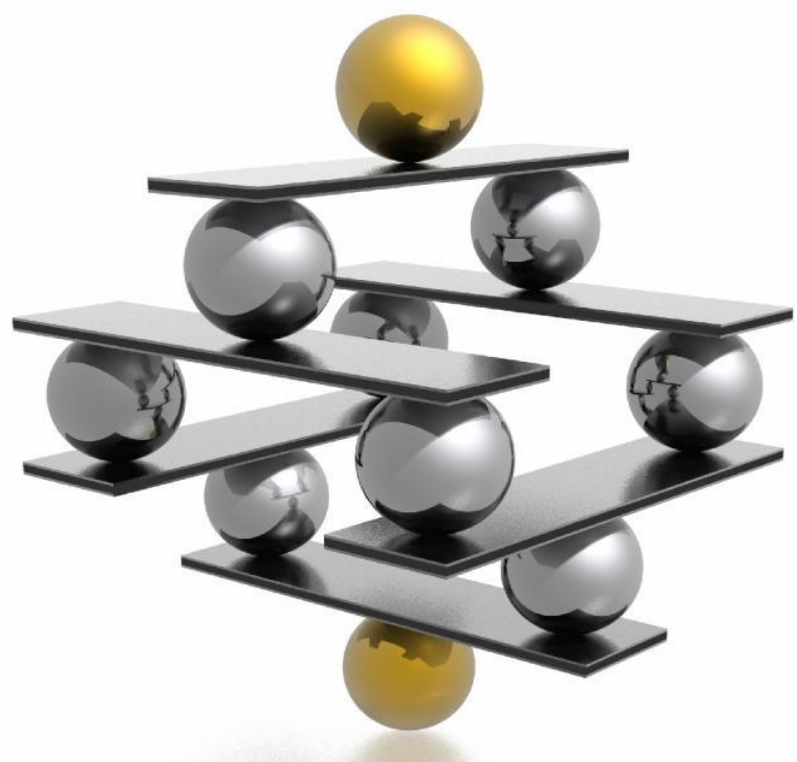
Municipal Employees' Pension Plan Actuarial Valuation as at December 31, 2013

Management Valuation

May 6, 2014



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Executive Summary

An actuarial valuation has been prepared for the Municipal Employees' Pension Plan (the "Plan") as at December 31, 2013 to meet the requirements of a Funding Policy adopted by the Municipal Employees' Pension Commission (the "Commission") to provide a framework for the sound financial management of the Plan and to assist the Commission in its decision-making process, its development of recommendations to the Minister of Finance and its communication with stakeholders. This section provides an overview of the important results and the key valuation assumptions which have had a bearing on these results. The next actuarial valuation for the purposes of developing funding requirements should be performed no later than as at December 31, 2015.

Summary of Principal Results

Defined Benefit Portion

	December 31, 2013		December 31, 2012[1]	
	Management	**Solvency**	**Management**	**Solvency**
Assets	$ 1,589,549,000	$ 1,650,074,000	$ 1,454,787,000	$ 1,527,696,000
Liabilities & Reserves	1,481,427,000	1,856,990,000	1,403,686,000	1,979,286,000
Surplus/(Deficit)	**$ 108,122,000**	**$ (206,916,000)**	**$ 51,101,000**	**$ (451,590,000)**
Funded Ratio	107.3%	88.9%	103.6%	77.2%

Overall Results – Defined Benefit Portion plus Annuities

	December 31, 2013		December 31, 2012	
	Management	**Solvency**	**Management**	**Solvency**
Assets	$ 1,609,988,000	$ 1,670,110,000	$ 1,475,539,000	$ 1,549,123,000
Liabilities & Reserves	1,500,321,000	1,879,551,000	1,424,830,000	2,005,469,000
Surplus/(Deficit)	**$ 109,667,000**	**$ (209,441,000)**	**$ 50,709,000**	**$ (456,346,000)**
Funded Ratio	107.3%	88.9%	103.6%	77.2%

[1] Subsequent to the preparation of the December 31, 2012 valuation report, the market value of assets of the DB portion was reduced by $17,216,000, which decreased the smoothed value of the DB portion by $3,440,000. The revised assets are shown here.

Executive Summary

Current Service Cost

The current service cost as a percentage of salary and as dollar amounts with effect for the first plan year following December 31, 2013, along with the previous year's current service cost from the December 31, 2012 management valuation, are as follows:

	December 31, 2013	December 31, 2012
Total current service cost	$ 77,428,000	$ 73,008,000
Expected member contributions	43,095,000	40,867,000
Expected employer contributions	43,095,000	40,867,000
Excess contributions / (Funding deficiency)	8,762,000	8,726,000
Total estimated payroll	**$ 520,611,000**	**$ 493,416,000**
	% of payroll	**% of payroll**
Total current service cost	14.9%	14.8%
Expected member contributions	8.3%	8.3%
Expected employer contributions	8.3%	8.3%
Excess contributions / (Funding deficiency)	1.7%	1.8%

Executive Summary

Key Assumptions

The principal assumptions to which the valuation results are most sensitive are outlined in the following table.

	December 31, 2013		December 31, 2012	
	Going Concern	**Solvency**	**Going Concern**	**Solvency**
Discount rate	6.5%	Annuity purchases: 3.9% Transfers: 3.0% for 10 years, 4.6% thereafter	6.5%	Annuity purchases: 3.0% Transfers: 2.4% for 10 years, 3.6% thereafter
Inflation rate	2.5%	n/a	2.5%	n/a
Pensionable earnings	3.5%	n/a	3.5%	n/a
Mortality table	UP94 with generational projection	UP94 with generational projection	UP94 with generational projection	UP94 with generational projection
Retirement rates – General Members	10% if eligible to retire but less than 80 points, 20% with 80 points, remainder at age 65	n/a	10% if eligible to retire but less than 80 points, 20% with 80 points, remainder at age 65	n/a
Retirement rates – Emergency Members	100% at earliest unreduced date	n/a	100% at earliest unreduced date	n/a

Respectfully submitted,

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May 6, 2014

Section 1: Introduction

Purpose and Terms of Engagement

We have been engaged by the Public Employees Benefits Agency and the Municipal Employees' Pension Commission, and hereafter collectively referred to as the "Commission", to conduct a management valuation of the Plan as at December 31, 2013 in accordance with the Plan's funding policy, based on the actuarial assumptions and methods summarized herein. More specifically, the purposes of the management valuation are to:

- Determine the financial position of the Plan on a best estimate going concern basis as at December 31, 2013;
- Determine the financial position of the Plan on a solvency basis as at December 31, 2013; and
- Determine the best estimate funding requirements of the Plan as at December 31, 2013.

The results of this report may not be appropriate for accounting or regulatory filing purposes or any other purposes not listed above.

While we have been engaged by the Commission to conduct this actuarial valuation, we note that the users of our work may well extend to parties external to the Commission. Out of respect for the Commission's confidentiality, however, we shall not undertake to communicate the terms of our engagement or results of our work with such other users unless so directed by the Commission.

An actuarial valuation as at December 31, 2012 was filed with the regulatory authorities. The next required valuation for regulatory filing purposes will be as at December 31, 2015.

Summary of Changes Since the Last Valuation

The last such management valuation in respect of the Plan was performed as at December 31, 2012. Since the time of the last management valuation, there have been no changes to the best estimate assumptions, but the market value of assets at December 31, 2012 was restated and reduced by $17,569,000 on a total fund basis, or $17,216,000 and $353,000 for the DB portion and annuity fund, respectively. This subsequently reduced the smoothed value of assets for the DB portion by $3,440,000. The December 31, 2012 results in this report reflect the restated market value of assets.

Information and Inputs

In order to prepare our valuation, we have relied upon the following information:

- Membership data compiled as at December 31, 2013 by the Public Employees Benefits Agency (PEBA);
- Asset data taken from the Plan's audited financial statements; and
- A copy of the act and regulations governing the Plan.

Furthermore, the actuarial assumptions and methods have been chosen to reflect our understanding of the Commission's desired funding objectives with due respect to accepted actuarial practice in Canada and the Plan's funding policy.

Section 1: Introduction

Subsequent Events

On February 13, 2014, the Canadian Institute of Actuaries (CIA) released their final report and mortality tables from their study of Canadian pensioner mortality levels and trends. The results of their report suggest that:

- the widely used 1994 Uninsured Pensioner (UP94) mortality table together with generational improvements as per Scale AA understates Canadian life expectancies; and
- more rapid improvements in life expectancies have been observed than suggested by the widely used AA improvement scale.

Since the release of the report, there has been a great deal of pressure in the industry to adopt the new Canadian Pensioner Mortality tables, which could result in a potentially material increase in liabilities for the Plan. If a funding valuation report were to be filed as at December 31, 2013, the CPM-B mortality improvement projection scale would have to be reflected in the calculation of the liabilities, which would be greater than those shown in this report. However, for the purposes of this report, no change in the mortality assumption has been made from that used in the December 31, 2012 valuation.

As of the date of this report, we have not been made aware of any other subsequent events which would have an effect on the results of this valuation. However, the following points should be noted in this regard:

- Actual experience deviating from expected after December 31, 2013 will result in gains or losses which will be reflected in the next actuarial valuation report; and
- To the best of our knowledge, the results contained in this report are based on the regulatory and legal environment in effect at the date of this report and do not take into consideration any potential changes that may be currently under review. To the extent that actual changes in the regulatory and legal environment transpire, any financial impact on the Plan as a result of such changes will be reflected in future valuations.

Section 2: Management Valuation Results

Financial Position of the Plan under Management Valuation

The management valuation provides an assessment of the Plan's financial position at the valuation date on the premise that the Plan continues on into the future indefinitely.

The selection of the best estimate actuarial assumptions and methods used for the management valuation reflect the Plan's funding objectives, as communicated by the Commission, actuarial standards of practice, and pension standards.

On the basis of the funding policy, plan provisions, membership data, best estimate assumptions and methods, and asset information described in the Appendices, the financial position of the Plan under the management valuation as at December 31, 2013 is shown in the following table. The results as at December 31, 2012 are also shown for comparison purposes.

Financial Position under Management Valuation

	December 31, 2013	December 31, 2012
Market Value of Assets	$ 1,657,161,000	$ 1,534,585,000
Asset smoothing adjustment	(67,612,000)	(79,798,000)
Actuarial Value of Assets	$ 1,589,549,000	$ 1,454,787,000
Going Concern Liabilities		
Active General members	$ 778,524,000	$ 747,442,000
Active Emergency	57,795,000	56,241,000
Disabled members	11,378,000	13,205,000
Retired members	490,869,000	453,413,000
Survivors	36,152,000	34,194,000
Deferred members	47,043,000	46,744,000
Pending terminations	42,812,000	38,040,000
Pending payouts	4,809,000	5,245,000
Transfer deficiency holdbacks	3,033,000	1,101,000
Former plan and AVC	166,000	152,000
Total Liabilities	**$ 1,472,581,000**	**$ 1,395,777,000**
Reserves		
Liability reserve (future disabled accruals)	$ 8,846,000	$ 7,909,000
Total Liabilities and Reserves	**$ 1,481,427,000**	**$ 1,403,686,000**
Surplus/(Unfunded Liability)	**$ 108,122,000**	**$ 51,101,000**
Management funded ratio	**107.3%**	**103.6%**

Section 2: Management Valuation Results

Change in Financial Position

During the period from December 31, 2012 to December 31, 2013, the management financial position of the Plan changed from a surplus of $54,541,000 to a surplus of $108,122,000. The major components of this change are summarized in the following table.

Reconciliation of the Financial Position under Management Valuation
For the Period from December 31, 2012 to December 31, 2013

Surplus/(Unfunded Liability) as at December 31, 2012	**$**	**54,541,000**
Revision to assets		(3,440,000)
Revised Surplus/(Unfunded Liability) as at December 31, 2012	**$**	**51,101,000**
Expected interest on surplus (unfunded liability)		3,322,000
Expected Surplus/(Unfunded Liability) as at December 31, 2013	**$**	**54,423,000**
Change in liabilities due to experience gains/(losses)		
Gain due to actuarial return on assets greater than expected		46,226,000
Gain due to contributions greater than current service cost		10,055,000
Gain due to salary increases less than expected		5,363,000
Gain on disability experience		770,000
Loss on termination experience		(3,859,000)
Loss due to interest on contributions greater than expected		(2,639,000)
Loss on pensioner mortality experience		(1,908,000)
Loss on retirement experience		(110,000)
Net miscellaneous loss		(199,000)
Surplus/(Unfunded Liability) as at December 31, 2013	**$**	**108,122,000**

Section 2: Management Valuation Results

Going Concern Valuation Sensitivity Results

In accordance with the Canadian Institute of Actuaries Standards of Practice specific to pension plans, the table below presents the sensitivity of the going concern liabilities and the total normal cost of using a discount rate 1% lower than that used for the going concern valuation.

	Valuation Basis December 31, 2013	Based on Rate of 1% Lower	Effect $	Effect %
Management liabilities	$ 1,481,427,000	$ 1,678,133,000	$ 196,706,000	13.3%
Current service cost	$ 77,428,000	$ 90,454,000	$ 13,026,000	16.8%

Note that using a discount rate 1% higher than that assumed would result in a comparable reduction in the Plan's liabilities and current service cost.

Alternate Assumption Analysis

The following table outlines the impact of using alternate assumptions for the mortality table and the inflation rate assumption. In light of the recently released mortality tables from the CIA, we have analyzed two alternative mortality assumptions. The first uses the UP1994 table with mortality improvements projected to 2014 using Scale AA and future generational mortality improvements in accordance with the CIA's CPM-B projection scale. The second uses the CIA's full CPM-Private mortality scale with generational mortality improvements in accordance with the CPM-B projection scale, but adjusted to produce the same results as under the first alternative. We have also analyzed the impact of using an alternative inflation rate assumption of 2.25% per annum instead of 2.50%. Each scenario is independent of the others.

Management Results	Liabilities ($000s)	Funded Status ($000s)	Funded Ratio (%)	Current Service Cost (%)
Base Results	$ 1,481,427	$ 108,122	107.3%	14.9%
UP94@2014 with CPM-B	$ 1,493,978	$ 95,571	106.4%	15.0%
112% of CPM-Private	$ 1,494,889	$ 94,660	106.3%	15.0%
2.25% Inflation	$ 1,505,647	$ 83,902	105.6%	15.1%

Section 3: Solvency Valuation Results

Solvency Financial Position of the Plan

The solvency valuation is a financial assessment of the Plan that is required by the Plan's funding policy and is performed in accordance with requirements prescribed by *The Pension Benefits Act, 1992* (Saskatchewan) (the "Act"). It is intended to provide an assessment of the Plan's financial position at the valuation date on the premise that certain obligations as prescribed by the Act are settled on the valuation date for all members.

On the basis of the plan provisions, membership data, solvency assumptions and methods and asset information described in the Appendices, as well as the requirements of the Act, the solvency financial position of the Plan as at December 31, 2013 is shown in the following table. The solvency financial position of the Plan as at December 31, 2012 is shown for comparison purposes.

Solvency Financial Position

	December 31, 2013	December 31, 2012
Assets		
Solvency assets	$ 1,657,161,000	$ 1,534,585,000
Estimated wind up expenses	(7,087,000)	(6,889,000)
Total Assets	**$ 1,650,074,000**	**$ 1,527,696,000**
Solvency Liabilities		
Active general members	$ 967,592,000	$ 1,056,108,000
Active emergency members	66,808,000	74,413,000
Disabled members	13,481,000	17,881,000
Retired members	620,037,000	628,172,000
Survivors	42,985,000	43,634,000
Deferred members	71,341,000	82,560,000
Pending terminations	66,738,000	70,020,000
Pending payouts	4,809,000	5,245,000
Transfer deficiency holdbacks	3,033,000	1,101,000
Former plan and AVC	166,000	152,000
Total Liabilities	**$ 1,856,990,000**	**$ 1,979,286,000**
Solvency Surplus/(Deficiency)	**$ (206,916,000)**	**$ (451,590,000)**
Solvency Ratio	**88.9%**	**77.2%**

Section 3: Solvency Valuation Results

Solvency Ratio

The solvency ratio is the lesser of 1.0 or the ratio of the solvency assets (excluding wind-up expenses and present value of special payments) to the solvency liabilities (including wind-up expenses). If the solvency ratio is less than 1.0, certain conditions and restrictions, as prescribed by the Act, must be applied to the transfer of the commuted value of benefits from the Plan. Essentially, a transfer equal to the solvency ratio times the total commuted value can be made. The residual amount cannot be transferred out until either:

(a) a special payment (over the amounts being paid in to the Plan to amortize the solvency deficiency) in the amount of the residual has been made to the Plan;

(b) a subsequent valuation of the Plan discloses a solvency ratio of 1.0; or

(c) five years have elapsed.

If the residual amount is less than 5% of the YMPE ($52,500 x 5% = $2,625.00 for 2014) and the total of all such residual amounts is less than 5% of the market value of assets, then the above restrictions do not apply.

The solvency ratio is determined as follows:

	$
Market value of assets, less wind-up expenses	1,650,074,000
Solvency liabilities	1,856,990,000
Ratio	0.889

Since the ratio of the solvency assets to the solvency liabilities is less than 1.0 as at December 31, 2013, the above restrictions on transfers apply.

Solvency Valuation Sensitivity Results

In accordance with the Canadian Institute of Actuaries Standards of Practice specific to pension plans, the table below presents the sensitivity of the solvency liabilities to using a discount rate of 1% lower than that used for the solvency valuation.

	Valuation Basis December 31, 2013	Based on Rate of 1% Lower	Effect $	Effect %
Solvency liabilities	$ 1,856,990,000	$ 2,145,930,000	$ 288,940,000	15.6%

Note that using a discount rate 1% higher than that assumed would result in a comparable reduction in the solvency liabilities.

Section 3: Solvency Valuation Results

Incremental Cost on a Solvency Basis

The incremental cost on a solvency basis represents the present value at December 31, 2013 of the expected aggregate change in the solvency liabilities between December 31, 2013 and the next calculation date, which is December 31, 2014. Appendix E gives more details on the calculation methodology and on assumptions.

Based on this methodology and on these assumptions, the incremental cost on a solvency basis, for the period from December 31, 2013 to December 31, 2014, is $99.5 million.

Note that the incremental cost does not form part of the contribution requirements of the Plan.

Section 4: Contribution Requirements

Contribution Requirements in Respect of the Normal Cost

The annual going concern cost of benefits in respect of service accruing after the valuation date is known as the normal cost. The following table sets out:

- The development of the rule to determine the normal cost until the next actuarial funding recommendation is certified;
- An estimate of the normal cost for the year following the valuation date; and
- The portion of the current service cost that is to be paid by the members.

	General Members	Emergency Members	Total
Current Service Cost			
Total current service cost	$ 72,949,000	$ 4,479,000	$ 77,428,000
Expected member contributions	40,580,000	2,515,000	43,095,000
Expected employer contributions	40,580,000	2,515,000	43,095,000
Excess contributions / (Funding deficiency)	$ 8,211,000	$ 551,000	$ 8,762,000
Total pensionable earnings	$ 498,454,000	$ 22,157,000	$ 520,611,000

	% of payroll	% of payroll	% of payroll
Total current service cost	14.6%	20.2%	14.9%
Expected member contributions	8.15%	11.35%	8.3%
Expected employer contributions	8.15%	11.35%	8.3%
Excess contributions / (Funding deficiency)	1.7%	2.5%	1.7%

Appendix A: Glossary of Terms

- The **actuarial value of assets** is the asset value used for going concern valuation purposes. In this valuation report, smoothing methods are used to smooth investment gains and losses over a certain period.

- The **estimated wind up expenses** is an estimate of the administrative and other expenses expected to be charged against the pension fund if the Plan were to terminate on the valuation date.

- The **management liabilities** are the actuarial present value of benefits earned in respect of service prior to the valuation date. The management liabilities are calculated using the best estimate going concern assumptions and methods summarized in Appendix D of this report.

- The **management financial position** is the difference between the actuarial value of assets and the management liabilities.

- **Solvency assets** are the market value of pension fund assets adjusted to reflect contributions, benefit payments, transfers and fees/expenses in-transit at the valuation date plus the present value of 5 years of future special payments to be contributed to the Plan to amortize unfunded liabilities and solvency deficiencies of the Plan.

- The **solvency liabilities** are the actuarial present value of benefits earned in respect of service prior to the valuation date determined as if the Plan were wound up on the valuation date. The solvency liabilities are calculated using the solvency valuation assumptions summarized in Appendix E of this report.

- The **solvency ratio** compares the solvency assets, excluding the present value of any special payments, to the solvency liabilities, including estimated wind-up expenses.

- The **solvency surplus/(deficiency)** is the difference between the solvency assets (net of estimated wind up expenses and including the present value of special payments) and the solvency liabilities.

- The **surplus/(unfunded liability)** is the difference between the actuarial value of assets and the management liabilities.

- The **total normal cost** is the actuarial present value of benefits expected to be earned in respect of service for each year starting on the valuation date. The total normal cost is calculated using the best estimate going concern valuation assumptions and methods summarized in Appendix D of this report.

Appendix B: Assets

Market Value of Assets – Defined Benefit Portion

The following is a summary of the composition of the Plan's assets by asset type. This has been taken from the Plan's audited financial statements, dated March 21, 2014.

	December 31, 2013	
	$	%
Cash and short term	$ 67,644,000	4.1%
Bonds	498,684,000	30.1%
Equities	700,575,000	42.3%
Private equity	2,024,000	0.1%
Infrastructure	59,146,000	3.6%
Pooled Funds	322,620,000	19.4%
Net accounts payable and receivables	6,468,000	0.4%
Total Invested Assets	**$ 1,657,161,000**	**100.0%**

Target Asset Mix

The target asset mix of the fund, upon which the December 31, 2013 discount rate assumption has been based, is provided in the following table. This has been taken from the Plan's Statement of Investment Policies and Procedures dated November 2013.

	Minimum	Target	Maximum
Canadian Bonds – Corporate	7%	10%	13%
Canadian Bonds – Core Plus	7%	10%	13%
Canadian Bonds – Long-term Core Plus	7%	10%	13%
Canadian Bonds – Short Term	0%	5%	10%
Canadian Equities	10%	15%	20%
U.S. Equities (Large Capitalization)	2%	4%	6%
U.S. Equities (Small Capitalization)	2%	4%	6%
Non-North American Equities	2%	4%	6%
Global Equities	13%	18%	23%
Private Equity	0%	5%	8%
Infrastructure	4%	10%	13%
Real Estate	3%	5%	8%
		100.0%	

Appendix B: Assets

Reconciliation of Total Market and Actuarial Value of Assets

The following table reconciles changes in the market and smoothed values of assets between January 1, 2009 and December 31, 2013 for the total fund, including annuities.

(in thousands)	2009	2010	2011	2012	2013
Reported Market value at beginning of year	1,149,467	1,283,192	1,397,047	1,392,223	1,556,437
Employee contributions	22,922	28,134	34,966	36,778	42,853
Employer contributions	22,214	27,987	34,904	36,787	42,673
Transfers-in	641	551	923	833	772
Arrears contributions	29	55	149	322	210
Interest and Dividend Income	42,142	41,031	39,733	48,084	53,736
Change in market value of assets	124,443	94,763	(33,366)	143,533[2]	99,952
Pensions	(43,387)	(45,659)	(48,461)	(51,411)	(54,796)
Termination / death payments	(26,302)	(24,271)	(23,645)	(33,111)	(40,624)
Investment expenses	(5,207)	(4,688)	(5,105)	(12,707)	(18,616)
Administration expenses	(3,770)	(4,048)	(4,922)	(4,894)	(4,997)
Reported market value at end of year	1,283,192	1,397,047	1,392,223	1,556,437	1,677,600
Net Rate of Return[3] – Market value	14.21%	10.29%	0.09%	12.92%	8.38%
Expected actuarial return	6.00%	6.00%	5.75%	5.00%	6.50%
Investment Income Net of Expenses[3]	161,378	131,106	1,262	178,910	130,075
Expected Actuarial Investment Income	68,138	76,474	80,155	69,244	100,879
Excess/(Shortfall)	93,240	54,632	(78,893)	109,666	29,196
80% of current year excess/(shortfall)	74,592	43,706	(63,114)	87,733	23,357
60% of current year, less 1 excess/(shortfall)	(189,259)	55,944	32,779	(47,336)	65,800
40% of current year, less 2 excess/(shortfall)	(10,993)	(126,172)	37,296	21,853	(31,557)
20% of current year, less 3 excess/(shortfall)	17,925	(5,497)	(63,086)	18,648	10,926
Total Asset Fluctuation Reserve	**(107,735)**	**(32,019)**	**(56,125)**	**80,898**	**68,526**
Actuarial value at beginning of year	1,382,452	1,390,927	1,429,066	1,448,348	1,475,539
Total Contributions	45,136	56,121	69,870	73,565	85,526
Net transfers	670	606	1,072	1,155	982
Investment Income[3]	36,128	55,390	25,368	41,887	142,447
Total benefit payments	(69,689)	(69,930)	(72,106)	(84,522)	(95,420)
Administration expenses	(3,770)	(4,048)	(4,922)	(4,894)	-
Actuarial value at end of year	1,390,927	1,429,066	1,448,348	1,475,539	1,609,074
Corridor adjustment[4]	(43,575)	-	-	-	-
Actuarial value at end of year (after corridor)	1,347,352	1,429,066	1,448,348	1,475,539	1,609,074
Net Rate of Return[3] (after corridor)	14.09%	7.39%	1.78%	2.91%	9.68%
% of Market Value	105.00%	102.29%	104.03%	94.80%	95.92%

[2] Revised. Was $161,102 in December 31, 2012 management report.
[3] Prior to December 31, 2012, this is net of investment expenses. Starting January 1, 2013, this is net of all expenses.
[4] Prior to 2012, the actuarial value of assets was restricted to be no less than 95% or more than 105% of the market value of assets. Starting in 2012, the actuarial value of assets is restricted to be no less than 90% or more than 110% of the market value of assets.

Appendix B: Assets

The smoothed value of assets for the defined benefit portion has been calculated by multiplying the market value of assets for the defined benefit portion of $1,657,161,000 by the smoothing adjustment of 95.92% to obtain a smoothed value of assets of $1,589,549,000.

Appendix C: Membership Data

Source of Data

Data as to the membership of the Plan was compiled as at December 31, 2013 and provided by the Public Employees Benefits Agency. The relevant data required as of December 31, 2013 to carry out this valuation was extracted from these records. The data was checked for consistency with the previous valuation, general reasonableness, internal consistency and reconciled with the previous valuation's membership data. Data testing did not include an independent audit from source records to test for completeness and accuracy.

Data checks included, but were not limited to, a review of changes to annual pensions, review of salary increases, personal data (i.e. birth dates, dates of hire, etc) from the previous valuation to this valuation, service accrual and any duplicate records. The checks were reviewed with the plan administrator and appropriate adjustments were made.

Membership Reconciliation

	General	Emergency	Disabled	Pensioner	Survivor	Deferred	Pending	Total
December 31, 2012	**13,916**	**257**	**206**	**3,748**	**859**	**1,573**	**2,404**	**22,963**
New	1,900	16	6	-	-	-	217	2,139
Data Changes	-	-	-	3	3	-	-	6
To General	301	-	(50)	-	-	-	(251)	-
To Emergency	(2)	4	(1)	-	-	-	(1)	-
To LTD	(74)	-	79	-	-	-	(5)	-
To Pensioner	(240)	(5)	(8)	303	-	(24)	(26)	-
To Survivor	-	-	-	(77)	80	-	-	3
To Deferred	(35)	(2)	(1)	-	-	80	(42)	-
To Pending	(867)	(4)	(11)	-	-	-	882	-
Benefits ended	-	-	-	(10)	(3)	-	-	(13)
Death, no survivor	-	-	-	(44)	(47)	-	-	(91)
Paid out	(770)	(8)	(21)	-	-	(118)	(466)	(1,383)
December 31, 2013	**14,129**	**258**	**199**	**3,923**	**892**	**1,511**	**2,712**	**23,624**

Appendix C: Membership Data

Membership Data – Defined Benefit Provision

Active Members – General

	December 31, 2012	December 31, 2013
Membership	13,916	14,129
Average age	46.9 years	47.0 years
Average eligibility service	8.3 years	8.2 years
Percent female	66.6%	66.3%
Average full-time equivalent earnings	$38,754	$40,532
Average employee required contributions with interest	$21,438	$23,618

Active Members – Emergency

	December 31, 2012	December 31, 2013
Membership	257	258
Average age	40.5 years	40.8 years
Average eligibility service	11.1 years	11.1 years
Percent female	10.9%	10.5%
Average full-time equivalent earnings	$81,995	$84,378
Average employee required contributions with interest	$83,538	$91,847

Disabled

	December 31, 2012	December 31, 2013
Membership	206	199
Average age	53.9 years	52.7 years
Average eligibility service	10.0 years	8.9 years
Percent female	60.2%	59.8%
Average fulltime equivalent earnings	$35,656	$37,498

Appendix C: Membership Data

Deferred Pensioners

	December 31, 2012	December 31, 2013
Membership	1,573	1,511
Average age	49.5 years	49.8 years
Average monthly accrued pension	$323	$353
Average monthly bridge	$12	$12
Total excess employee contributions	$7,633,000	$6,828,000

Pending

	December 31, 2012	December 31, 2013
Membership	2,404	2,712
Average age	43.1 years	43.6 years
Average monthly accrued pension	$192	$196
Average monthly bridge	$10	$10
Total refund of contributions	$1,690,000	$1,994,000

Pensioners

	December 31, 2012	December 31, 2013
Membership	3,748	3,923
Average age	71.1 years	71.0 years
Average monthly lifetime pension	$935	$963
Average monthly bridge	$287[5]	$304[6]
Average period since retirement	10.0 years	9.9 years

[5] For 976 pensioners receiving a bridge payment.
[6] For 1,037 pensioners receiving a bridge payment.

Appendix C: Membership Data

Survivors

	December 31, 2012	December 31, 2013
Membership	859	892
Average age[7]	79.7 years	77.4 years
Average monthly lifetime pension	$445	$460
Average monthly bridge	$194[8]	$194[9]
Average period since retirement	20.2 years	20.6 years

General Active Members – Age/Service Distribution

Age		Years of Credited Service: Under 5 ($)	5-9.99 ($)	10-14.99 ($)	15-19.99 ($)	20-24.99 ($)	25-29.99 ($)	30-34.99 ($)	35 or more	Total ($)
Under 20	Number	51	0	0	0	0	0	0	0	51
	Average Salary	33,451	0	0	0	0	0	0	0	33,451
20 to 24	Number	419	8	0	0	0	0	0	0	427
	Average Salary	34,363	36,644	0	0	0	0	0	0	34,405
25 to 29	Number	706	92	0	0	0	0	0	0	798
	Average Salary	41,358	44,621	0	0	0	0	0	0	41,734
30 to 34	Number	814	260	62	1	0	0	0	0	1,137
	Average Salary	38,458	47,731	48,726	38,002	0	0	0	0	41,138
35 to 39	Number	965	391	179	43	3	0	0	0	1,581
	Average Salary	35,687	44,007	46,949	47,686	53,427	0	0	0	39,380
40 to 44	Number	882	455	264	90	35	2	0	0	1,728
	Average Salary	36,198	39,541	40,791	52,203	54,502	66,872	0	0	39,020
45 to 49	Number	779	527	399	145	110	101	12	0	2,073
	Average Salary	37,637	39,466	37,470	47,231	56,646	60,309	56,867	0	40,965
50 to 54	Number	753	554	532	265	217	135	102	8	2,566
	Average Salary	39,921	38,695	36,588	43,512	46,745	60,713	61,501	72,819	41,968
55 to 59	Number	598	417	337	229	200	145	60	32	2,018
	Average Salary	39,152	40,510	36,292	43,828	44,776	50,962	58,179	56,392	41,731
60 to 64	Number	389	250	267	117	116	70	56	18	1,283
	Average Salary	39,784	41,025	37,780	43,682	43,384	45,229	45,817	55,100	41,065
Over 64	Number	163	93	93	24	32	25	15	22	467
	Average Salary	34,941	36,115	31,720	41,974	40,652	40,855	44,844	45,580	36,422
TOTAL	**Number**	**6,519**	**3,047**	**2,133**	**914**	**713**	**478**	**245**	**80**	**14,129**
	Average Salary	**37,879**	**40,942**	**38,386**	**45,209**	**47,309**	**54,390**	**55,856**	**54,771**	**40,532**

[7] Does not include beneficiaries who are only receiving a remaining guarantee benefit.
[8] For 16 survivors receiving a bridge payment.
[9] For 18 survivors receiving a bridge payment.

Appendix D: Management Assumptions and Methods

Assumptions and Methods

A member's entitlements under a pension plan are generally funded during the period over which service is accrued by the member. The cost of each member's benefits is allocated in some fashion over the member's service. An actuarial valuation provides an assessment of the extent to which allocations relating to periods prior to a valuation date (often referred to as the actuarial liabilities) are covered by the plan's assets.

The going concern valuation provides an assessment of a pension plan on the premise that the plan continues on into the future indefinitely based on assumptions in respect of future events upon which a plan's benefits are contingent and methods that effectively determine the way in which a plan's costs will be allocated over the members' service. The true cost of a plan, however, will emerge only as experience develops, investment earnings are received, and benefit payments are made.

This appendix summarizes the going concern assumptions and methods that have been used for the management valuation of the Plan at the valuation date. The going concern assumptions and methods have been chosen to reflect our understanding of the Plan's funding objectives with due respect to accepted actuarial practice and regulatory constraints. For greater certainty: the assumptions used for this valuation have been selected as best estimate assumptions, containing no margins for adverse deviations of experience from the assumptions.

Summary

The actuarial assumptions and methods used in the current and previous valuations are summarized below and described on the following pages.

	December 31, 2013	**December 31, 2012**
Economic Assumptions		
Discount rate	6.5%	Same
Inflation rate	2.5%	Same
Increases in pensionable earnings – base	3.5%	Same
Increases in pensionable earnings – merit and promotion	Variable by service (Table A following)	Same
Increases in year's maximum pensionable earnings (“YMPE”)	3.5%	Same
Increases in maximum pension limit	In accordance with *Income Tax Act*, then 3.5%	Same
Interest on member contributions	6.5%	Same
Investment expenses	Included in discount rate	Same
Non-investment expenses	Included in discount rate	Same
Margin for adverse deviation	None	Same

Appendix D: Management Assumptions and Methods

	December 31, 2013	December 31, 2012
Demographic Assumptions		
Mortality	UP94 with generational projection using Scale AA	Same
Retirement – General Members	10% if eligible to retire but less than 80 points, 20% with 80 points, remainder at age 65	Same
Retirement – Emergency members	100% at earliest unreduced date	Same
Termination of employment	Variable by age (Table B following)	Same
Disability	None	Same
Proportion married:		
Non-retired proportion with spouse	90% for males, 70% for females	Same
Non-retired spousal age differential	Males four years older	Same
Retired members	Actual marital status and ages are used	Same
Margin for adverse deviation	None	Same
Methods		
Actuarial cost method	Projected unit credit	Same
Asset valuation method	5-year smoothed value with 10% corridor	Same

Economic Assumptions

Discount Rate

A discount rate of 6.5% has been used for this valuation. This discount rate is based on the following information:

The overall best estimate expected annual rate of return on assets is 6.5%. This is based on an assumed inflation rate of 2.5%, yielding a real rate of return on the pension fund assets of 4.0% per annum. This best-estimate rate of return on the assets was developed using best-estimate returns for each major asset class in which the pension fund is invested. In addition, certain adjustments, such as expected additional return from the interest rate overlay strategy, asset mix rebalancing and diversification, have been included to reflect the Plan's overall investment policy.

A specific provision has been included for investment management fees, which is made up of a component for passive management and a component for active management. PEBA has provided input on the level of expected active management fees. The assumption for active management fees anticipates an increase from historical levels due to expected changes in the investment policy.

Appendix D: Management Assumptions and Methods

The previous valuation used a discount rate net of investment expenses of 6.5% per annum.

For greater clarity: the following has been incorporated in the adjustments used to establish the best estimate discount rate for this valuation.

Development of Best Estimate Discount Rate				
Expected return on assets – before expenses and adjustments				6.91%
Non-investment expenses				(0.40)%
Investment expenses				
Passive	(1)	(0.03)%		
Actively managed	(2)	(0.60)%		
			(1)+(2)	(0.63)%
Additional returns due to active management				0.60%
Interest rate overlay				(0.00)%[10]
Unrounded Discount Rate				**6.48%**

Therefore, we have arrived at a discount rate of 6.48% per year, which has been rounded to 6.50%. This assumption is best estimate and therefore contains no margins for adverse deviation.

Inflation Rate

The inflation rate is assumed to be in the range of 2% to 3% per annum. For the purpose of this valuation a point estimate of 2.5% per year has been used. This reflects the current best estimate of future inflation considering current and future economic and financial market conditions. The inflation rate used in the previous valuation was 2.5%.

Increases in Pensionable Earnings

We have assumed future salary increases will be 3.50% per year, plus a merit and promotion scale that varies by service, as shown in the following Table A. The assumption reflects an assumed rate of inflation of 2.50% per year plus an allowance of 1.00% per year for the effect of productivity growth. The same assumptions were used in the previous valuation.

[10] It is worth noting that there is an expected additional return of roughly 0.2%-0.5% due to the effect of the leveraged position of the plan as a result of the interest rate overlay. However, as there is some uncertainty as to its exact impact, we have not added any additional expected return from the overlay at this point. This component of the discount rate will continue to be monitored in future valuations.

Appendix D: Management Assumptions and Methods

Table A – Merit and Promotion Rates

The rates for increases in pensionable earnings due to merit and promotion used in this valuation and the previous valuation are shown in the following table:

Year of service	General Members	Emergency Members
≤5	2.0%	3.0%
6-10	1.5%	2.0%
11-15	1.0%	1.0%
16-20	0.5%	0.5%
>20	0.0%	0.0%

Increases in Year's Maximum Pensionable Earnings

As the benefits paid to a member from the Plan are dependent to a small degree on the future Year's Maximum Pensionable Earnings ("YMPE"), it is necessary to make an assumption regarding the future increases in the YMPE.

The YMPE was assumed to increase up until the time the member retires, dies or terminates from active employment at 3.5% per year. This is comprised of an annual increase of 2.50% on account of inflation, plus 1.00% on account of productivity, which is consistent with historical real economic growth. The same assumption was used in the previous valuation.

Increases in the Maximum Pension Limit

Pensions are limited to the maximum limits under the *Income Tax Act*. The maximum lifetime annual pension per year of pensionable service payable under the *Income Tax Act* is $2,770.00 in 2014. It is assumed that the maximum limit will increase at 3.5% per year commencing in 2015. This is comprised of an annual increase of 2.50% on account of inflation, plus 1.00% on account of productivity, which is consistent with historical real economic growth. The previous valuation assumed the maximum lifetime pension would increase at 3.5% per year from $2,696.67 in 2013.

Interest on Member Contributions

Interest is credited on member contributions at 6.50% per year. The assumption reflects the expected long-term return on assets. The same assumption was used in the previous valuation.

Expenses

Since the discount rate has been established net of all expenses, no explicit assumption is required for expenses. This is unchanged from the previous valuation.

Appendix D: Management Assumptions and Methods

Demographic Assumptions

Mortality

The membership of this Plan is not sufficiently large to develop its own plan-specific mortality table. The 1994 Uninsured Pensioner Mortality Table ("UP94") reflects the mortality experience as of 1994 for a large sample of North American pension plans. Applying projection scale AA on a generational mortality improvement basis provides allowance for improvements in mortality after 1994. This table has been commonly used for valuations where the mortality experience of the membership of a plan is insufficient to assess plan specific experience and where there is no reason to expect the mortality experience of the Plan to differ significantly from that of other pension plans. However, recent statements made by the Canadian Institute of Actuaries suggest that this table may not be appropriate for Canadian pension plans unless the plan has material experience to suggest otherwise. Therefore, this assumption should be reviewed in more detail in the near future.

Generational mortality rates depend on the year of birth of a member and vary by age. For example, the mortality rate at age 80 for a member age 70 at the valuation date (e.g. 49.34 expected deaths per 1,000 lives for males in the table below) will be higher than the mortality rate at age 80 for a member age 60 (e.g. 44.62 expected deaths per 1,000 lives for males in the table below) at the valuation date. The mortality rates decline due to projected mortality improvements over time.

Mortality rates per 1,000 lives at selected ages are as follows:

Mortality per 1,000 lives - Male

	Mortality per 1,000 lives at each future age				
Current age	**80**	**85**	**90**	**95**	**100**
60	44.62	76.22	134.58	225.00	321.24
70	49.34	81.77	140.08	229.55	324.47
80	54.55	87.72	145.81	234.19	327.73
90	n/a	n/a	151.77	238.93	331.03

Mortality per 1,000 lives - Female

	Mortality per 1,000 lives at each future age				
Current age	**80**	**85**	**90**	**95**	**100**
60	31.98	55.56	107.58	179.35	279.92
70	34.31	59.00	110.86	182.98	282.73
80	36.81	62.66	114.24	186.68	285.57
90	n/a	n/a	117.73	190.45	288.44

Appendix D: Management Assumptions and Methods

Retirement

Retirement rates are typically developed taking into account the past experience of the Plan.

General active members are assumed to retire at the rate of 10% per year if eligible to retire but have not attained 80 points (age plus service), 20% per year if they have 80 points, with the remainder assumed to retire at age 65. This assumption is unchanged from the rates used in the previous valuation.

Emergency active members and disabled members are assumed to retire at their earliest unreduced retirement date, which is the same assumption used in the previous valuation.

Deferred and pending members are assumed to retire at their earliest reduced or unreduced date, with any applicable reductions. These dates and pension amounts were included in the data. This assumption is unchanged from the previous valuation.

Termination of Employment

A member's benefit entitlement under the Plan is affected by whether the member terminates employment prior to retirement for reasons other than death. In order to account for this in the calculation of the actuarial liability, an assumption regarding the probability that a member will terminate employment for reasons other than death has been made.

The termination rates are summarized in Table B below. Note that termination rates for emergency members are assumed to be 75% of those for general active members. Disabled members are assumed not to terminate membership prior to retirement.

Table B – Termination Rates

Sample rates used in this valuation and the previous valuation are shown in the following table:

Age	General Members	Emergency Members
20	20.5%	15.4%
25	15.5%	11.6%
30	10.5%	7.9%
35	6.5%	4.9%
40	4.8%	3.6%
45	4.3%	3.2%
50	3.2%	2.4%
55	1.2%	0.9%
>57	0.0%	0.0%

In addition, we have assumed that, upon termination, 50% of members will elect a deferred retirement benefit and 50% will elect a lump sum transfer. For those members electing a transfer, we have assumed a discount rate of 3.4% will be used to determine such values.

The termination assumptions are unchanged from the previous valuation.

Appendix D: Management Assumptions and Methods

Disability

If an active Plan member becomes disabled, contributory service continues to accrue until unreduced pension commencement age, but employee contributions are waived. Since this benefit is substantially the same as the benefit that accrues to an active member, no assumption has been made for future disabilities.

For those members that are currently disabled, we have assumed that members will continue to earn full credited service each year in the future until retirement at the earliest unreduced age. The liability associated with the future service accrual for disabled members has been held as a liability reserve.

The same assumption was used in the previous valuation.

Proportion of Members with Spouses and Spousal Age Differential

These assumptions are relevant to the valuation of benefits since there is a subsidized joint and survivor benefit available for members with a spouse. It has been assumed that 90% of male members and 70% of female members will have a spouse at retirement, and males are assumed to be 4 years older than females. This assumption is unchanged from the previous valuation.

Other

Actuarial Cost Method

An actuarial cost method is a technique used to allocate in a systematic and consistent manner the expected cost of a pension plan over the years of service during which plan members earn benefits under the Plan. By funding the cost of a pension plan in an orderly and rational manner, the security of benefits provided under the terms of the plan in respect of service that has already been rendered is significantly enhanced.

The projected accrued benefit actuarial cost method has been used for this valuation. Under this method, the actuarial present value of benefits in respect of service prior to the valuation date, but based on pensionable earnings projected to retirement, is compared with the actuarial asset value, revealing either a surplus or an unfunded actuarial liability.

With respect to service after the valuation date, the expected value of benefits for service in the year following the valuation date (i.e., the current service cost) is expressed as a percentage of the expected value of participating payroll for that year.

When calculating the actuarial present value of benefits at the valuation date, the present value of all retirement, withdrawal and preretirement death benefits are included. For each member, the retirement, withdrawal and pre retirement death benefits for a particular period of service are first projected each year into the future taking into account future vesting, early retirement entitlements and pension entitlements. These projected benefits for each future year are then capitalized, multiplied by the probability of the member leaving the Plan in that year and discounted with interest and survivorship to the valuation date. The actuarial present value of benefits for the particular period of service is then determined by summing the present values of these projected benefits.

Appendix D: Management Assumptions and Methods

The pattern of future contributions necessary to pre fund future benefit accruals for any one particular individual will increase gradually as a percentage of their pensionable earnings as the individual approaches retirement. For a stable population (i.e., one where the demographics of the group remain constant from year to year), the normal cost will remain relatively level as a percentage of payroll.

Asset Valuation Method

The actuarial value of assets (AVA) methodology shown in Appendix A was used in accordance with the funding policy, with the goal of moderating fluctuations in contribution rates. The method used tracks the market value of assets, and would approach market value if rates of return matched assumptions. The method chosen does not deviate materially from market value, and additionally, we have set a corridor for the method to produce actuarial values within plus or minus 10% of market value should the method produce an AVA outside of this range. The method does not have undue influence on investment transactions, (i.e., sale of an asset will not have an impact on the AVA). A 5-year period of averaging was chosen, which is within the typical range of an economic cycle. There is no bias in the method, as we believe there is an equal probability of the AVA being higher or lower than the market value of assets.

Appendix E: Solvency Assumptions and Methods

Valuation Assumptions

	December 31, 2013	December 31, 2012
Economic Assumptions		
Discount Rate		
Transfer value basis	3.00% for 10 years; 4.60% thereafter	2.40% for 10 years; 3.60% thereafter
Annuity purchase basis	3.90%	3.00%
Demographic Assumptions		
Post-retirement mortality rates	1994 Uninsured Pensioner Mortality Table with fully generational projection scale AA (sex-distinct rates)	Same
Withdrawal rates	Not Applicable	Same
Retirement age		
Active and disabled members	Age that produces the highest lump-sum value	Same
Deferred vested members	Age that produces the highest lump-sum value	Same
Retired members and beneficiaries	Not applicable	Same
Termination of employment	Terminate with full vesting	Same
Marital status		
Non-retired spousal proportion	90% for males, 70% for females	Same
Non-retired spousal age differential	Males four years older	Same
Retired members	Actual marital status and ages are used	Same
Other		
Wind up expenses	$300 per member	No change
Actuarial cost method	Unit credit	No change
Asset valuation method	Market value of assets adjusted to reflect in-transit items as of the valuation date	No change
Solvency Incremental Normal Cost		
Increases in pensionable earnings	3.50% + merit and promotion	Same
Increases in YMPE	3.50%	Same
Increases in maximum pension limit	In accordance with *Income Tax Act*, then 3.50%	Same
Inflation Rate	2.50%	Same

Appendix E: Solvency Assumptions and Methods

Based on the Canadian Institute of Actuaries' Guidance and information such as pension legislation, Plan provisions and Plan experience, we have made the following assumptions regarding how the Plan's benefits would be settled on Plan wind up, which is unchanged from the previous valuation:

	Percent of Liability Assumed to be Settled By Purchase of Annuities	**Percent of Liability Assumed to be Settled By Lump-Sum Transfer**
Members not currently receiving a pension		
Less than age 53.5	0%	100%
At least age 53.5	100%	0%
Members currently receiving a pension	100%	0%

Estimated Wind Up Expenses

Plan wind up expenses would normally include such items as fees related to preparation of the actuarial wind up report, fees imposed by a pension supervisory authority, legal fees, administration, custodial and investment management expenses. We have assumed these fees would amount to $300 per member. This assumption is unchanged from the previous valuation.

Actuarial Cost Methods

Unit credit (accrued benefit) cost method as prescribed.

Asset Valuation Method Considerations

Assets for solvency purposes have been determined using market value.

Incremental Cost on a Solvency Basis

The incremental cost on a solvency basis represents the present value, at the calculation date (time 0), of the expected aggregate change in the solvency liabilities between time 0 and the next calculation date (time t), adjusted upwards for expected benefit payments between time 0 and time t.

An educational note was published in December 2010 by the Canadian Institute of Actuaries' Committee on Pension Plan Financial Reporting to provide guidance for actuaries on the calculation of this information.

The calculation methodology can be summarized as follows:

- The present value at time 0 of expected benefit payments between time 0 and time t, discounted to time 0,

  plus

- A projected hypothetical wind up or solvency liabilities at time t, discounted to time 0, allowing for, if applicable to the pension plan being valued:
  - expected decrements and related changes in membership status between time 0 and time t,
  - accrual of service to time t,

Appendix E: Solvency Assumptions and Methods

- expected changes in benefits to time t,
- a projection of pensionable earnings to time t,

minus

- The hypothetical wind up or solvency liabilities at time 0.

The projection calculations take into account the following assumptions and additional considerations:

- The assumptions for the expected benefit payments and decrement probabilities, service accruals, and projected changes in benefits and/or pensionable earnings would be consistent with the best estimate assumptions used in the management valuation.
- The assumptions used to calculate the projected liability at time t are consistent with the assumptions for the solvency liabilities at time 0, assuming that interest rates remain at the levels applicable at time 0, that the select period is reset at time t for interest rate assumptions that are select and ultimate and that the Standards of Practice for the calculation of commuted values and the guidance for estimated annuity purchase costs in effect at time 0 remain in effect at time t.
  - Active and inactive plan members as of time 0 and assumed new entrants over the period between time 0 and time t are considered in calculating the incremental cost.

Appendix F: Summary of Plan Provisions

The following is a summary of the main provisions of the Plan which are relevant to the valuation. For complete details, reference should be made to the official Plan documents.

Effective Date

The effective date of the Plan is November 1, 1973.

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 if 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.

Normal Retirement

The normal retirement date for members is the first day of the month immediately following the attainment of age 65. The normal retirement date for emergency workers 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 or more) with an unreduced pension. They can also retire after 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.

Appendix F: Summary of Plan Provisions

Emergency Members

Emergency members can retire with an unreduced pension at any time after satisfying any of:

- age 55,
- rule of 75, or
- 25 years of continuous service.

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. The pension in respect of service prior to 1992 is not reduced for early retirement.

Employee Contributions

Effective January 1, 2011, general members are required to contribute an amount equal to 7.4% of their earnings. Emergency members contribute 10.2% of their earnings. Effective January 1, 2013, general members contribute 8.15% and emergency members 11.35% of 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.

Employer Contributions

The participating employers shall contribute to the Plan such amounts equal to the required employee contributions.

Amount of Pension

Upon retirement, a member is entitled to a retirement benefit based on the member's highest average salary and contributory service, where the highest average 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 highest average salary multiplied by the number of years or 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:

Appendix F: Summary of Plan Provisions

- Are entitled to a pension of 1.5% of the highest average salary multiplied by the number of years of contributory service excluding the years 2001 to 2005; plus
- A pension of 1.8% of the highest average 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 highest average salary multiplied by the number of years of contributory service, excluding the years 2001 to 2005; plus
- A pension of 2% of the highest average 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:
  (i) 1.3% times the highest average salary not in excess of the three year average YMPE plus 2% times the highest average salary in excess of the three year average YMPE, and
  (ii) 1.8% times the highest average 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:
  (i) 1.3% times the highest average salary not in excess of the three year average YMPE plus 2% times the highest average salary in excess of the three year average YMPE, and
  (ii) 1.5% times the highest average 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 highest average salary:
- With respect to service on or after January 1, 1990, but excluding years of 2001 to 2005, are entitled to a pension for each year of contributory service equal to the greater of:
  (i) 1.3% times the highest average salary not in excess of the three year average YMPE plus 2% times the highest average salary in excess of the three year average YMPE, and
  (ii) 1.7% of the highest average salary.

Appendix F: Summary of Plan Provisions

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. The spouse also has the option to receive a monthly lifetime pension based on the total value of the death benefit.

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 death of both the retired member and retired member's spouse, the 60% allowance will be payable to the 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

Appendix F: Summary of Plan Provisions

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.

Appendix G: Summary of Funding Policy

The following is a summary of the provisions of the Plan's funding policy, effective November 15, 2013, which are relevant to the valuation. For complete details, reference should be made to the official funding policy document.

Valuations

The funding policy requires the preparation of the following three valuations:

- Management valuation
- Solvency valuation
- Filing valuation

Management Valuation

The management valuation is the primary source of information upon which the Commission will base its decisions or recommendations regarding contribution rates and additional benefits. The management valuation shall be prepared annually using best estimate economic and demographic assumptions.

The management valuation shall include reserves for accruals for disabled members equal to the present value of all future accruals for presently disabled members.

The actuarial value of assets will be determined using a smoothing method over no more than 5 years and the actuarial value of assets will be limited to not more than 110% nor less than 90% of the market value of assets.

The discount rate used for the management valuation shall be best estimate and shall include a provision for future investment management and administration expenses.

Solvency Valuation

The solvency valuation provides a minimum funding target for the Plan and shall be prepared in accordance with requirements of *The Pension Benefits Act, 1992* (Saskatchewan).

The market value of assets on an accrual basis will be used to determine the solvency financial position.

Filing Valuation

The filing valuation is required to be prepared at least triennially to comply with the requirements of *The Pension Benefits Act, 1992* (Saskatchewan) and the *Income Tax Act*. The filing valuation shall be filed with the Financial and Consumer Affairs Authority of Saskatchewan and the Canada Revenue Agency with respect to the decisions or recommendations of the Commission with respect to contribution rates and benefits.

Appendix H: Administrator Certification

With respect to the Municipal Employees' Pension Plan, forming part of the actuarial report as at December 31, 2013, I hereby certify that, to the best of my knowledge and belief:

- The asset data contained in Appendix B of this report is complete and accurate;
- The membership data summarized in Appendix C of this report form 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;
- The summary of the Plan provisions contained in Appendix F is an accurate summary of the current Plan provisions; and
- The actuary has been notified of all relevant events subsequent to the valuation measurement date.

Date May 6, 2014

Signed

Name Kevin Sockett

Title Manager, Pension Programs