	93,240	-60% unrecognized	(55,944)
2008 excess	(315,431)	-40% unrecognized	126,172
2007 excess	(27,483)	-20% unrecognized	5,497
Actuarial value of total fund (incl. annuity fund)			$1,429,066
% of market value			102.29%

Under the Funding Policy the actuarial value of assets is limited to not more than 105%, nor less than 95%, of the corresponding market value of assets.

The assets, other than those supporting the retirement annuities, as at December 31, 2010 are adjusted from the financial statements for amounts that should have been but were not yet transferred as of December 31, 2010 as follows:

	(thousands of dollars)
December 31, 2010	$1,373,039
Transfer to retirement annuities	(465)
	$1,372,574

The actuarial value is determined as follows:

Actuarial value (excl. annuity fund)		**(thousands of dollars)**
12/05/2011 14:36		
Market value		$1,372,574
Investment reserve	2.29%	31,432
Actuarial value	102.29%	$1,404,006

1. **Funding Policy**
   In accordance with the Funding Policy, actuarial assumptions for the management valuation are to be best estimate assumptions, which in the opinion of the actuary are without bias. Over the long term, actual experience versus the best estimate assumptions should be expected to generate neither surplus nor deficit. In particular, the best estimate discount rate should reflect the long term return expectations of the pension fund investments, based on the target asset mix set out in the investment policy. In the short term, deviations of experience versus the best estimate assumptions are expected. The adequacy of the current level of contributions relative to funding targets outlined in the Funding Policy is presented in Section 5.

2. **Actuarial Assumptions, Methods and Reserves**
   A complete description of the assumptions, methods and reserves used in the management valuation are described in Section 7. Changes made since the previous valuation are briefly described below.

   Assumptions
   In this valuation, the discount rate is 5.75%, decreased from 6.0% in the December 31, 2009 valuation. Assumed inflation is 2.25%, decreased from 2.50% in the 2009 valuation. Consistent with the assumptions used in the 2009 valuation, real salary increases (i.e., net of inflation) are assumed to be at 2% for the first two years following the valuation and 1% thereafter, recognizing that wage increases in Saskatchewan are expected to be higher than average for at least the short-term. The rate used to determine the lump sum transfer value was decreased from 5.0% to 4.4%.

   Reserves
   Under the previous Funding Policy, a reserve for the present value of the excess normal cost for the 3-year period following the valuation date was also held. The current Funding Policy no longer includes this requirement. A reserve for the future accruals for disabled members continues to be held.

3. Financial Position under Management Valuation

Based on the asset information from Section 2, the Plan provisions summarized in Section 6, the membership data summarized in Section 8, and the actuarial assumptions, methods and reserves outlined in Section 7 (management valuation), the results of the management valuation at December 31, 2010 compared with the results of the funding valuation at December 31, 2009 (the effective date of the last full valuation) are as follows:

Management valuation	**(thousands of dollars)**	
12/05/2011 14:36	**Dec 31, 2010**	**Dec 31, 2009**
Assets at market value	$1,372,574	$1,257,878
Adjustment*	31,432	62,894
Adjusted assets (actuarial value)	$1,404,006	$1,320,772
General members	720,214	662,027
Emergency members	49,443	45,561
Disabled members	13,246	10,461
Pensioners	420,395	386,372
Survivors	33,170	31,758
Deferred pensioners	56,390	50,141
Pending	32,395	32,805
Former Plan accounts and AVCs	117	107
Liabilities	$1,325,370	$1,219,232
Liability reserve	8,678	18,520
Expense reserve	10,332	9,170
Liabilities and reserves	$1,344,380	$1,246,922
Surplus/(Deficit)	$59,626	$73,850
Management funded ratio	1.044	1.059

*The adjustment to the assets is the effect of the asset smoothing in accordance with the Funding Policy.

As at December 31, 2010 the Funding Policy no longer provides for the inclusion of a reserve for the shortfall of contributions in the three years following the valuation (but was included in 2009). At December 31, 2010, the reserve would have been $8.180 million.

4. Summary of Changes in Financial Position

At the previous valuation, the surplus reported was $73.850 million. At this valuation there is a surplus of $59.626 million under the management valuation. The changes in financial position may be summarized as follows:

Summary of changes in financial position	(thousands of dollars)
12/05/2011 14:36	
Surplus at the previous valuation	$73,850
Interest on surplus at 6.0% for one year	4,430
Fund earning more than 6.0%[1]	18,393
Change in assumptions[2]	(35,101)
Demographic experience (active members)[3]	(3,273)
Salary experience[4]	2,985
Interest credits on contributions higher than assumed[5]	(1,368)
Pensioner mortality experience[6]	636
New entrants[7]	308
Expense reserve[8]	(4,702)
Liability reserve[9]	2,630
Pensioner data[10]	891
Miscellaneous losses from other sources	(53)
Surplus at this valuation	$59,626

Notes:

1. In 2010, the fund earned, on the basis of the "actuarial" asset values used in the management valuation, a rate of return net of investment expenses of 7.4% compared with the 6.0 % assumed in the previous valuation. This has produced an investment gain $18.393 million.

2. The valuation interest rate has decreased from 6.0% to 5.75%. In addition, the assumed annual inflation rate has decreased from 2.5% at the previous valuation to 2.25%. The salary increase assumption for the two years following the valuation date continues at 2% above inflation reducing to 1% above inflation thereafter. The rate used to determine the lump sum transfer value was reduced from 5.0% to 4.4%. The effect of these changes on the surplus is as follows:

	$000's
Valuation interest rate	($43,322)
Lump sum rate	(3,491)
Inflation	11,712
	($35,101)

3. We reran the previous valuation for the active members assuming that we had correctly forecast all the decrements and resulting benefit payments. We also considered the impact on the liabilities for those who moved from pending back to active status. On that basis we determined that the liabilities determined in the previous valuation were less than the required amount. With interest, the increase in liabilities is $3.273 million.

4. We determined that changes in salary and in the YMPE different from expected in the previous valuation accounted for a decrease in liabilities of $2.985 million.

5. In the previous valuation, we assumed that interest credited to member contribution accounts would be 6.0% per annum in the future. In 2010 the actual rate credited was approximately 9.1%. Therefore, contribution accounts were higher than expected as were liabilities under the 50% rule. We estimated the loss to be $1.368 million.

6. There was a gain on pensioner and survivor mortality of $0.636 million in 2010.

7. New entrants in the period who are still active at the valuation date accrued fewer benefits than the accumulated matching contributions and amounts from the reserve to fund excess current service costs. We estimate the excess to be $0.308 million.

8. In the previous valuation we established a reserve for expenses of $9.170 million. If we add interest to this amount at 6.0% and debit the result by the expenses actually paid, the difference between the amount remaining and the reserve required at this valuation is $4.702 million, which is taken from the surplus.

9. Similarly, we established a reserve of $18.520 for the shortfall in contributions for the years 2010 through 2011 and for the future accruals members who were disabled at the time. The requirement for a reserve in respect of the shortfall in contributions has been eliminated under the current Funding Policy. Adding interest at 6.0% and debiting the result by the amount required to fund the shortfall in 2010, the difference between the amount remaining and the reserve required at this valuation is $2.630 million, which is added to surplus.

10. In this valuation we made a number of changes to our interpretation of the pensioner data to reflect more accurately the underlying liability.

5. Current Service Cost

In 2010, general members contributed 6.4% and emergency members 8.75% of earnings with employers matching these contributions. A further increase to 7.4% and 10.2%, respectively, effective January 1, 2011 has been implemented. Under the management valuation the cost of future benefit accruals exceeds those matching contributions.

The following tables show the current service cost as a percentage of salary and as a dollar amount and compares these with the total matching contributions expected in 2011:

Current service cost	**(% of Salary)**		
12/05/2011 14:36	**General**	**Emergency**	**Total**
Current service cost	15.5%	21.5%	15.7%
Expected member contributions	7.4%	10.2%	7.5%
Expected employer contributions	7.4%	10.2%	7.5%
Excess normal cost/(contributions)	0.7%	1.1%	0.7%

	(thousands of dollars)		
	General	**Emergency**	**Total**
Current service cost	$64,536	$3,940	$68,476
Expected member contributions	30,890	1,867	32,757
Expected employer contributions	30,890	1,867	32,757
Excess normal cost/(contributions)	2,756	206	2,962
Estimated payroll	$417,438	$18,282	$435,720

6. Interest Rate Sensitivity of the Management Valuation Liability

The effect of using a discount rate 1% lower than assumed is as follows:

Management valuation sensitivity 12/05/2011 14:36	**Valuation Assumption** (5.75%)	**Sensitivity Test Assumption** (4.75%)	**% Increase**
Liabilities and reserves	$1,344,380	$1,547,519	15.1%
Current service cost			
Percent of salary	15.7%	19.0%	21.0%
Thousands of dollars	$68,476	$82,806	20.9%

Section 4 Solvency Valuation

1. Funding Policy

A solvency valuation assumes that the plan is terminated and wound-up on the valuation date and that benefits are settled through the purchase of annuities and the transfer-out of commuted values.

In accordance with the Funding Policy, solvency valuation results will be prepared on a basis consistent with the requirements of *The Pension Benefits Act, 1992* and accepted actuarial practice.

2. Actuarial Assumptions, Methods and Reserves

A complete description of the assumptions, methods and reserves used in the management valuation are described in Section 7 (solvency valuation). Changes made since the previous valuation are briefly described below.

Assumptions

The basis for the lump sum commuted values as at December 31, 2010 is 3.3% for the first ten years following the valuation date and 5.0% thereafter. As of December 31, 2009, the basis was 3.9% for the first 10 years and 5.4% thereafter. The basis for the purchase of annuities is 4.5% (the same as in 2009).

We assume that annuities would be purchased for all current pensioners and all members age 53.5 and older at the valuation date, while the remainder would transfer the lump sum commuted value out of the plan. In the previous valuation we assumed that annuities would be purchased for all current pensioners and all members eligible to retire immediately; all other members would transfer the lump sum commuted value out of the plan.

Methods

For the asset value, we used the market value of assets. In the previous valuation we used an adjusted value of assets as permitted under *The Pension Benefits Regulations, 1993.* Pens

3. Financial Position under the Solvency Valuation

Based on the assumptions and methods described in Section 7 (solvency valuation), the Plan provisions summarized in Section 6, and the membership data summarized in Section 8, the results of the solvency valuation are as follows:

Solvency valuation 12/05/2011 14:36	**(thousands of dollars)**	
	Dec 31, 2010	**Dec 31, 2009**
Assets at market value	$1,372,574	$1,257,878
Adjustment*	0	63,145
Expenses of plan wind-up	(6,487)	(6,472)
Net assets for solvency test	$1,366,087	$1,314,551
General members	$757,700	$676,435
Emergency members	48,722	42,306
Disabled members	12,301	9,360
Pensioners	468,869	440,850
Survivors	36,261	35,387
Deferred pensioners	69,037	60,516
Pending	40,062	40,423
Former Plan accounts and AVCs	117	171
Total	$1,433,069	$1,305,448
Surplus/(Deficit)	($66,982)	$9,103
Solvency ratio	0.953	1.007

*The adjustment to the assets is the effect of asset smoothing as permitted under *The Pension Benefits Regulations, 1993*. The Funding Policy at December 31, 2010 provides that the market value of assets will be used for the solvency valuation.

4. Hypothetical Wind-up Valuation

A hypothetical wind-up valuation is required under the Standards of Practice of the Canadian Institute of Actuaries. *The Municipal Employees' Pension Plan Act*, however, does not contemplate wind-up of the plan and benefits on wind-up are not defined. The Act would have to be amended in order to wind-up the plan and to define the benefits to be provided on wind-up. We have assumed that the liabilities on wind-up would be the same as those determined for the solvency valuation. The market value of assets is prescribed under the CIA standards.

Hypothetical wind-up valuation 12/05/2011 14:36	**(thousands of dollars)**	
	Dec 31, 2010	**Dec 31, 2009**
Assets at market value	$1,372,574	$1,257,878
Expenses of plan wind-up	(6,487)	(6,472)
Net assets	$1,366,087	$1,251,406
Liabilities	$1,433,069	$1,305,448
Surplus/(Deficit)	($66,982)	($54,042)

5. Interest Rate Sensitivity of the Solvency Liability

The effect of using a discount rate 1% lower than assumed is as follows:

Solvency valuation sensitivity 12/05/2011 14:36	**Valuation Assumption**	**Sensitivity Test Assumption**	**% Increase**
Annuity purchase basis	4.50%	3.50%	
Transfer value basis	3.30%/5.00%	2.30%/4.00%	
Liabilities and reserves	$1,433,069	$1,637,516	14.3%

6. Incremental Cost on the Solvency Basis

The total estimated incremental cost between the valuation date, December 31, 2010 and the date of the next valuation, December 31, 2011 is $97.7 million.

The incremental cost on a solvency basis represents the present value at the valuation date of the expected aggregate change in the solvency liability between the valuation date and the next valuation, and includes expected benefit payments in the period. For this purpose, we assume sufficient new entrants in the period, with demographic characteristics based on the members hired since January 1, 2006, to maintain the membership. The disclosure of the incremental cost is a requirement of The Standards of Practice of the Canadian Institute of Actuaries, effective December 31, 2010.

7. Summary of Changes in Solvency Position

At the previous valuation the solvency liabilities were $1,305,448,000. Projected to December 31, 2010, the liabilities were expected to be $1,402,572,000 (including interest, one year of credited service and assumed new entrants, less expected benefit payments). This amount reconciles to the solvency liability at December 31, 2010 as follows:

	($000's)
Expected liability at Dec 31, 2010	$1,402,572
Experience (gain)/loss[1]	(6,977)
Change in assumptions[2]	43,889
Change in CV/Annuity rule[3]	(6,415)
Liability at Dec 31, 2010	$1,433,069

Notes:

1. The experience gain represents the difference between expected changes in the membership based on the management valuation assumptions (and assumed new entrants) and the actual changes in the membership.

2. The rate used for annuity purchases remained at 4.5% while the rates used for the lump sum transfer values declined from 3.9% for the first 10 years and 5.4% thereafter to 3.3% and 5.0% respectively.

3. In the previous valuation we assumed that annuities would be purchased for pensioners and all members eligible to retire immediately, while all other members would take the lump sum transfer value. In this valuation, we assumed that annuities would be purchased for pensioners and all members age 53.5 or older at the valuation date; all other members would take the lump sum transfer value.

8. Recommended Commuted Value Basis

We recommend that commuted values be determined in accordance with the Standards of Practice of the Canadian Institute of Actuaries with respect to commuted values as of the date of calculation (the “Standards”) and where the Standards are not specific, effective January 1, 2012, the assumptions used to determine the commuted value of a pension would be as follows (these assumptions are unchanged from the previous recommendation):

1. Mortality on a unisex basis: 50% male.

2. Probability of eligible spouse at retirement: 80%*

3. Age of spouse: 0.50 years younger than member*

4. Discount rates: As specified in the Standards for non-indexed pensions.

5. Future increases, where applicable: There will be no allowance made in the calculations for future pension increases.

* where the pension is assumed to commence immediately, the actual marital status and age of spouse would be used.

Lump sum values will apply for 120 days after the calculation date. After 120 days a recalculation will be made using the then current basis. For transfers within 120 days of the calculation date, the commuted value will be increased with interest at the discount rate used to calculate the commuted value for the period between the calculation date and the transfer date.

1. Summary of Results

a. Management Valuation

The financial position under the management valuation as at December 31, 2010, together with comparative results as at December 31, 2009, is as follows:

Management valuation	**(thousands of dollars)**	
12/05/2011 14:36	**Dec 31, 2010**	**Dec 31, 2009**
Assets at market value	$1,372,574	$1,257,878
Adjustment*	31,432	62,894
Adjusted assets (actuarial value)	$1,404,006	$1,320,772
Liabilities and reserves	$1,344,380	$1,246,922
Surplus/(Deficit)	$59,626	$73,850
Management funded ratio	1.044	1.059

*The adjustment to the assets is the effect of the asset smoothing in accordance with the Funding Policy.

b. Solvency Valuation

The financial position under the solvency valuation as at December 31, 2010, together with comparative results as at December 31, 2009, is as follows:

Solvency valuation	**(thousands of dollars)**	
12/05/2011 14:36	**Dec 31, 2010**	**Dec 31, 2009**
Assets at market value	$1,372,574	$1,257,878
Adjustment*	0	63,145
Expenses of plan wind-up	(6,487)	(6,472)
Net assetsfor solvency test	$1,366,087	$1,314,551
Total solvency liabilities	$1,433,069	$1,305,448
Excess/(Shortfall)	($66,982)	$9,103
Solvency ratio	0.953	1.007

*The adjustment to the assets is the effect of asset smoothing as permitted under *The Pension Benefits Regulations, 1993*. The Funding Policy at December 31, 2010 provides that the market value of assets will be used for the solvency valuation.

c. **Current Service Cost**

The current service cost as a percentage of salary and as dollar amounts under the management valuation in 2011 is shown below, together with comparative results from the valuation as at December 31, 2009 (i.e., the results from the 2009 valuation reflect the increase in the contribution rates effective January 1, 2011 and the estimated payroll for 2010).

Current service cost

12/05/2011 14:36

	(% of Salary)	
	Dec 31, 2010	**Dec 31, 2009**
Current service cost	15.7%	15.3%
Expected contributions	15.0%	15.0%
Excess normal cost	0.7%	0.3%

	(thousands of dollars)	
	Dec 31, 2010	**Dec 31, 2009**
Current service cost	$68,476	$63,454
Expected contributions	65,514	62,496
Excess normal cost	2,962	958
Estimated payroll	$435,720	$415,131

2. Comments

Continuing strong financial returns in 2010 were more than offset by the effect of changes in assumptions on the liabilities, leading to a deterioration of the financial position of the Plan on the management valuation basis and on the solvency valuation basis.

1. On the solvency basis, the shortfall is $66.982 million. At the previous valuation there was a small excess of $9.103 million. The deterioration is due to the elimination of smoothing of the assets (under the Funding Policy) and to a decrease in the interest rate basis used for lump sum transfer values.

2. The surplus on the management valuation basis has decreased from $73.850 million at December 31, 2009 to $59.626 million. The increase in asset value due to improved financial returns was more than offset by an increase in the liabilities due to a decrease in the assumption for future market returns from 6.0% to 5.75% (offset only partially by a decrease in the assumed rate of inflation from 2.5% to 2.25%). Under the Funding Policy, the assumptions used for the management valuation are intended to be best estimate assumptions of future market returns.

3. Minimum Contributions under *The Pension Benefits Act, 1992*

The solvency and management valuations determine the funding required under *The Pension Benefits Act, 1992,* and *The Pension Benefits Regulations, 1993.* The current service cost plus special payments required to amortize any deficits (over 15 years for the management valuation, over 5 years for the solvency valuation) would be as follows:

Minimum contributions (PBA, 1992)

12/05/2011 14:36

	Thousands of Dollars	% of Salary
Current service cost	$68,476	15.7%
Special payments	14,824	3.4%
Total	83,300	19.1%
Expected contributions (employee)	32,757	7.5%
Expected contributions (employer)	32,757	7.5%
Shortfall	$17,786	4.1%

Therefore, the matching contributions are not adequate to fund the benefits under *The Pension Benefits Act, 1992,* and *The Pension Benefits Regulations, 1993.*

4. Funding Policy Targets

The Funding Policy provides that minimum funding targets will be 105% of the management valuation liabilities and 100% of the solvency valuation liabilities as follows:

Minimum funding target

12/05/2011 14:36

	(thousands of dollars)	
	Management	**Solvency**
Liabilities and reserves	$1,344,380	$1,433,069
Target ratio	105%	100%
Target value for assets	$1,411,599	$1,433,069
Assets (adjusted)	1,404,006	1,366,087
Excess/(Shortfall)	($7,593)	($66,982)

The Funding Policy provides that the usual period over which to amortize the shortfall relative to the management valuation liabilities or solvency valuation liabilities would be 15 years and 5 years, respectively. Accordingly, special payments would be as follows:

Annual special payments

12/05/2011 14:36

	Thousands of Dollars	% of Salary
From Jan 1, 2011 to Dec 31, 2015	$14,824	3.4%
From Jan 1, 2016 to Dec 31, 2025	751	0.2%

To determine the special payments required, we have taken the same approach that would be used under *The Pension Benefits Act, 1992,* and *The Pension Benefits Regulations, 1993.* That is, we first amortize the deficiency on the management valuation over 15 years and then determine if additional payments are required in the first 5 years to fund the solvency deficiency. Accordingly, the schedule of special payments identified above will eliminate both shortfalls relative to the minimum funding targets in the first 5 years. The schedule of special payments will be adjusted each year, however, as the financial position of the plan changes, eventually eliminating any payments that are not needed.

Further, the Funding Policy provides that minimum contributions will be 105% of the normal actuarial cost plus any special payments sufficient to amortize any shortfall of assets relative to the minimum funding targets over an appropriate period.

Accordingly, minimum contributions under the Funding Policy for the next 5 years would be as follows:

Minimum contributions	**(% of Salary)**	
12/05/2011 14:36	**General**	**Emergency**
Normal actuarial cost	15.5%	21.6%
Funding target	105%	105%
Normal actuarial cost	16.3%	22.7%
Special payments in 2011	3.4%	3.4%
Minimum Contributions	19.7%	26.1%
Employer/Employee contributions (50%)	9.85%	13.05%

As increasing contributions may increase benefits payable under the 50% rule (minimum benefits on termination of employment relative to a member's contributions), testing would be required to determine the adequacy of these contribution levels to fund the plan. Experience different than assumed or future changes in assumptions may also change the contributions required to fund the plan.

The contribution levels required under the Funding Policy may not be implemented, however, without approval under the Income Tax Act (as the contributions required under the Funding Policy are in excess of 9%, and in excess of those already approved). In order to obtain approval, however, a report supporting these contributions would have to be filed with the regulatory authorities. To ensure that contributions are permissible, it may be necessary to adjust the assumptions to increase the current service cost in line with the Funding Policy funding target.

Section 6 Summary of Principal Plan Provisions

The following is a brief summary of the provisions of the plan which are of importance in determining the actuarial liabilities. This summary includes all plan amendments up to December 31, 2010.

Eligibility

Permanent employees, who are employees employed on an ongoing basis (full-time, part-time and seasonal) join the plan on the date they become an employee.

Non-permanent employees may join the plan on the date of hire and must join the plan if the employee works at least 700 hours in two consecutive years. Once an employee has joined the plan, he/she remains a member even though the hours of work reduce to less than 700 hours in a year.

Plan members who move from one participating employer to another, must immediately participate with the second employer regardless of the terms of employment with the second employer.

Emergency members are those designated by their employers.

Members' Contributions

Effective January 1, 2011, general members are required to contribute an amount equal to 7.4% (previously 6.4%) of their earnings. Emergency members contribute 10.2% (previously 8.75%) of their earnings. Earnings include regular remuneration and commissions, but exclude overtime pay and bonuses.

The interest rate credited on member contributions is the net fund rate of return.

Employers' Contributions

The plan provides that employers are obligated to contribute an amount equal to the required employee contributions.

Normal Retirement Date

The normal retirement date for general members is the first day of the month immediately following the attainment of age 65. The normal retirement date of emergency members is the first day of the month immediately following the attainment of age 60.

Early Retirement Date

General Members

General members can retire any time after satisfying the rule of 80 (age plus years of continuous service = 80) with an unreduced pension. They can also retire having attained age 55 with a minimum of 15 years of continuous service but in that event, the pension is reduced by 3% for each year prior to the date when the member would satisfy the rule of 80 assuming service had continued, or would reach normal retirement age, if earlier.

Emergency Members

Emergency members can retire at any time after satisfying any of the age of 55, the rule of 75 or 25 years of continuous service with an unreduced pension. They can also retire after age 45 on satisfying the rule of 70 but in that event, the pension in respect of service after 1991 is reduced by 3% for each year prior to the date when the member would satisfy the rule of 75 assuming that service had continued, or would reach normal retirement age, if earlier.

Retirement Income

Upon retirement, a member is entitled to a retirement benefit based on the member's average highest salary and contributory service, where the average highest salary is the total salary of the member during the three years of highest salary divided by three, as follows:

1. For benefits payable before age 65:

   All members are entitled to a pension of 2% of the average highest salary multiplied by the number of years of contributory service.

2. For benefits payable on and after age 65:

   a) general members with a date of entry on or after January 1, 1993:

   - are entitled to a pension of 1.5% of the average highest salary multiplied by the number of years of contributory service, excluding the years 2001 to 2005; plus
   - a pension of 1.8% of the average highest salary multiplied by the number of years of contributory service between January 1, 2001 and December 31, 2005.

   b) emergency members with a date of entry on or after January 1, 1993:

   - are entitled to a pension of 1.7% of the average highest salary multiplied by the number of years of contributory service excluding the years 2001 to 2005; plus
   - a pension of 2% of the average highest salary multiplied by the number of years of contributory service between January 1, 2001 and December 31, 2005.

   c) general members with a date of entry prior to January 1, 1993:

   - with respect to service prior to January 1, 1990 and service between January 1, 2001 and December 31, 2005, are entitled to a pension for each year of contributory service equal to the greater of:

     (a) 1.3% times the average highest salary not in excess of the three year average YMPE plus 2% times the average highest salary in excess of the three year average YMPE, and
     (b) 1.8% times the average highest salary.

   - with respect to service on or after January 1, 1990, but excluding years 2001 to 2005, are entitled to a pension for each year of contributory service equal to the greater of:

     (a) 1.3% times the average highest salary not in excess of the three year average YMPE plus 2% times the average highest salary in excess of the three year average YMPE, and
     (b) 1.5% times the average highest salary.

   d) emergency members with a date of entry prior to January 1, 1993:

   - with respect to service prior to January 1, 1990 and service between January 1, 2001 and December 31, 2005 are entitled to a pension for each year of contributory service equal to 2% times the average highest salary:

   - with respect to service on or after January 1, 1990, but excluding years 2001 to 2005, are entitled to a pension for each year of contributory service equal to the greater of:

     (a) 1.3% times the average highest salary not in excess of the three year average YMPE plus 2% times the average highest salary in excess of the three year average YMPE, and

(b) 1.7% times the average highest salary.

Pre-retirement Death Benefits

Upon the death of a member prior to retirement, an amount equal to the sum of the member's additional contribution account, the member's annuity and annuity surplus account, the employer additional contribution account and the employer annuity account, plus the commuted value of the defined benefit pension is paid to the member's spouse, beneficiary or estate.

Post-retirement Death Benefits

If a retired member who has a spouse at retirement dies, 100% of the pension payable to the member is guaranteed to be paid for five years from the retired member's date of retirement. After the guaranteed payments are made, 60% of the pension to which the retired member was entitled shall be paid to the surviving spouse for life. In the event of the death of both the retired member and the retired member's spouse, the 60% allowance will be payable to designated dependents named at retirement (up to age 18).

If the member does not have a spouse at retirement, a single life annuity with a guarantee period of 15 years is payable.

Optional forms of pension are provided on an actuarial equivalent basis.

Termination Benefits

An employee who has been a member of the plan or employed by an employer participating in the plan for a continuous period of at least 2 years, on termination of employment prior to retirement, would receive an immediate or deferred pension. In lieu of part of the pension an employee may elect to receive a lump sum that does not exceed one half of the member's accumulated contributions with interest as at December 31, 1993.

Upon termination, the pension benefit may be commuted.

Indexation Benefits

For pensions in respect of service accrued before 1999, and subject to there being funds available to provide it, the plan provides for future indexation equivalent to the lesser of 2% per year or the increase in the Consumer Price Index with the excess of 2% over the increases in the CPI carried forward on a cumulative basis. Indexing on post-1998 benefits may also be provided if funds permit, but this is a decision of the Commission and does not happen automatically. The 2% increase for benefits in respect of pre-1999 service was paid at January 1, 2007 and 2008 – no increase was provided for benefits in respect of post-1998 service at these times.

The Commission cancelled the automatic provision of 2% indexing on pre-1999 benefits effective June 1, 2009.

Disability

A member who is totally and permanently disabled and who has been away from work for a 2 year period may, on application, continue to accrue credited service without employee or employer contribution. In this event, the salary on which the pension is based will be increased from the date of disability based on the increase in the average Canadian salaries and wages. The waiver will cease on the member's unreduced retirement date.

Management Valuation

In this section we describe the actuarial assumptions, methods and reserves that are specific to the management valuation. Assumptions for the management valuation are best estimate assumptions and include no margins for adverse deviations.

1. Economic Assumptions

The economic assumptions used in the management valuation are the same as used in the previous valuation, except where noted.

a) *Inflation = 2.25% per annum.*

This long-term assumption reflects long-term expectations in the marketplace at the valuation date, rounded to the nearest 0.1%. At the previous valuation we assumed inflation of 2.5% per annum.

Investment Return = 5.75%

This rate is based on our analysis of expected investment returns (excluding those related to active management), reduced by investment related expenses of 0.25% (assumed expenses for passive management). Expected investment returns were determined to be approximately 6.1% gross, and 5.85% net, based on current market yields on fixed income investments and recognizing appropriate risk premiums for the equity and real estate components of the current investment policy benchmark. In the previous funding valuation we assumed that the investment return would be 6.0%.

b) *Rate of salary increase*

We have assumed there will be universal salary increases of 4.25% per annum for two years and 3.25% per annum thereafter. The 3.25% provides for market-implied future inflation plus real salary increases at 1% above inflation. The 4.25% for the next two years recognizes that salary increases are expected to be higher than the Canadian average, at least in the short-term, due to the active Saskatchewan economy. For the previous valuation the assumed rate of general salary increases was 4.5% for the first four years and 3.5% thereafter (2% and 1% over inflation, respectively).

c) We have also allowed for promotional and merit increases as follows:

Years of Service	General Members	Emergency Members
1-5	2.0% per year	3.0% per year
6-10	1.5% per year	2.0% per year
11-15	1.0% per year	1.0% per year
16-20	0.5% per year	0.5% per year

d) *Increase in CPP earnings ceiling and maximum pension*

We assumed that the CPP earnings ceiling (YMPE) would increase from $48,300 in 2011 by 3.25% per year, which is consistent with the long-term assumption for salary increases. We have also assumed that the maximum pension per year of service permitted under the Income Tax Act would increase from $2,552.22 in 2011 at 3.25% per annum, also consistent with the long-term assumption for salary increases. The assumed rate of increase for the YMPE and maximum pension at the previous valuation was 3.5% per year.

e) Indexing of pensions

We assume no indexing for pensions due to the cancellation in 2009 of the policy of automatic indexing for pensions earned for service prior to 1999. No provision is made for future indexing of pensions for post-1998 service. This assumption is consistent with the terms of the Act and policies adopted by the Commission, and the inflation assumption used for the valuation.

2. Demographic assumptions

The demographic assumptions are the same as used at the previous valuation. Gain and loss analysis does not indicate any need to revise the demographic assumptions.

a) Retirement

General Members

We have assumed that there is a 50% probability that general members will retire on first becoming entitled to an unreduced pension and a 50% probability that they will not retire until age 65. For those already entitled to an unreduced pension at December 31, 2010, we have assumed that there is a 50% probability that they will retire at June 30, 2011 and a 50% probability that they will retire at age 65.

Emergency Members

For the emergency members, we have assumed that 100% will retire when they are first entitled to an unreduced pension. This is in line with experience.

b) Termination of Membership

For the general members we have assumed terminations in accordance with a table of estimates, excerpts of which are as follows:

Age	**Annual Rate**
20	20.5%
25	15.5%
30	10.5%
35	6.5%
40	4.8%
45	4.3%
50	3.2%
55	1.2%

For the emergency members, we have used an assumption of 75% of the termination rates for the general members to recognize their generally lower turnover rates, consistent with experience in the plan.

Future commuted values are assumed to be calculated using 4.4% interest and the valuation mortality table. This rate is based on current market yields for Government of Canada long bonds, annualized, plus 0.9% and rounded to the nearest 0.1%. This reflects a long-term expectation for commuted values consistent with the current Standards of Practice of the Canadian Institute of Actuaries with respect to commuted values from registered pension plans. In the previous valuation future commuted values were calculated using 5.0% and the valuation morality table.

We have assumed that 50% of terminating members will take a deferred pension while 50% will transfer the commuted value out of the plan. This is in line with recent experience.

c) Mortality

We have used the Uninsured Pensioners 1994 Mortality Table projected generationally using Projection Scale AA to represent the mortality of members both before and after retirement. This table is a commonly used table for pension valuation purposes and there is no reason to expect that mortality experience for members of this plan will be materially different from this table.

d) Proportion married and age of spouse

We have assumed that 90% of male members and 70% of female members will be married at retirement and the male spouse will be 4 years older.

e) Future Credited Service

Members are assumed to accrue future credited service at the same rate as accrued in 2010.

f) Disability

The disabled members are valued separately. We assume that they will all stay disabled to their unreduced retirement date, retire at that date and that their imputed salary will increase with the assumption for universal salary increases (i.e., excluding merit increases). Providing an allowance for recovery from disability would not have a material effect on the results of the valuation. We have also provided them with full service credit, if not already included in the data, from July 1, 1988, or the date of disability if later, to December 31, 2010.

We have not made any allowance for future disabilities, on the basis that it would not have a material effect on the results of the valuation.

3. Actuarial Method

a) Assets

For the asset value we use a method which smoothes out the investment returns over a period of 5 years.

b) Liabilities

For the management valuation, we have used the projected unit credit method to determine the plan's financial position. This was the method used at the previous valuation. Under this method, the actuarial value of the plan assets is compared with the actuarial present value of the pensions accrued in respect of service to the valuation date.

For pensioners and survivors, as well as for deferred and pending members, pension amounts were provided by the administrator and the actuarial liabilities were determined based on these amounts. For deferred and pending members, the liabilities also include any excess contributions each member is entitled to. These amounts were also provided by the administrator.

For active and disabled members, we take each individual, project his or her salary to retirement, determine the value of the pension and bridge benefit in respect of service to the valuation date and discount this back to the valuation date. We discount for interest but also for pre-retirement termination and death and the value of the termination and death benefits are determined in a manner consistent with the retirement benefit. The value of the member's benefits is compared to the contributions with interest. If the contributions with interest are greater than 50% of the value of the benefit (the 50% rule), a pro-rata amount (on service) of the difference is allocated to the accrued liability.

Also under this method, the current service cost is the value of the benefits, which will be earned in respect of the year of service following the valuation date. Similarly, an additional liability due to the "50% rule" is allocated pro-rata on service to the current service cost. Aside from experience different from assumed or changes in assumptions that may affect cost, an increase (or decrease) in the average age of the membership will increase (or decrease) the current service of cost.

4. Reserves

In accordance with the Funding Policy, reserves under the management valuation will be established as follows (in lieu of an explicit assumption where relevant):

1. Administration expenses – the present value of full administration expenses for a 3-year period following the valuation date.
2. The total administration expenses in the last 3 years were $10.863 million or an average of $3.621 million per year. The expense reserve for the management valuation is the present value at 5.75% of the expenses assumed to be $3.621 million per year for the next 3 year period, or $10.332 million including a component for future inflation.
3. Accruals for disabled members – the present value of all future accruals of presently disabled members. We have established a reserve of $8.678 million to cover all the future accruals of the currently disabled members.
4. Under the previous Funding Policy, a reserve for the present value of the excess normal cost for the 3-year period following the valuation date was also held. The current Funding Policy no longer includes this requirement.

Solvency Valuation

In this section we describe the actuarial assumptions, methods and reserves that are specific to the solvency valuation.

a. Assumptions

i. Salary Projection - A salary projection is not required as the accrued benefits are based on the salary history as of the wind-up date.

ii. Commuted Value **-** We assume that all members who are not yet age 53.5 at the valuation date would transfer the lump sum commuted value out of the Plan. In the previous valuation we assumed that those not eligible to retire immediately would transfer the lump sum commuted value out of the plan. The lump sum commuted values are calculated based on the Canadian Institute of Actuaries (CIA) Standards of Practice for Commuted Values as they apply to calculations made in December 2010 (specifically by assuming mortality in accordance with UP94@2020, and using a discount rate of 3.3% for the first ten years following the valuation date and 5.0% thereafter).

iii. Annuity Purchase **-** We assume that annuities would be purchased for all current pensioners and all other members age 53.5 and older at the valuation date. In the previous valuation we assumed that annuities would be purchased for all current pensioners and all other members eligible to retire immediately.

The purchase price for annuities is approximated by assuming mortality in accordance with the UP94@2020 mortality table and a discount rate of 4.50%. This is the basis recommended in the educational note “Assumptions for Hypothetical Wind-Up and Solvency Valuations with Effective Dates Between December 31, 2010 and December 30, 2011” published by the CIA for the valuation of immediate pensions for solvency valuations performed as at December 31, 2010.

iv. For both commuted value and annuity purchase liability calculations we assume 90% of male members and 70% of female members are married and that the female spouse is four years younger than the male spouse, if marital status and age of spouse are unknown.

b. Methods

Our postulated scenario on wind-up of the pension plan is that members would be eligible for subsidized early retirement benefits etc. based on service accrued to the date of wind-up only. This is in keeping with the terms of the pension plan which provide for eligibility based on credited or contributory service. The liability under the solvency valuation is determined to be the present value at the valuation date of future pension payments. The value of the member’s accrued benefits is compared to the accumulated contributions with interest. If the contributions with interest are greater than 50% of the liability, the liability is increased by the difference.

For the asset value, we used the market value of assets. In the previous valuation we used an adjusted value of assets as permitted under *The Pension Benefits Regulations, 1993.*

Reserves

No reserves are required, other than for the expenses required for plan wind-up which are assumed to be $300 per member (in all categories). The total wind-up expenses are estimated to be $6.487 million ($300 x 21,622 lives).

Section 8 Membership Data Summary

Membership data were obtained from the Public Employees Benefits Agency, the administrator of the plan. The data were gathered and compiled as of December 31, 2010. The data included pensionable salary and in-year credited service amounts for 2008, 2009 and 2010. We annualized the salary amounts by dividing the pensionable salary by the credited service in the year. Where annualizing the salary produced an amount greater than $100,000 we adjusted the annualized salary for that year to ensure that the average salary for the three years was not greater than the highest 3-year average salary provided in the data. If the 2010 salary was zero as it was for 420 of the active members, we assumed that it should be $20,000.

The following tests were performed:

a. Active data was checked for missing or invalid dates of birth and hire, gender, and salary.
b. Inactive data was checked for missing dates of birth, missing or invalid payment forms, and dates of retirement.
c. The data was reconciled to the data from the previous valuation.
d. The data was compared to data from the previous valuation and unexpected changes in dates of birth, eligibility service, gender, credited service, benefits, payment forms, were provided to PEBA for review.

1. Membership Reconciliation

	General	Emergency	LTD	Pensioners	Survivors	Deferred	Pending	Totals
At December 31, 2009	12,846	236	167	3,324	819	1,873	2,308	21,573
Data corrections [1]				1	2			3
Classification changes								-
To General	289	-	(33)	-	-	-	(256)	-
To Emergency	-	1	-	-	-	-	(1)	-
To LTD	(77)	(2)	83	-	-	-	(4)	-
To Pensioners	(177)	(6)	(5)	234	-	(22)	(24)	-
To Survivors [2]	-	-	-	(55)	55	-	-	-
To Deferred	(15)	-	-	-	-	377	(362)	-
To Pending	(670)	(4)	(10)	-	-	(2)	686	-
Adjustments [3]				(2)	10			8
Terminations & Deaths								-
Benefits ended					(52)			(52)
Death, no survivor				(48)				(48)
Paid out	(549)	(5)	(14)	-	-	(299)	(642)	(1,509)
Continuing from 2009	11,647	220	188	3,454	834	1,927	1,705	19,975
New members	1,406	20	4	-	-	-	217	1,647
At December 31, 2010	13,053	240	192	3,454	834	1,927	1,922	21,622

[1] Members were missed in the previous valuation.
[2] Pensioner deaths with continuing spouse or beneficiary.
[3] Member records were combined in some cases; multiple beneficiaries were added for some pensioner deaths.

2. Membership Summary – Active General Males

Age		Retirement Eligiblity Service							
		0-5	5-10	10-15	15-20	20-25	25-30	30+	Total
16-24	Number	156	1						157
	Salary	5,173,210	58,922						5,232,132
	Avg Salary	33,162	58,922						33,326
25-29	Number	187	44						231
	Salary	7,300,869	2,160,112						9,460,982
	Avg Salary	39,042	49,093						40,957
30-34	Number	203	64	24					291
	Salary	9,263,784	3,049,916	1,137,677					13,451,377
	Avg Salary	45,634	47,655	47,403					46,225
35-39	Number	183	99	41	20	2			345
	Salary	7,631,879	4,726,961	2,088,454	1,053,536	108,265			15,609,095
	Avg Salary	41,704	47,747	50,938	52,677	54,132			45,244
40-44	Number	205	73	58	30	24	7		397
	Salary	8,563,885	3,145,056	2,822,625	1,759,377	1,255,943	367,877		17,914,763
	Avg Salary	41,775	43,083	48,666	58,646	52,331	52,554		45,125
45-49	Number	264	127	75	73	70	86	11	706
	Salary	10,648,846	5,317,578	3,444,891	3,535,697	3,897,638	4,789,285	682,075	32,316,011
	Avg Salary	40,337	41,871	45,932	48,434	55,681	55,689	62,007	45,773
50-54	Number	290	159	102	68	102	69	50	840
	Salary	11,358,866	6,864,458	4,691,267	3,405,272	5,314,330	3,988,176	2,930,533	38,552,902
	Avg Salary	39,169	43,173	45,993	50,078	52,101	57,800	58,611	45,896
55-59	Number	251	129	93	74	70	46	50	713
	Salary	9,794,267	5,210,698	3,894,125	3,629,317	3,569,194	2,630,020	2,834,474	31,562,095
	Avg Salary	39,021	40,393	41,872	49,045	50,988	57,174	56,689	44,267
60+	Number	235	158	94	60	42	34	39	662
	Salary	8,530,174	5,509,859	3,807,757	2,484,202	1,767,091	1,791,118	1,904,167	25,794,369
	Avg Salary	36,299	34,873	40,508	41,403	42,074	52,680	48,825	38,964
Total	Number	1,974	854	487	325	310	242	150	4,342
	Salary	78,265,781	36,043,559	21,886,797	15,867,401	15,912,462	13,566,475	8,351,250	189,893,725
	Avg Salary	39,648	42,206	44,942	48,823	51,331	56,060	55,675	43,734

3. Membership Summary – Active General Females

Age		Retirement Eligiblity Service 0-5	5-10	10-15	15-20	20-25	25-30	30+	Total
16-24	**Number**	276	1						277
	Salary	7,929,907	44,854						7,974,760
	Avg Salary	28,732	44,854						28,790
25-29	**Number**	425	53						478
	Salary	14,166,014	1,791,365						15,957,379
	Avg Salary	33,332	33,799						33,384
30-34	**Number**	524	179	32	1				736
	Salary	16,529,146	6,456,225	1,238,695	45,249				24,269,315
	Avg Salary	31,544	36,068	38,709	45,249				32,975
35-39	**Number**	675	255	98	19	1			1,048
	Salary	19,656,246	8,564,122	3,629,667	768,236	45,729			32,664,000
	Avg Salary	29,120	33,585	37,037	40,434	45,729			31,168
40-44	**Number**	668	401	138	52	43	4		1,306
	Salary	19,556,739	11,934,433	4,855,729	2,104,183	1,956,771	232,010		40,639,866
	Avg Salary	29,277	29,762	35,186	40,465	45,506	58,003		31,118
45-49	**Number**	602	498	298	114	104	66	3	1,685
	Salary	17,798,552	14,970,584	9,093,000	4,437,926	4,510,986	3,221,065	131,966	54,164,079
	Avg Salary	29,566	30,061	30,513	38,929	43,375	48,804	43,989	32,145
50-54	**Number**	446	384	256	184	142	64	31	1,507
	Salary	13,615,118	11,315,450	8,054,646	6,351,673	5,662,485	2,855,927	1,496,424	49,351,723
	Avg Salary	30,527	29,467	31,463	34,520	39,877	44,624	48,272	32,748
55-59	**Number**	288	198	173	122	163	61	30	1,035
	Salary	8,547,013	6,216,073	5,326,126	4,241,998	5,897,545	2,467,297	1,272,307	33,968,359
	Avg Salary	29,677	31,394	30,787	34,770	36,181	40,447	42,410	32,820
60+	**Number**	158	135	104	65	87	43	47	639
	Salary	4,581,391	4,221,768	3,232,903	2,063,246	2,805,670	1,563,659	1,767,910	20,236,546
	Avg Salary	28,996	31,272	31,086	31,742	32,249	36,364	37,615	31,669
Total	**Number**	4,062	2,104	1,099	557	540	238	111	8,711
	Salary	122,380,126	65,514,874	35,430,767	20,012,511	20,879,187	10,339,958	4,668,606	279,226,027
	Avg Salary	30,128	31,138	32,239	35,929	38,665	43,445	42,060	32,054

4. Membership Summary – Active Emergency Males

Age		Retirement Eligiblity Service							
		0-5	5-10	10-15	15-20	20-25	25-30	30+	Total
16-24	**Number**	5							5
	Salary	277,155							277,155
	Avg Salary	55,431							55,431
25-29	**Number**	25	8						33
	Salary	1,307,794	596,421						1,904,215
	Avg Salary	52,312	74,553						57,703
30-34	**Number**	13	25	4					42
	Salary	871,408	1,848,321	332,464					3,052,192
	Avg Salary	67,031	73,933	83,116					72,671
35-39	**Number**	10	11	11	9	1			42
	Salary	649,696	809,846	899,769	804,442	90,578			3,254,331
	Avg Salary	64,970	73,622	81,797	89,382	90,578			77,484
40-44	**Number**	7	4	9	13	6			39
	Salary	427,667	339,439	671,853	1,045,581	441,434			2,925,974
	Avg Salary	61,095	84,860	74,650	80,429	73,572			75,025
45-49	**Number**	5	1	3	5	9	3	1	27
	Salary	407,517	57,010	196,816	351,661	918,360	254,310	87,585	2,273,259
	Avg Salary	81,503	57,010	65,605	70,332	102,040	84,770	87,585	84,195
50-54	**Number**	1			3	6	3	1	14
	Salary	60,030			221,428	485,385	260,172	90,080	1,117,095
	Avg Salary	60,030			73,809	80,898	86,724	90,080	79,792
55-59	**Number**	3	2	1	1		1	3	11
	Salary	234,790	95,297	87,139	59,673		60,324	294,971	832,194
	Avg Salary	78,263	47,649	87,139	59,673		60,324	98,324	75,654
60+	**Number**	2						1	3
	Salary	114,254						92,635	206,889
	Avg Salary	57,127						92,635	68,963
Total	**Number**	71	51	28	31	22	7	6	216
	Salary	4,350,310	3,746,335	2,188,041	2,482,784	1,935,757	574,806	565,272	15,843,304
	Avg Salary	61,272	73,458	78,144	80,090	87,989	82,115	94,212	73,349

5. Membership Summary – Active Emergency Females

Age		Retirement Eligiblity Service 0-5	5-10	10-15	15-20	20-25	25-30	30+	Total
16-24	Number								
	Salary								
	Avg Salary								
25-29	Number	1	1						2
	Salary	42,960	79,440						122,400
	Avg Salary	42,960	79,440						61,200
30-34	Number	2	2						4
	Salary	99,641	129,250						228,891
	Avg Salary	49,820	64,625						57,223
35-39	Number		2		2				4
	Salary		109,265		190,636				299,901
	Avg Salary		54,632		95,318				74,975
40-44	Number	2		3		1			6
	Salary	109,768		220,877		79,958			410,603
	Avg Salary	54,884		73,626		79,958			68,434
45-49	Number	2	1	2	1				6
	Salary	106,077	46,425	145,383	87,889				385,774
	Avg Salary	53,039	46,425	72,691	87,889				64,296
50-54	Number	1							1
	Salary	38,038							38,038
	Avg Salary	38,038							38,038
55-59	Number					1			1
	Salary					99,175			99,175
	Avg Salary					99,175			99,175
Total	Number	8	6	5	3	2			24
	Salary	396,483	364,380	366,260	278,525	179,133			1,584,781
	Avg Salary	49,560	60,730	73,252	92,842	89,567			66,033

6. General and Emergency Members

	General	Emergency	Total
Number	13,053	240	13,293
Average age	46.5	39.5	46.4
Accumulated contributions with interest	$258.0 million	$17.0 million	$275.0 million
Total salary	$469.1 million	$17.4 million	$486.5 million

7. Disabled Members

	Males			Females		
Age	Number	Retirement Eligibility Service	Average Salary	Number	Retirement Eligibility Service	Average Salary
0-24	2	0.96	$31,764	1	3.86	$46,058
25-29	2	5.68	36,369	3	4.92	28,998
30-34	-	-	-	4	22.87	34,796
35-39	2	1.94	37,998	7	20.84	30,621
40-44	4	20.99	37,426	11	74.62	29,884
45-49	9	68.56	35,446	28	235.33	29,875
50-54	15	191.31	41,806	22	217.05	32,110
55-59	13	172.20	37,857	28	348.87	27,025
60-64	21	242.81	35,361	14	183.75	28,117
65+	3	12.09	37,241	3	10.32	26,784
Total	71	716.54	$37,388	121	1,122.43	$29,660
Average age		54.2			50.50	

8. Pensioners

	Males			Females		
Age	Number	Monthly Pension	Monthly Bridge	Number	Monthly Pension	Monthly Bridge
0-49	4	$4,980	$1,011	1	$1,927	$161
50-54	54	101,954	18,270	25	36,741	7,383
55-59	165	309,051	51,399	147	158,695	33,986
60-64	229	381,237	67,068	296	227,463	51,484
65-69	390	400,780	407	332	195,799	108
70-74	419	381,415	0	256	133,594	0
75-79	353	296,959	0	180	82,320	0
80-84	250	185,859	0	97	44,251	0
85-89	118	58,979	0	65	27,806	0
90-94	41	20,273	0	17	3,543	0
95+	11	2,848	0	4	841	0
Total	2,034	$2,144,337	$138,154	1,420	$912,981	$93,122
Average age		72.2			70.0	

9. Survivors

	Males			Females		
Age	**Number**	**Monthly Pension**	**Monthly Bridge**	**Number**	**Monthly Pension**	**Monthly Bridge**
0-49	13	$4,841	$ 0	25	$14,109	$859
50-54	7	2,125	0	12	5,882	392
55-59	2	115	0	14	9,317	727
60-64	10	5,256	422	44	31,899	1,413
65-69	9	3,605	0	58	35,576	0
70-74	8	3,077	0	96	51,940	0
75-79	18	5,800	0	155	70,087	0
80-84	9	2,180	0	143	45,097	0
85-89	11	2,231	0	136	35,270	0
90-94	4	335	0	50	10,545	0
95+	2	240	0	8	1,395	0
Total	93	$29,804	422	741	$311,117	$3,391
Average age		70.0			77.3	

10. Deferred

	Males			Females		
Age	**Number**	**Monthly Pension**	**Monthly Bridge**	**Number**	**Monthly Pension**	**Monthly Bridge**
0-24	5	$476	$ 0	6	$647	$ 0
25-29	25	5,330	0	40	5,151	0
30-34	56	17,617	88	76	16,881	0
35-39	65	20,962	18	138	36,440	0
40-44	111	45,551	816	168	39,911	307
45-49	176	61,821	2,366	200	51,885	3,023
50-54	163	62,043	5,278	209	61,320	5,001
55-59	125	45,187	2,344	151	37,309	973
60-64	97	31,251	1,780	78	19,137	1,752
65+	22	3,872	83	16	1,786	6
Total	845	$294,111	$12,773	1,082	$270,467	$11,062
Average age		49.1			47.3	
Excess contributions		$5,103,000			$3,649,000	

11. Pending

	Males			Females		
Age	**Number**	**Monthly Pension**	**Monthly Bridge**	**Number**	**Monthly Pension**	**Monthly Bridge**
0-24	77	$3,988	$ 0	61	$3,210	$ 0
25-29	77	9,067	127	159	16,269	33
30-34	86	11,858	58	177	29,588	0
35-39	73	18,543	726	124	14,473	0
40-44	106	18,945	1,250	95	18,118	498
45-49	140	38,517	4,027	113	19,614	783
50-54	137	30,441	2,123	107	21,250	2,305
55-59	141	31,161	2,344	59	16,331	1,650
60-64	107	33,217	4,235	29	7,108	712
65+	49	18,643	328	5	178	16
Total	993	$214,378	$15,218	929	$146,138	$5,996
Average age			46.2			39.4
Refund of contributions only			$639,000			$427,000

Section 9 Administrator's Certification

of the membership data submitted to Eckler Ltd. in connection with the actuarial valuation of the Saskatchewan Municipal Employees' Pension Plan as at December 31, 2010.

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 data supplied to the actuary provides a complete and accurate description of all persons who are entitled to benefits under the terms of the plan in respect of service up to the date of the valuation.

c) All events including those subsequent to the date of the valuation that may affect the results of the valuation have been communicated to the actuary.

d) The Funding Policy and all other documents under the engagement are accurately reflected.

July 28, 2011

Date

Public Employees Benefits Agency
Plan Administrator