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Eckler Partners Ltd.

Consultants and Actuaries

A Report on the Actuarial Valuation of the Saskatchewan Municipal Employees' Pension Plan as at December 31, 2001

Prepared by:

Eckler Partners Ltd.
Winnipeg, Manitoba

November 26, 2002

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Section 1 Executive Summary

INTRODUCTION

This report has been prepared at the request of the Saskatchewan Municipal Employees' Pension Commission to determine the financial position of the plan as at December 31, 2001 on a going-concern basis and to determine the cost of future benefit accruals.

RESULTS

The results of this valuation and the previous valuation are as follows:

	(thousands of dollars)		
	2001		**1998**
Assets: At Market Value	$921,657	At M.V.	$787,684
Investment Reserve	(77,972)	Contingency Reserve	(48,839)
For valuation purposes	843,685		738,845
Liabilities	778,144		658,043
Other Reserves	65,278		63,955
Total Liabilities	$843,422		$721,998
Surplus	$263		$16,847

FUTURE FUNDING REQUIREMENTS

The current levels of contribution of 5.4% of salary for regular staff and 7.3% for emergency staff, matched by the employers, are somewhat less than the cost to provide the benefits particularly in the 4 years following the valuation date when a temporary higher accrual rate is in effect. We have allowed for this in our valuation by establishing a reserve to cover the excess cost of the benefit accruals for the next 4 years.

PLAN EXPERIENCE

Over the past 3 years, the plan experience has been fairly neutral. While the investment return in the 3 years ending at December 31, 2001 was somewhat higher than the 6.75% assumed, this has been offset by the need to establish investment reserves to offset the calamitous fall in the markets in 2002. Retirement experience has been much lighter than anticipated in the previous valuation but the early retirement window remains open until December 31, 2005 and, in this valuation, we have assumed that all those who, in 2005, are entitled to an unreduced pension will retire in that year – that is some 1,000 members.

ASSUMPTIONS

We have modified most of the demographic assumptions to reflect the recent plan experience. For the economic assumptions, the major changes are a reduction in the valuation interest rate from 6.75% to 6.5% and a reduction in the long-term salary increase rate from 5% to 4%.

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

Respectfully submitted,

John Corp, FIA, FCIA

K. Dawn Power, FSA, FCIA

November 26, 2002

Section 2 Valuation of Assets

1. Assets at December 31, 2001

At December 31, 2001, the assets of the plan were as follows:

	(thousands of dollars)
Investments	
Short Term	$15,692
Bonds	295,018
Equities	296,493
Pooled Funds	307,336
Mortgages	2,321
Real Estate	41,178
	$958,038
Cash	463
Accrued Income	3,852
Net Receivables	1,770
Assets attributable to annuity fund[1]	(42,466)
	$921,657

[1] The fund assets include those which support self-insured annuities provided under the former municipal plan. Canada Customs and Revenue Agency requires 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.

2. Financial Statements

The following summarizes the audited financial statements for 1999 and 2000 and the unaudited statements prepared by the Public Employees Benefits Agency for 2001.

	1999	**2000**	**2001**
At start	$754,516	$842,477	$913,373
Employee contributions	12,804	11,531	13,546
Employer contributions	10,947	11,448	13,362
Transfers-in	316	89	169
Investment Income	40,709	49,031	50,951
Change in market value	57,510	40,739	(26,945)
Pensions Paid	15,964	18,193	21,465
Annuities Paid[1]	3,771	3,766	5,158
Transfers, refunds etc.	7,136	7,269	9,539
Supplementary benefits	2,603	2,854	0[3]
Administration Cost	2,251	2,279	2,068
Investment & Custodial Fees	1,682	1,906	1,863
Increase in annuity provision[2]	918	5,675	2,706
At end	$842,477	$913,373	$921,657

Notes:

1. As indicated, annuities provided under the “Former Plan” were charged against the fund.

2. Each year since the previous valuation of the plan, a valuation of the annuity plan has been prepared and the increase in the annuity liabilities in that year has been charged against the assets of this plan.

3. The “supplementary benefits” shown separately in 1999 and 2000 were included in the “pensions paid” in 2001.

3. Actuarial value of assets

At the previous valuation, the assets for actuarial valuation purposes were taken at their market value. At this valuation, we have used an approach which attempts to smooth out the fluctuations in the financial markets.

To do this we amortize the "change in market value" of the assets in a year (i.e., the degree to which the value of the assets has changed in the year which is not accounted for by other factors such as contributions, investment income, benefit payments, expenses, etc.) over a period of 5 years.

Thus in 2001, the "change in market value" was - $26,945,000. We amortize this over 5 years starting in 2001 i.e. we recognize one-fifth ($5,389,000) in 2001, which means that at the end of the year there is still $21,556,000 unrecognized.

The actuarial value expressed as a percentage of market value is therefore determined as follows (for this exercise, we add back in the assets attributable to the annuities).

			(thousands of dollars)
Market value of total fund (inc.$42,538 annuity fund)			$964,124
2001 losses	$26,945,000	Unrecognized (80%)	21,556
2000 gains	$40,739,000	Unrecognized (60%)	(24,443)
1999 gains	$57,510,000	Unrecognized (40%)	(23,004)
1998 gains	$37,501,000	Unrecognized (20%)	(7,500)
Actuarial value of total fund (incl. annuity fund)			$930,733
		or	96.54% of the fund

Applying this percentage to the part of the fund other than that supporting the annuities, we have

Market value		$921,657,000
Investment Reserve	(3.46%)	31,889,000
Actuarial Value	(96.54%)	$889,768,000

4. Special Investment Reserve

The year 2002 has, to the date of this report, been the worst year for pension funds for nearly 30 years. Our normal approach to asset valuation does not contemplate the large investment losses incurred this year. Accordingly, we have set aside a further investment reserve of 5% of the market value in recognition of these losses.

We therefore have

Market value	$921,657,000
Investment Reserve (3.46%)	31,889,000
Special Investment Reserve (5.00%)	46,083,000
Actuarial Value for 2001 valuation	$843,685,000

Section 3 Actuarial Assumptions, Actuarial Methods and Reserves

1. Economic Assumptions

The economic assumptions used in the valuation are as follows

a) *Inflation = 3% per annum.*

The Provincial Auditor has requested that all public sector plans in Saskatchewan should use a common inflation assumption. We are quite comfortable with an assumption of 3% and have used it in our valuation. At the previous valuation, the assumption was

1999 (First year)	2.5%
2000	3.0%
2001	3.5%
2002+	4.0%

b) *Investment Return = 6.5%*

We have used an investment return of 6.5%, which with the 3% inflation assumption represents a real rate of return, net of expenses, of 3.5%. At the valuation date, the yield to maturity (and hence the real rate of return) on long-term Government of Canada indexed bonds was about 3.75%. At the previous valuation, the investment return assumption was 6.75%.

c) *Rate of salary increase*

We have assumed that there will be a general salary increase of 4% per annum – equivalent to inflation plus 1%. This is the same assumption as at the previous valuation, that is inflation plus 1%, although the underlying inflation assumption has changed.

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

Years of Service	Regular Employees	Emergency Employees
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

At the previous valuation, the assumptions for promotional and merit increases were based on age going from 2.1% at age 17 to 0.1% at age 47. We reviewed the salary profile of the current membership and concluded that a scale based on service fitted the data better than one based on age.

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

We assumed that the CPP earnings ceiling would increase from $39,100 in 2002 to $39,900 in 2003 and by 4% per year thereafter (being inflation plus 1%). We have also assumed that the maximum pension per year of service permitted under the Income Tax Act would increase by 4% per year from $1,722.22 starting in 2005. These assumptions are the same as those used in the previous valuation, that is inflation plus 1%.

e) *Administration Expenses*

We have established a reserve for future expenses in 2 parts

(i) 3% of accrued liabilities, plus

(ii) $1.1 million per year for the next 3 years

For the last 3 years, the total administration expenses have averaged about $2.2 million per year. We have split this out as $1.1 million in respect of accrued benefits (i.e. pensioners and accrued benefits of existing members) and $1.1 million in respect of current service (i.e. current contributions and new members). Since $1.1 million would be approximately 3% of benefits paid in each of the 1999-2001 years, the future expense reserve in respect of accrued benefits can be expressed as 3% of accrued liabilities, excluding reserves, or $23.344 million. The future expense reserve for current service is $1.1 million for each of the next 3 years, which has a present value of $2.989 million. The total expense reserve is $26.333 million compared with the previous assumption which was 4.69% of total future service liability or about $9.1 million.

2. Demographic assumptions

a) *Retirement*

At the previous valuation, the retirement assumption was in 2 parts

(i) an age related assumption, as follows:

Age	Regular Staff	Emergency Staff
55		100%
56-59	10%	
60	12%	
61	14%	
62	16%	
63	18%	
64	20%	
65	100%	

(ii) an assumption that 100% of those employees who were entitled to a reduced or an unreduced pension during the early retirement window would do so at their first opportunity. The early retirement window extends from January 1, 2001 to December 31, 2005.

The number of retirees during the intervaluation period was much less than the above assumptions would have projected but more than if the second assumption had been eliminated – in other words the window appears to have encouraged some members to retire but not as many as projected.

We believe that it is appropriate to recognize that the window is still open but that not everyone will take advantage of it. Our special assumption for the window will be that everyone who becomes entitled to an unreduced pension (but not those entitled to a reduced pension) will retire at their last possible opportunity to do so ie, December 31, 2005. (In fact, our valuation software assumes that members retire in the middle of the year ie June 30, 2005.) For those regular staff who become entitled to an unreduced pension in any event prior to that date, or after that date, we have assumed that 50% will retire on the date they become entitled to an unreduced pension and 50% will continue until 65. For the emergency staff, we have assumed that 100% will retire when they are first entitled to an unreduced pension.

We believe that these assumptions better fit the pattern of retirements than the age-related rates which do not recognize that, with the rule of 80, many members can retire as early as 50 while with the rule of 75, the emergency personnel can retire even earlier.

b) *Terminations*

At the previous valuation, it was assumed that members would terminate plan membership based on a scale which varied by age and sex with females being twice as likely to terminate as males. Our review of the experience indicates that actual male terminations were 48% higher than projected while the actual female terminations were 22% lower than expected – in other words, the actual rates of termination were quite similar for males and females.

We have therefore developed a new unisex termination scale for the regular staff which recognizes 90% of the experience since the previous valuation as follows:

	This Valuation	Previous Valuation	
	Both	**Male**	**Female**
20	20.5%	16.0%	32.0%
25	15.5%	11.8%	23.6%
30	10.5%	8.8%	17.6%
35	6.5%	6.4%	12.6%
40	4.8%	4.7%	9.4%
45	4.3%	3.3%	6.6%
50	3.2%	2.1%	4.2%
55	1.2%	0.9%	1.8%

For the emergency staff, we have used an assumption of 75% of the new termination rates for the regular staff to recognize their generally lower turnover rates.

c. *Mortality*

We have used the 1994 Group Annuitant Mortality Table to represent the future mortality of the plan members. At the previous valuation, the valuation used the 1983 Group Annuitant Mortality Table projected to 2005.

d. *Proportion married and age of spouse*

Based on a review of the retirees since the previous valuation, 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. At the previous valuation, it was assumed that 90% of members who retired on and after age 65 would be married while 100% of male members and 80% of female members who retired prior to 65 would be married. It was also assumed that the male spouse would be four years older.

e. *Disability*

At the previous valuation, a reserve equal to 5% of the total 1999 payroll was established in the amount of $9,819,000 to cover the cost of the waiver of future contributions.

In this valuation, we have valued the disabled members separately – assumed that they will all stay disabled to their unreduced pension date and then retire at that date and that their imputed salary will increase at 4% per year. We have also provided them with full service credit from July 1, 1998, or the date of disability if later, to December 31, 2001.

As for last time, we have not allowed for future disabilities .

3. Actuarial Method

For this valuation, we have used the unit credit method to determine the plan's financial position. 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. If experience is as assumed, this method accumulates assets systematically to provide security for the benefits provided under the terms of the plan in respect of service that has already been rendered, without further recourse to the assets of the employers.

Under this method we take each individual, project his or her salary to retirement, determine 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 prior termination and death and these terminations and death benefits are determined in a manner consistent with the retirement benefit.

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. This cost increases as the average age of the membership increases but as long as the average age remains stable, the cost will remain stable.

In this plan with its matching contribution structure, it is necessary to establish a reserve to cover any shortfall between the current service cost and the matching contributions, until the date of the next valuation.

The value of the member's accrued benefits are compared with his or her contributions with interest. If the contributions with interest are greater than 50% of the value of the benefit, the liability is increased by the difference.

At the previous valuation, the attained age method was used. This includes as assets the present value of all future contributions of current members and includes as liabilities the present value of benefits in respect of future service for those members. We think that the unit credit method is more appropriate in a plan which is open to new members and where the earnings-weighted average age of the membership is likely to remain reasonably stable.

4. Reserves

We have established a number of liability-related reserves as follows:

a) *Excess accruals for next 4 years.*

As we indicated when discussing the actuarial method, our normal practice in a plan with fixed contributions would be to establish a reserve to cover any negative difference between the current service cost and the fixed contributions over the period to the next valuation date – a 3-year period. In this situation, however, the accrual rate is temporarily higher for a period of 4 years and also the early retirement window closes in 4 years' time. Accordingly we have established a reserve to cover the shortfall for the next 4 years rather than 3 years.

b) *Future Accruals for disabled members.*

We have established a reserve to cover the future accruals of all the currently disabled members.

c) *Eligibility Project*

The administrator is currently reviewing the service eligibility date for many of the plan members. Increasing eligibility service will increase liabilities because members would be eligible to retire earlier. We reran the valuation adding 6 months eligibility service for each member which increased liabilities by about $2.0 million and have therefore used this as our reserve.

d) *Pension Increases*

Pensions are increased automatically in respect of pre-1999 service up to a maximum of 2% and the liability for this is included in the liability for pensioners. We have also established a reserve in the amount of $650,000 to cover ad hoc increases of 2% at January 1, 2002 through 2005 for pensions in respect of post-1998 service for existing pensioners and those expected to retire in the next 3 years.

Section 4 Valuation Results

1. Going-Concern Valuation

On the basis of the summary of plan provisions listed in Appendix A, the actuarial assumptions and methods described in Section 3 and the membership information summarized in Appendix B the results of the valuation are as follows (with the corresponding results from the previous valuation):

	(thousands of dollars)		
	December 31, 2001		**December 31, 1998**[1]
Assets at market value	$921,657		$787,684
Investment Reserve	(31,889)	Contingency	0
Special Investment Reserve	(46,083)	Reserve	(48,839)
	843,685		738,845
Liabilities			
Actives - Regular	413,411		395,748
- Emergency	38,888		
Disabled	3,665		
Pensioners	266,980		227,265
Deferreds	38,519		8,734
Pending	16,468		21,481
Former Plan Accumulations	122		4,437
Voluntary Contributions	91		378
Reserves			
Excess Accrual in next 4 years			
- Regular	33,056	All future	44,993
- Emergency	1,360	excess accruals	
Future LTD accruals	1,879		9,819
Expenses	26,333		9,143
Eligibility Project	2,000		0
Pension Increases for post-1998 service from Jan 1, 2002 to Jan 1, 2005	650		0
Total	$843,422		$721,998
Surplus	$263		$16,847

[1] The valuation results as at December 31, 1998 were determined on the attained age method and have been rearranged so that items which correspond to those as at December 31, 2001 (determined on the unit credit cost method) are adjacent. Had the December 31, 1998 valuation been based on the method used this time, the surplus would have been $61,840 less an allowance for the short-term excess accruals.

2. **Solvency valuation**

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

The Pension Benefits Act permits the actuary to opine that there is no solvency deficiency without doing a full valuation if, based on the results of the going-concern valuation, he/she is satisfied that this is the case.

For the solvency valuation we would use market value for assets, we would not employ a salary projection for the liabilities and no reserves would be required. With these modifications, the plan would have a much increased surplus on a solvency basis, and accordingly, we do not need to prepare a full solvency valuation to opine that there is no solvency deficiency.

This opinion is based on the assumption that all members not eligible to retire immediately would transfer the lump sum commuted value out of the Plan and that annuities would be purchased for all pensioners and all other members eligible to retire immediately. The lump sum commuted values would be calculated based on the Recommendations for the Computation of Transfer Values from Registered Pension Plans of the Canadian Institute of Actuaries (CIA) as they apply to transfers occurring in December 2001 (specifically using a discount rate of 6%). The purchase price for annuities would be approximated by assuming mortality in accordance with the Group Annuitant Mortality Table 1983 and a discount rate of 6% - this basis has been recommended by the Pension Plan Financial Reporting Committee of the CIA as being a suitable proxy for the determination of the purchase price of annuities at December 31, 2001.

3. **Future Funding Requirements**

Regular staff will contribute 5.4% and emergency staff 7.3% of earnings with employers matching these contributions.

As indicated, we have established a reserve of $33,056,000 for the regular staff and $1,360,000 for the emergency staff to cover the excess accruals for the next 4 years, (i.e., the excess of the cost of benefits earned during the period over the total of the employee matching employer contributions). The cost of the accruals during this period is increased by the higher accrual rate and the early-retirement window.

We have also determined the current service cost for the plan assuming that there is no early retirement window and that the accrual rate has reverted to its post-2005 level. This shows that there would still be some level of excess accrual, as follows:

	% of Salary		
	Current Service Cost	**Total Matching Contributions**	**Excess**
Regular	13.1	10.8	2.3
Emergency	18.9	14.6	4.3

Having said this, if all those who are assumed to retire in 2005 actually do so, the average age of the remaining members will be lower, and this will reduce the current service cost. On the other hand, if not all of these members retire, the accrued liabilities will be less than they otherwise would.

4. Reconciliation of Results

We have reconciled the results of the valuation with those of the previous valuation.

The previous valuation and this valuation contain a number of reserves which complicate matters in any reconciliation. Accordingly, we have excluded them so that the results of the previous valuation would appear as follows:

	(thousands of dollars) December 31, 1998	
	As reported	**For reconciliation purposes**
Fund value	$787,684	$787,684
Present value of future employee contributions	74,969	0
Present value of future matching contributions	74,969	0
Assets attributable to annuitants	0	(33,168)
	$937,622	$754,516
Present value of accrued benefits	$405,567	$395,748
Present value of future benefits and expenses	204,074	0
Deferreds	21,481	21,481
Inactives	8,734	8,734
Pensioners - DB	194,097	194,097
- Annuitants	33,168	0
Contingency Reserves	48,839	0
Former Plan Accumulations	4,437	4,437
Member voluntary contributions	378	378
	$920,775	$624,875
Surplus	$16,847	$129,641

Using the same approach for this valuation we have

	(thousands of dollars) December 31, 2001	
	As reported	**For reconciliation purposes**
Fund value	$921,657	$921,657
Investment Reserve	(31,889)	0
Special Investment Reserve	(46,083)	0
	$843,685	$921,657
Liabilities		
Actives - Regular	413,411	413,411
- Emergency	38,888	38,888
Disabled	3,665	3,665
Pensioners	266,980	266,980
Deferreds	38,519	38,519
Pending	16,468	16,468
Former Plan Accumulations	122	122
Voluntary Contributions	91	91
Reserves		
Excess Accrual in next 4 years	34,416	0
Future LTD accruals	1,879	0
Expenses	26,333	0
Eligibility Project	2,000	0
Increases for post-1998 service	650	0
	$843,422	$778,144
Surplus	$263	$143,513

The reconciliation is as follows:

Surplus at previous valuation	$129,641
Interest on surplus at 6.75% for 3 years	28,064
Fund earning more than 6.75%[1]	33,543
Retirement and other demographic experience[2]	19,946
Accruals in period greater than contributions[3]	(15,519)
Change in assumptions[4]	(13,942)
Cost of re-calculation project[5]	(9,538)
Administration expenses[6]	(7,302)
Salary loss[7]	(7,306)
New entrant loss[8]	(1,083)
Operation of annuity fund[9]	(10,663)
	145,841
Balancing Item[10]	(2,328)
Surplus at this valuation	$143,513

Notes:

1. In the 3 years since the previous valuation, the fund has earned an average rate of return net of investment expenses of 8.05% compared with the 6.75% assumed in this valuation. This will have produced an investment gain of $33,543,000.

2. We reran the previous valuation for the active members assuming that we had correctly forecast all the decrements. For those active members at the last valuation who were still active at December 31, 2001, we assumed that they would retire under the early retirement window in accordance with our current assumption i.e. all those who are entitled to an unreduced pension will retire in 2005. On that basis, we determined that the liabilities at the previous valuation were $16,397,000 less than those reported in the valuation. With interest at 6.75% for 3 years this amounts to $19,946,000 at December 31, 2001.

3. During the period under review, the cost of benefit accruals was higher than the contributions made. Using the correct demographics, as described in 2. above, we determined that the present value at December 31, 1998 of the shortfall in the next 3 years was $12,757,000 which, with interest at 6.75% for 3 years amounts to $15,519,000 at December 31, 2001.

4. We made a number of changes to the assumptions, which had the following effect.

   (where + means an increase in surplus)

Change in mortality table and proportion married	+	$11,223
Change in retirement assumption from age related scale to percentage at unreduced date	-	12,797
New termination scale	-	3,519
New scale for promotional and merit increases	-	7,543
Reduction in long-term salary increase assumption from 5% to 4% and corresponding reduction in CPP and maximum pension projections	+	22,008
Reduction in interest rate from 6.75% to 6.5%	-	23,314
	-	$13,942

   It should be noted that these have been calculated in the order set out above. A different order would produce different individual results but the total effect would be the same.

5. During the period, many pensions were recalculated. We did not have individual details of these calculations so what we did was, for the common pensioners, (ie those who were receiving a pension at both valuations), we took their current pension and reduced it by the cost of living adjustments made since the previous valuation and compared the resulting pension with that used in the previous valuation. This produced an increased liability at December 31, 1998 of $20,875,000.

We did a similar valuation for those pensioners who died during the period with a surviving spouse and found an increase in liability of $2,155,000 for a total increase of $23,030,000. The previous valuation identified the cost of the benefit improvement for the pensioners at that date of $15,190,000. We would therefore conclude that the balance of the difference of $7,840,000 is due to the recalculation of pensions and with interest at 6.75% for 3 years this amounts to $9,538,000 at December 31, 2001.

6. The administration expenses in the 3 year period were $2,251,000 in 1999, $2,280,000 in 2000 and $2,068,000 in 2001. With interest, at 6.75% this amounts to $7,302,000.

7. We took the liabilities and the next 3 year's accruals at December 31, 1998 for the active members as determined in 2. above and compared them with the liabilities and 3 year accruals for the same members assuming that the 2001 salary had been correctly forecast. We found that this resulted in a liability some $6,006,000 higher which with interest at 6.75% for 3 years amounts to $7,306,000 at this valuation.

8. 3. above looks only at the accruals for the members at December 31, 1998. We valued the liabilities of the members who had joined the plan since the last valuation and compared them with the value of 2 times the members' contributions with interest.

9. We took the amount allocated to the annuitants at December 31, 1998. We added the amount of annuity purchases each year, and interest at the net rate of return earned by the pension fund in that year and debited with the amount of annuities paid in that year. On this basis, the amount of the annuity fund at December 31, 2001 would have been $31,803,000. In fact, it was $42,466,000 a difference of $10,663,000.

10. The balancing item of $2,328,000 represents about 0.3 % of total liabilities which is within our own materiality limit for the gain and loss analysis of 0.5% of liabilities.

Appendix A 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, 2001.

Eligibility

Permanent employees, who are employees employed on an ongoing basis (full-time, part-time and seasonal) and who are expected to work 700 hours or more in a year, 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.

Members' Contributions

All active members who are not emergency personnel are required to contribute an amount equal to 5.4% of their earnings. Emergency personnel contribute 7.3% of their earnings. Earnings include regular remuneration and commissions, but excludes overtime pay and bonuses.

The interest rate credited on members' contributions is the net fund rate of return smoothed over a period of four years.

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 members other than emergency personnel is the first day of the month immediately following the attainment of age 65. The normal retirement date of emergency personnel is the first day of the month immediately following the attainment of age 60.

Early Retirement Date

Non-emergency Member

Members who are not emergency personnel 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.

For the period January 1, 2001 to December 31, 2005, members who are not emergency personnel can retire on satisfying any of the age of 60, the rule of 80 or 30 years of continuous service with an unreduced pension. They can also retire on satisfying the age of 55, the rule of 75 or 25 years of continuous service but, in that event, the pension is reduced by 3% for each year prior to satisfying one of the age of 60, the rule of 80 or 30 years of continuous service, assuming that service had continued.

Emergency Members

Emergency personnel 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 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 satisfying the rule of 75 assuming that service had continued.

During the period January 1, 2001 to December 31, 2005, emergency personnel can retire after satisfying the age of 50, the rule of 70 or 20 years of service but in that event, the pension in respect of service after 1991 is reduced by 3% for each year prior to satisfying any of the age of 55, the rule of 75 or 25 years of service assuming the service had continued.

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:

   (i) members who are not emergency personnel 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.

   (ii) emergency personnel 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.

   (iii) members who are not emergency personnel, 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.

(iv) emergency personnel 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.

Death Benefits Before Retirement

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.

Death Benefits After Retirement

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 the designated dependents (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. An employee may also 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, the plan has guaranteed a 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 be provided if funds permit.

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, and the member must retire on his or her unreduced retirement date.

Appendix B Membership Data Summary

Membership data were obtained from the Public Employees Benefits Agency, who administer the plan. The data were gathered and compiled as of December 31, 2001. They were reconciled and checked for consistency with the previous valuation data.

The data included salary amounts for 2001 and also the highest average 3-year salary. Where the 2001 salary was shown as zero and the highest average salary was greater than zero, we assumed that the 2001 salary was equal to the highest average salary. Where both were zero, we assumed an annual salary of $20,000.

1. Membership Reconciliation

ACTIVE (includes Disabled)

	Norm	Emer	Total
At June 30, 1998	7,509	188	7,697
Add:			
New Members	5,053	53	5,106
Reinstatements	57	0	57
Less:			
Terminations			
- Election - Pending	(483)	(6)	(489)
- Election - Deferred	(271)	(4)	(275)
- Election - Paid Out	(730)	(13)	(743)
Retirement	(457)	(20)	(477)
Class Changes	(16)	16	0
At December 31, 2001	10,662	214	10,876

PENDING

	Total
At June 30, 1998	1,396
Add:	
Terminations	
- from active	489
- new hires	691
Less:	
Election - Deferred	(467)
Election - Paid Out	(739)
Reinstatements	(57)
Retirement	(111)
At December 31, 2001	1,202

PENSIONERS

	Total
At June 30, 1998	2,619
Add:	
Pensioners - New	624[1]
Pensioners - Survivors	164
Less:	
Death	(459)
At December 31, 2001	2,948

DEFERRED

	Total
At June 30, 1998	735
Adjusted	3[2]
Add:	
New Deferred	
- from active/pending	742
- new hires	16
Less:	
Retirement	(39)
Paid Out	(68)
At December 31, 2001	1,389

[1] Multiple records (active/deferred/pending) for the same individual were combined into 1 pensioner record resulting in 3 less pensioners by number than "retirements".

[2] The 1998 valuation report indicated 735 deferred members; the valuation data supplied by the previous actuary, however, included an additional 3 members.

2. Membership Summary - Males (except emergency)

		Service							
Age		**0-5**	**5-10**	**10-15**	**15-20**	**20-25**	**25-30**	**30+**	**TOTAL**
16-24	No.	121	3	0	0	0	0	0	124
	Salary	2,938,394	92,151	0	0	0	0	0	3,030,545
	Average Sal	24,284	30,717	0	0	0	0	0	24,440
25-29	No.	177	28	0	0	0	0	0	205
	Salary	4,878,068	881,341	0	0	0	0	0	5,759,409
	Average Sal	27,560	31,476	0	0	0	0	0	28,095
30-34	No.	173	58	37	4	0	0	0	272
	Salary	5,049,736	1,965,066	1,244,834	135,632	0	0	0	8,395,266
	Average Sal	29,189	33,880	33,644	33,908	0	0	0	30,865
35-39	No.	229	102	108	66	6	0	0	511
	Salary	6,590,596	3,318,113	3,657,243	2,318,771	210,558	0	0	16,095,290
	Average Sal	28,780	32,531	33,863	35,133	35,093	0	0	31,498
40-44	No.	278	111	145	107	76	1	0	718
	Salary	7,319,320	3,374,585	4,767,272	4,057,435	2,898,082	30,618	0	22,447,300
	Average Sal	26,328	30,402	32,878	37,920	38,133	30,618	0	31,264
45-49	No.	242	124	139	100	84	47	1	737
	Salary	6,745,880	3,878,329	4,518,277	3,935,226	3,369,482	1,884,107	39,240	24,370,550
	Average Sal	27,876	31,277	32,506	39,352	40,113	40,087	39,240	33,067
50-54	No.	229	87	114	79	72	64	12	657
	Salary	5,897,021	2,687,620	3,529,291	2,882,295	2,809,758	2,752,439	532,793	21,091,220
	Average Sal	25,751	30,892	30,959	36,485	39,024	43,007	44,399	32,102
55-59	No.	173	74	77	58	50	41	23	496
	Salary	4,109,783	2,311,645	2,483,394	2,051,288	1,836,777	1,657,768	913,376	15,364,030
	Average Sal	23,756	31,238	32,252	35,367	36,736	40,433	39,712	30,976
60-69	No.	132	54	61	47	34	26	22	376
	Salary	3,016,122	1,500,248	1,683,420	1,647,673	1,105,733	853,669	781,402	10,588,260
	Average Sal	22,849	27,782	27,597	35,057	32,522	32,833	35,518	28,160
TOTAL	No.	1,754	641	681	461	322	179	58	4,096
	Salary	46,544,880	20,009,100	21,883,720	17,028,330	12,230,390	7,178,601	2,266,811	127,142,000
	Average Sal	26,536	31,215	32,135	36,938	37,983	40,104	39,083	31,041

3. Membership Summary - Females (except emergency)

Age		Service 0-5	5-10	10-15	15-20	20-25	25-30	30+	TOTAL
16-24	No.	244	2	0	0	0	0	0	246
	Salary	4,801,030	54,409	0	0	0	0	0	4,855,439
	Average Sal	19,676	27,204	0	0	0	0	0	19,738
25-29	No.	422	34	2	0	0	0	0	458
	Salary	9,042,587	816,922	68,005	0	0	0	0	9,927,510
	Average Sal	21,428	24,027	34,003	0	0	0	0	21,676
30-34	No.	469	89	43	2	0	0	0	603
	Salary	9,664,603	2,223,883	1,191,690	39,560	0	0	0	13,119,730
	Average Sal	20,607	24,987	27,714	19,780	0	0	0	21,757
35-39	No.	702	153	113	50	10	0	1	1,029
	Salary	13,966,590	3,726,554	3,178,427	1,535,634	336,021	0	25,510	22,768,740
	Average Sal	19,895	24,357	28,128	30,713	33,602	0	25,510	22,127
40-44	No.	709	297	208	77	50	5	0	1,346
	Salary	14,062,080	6,539,934	5,434,734	2,401,635	1,589,834	143,993	0	30,172,210
	Average Sal	19,834	22,020	26,129	31,190	31,797	28,799	0	22,416
45-49	No.	515	250	246	99	49	30	1	1,190
	Salary	10,337,360	5,560,132	5,833,922	2,910,316	1,783,149	903,364	55,193	27,383,430
	Average Sal	20,073	22,241	23,715	29,397	36,391	30,112	55,193	23,011
50-54	No.	314	159	252	106	58	17	4	910
	Salary	6,278,747	3,483,098	5,879,653	2,864,424	1,654,480	575,993	155,865	20,892,250
	Average Sal	19,996	21,906	23,332	27,023	28,526	33,882	38,966	22,959
55-59	No.	170	60	124	77	70	25	4	530
	Salary	3,354,646	1,257,487	2,606,449	1,958,317	1,828,501	670,509	152,083	11,827,990
	Average Sal	19,733	20,958	21,020	25,433	26,121	26,820	38,021	22,317
60-69	No.	47	23	52	35	19	15	11	202
	Salary	952,671	408,539	1,170,190	878,502	414,558	429,778	235,923	4,490,162
	Average Sal	20,270	17,763	22,504	25,100	21,819	28,652	21,448	22,229
TOTAL	No.	3,592	1,067	1,040	446	256	92	21	6,514
	Salary	72,460,320	24,070,940	25,363,090	12,588,390	7,606,542	2,723,638	624,574	145,437,300
	Average Sal	20,173	22,559	24,388	28,225	29,713	29,605	29,742	22,327

4. Membership Summary - Emergency Males

		Service							
Age		**0-5**	**5-10**	**10-15**	**15-20**	**20-25**	**25-30**	**30+**	**TOTAL**
16-24	No.	6	0	0	0	0	0	0	6
	Salary	199,171	0	0	0	0	0	0	199,171
	Average Sal	33,195	0	0	0	0	0	0	33,195
25-29	No.	19	8	0	0	0	0	0	27
	Salary	724,502	384,614	0	0	0	0	0	1,109,116
	Average Sal	38,132	48,077	0	0	0	0	0	41,078
30-34	No.	16	14	4	0	0	0	0	34
	Salary	637,570	678,139	162,207	0	0	0	0	1,477,916
	Average Sal	39,848	48,438	40,552	0	0	0	0	43,468
35-39	No.	1	8	13	8	2	0	0	32
	Salary	33,398	368,935	622,236	451,572	100,323	0	0	1,576,463
	Average Sal	33,398	46,117	47,864	56,447	50,161	0	0	49,264
40-44	No.	3	2	7	6	11	1	0	30
	Salary	116,854	84,726	377,722	312,389	629,664	60,612	0	1,581,967
	Average Sal	38,951	42,363	53,960	52,065	57,242	60,612	0	52,732
45-49	No.	0	2	4	5	15	8	0	34
	Salary	0	109,183	176,265	246,863	839,564	481,008	0	1,852,883
	Average Sal	0	54,591	44,066	49,373	55,971	60,126	0	54,497
50-54	No.	2	2	1	3	6	7	2	23
	Salary	72,078	118,412	42,764	175,590	326,085	413,553	130,450	1,278,932
	Average Sal	36,039	59,206	42,764	58,530	54,347	59,079	65,225	55,606
55-59	No.	1	1	2	2	1	1	1	9
	Salary	85,148	36,180	100,531	99,315	62,210	73,134	55,395	511,913
	Average Sal	85,148	36,180	50,266	49,657	62,210	73,134	55,395	56,879
TOTAL	No.	48	37	31	24	35	17	3	195
	Salary	1,868,720	1,780,188	1,481,726	1,285,729	1,957,847	1,028,308	185,845	9,588,357
	Average Sal	38,932	48,113	47,798	53,572	55,938	60,489	61,948	49,171

5. Membership Summary – Emergency Females

		Service							
Age		**0-5**	**5-10**	**10-15**	**15-20**	**20-25**	**25-30**	**30+**	**TOTAL**
16-24	No.	1	0	0	0	0	0	0	1
	Salary	28,483	0	0	0	0	0	0	28,483
	Average Sal	28,483	0	0	0	0	0	0	28,483
25-29	No.	1	2	0	0	0	0	0	3
	Salary	28,877	94,032	0	0	0	0	0	122,909
	Average Sal	28,877	47,016	0	0	0	0	0	40,970
30-34	No.	2	1	1	0	0	0	0	4
	Salary	86,200	55,016	53,970	0	0	0	0	195,185
	Average Sal	43,100	55,016	53,970	0	0	0	0	48,796
35-39	No.	1	1	0	1	0	0	0	3
	Salary	35,273	54,577	0	35,469	0	0	0	125,319
	Average Sal	35,273	54,577	0	35,469	0	0	0	41,773
40-44	No.	1	0	0	1	3	0	0	5
	Salary	20,834	0	0	37,775	158,582	0	0	217,190
	Average Sal	20,834	0	0	37,775	52,861	0	0	43,438
45-49	No.	0	0	2	0	0	0	0	2
	Salary	0	0	92,987	0	0	0	0	92,987
	Average Sal	0	0	46,494	0	0	0	0	46,494
50-54	No.	1	0	0	0	0	0	0	1
	Salary	30,577	0	0	0	0	0	0	30,577
	Average Sal	30,577	0	0	0	0	0	0	30,577
TOTAL	No.	7	4	3	2	3	0	0	19
	Salary	230,244	203,624	146,957	73,243	158,582	0	0	812,651
	Average Sal	32,892	50,906	48,986	36,622	52,861	0	0	42,771

6. Disabled Members

	Males			Females		
	Number	Credited Service	Average Salary	Number	Credited Service	Average Salary
25-29	2	9.25	31,178	0	0	0
30-35	0	0	0	2	11.26	26,250
35-39	1	6.92	26,250	1	3.84	26,250
40-44	7	83.38	35,020	4	31.75	27,848
45-49	6	42.11	28,176	2	14.33	26,250
50-54	4	38.03	28,592	6	56.08	34,570
55-59	3	59.58	31,932	2	23.33	30,557
60-64	8	131.59	34,646	4	70.28	26,874
	31	370.36	31,635	21	210.87	29,180

7. Pensioners

	Male			Female		
Age	Number	Annual Pension	Annual Bridge	Number	Annual Pension	Annual Bridge
0-49	7	116,801	16,993	2	1,620	0
50-54	39	862,204	120,923	9	110,248	17,263
55-59	85	1,511,121	272,968	68	565,794	100,756
60-64	187	2,849,555	548,022	138	997,266	186,146
65-69	377	3,606,113	0	255	1,253,616	0
70-74	463	3,340,179	0	221	981,997	0
75-79	292	1,746,684	0	264	892,421	0
80-84	210	1,018,108	0	150	389,808	0
85-89	84	223,441	0	79	131,421	0
90-94	13	21,617	0	5	7,472	0
Total	1,757	15,295,820	958,906	1,191	5,331,663	304,165

8. Deferreds

	Male			Female		
Age	**Number**	**Annual Pension**	**Annual Bridge**	**Number**	**Annual Pension**	**Annual Bridge**
0-24	0	0	0	1	550	0
25-29	7	4,588	0	13	10,744	0
30-34	30	47,277	422	39	49,948	0
35-39	86	180,515	976	82	137,752	1,018
40-44	97	250,447	7,626	107	195,897	10,533
45-49	106	389,295	29,295	116	270,076	10,776
50-54	130	549,486	37,657	130	339,268	21,828
55-59	111	297,317	1,831	114	243,340	5,445
60-64	94	290,163	5,249	72	151,510	1,789
65-69	35	78,231	0	19	27,174	0
Total	696	2,087,317	83,056	693	1,426,259	51,389

9. Pending

	Male			Female		
Age	**Number**	**Annual Pension**	**Annual Bridge**	**Number**	**Annual Pension**	**Annual Bridge**
0-24	51	8,916	0	73	3,507	0
25-29	58	30,550	650	110	35,826	0
30-34	46	59,898	228	104	71,643	0
35-39	65	115,154	5,834	102	123,510	9,255
40-44	71	165,200	18,645	95	127,419	10,537
45-49	75	231,474	26,220	90	189,336	10,201
50-54	51	162,111	14,375	60	103,803	10,137
55-59	48	46,494	3,814	42	79,912	9,810
60-64	34	132,544	23,328	14	38,149	4,053
65-69	9	10,140	0	4	3,276	0
Total	508	962,481	93,094	694	776,382	53,992

Appendix C *Actuarial Opinion*

with respect to the Saskatchewan Municipal Employees Pension Plan forming part of the actuarial report dated November 26, 2002 on a valuation of the plan as at December 31, 2001.

In my opinion:

(a) the plan is fully funded with a surplus at December 31, 2001 of $263,000.

(b) the rule for computing the employer normal cost contribution for each year from January 1, 2002 to December 31, 2004 is that the employers should match the contributions made by the members. Estimated member contributions in 2002 are $13.04 million. These contributions are not sufficient to meet the full costs of the benefits accruing in these years but a reserve has been established, and the surplus in (a) determined after the establishment of this reserve, to fund the shortfall for the 4 years from the valuation date.

(c) the value of the plan assets would be greater than the actuarial liabilities if the plan were to be wound-up on the valuation date.

(d) the plan has no solvency deficiency at the valuation date and the solvency ratio is not less than 1:1.

(e) the next valuation should be prepared no later than December 31, 2004.

Notwithstanding the above, emerging experience which differs from the assumptions on which this opinion is based will result in gains or losses which will be revealed in future valuations.

In my opinion:

(a) the data on which the valuation is based are sufficient and reliable for the purposes of the valuation.

(b) the assumptions used are, in aggregate, appropriate for the purposes of the valuation, and

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

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

November 26, 2002

John Corp, FIA, FCIA
Fellow of the Institute of Actuaries
Fellow of the Canadian Institutes of Actuaries

Appendix D *Administrator's Certification*

of the membership data submitted to Eckler Partners Ltd. in connection with the actuarial valuation of the Saskatchewan Municipal Employees' Pension Plan as at December 31, 2001

I hereby certify that to the best of my knowledge and belief the membership information provided in Appendix B is accurate and complete and is in accordance with our records as the plan administrator.

Date

Public Employees Benefits Agency
Plan Administrator