



**Minnesota Legislative Commission
on Pensions and Retirement**

**Replication of the Actuarial Valuation of the
Minnesota Public Employees Retirement Association
Minneapolis Employees Retirement Fund
as of July 1, 2010**

Prepared by:

Milliman, Inc.

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March 23, 2011

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Minnesota Legislative Commission
on Pensions and Retirement
State Office Building, Room 55
100 Rev. Dr. Martin Luther King Jr. Boulevard
St. Paul, Minnesota 55155

Attention: Mr. Lawrence A. Martin, Executive Director

Ladies and Gentlemen:

The enclosed report presents the findings and comments resulting from a review and replication of the July 1, 2010 actuarial valuation of the Minneapolis Employees Retirement Fund (Fund) administered by the Minnesota Public Employees Retirement Association (PERA). An overview of our major findings is included in the Executive Summary section of the report. More detailed commentary and information is provided in the sections that follow.

We pursued this analysis and review with a constructive mindset. We looked to identify any possible suggestions that might improve understanding of or confidence in the actuarial services being provided. Naturally, some of the comments may be viewed as personal preference or nit-picky in nature. While we are not trying to impose our own preferences or biases on the Fund or the retained actuary, neither did we hesitate to make such comments if we believed that some change, however minor, would improve the actuarial functions.

This report has been prepared for use by the Minnesota Legislative Commission on Pensions and Retirement (LCPR) in their oversight role with regard to the Fund. It has been prepared using Milliman valuation systems in a manner that would be used by Milliman to prepare a full actuarial valuation of the Fund. We recognize that there are hundreds of thousands of complex calculations performed by the actuarial valuation system. For this reason, even the smallest differences between valuation systems can produce noticeable differences in the valuation results between two different actuaries.

In preparing this report, we have relied without audit on the employee data, plan provisions, value of the plan assets and other plan financial information as provided by various involved entities including your office, PERA, Fund actuary and others. We have reviewed this data for reasonableness and for consistency with previously supplied information. If any of this information as summarized in this report is inaccurate or incomplete, the results shown could be materially affected and this report may need to be revised.

On the basis of the foregoing we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the principles prescribed by the Actuarial Standards Board (ASB) and the Code of Professional Conduct and Qualification Standards for Public Statements of Actuarial Opinion of the American Academy of Actuaries.

Any distribution of the enclosed report must be in its entirety including this cover letter, unless prior written consent is obtained from Milliman, Inc. This report has been prepared in accordance with the terms and provisions of the Consulting Services Agreement effective November 25, 2009.

March 23, 2011
Page Two

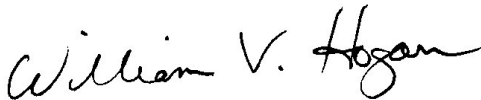
I, William V. Hogan, FSA, am an actuary for Milliman, Inc. I am a member of the American Academy of Actuaries and a Fellow of the Society of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I, Timothy J. Herman, FSA, am an actuary for Milliman, Inc. I am a member of the American Academy of Actuaries and a Fellow of the Society of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

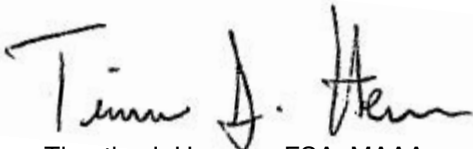
We look forward to making a personal presentation of our findings in briefings to the Minnesota Legislative Commission on Pensions and Retirement and to relevant staff members.

Respectfully submitted,

Milliman, Inc.



William V. Hogan, FSA, MAAA
Principal & Consulting Actuary



Timothy J. Herman, FSA, MAAA
Consulting Actuary

WVH/TJH/cw

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Opinion Letter

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Executive Summary

Purpose and Scope of the Actuarial Replication Audit

In accordance with Minnesota Statutes, Section 356.214, Subdivision 4, the LCPR has engaged Milliman, Inc. to perform a replication of the July 1, 2010 actuarial valuation of the Fund administered by PERA.

In performing the replication of the actuarial valuation, we follow several well defined steps. These steps involve a review and cleansing of the data used in the actuarial valuation, an assessment of the plan provisions to be valued, analysis of the actuarial assumptions to be applied, review of the reported value of plan assets as of the valuation date, preparation of the actuarial calculations using appropriate computer programming and summarizing the results. All of the above steps are to be applied in accordance with the requirements of Minnesota statutes and the Actuarial Standards For Actuarial Work adopted by the LCPR.

In conducting our work, we initially prepared the above steps independently from the work of the Fund actuary. After completing that work, we conducted a review of some individual benefit trace information in order to identify any key differences in programming or technique. We then prepared a summary of the key valuation results, showing a comparative of our results to those of the Fund actuary. Please note that we have shown costs assuming beginning of the year decrements in order to match with the Fund actuary. We have also provided costs assuming mid-year decrements and a modification to the retirement age assumption in accordance with the Actuarial Standards for Actuarial Work.

It is important to recognize that the actuarial valuation process, while very sophisticated in its calculation methodology, is still an estimate of the financial value of benefits payable on contingent events, most of which occur many years into the future. As such, a considerable amount of uncertainty and variability surrounds those estimates. As actuaries we recognize this fact and are comfortable that small differences (in percentages) in the results do not change the overall financial results portrayed in the valuation. Furthermore, the actuarial software used by different firms has implicit differences that create differences in the valuation numbers. For this reason, we believe the comparison of valuation results should be evaluated in terms of percentage differences. To provide some context to our comments, in a replication audit, where the differences that are identified can also be quantified, we generally expect to be within 1%-2% on the calculation of the present value of future benefits and within 4%-5% on the calculation of the actuarial accrued liability and normal cost. The wider range on the latter items is because there tends to be more variability in how different actuarial software programs allocate the total liability (present value of future benefits) to past and future years of service.

Statement of Findings

In general, we found the actuarial calculations by the Fund actuary to be reasonably consistent with our own separate calculations to within a reasonable degree of tolerance. Where we saw differences, we attempted to identify the reasons. Overall, we are satisfied that the July 1, 2010 actuarial valuation results for the Fund as prepared by the Fund actuary present a fair and reasonable representation of the present value of future benefits, actuarial liabilities and contribution requirements for the Fund.

The following commentary provides our main conclusions on the various areas of our review:

Executive Summary

(continued)

- **Membership Data:** Our raw data counts matched up with the counts as summarized by PERA. After applying our own cleansing methods, our valuation data count was the same count as reported by the Fund actuary. Our conclusion is that the Fund actuary is correctly reflecting the data received from PERA.
- **Plan Provisions:** We started with the summary of plan provisions for the Fund that Milliman reviewed last year and modified those provisions to reflect the changes enacted due to recent legislation. After reviewing the actuarial report prepared by the Fund actuary, we believe that their summary of plan provisions is consistent with our understanding of the current plan provisions.
- **Actuarial Assumptions and Methods:** In general, we believe that the assumptions and methods employed by the Fund actuary are reasonable and consistent with statutes and the Standards for Actuarial Work with one exception. We do note that the valuation results prepared by the Fund actuary are based upon beginning of the year decrement timing. While we prefer mid-year decrement timing, we note that the Standards for Actuarial Work would allow for either mid-year or end of the year decrement timing for the 2010 actuarial valuations. Upon further discussion with the Fund actuary, it is our understanding that beginning of the year decrement timing is consistent with results published in prior years. Consequently, the use of this timing in the 2010 actuarial valuation should be consistent with prior year results. At the July 8, 2010 LCPR meeting, revised actuarial assumptions for the fund's July 1, 2010 actuarial valuation were approved. Included in these approved assumptions is the retirement rate assumption that 100% of active members retire at age 61. The valuation results prepared by the Fund actuary are consistent with the assumptions approved by the LCPR. We note Section II.D(4) of the Standards for Actuarial Work states:

"Members Remaining Active Beyond the Age at Which the Retirement Rate becomes 100% - Each remaining active member must be assumed to retire one year following the valuation date unless a different timing assumption is approved by the Commission. Remaining active members must be included in the valuation for all purposes."

Because the assumptions were approved by the LCPR, we concluded that the valuation results were consistent with the Standards for Actuarial Work.

We have prepared July 1, 2010 actuarial valuation results to demonstrate the impact of mid-year decrement timing and the assumption that active members aged 61 or older retire one year from the valuation date. Because the Fund is closed and the relatively small number of active members who are close to retirement age, there is not a significant impact on the valuation results.

- **Actuarial Value of Assets:** We believe that the Fund actuary has fairly and correctly presented the actuarial value of assets.

Executive Summary

(continued)

- **Valuation System Results:** Based upon our own valuation system results, we were able to match the Fund actuary valuation results on the present value of future benefits and on the actuarial liabilities. Our calculation of Normal Cost based upon the Fund actuary assumptions described above is approximately 6% lower. Due to the high average age of actives, we believe this calculation is more sensitive to valuation differences. For example, we are about 70% higher on the Normal Cost when valued using a mid-year assumption for the occurrence of decrements and the modified retirement assumption. This large difference on a percentage basis is due mainly to the retirement assumption. Since we are very close in our values for total present value of benefits, at issue is how costs are allocated between past and future service. Under the Fund actuary's assumption, members age 61 and older are assumed to retire at the valuation date and have no Normal Cost. Under the assumption that such members retire one year from the valuation date, these members have a sizable Normal Cost. Because the average age for the 143 active members is 60.1, this assumption has a significant impact on the Total Normal Cost. However, the difference in Normal Cost is overshadowed by the level of underfunding.
- **Valuation Report:** We believe the actuarial valuation report prepared by the Fund actuary provides all of the information required by the Standards for Actuarial Work. Overall, the work by the Fund actuary is comprehensive and thorough. We note that some of the healthy pre-retirement mortality rates reported in the assumptions do not appear to be consistent with the table that is referenced. In particular, the mortality rates for ages under 30 and over 70 are slightly different than the values in the referenced tables. In our discussions with the fund actuary, we understand the fund actuary's firm-wide approach is to use a modification of the referenced table to extend the "white collar adjustment" included in the standard tables. We do not disagree with this approach. However, we recommend the fund actuary modify the description of the table to specify this adjustment. Because this comment only affects the description of the mortality assumption, there is no impact on the valuation results. On a more "nit-picky" level, we note that the report continues to reference Chapter 422A of Minnesota Statutes. With the transfer of this fund into the Public Employees Retirement Association, we believe these references should be updated to Chapter 353 in next year's report. Finally, we note that the Fund actuary does not report the split between deferred annuity present value and refund present value for assumed termination decrement of active employees. We believe showing this detail should be included in future valuations.
- **COLA:** As part of legislation enacted in 2010, the annual Cost of Living Adjustment (COLA) applied to the pensions of retired Members was changed from 2.5% to 1.0%. However, if the PERA General Fund achieves a 90% funded ratio on the market value of assets to actuarial liability, the COLA will increase back to 2.5%. The valuation by the Fund actuary assumes that the lower 1.0% COLA will remain in place for all years. Based upon the current fund ratio and the current level of contributions of the PERA General Fund, we believe this to be a reasonable assumption. This does create interesting questions for future valuations if the PERA General funded ratio improves and/or contribution levels are raised. Questions such as (1) when is it appropriate to assume the return to a 2.5% COLA for valuation purposes and (2) how to handle the situation when the COLA achieves a 90% funded ratio when 1.0% is applied but is less than 90% when 2.5% is applied? We believe that these questions should be addressed in the near future.

Principal Valuation Results

This section provides a summary of the key measurements from the July 1, 2010 Actuarial Valuation. In this section, we have provided two columns of numbers from Milliman. The middle column reflects a valuation basis which assumes all decrements (death, retirement, disability, turnover, etc.) occur at the beginning of the year. The far right column (labeled "Milliman Midyear") provides our calculations assuming that decrements occur during the middle of the valuation year and that the retirement age assumption is modified. We have provided the middle column for comparative purposes to the Fund actuary numbers. We have provided the midyear column for information regarding the impact from assuming beginning of the year decrements to middle of the year decrements and from assuming active members who are older than the assumed retirement age retire one year from the valuation date.

In general, our beginning of the year calculations provide slightly lower funding ratios and slightly higher required contributions. By moving the assumed decrements to midyear, the present value of benefits becomes lower. As a result, the funding ratios improve and the required contributions decrease. As the numbers show, we were able to match the primary data totals with those shown by the Fund actuary in almost all cases.

Principal Valuation Results

	<u>Actuarial Valuation as of</u>		<u>July 1, 2010</u> <u>(Milliman Midyear)</u>
	<u>July 1, 2010</u> <u>(Fund Actuary)</u>	<u>July 1, 2010</u> <u>(Milliman)</u>	
<u>Contributions</u> (% of Payroll)			
Statutory – Chapter 353	322.21%	322.21%	322.21%
Required – Chapter 356	538.76%	539.58%	542.29%
Sufficiency/(Deficiency)	(216.55)%	(217.37)%	(220.08)%
<u>Unfunded Actuarial Accrued Liability</u>			
Based upon AVA	\$ 442,118	\$ 443,106	\$ 441,702
Based upon MVA	442,118	443,106	441,702
<u>Funding Ratios</u> (dollars in thousands)			
Accrued Benefit Funding Ratio			
Current assets (AVA)	\$ 844,033	\$ 844,033	\$ 844,033
Current benefit obligations	1,284,153	1,285,119	1,283,364
Funding ratio	65.73%	65.68%	65.77%
Accrued Liability Funding Ratio			
Current assets (AVA)	844,033	844,033	\$ 844,033
Current assets (MVA)	844,033	844,033	844,033
Actuarial accrued liability	1,286,151	1,287,139	1,285,735
Funding ratio (AVA)	65.62%	65.57%	65.65%
Funding ratio (MVA)	65.62%	65.57%	65.65%
Projected Benefit Funding Ratio			
Current and expected future assets	1,287,974	1,288,797	1,287,861
Current and expected future benefit obligations	1,287,974	1,288,797	1,287,861
Funding ratio	100.00%	100.00%	100.00%
<u>Participant Data</u>			
Active Members			
Number	143	143	143
Projected annual earnings (000s)	\$ 8,883	\$ 8,883	\$ 8,883
Average projected annual earnings	62,116	62,116	62,116
Average age	60.1	60.1	60.1
Average service	35.5	35.5	35.5
Service Retirements	3,360	3,360	3,360
Survivors	840	840	840
Disability Retirements	143	143	143
Deferred Retirements	102	102	102
Terminated Other Non-vested	0	0	0
TOTAL	4,588	4,588	4,588

Plan Assets

Statement of Plan Net Assets for Year Ended June 30, 2010

(dollars in thousands)

We received asset information from the Public Employees Retirement Association which provided assets by class as of June 30, 2010. We have reviewed these assets and summarized them below. Our summary exactly matches the summary provided by the Fund actuary in their Actuarial Valuation Report.

	Market Value	
	Fund Actuary	Milliman
Assets in Trust		
Cash, equivalents, short term securities	\$ 27,425	\$ 27,425
Fixed income	285,590	285,590
Equity	518,231	518,231
Other	<u>0</u>	<u>0</u>
Total Assets in Trust	831,246	831,246
Assets Receivable	<u>12,788</u>	<u>12,788</u>
Total Assets	844,034	844,034
Amounts Payable	<u>(1)</u>	<u>(1)</u>
Net Assets Held in Trust for Pension Benefits	\$844,033	\$844,033

Plan Assets

Reconciliation of Plan Assets

(dollars in thousands)

The following exhibit shows the revenue, expenses and resulting assets of the Fund as reported by the Public Employees Retirement Association for the Plan's Fiscal year July 1, 2009 to June 30, 2010.

We received this information directly from PERA and summarized it below. Our summary matches the summary provided by the Fund actuary.

	Market Value	
	Fund Actuary	Milliman
1. Fund Balance at Market Value at July 1, 2009	\$853,375*	\$853,375*
2. Contributions		
a. Member	1,081	1,081
b. Employer	4,798	4,798
c. State	<u>9,000</u>	<u>9,000</u>
d. Total contributions	14,879	14,879
3. Investment Income		
a. Investment income/(loss)	127,196	127,196
b. Investment expenses	<u>(1,485)</u>	<u>(1,485)</u>
c. Total investment income/(loss)	125,711	125,711
4. Other	<u>0</u>	<u>0</u>
5. Total Income (2.d. + 3.c. + 4.)	\$140,590	\$140,590
6. Benefits Paid		
a. Annuity benefits	(147,099)	(147,099)
b. Refunds	<u>(27)</u>	<u>(27)</u>
c. Total benefits paid	(147,126)	(147,126)
7. Expenses		
a. Other	(1,571)	(1,571)
b. Administrative	<u>(1,235)</u>	<u>(1,235)</u>
c. Total expenses	(2,806)	(2,806)
8. Total Disbursements (6.c. + 7.c.)	(149,932)	(149,932)
9. Fund Balance at Market Value at June 30, 2010 (1. + 5. + 8.)	\$844,033	\$844,033

* Adjusted to match PERA's financial statement. This amount does not include a receivable amount of \$6.5 million included in 2009 valuation assets by prior fund actuary in the 2009 valuation report.

Plan Assets

Actuarial Asset Value

Actuarial Asset Value is equal to Market Value, including receivable contributions and reduced by amounts payable at the valuation date.

Development of Costs

Actuarial Valuation Balance Sheet

(dollars in thousands)

The actuarial balance sheet is based on the fundamental equation that at any given time the present value of benefits to be paid in the future must be equal to the assets on hand plus the present value of future contributions to be received. The total rate of contribution is determined as the amount which will make the total present and potential assets balance with the total present value of future benefits. The members' rate of contribution is fixed at the current schedule. The employer's rate of contribution is the balance required to cover the total rate of contribution.

The contributions made in excess of amounts required for current benefit payments are accumulated as a reserve to help meet benefit payments in later years. It is this reserve system which permits the establishment of a level rate of contribution each year.

	June 30, 2010 (Fund Actuary)	June 30, 2010 (Milliman)	June 30, 2010 (Milliman Midyear)
A. Actuarial Value of Assets	\$ 844,033	\$ 844,033	\$ 844,033
B. Expected Future Assets			
1. Present value of expected future statutory supplemental contributions *	442,118	443,106	441,702
2. Present value of future normal cost contributions	<u>1,823</u>	<u>1,658</u>	<u>2,126</u>
3. Total expected future assets (1. + 2.)	443,941	444,764	443,828
C. Total Current and Expected Future Costs	\$1,287,974*	1,288,797*	1,287,861*
D. Current Benefit Obligations			
1. Benefit recipients			
a. Service retirements	1,015,476	1,016,128	1,016,128
b. Disability	35,449	35,821	35,821
c. Survivors	163,953	164,192	164,192
2. Deferred retirement with augmentation	5,995	6,059	6,059
3. Active members	<u>63,280</u>	<u>62,919</u>	<u>61,164</u>
4. Total current benefit obligations	1,284,153	1,285,119	1,283,364
E. Expected Future Benefit Obligations	3,821	3,678	4,497
F. Total Current and Expected Future Benefit Obligations	1,287,974	1,288,797	1,287,861
G. Unfunded Current Benefit Obligations (D.4. – A.)	440,120	441,086	439,331
H. Unfunded Current and Future Benefit Obligations (F. – C.)	0	0	0

* Per the Actuarial Standards, this represents the balancing item needed so that C. equals F. Actual statutory contributions may be significantly different.

Development of Costs

Determination of Unfunded Actuarial Accrued Liability and Supplemental Contribution Rate (dollars in thousands)

In the tables that follow the Commentary in this section, we provide the calculations which ultimately determine the required supplemental contribution rate. From these tables, a critical calculation is the Actuarial Present Value of Projected Benefits. This calculation reflects the actuary's estimate of the total present value cost of all benefits yet to be paid by the Fund to the current members (active and inactive). In replication audits, we typically strive to be within 2% of the actuary's calculation. If that level cannot be achieved, then it is important to identify the differences in more detail. When using the beginning of the year decrement methodology, we match very closely with the Fund actuary's numbers. When midyear decrements are applied and the retirement age assumption is modified, our numbers become a little further apart. This was expected since we were aware of the methodology difference in advance. The following comments show, as a percentage, the ratio of each column to the reported numbers by the Fund actuary:

	Actuarial Present Value of Projected Benefits		
	Fund		
	Actuary	Milliman	Milliman Midyear
Active Members	100.0%	99.2%	97.9%
Deferred members	100.0	101.1	101.1
Benefit Recipients	<u>100.0</u>	<u>100.1</u>	<u>100.1</u>
Total	100.0%	100.1%	100.0%

The tables that follow the Actuarial Present Value of Projected Benefits are designed to determine how much of the Actuarial Present Value of Projected Benefits is to be funded by the future "normal cost" contributions (Actuarial Present Value of Future Normal Cost) versus how much belongs to past contributions (Actuarial Accrued Liability). This allocation does not change the total costs determined in the Actuarial Present Value of Projected Benefits. It simply allocates cost to past versus future based upon the Entry Age Normal actuarial cost method. In replication audits, we typically look to be within 5% of the actuary's calculations for active member Actuarial Accrued Liability. The larger range recognizes that different valuation systems have different ways of rounding service and ages. In addition, the Entry Age Method requires projection of theoretical past amounts which can be handled somewhat differently between actuarial valuation systems. The following amounts show, as a percentage, the ratio of each column to the reported numbers by the Fund actuary.

	Actuarial Accrued Liability		
	Fund		
	Actuary	Milliman	Milliman Midyear
Active Members	100.0%	99.5%	97.3%
Deferred members	100.0	101.1	101.1
Benefit Recipients	<u>100.0</u>	<u>100.1</u>	<u>100.1</u>
Total	100.0%	100.1%	100.0%

Development of Costs

Determination of Unfunded Actuarial Accrued Liability and Supplemental Contribution Rate (dollars in thousands)

Once the Actuarial Accrued Liability is determined, it is compared to the Actuarial Value of Assets to determine the funded amount. The difference between these numbers is then amortized to the statutory amortization date based upon the present value of future payrolls. Because this calculation is based upon the difference of two relatively close numbers, any change in one of the numbers can have a large impact when viewed as a percentage.

For example, if the Actuarial Accrued Liability is \$1,000 and the Actuarial Value of Assets is \$900, then unfunded liability is \$100. If the Actuarial Accrued Liability is reduced by \$25, the unfunded liability becomes \$75. In this example, the reduction in the Actuarial Accrued Liability of 2.5% generates a reduction of 25% in both the unfunded liability and the supplemental contribution rate.

Based upon the above, it should be expected that small deviations in the amount of Actuarial Accrued Liability will have a larger impact on the supplemental contribution rate. It is not evidenced here where our calculation of the Actuarial Accrued Liability is virtually identical to the Fund actuary and our supplemental contribution rate is 0.2% higher than the Fund actuary.

Development of Costs

Determination of Unfunded Actuarial Accrued Liability and Supplemental Contribution Rate (dollars in thousands)

	Actuarial Present Value of Projected Benefits		
	Fund Actuary	Milliman	Milliman Midyear
1. Active members			
a. Retirement annuities	\$ 62,622	\$62,065	\$60,798
b. Disability benefits	2,654	2,628	2,612
c. Survivor's benefits	521	421	732
d. Deferred retirements	1,304	1,378	1,369
e. Refunds	N/A	105	150
f. Total	67,101	66,597	65,661
2. Deferred retirements with future augmentation	5,995	6,059	6,059
3. Benefit recipients	1,214,878	1,216,141	1,216,141
4. Total	\$1,287,974	\$1,288,797	\$1,287,861

	Actuarial Present Value of Future Normal Costs		
	Fund Actuary	Milliman	Milliman Midyear
1. Active members			
a. Retirement annuities	\$ 725	\$ 686	\$864
b. Disability benefits	451	354	454
c. Survivor's benefits	61	58	88
d. Deferred retirements	586	99	118
e. Refunds	N/A	461	602
f. Total	1,823	1,658	2,126
2. Deferred retirements with future augmentation	0	0	0
3. Benefit recipients	0	0	0
4. Total	\$ 1,823	\$1,658	\$2,126

Development of Costs

Determination of Unfunded Actuarial Accrued Liability and Supplemental Contribution Rate (dollars in thousands)

	Actuarial Accrued Liability		
	Fund Actuary	Milliman	Milliman Midyear
A. Determination of Actuarial Accrued Liability (AAL)			
1. Active members			
a. Retirement annuities	\$ 61,897	\$ 61,379	\$ 59,934
b. Disability benefits	2,203	2,274	2,158
c. Survivor's benefits	460	363	644
d. Deferred retirements	718	1,279	1,251
e. Refunds	<u>N/A</u>	<u>(356)</u>	<u>(452)</u>
f. Total	65,278	64,939	63,535
2. Deferred retirements with future augmentation	5,995	6,059	6,059
3. Former members without vested rights	0	0	0
4. Benefit recipients	<u>1,214,878</u>	<u>1,216,141</u>	<u>1,216,141</u>
5. Total	1,286,151	1,287,139	1,285,735
B. Determination of Unfunded Actuarial Accrued Liability (UAAL)			
1. Actuarial accrued liability	1,286,151	1,287,139	1,285,735
2. Current assets (AVA)	<u>844,033</u>	<u>844,033</u>	<u>844,033</u>
3. Unfunded actuarial accrued liability	442,118	443,106	441,702
C. Determination of Supplemental Contribution Rate			
1. Current unfunded actuarial accrued liability to be amortized by July 1, 2031	442,118	443,106	441,702
2. Supplemental contribution amount *	45,846	45,949	45,803

* The amortization factor as of July 1, 2010 is 9.6435.

Development of Costs

Determination of Contribution Sufficiency/(Deficiency)

(dollars in thousands)

In this section, we compare the statutory contributions provided under Chapter 353 of Minnesota statutes (353 contributions) to the required contributions under chapter 356 of Minnesota statutes (356 contributions). The difference between these amounts results in a reported contribution sufficiency or deficiency.

With respect to the 353 contributions, the percentage is set by statute and we agree with the percentages reported by the Fund actuary. The dollar amount is determined by applying the statutory percentage to the member compensation provided in the data file and projected (and annualized where necessary) with expected pay increases for the upcoming year. Our projection methodology produced the same projected pay as the Fund actuary.

With respect to the 356 contributions, the total is equal to the sum of the Normal Cost (Entry Age Normal method) plus the supplemental contribution calculated earlier in this report plus an allowance for expected administrative expenses plus an allowance for 1992 investment expenses. Typically, in a replication audit, it is desirable to be within 5% of the actuary's Normal Cost. In this case, our Normal Cost is 5.8% lower than the Fund actuary. Because of the relatively small number of active members who are close to retirement, we do not believe a difference of this magnitude warrants further investigation. We do note that our components of Normal Cost are somewhat different from the Fund actuary. This is not an uncommon result as the treatment of where to categorize certain costs on an "entry age" basis between actuarial valuation systems quite often results in these differences.

As mentioned earlier, the supplemental contributions are highly leveraged to the value of the Actuarial Accrued Liability. In this case, our supplemental contribution is higher by 0.2%.

We arrive at the same expense allowance percentage and dollar contribution for both administrative expenses and the allowance for 1992 investment expense.

As a result of the above, our calculation of the Contribution Sufficiency/Deficiency is a deficiency of (217.37)%. This compares to a deficiency reported by the Fund actuary of (216.55)%. The difference of 0.82% is primarily the result of the normal cost and supplemental contribution difference. The primary conclusion from these results is that a significant contribution deficiency exists.

Development of Costs

Determination of Contribution Sufficiency/(Deficiency) (dollars in thousands)

	<u>Fund Actuary</u>		<u>Milliman</u>		<u>Milliman Midyear</u>	
	<u>July 1, 2010</u>		<u>July 1, 2010</u>		<u>July 1, 2010</u>	
	<u>Percent of Payroll</u>	<u>Dollar Amount</u>	<u>Percent of Payroll</u>	<u>Dollar Amount</u>	<u>Percent of Payroll</u>	<u>Dollar Amount</u>
A. Statutory Contributions – Chapter 353						
1. Employee contributions	9.75%	\$866	9.75%	\$866	9.75%	\$866
2. Employer contributions	<u>9.75</u>	<u>866</u>	<u>9.75</u>	<u>866</u>	<u>9.75</u>	<u>866</u>
3. Employer addition contributions [2.68% plus \$3,900,000 (43.91%)]	46.59%	4,138	46.59%	4,138	46.59%	4,138
4. Employer supplemental contributions *	0.00%	0	0.00%	0	0.00%	0
5. Employer special additional contribution **	0.00%	0	0.00%	0	0.00%	0
6. State contributions	<u>256.12%</u>	<u>22,750</u>	<u>256.12%</u>	<u>22,750</u>	<u>256.12%</u>	<u>22,750</u>
7. Total	322.21%	28,620	322.21%	28,620	322.21%	28,620
B. Required Contributions – Chapter 356						
1. Normal cost						
a. Retirement benefits	2.49%	221	2.41%	214	4.42%	393
b. Disability benefits	1.48%	131	1.22%	108	2.23%	198
c. Survivors	0.20%	18	0.20%	18	0.51%	45
d. Deferred retirement benefits	1.69%	150	0.35%	31	0.53%	47
e. Refunds	<u>N/A</u>	<u>N/A</u>	<u>1.34%</u>	<u>119</u>	<u>2.18%</u>	<u>194</u>
f. Total	5.86%	520	5.52%	490	9.87%	877
2. Supplemental contribution amortization of unfunded actuarial accrued liability	516.11%	45,846	517.27%	45,949	515.63%	45,803
3. Allowance for Administrative expenses	14.46%	1,285	14.46%	1,288	14.46%	1,288
4. Allowance for 1992 investment expenses	<u>2.33%</u>	<u>207</u>	<u>2.33%</u>	<u>207</u>	<u>2.33%</u>	<u>207</u>
5. Total	538.76%	47,858	539.58%	47,934	542.29%	48,175
C. Contribution Sufficiency/(Deficiency) (A.7. – B.5.)	(216.55)%	\$ (19,238)	(217.37)%	(19,314)	(220.08)%	(19,555)

Note: Projected annual payroll for fiscal year beginning on the valuation date: \$8,883 for Fund actuary and \$8,883 for Milliman.

* Not payable until after June 30, 2012

** Based on current assets and expected benefit payments, not applicable for 2010-2011

Actuarial Basis

Actuarial Cost Method

Liabilities and contributions in this report are computed using the Individual Entry Age Normal Cost Method. This method is prescribed by Minnesota Statutes.

The objective under this method is to fund each member's benefits under the Plan as payments which are level as a percentage of salary, starting at original participation date (or employment date), and continuing until the assumed date of retirement, termination, disability or death. For valuation purposes, entry age for each member is determined as the age at valuation minus years of service as of the valuation date.

At any given date, a liability is calculated equal to the contributions which would have been accumulated if this method of funding had always been used, the current plan provisions had always been in place, and all assumptions had been precisely accurate. The difference between this liability and the assets (if any) which are held in the fund is the unfunded liability. The unfunded liability is typically funded over a chosen period in accordance with the amortization schedule.

A detailed description of the calculation follows:

The normal cost for each active member under the assumed retirement age is determined by applying to earnings the level percentage of salary which, if contributed each year from date of entry into the Plan until the assumed retirement (termination, disability or death) date, is sufficient to provide the full value of the benefits expected to be payable.

- The present value of future normal costs is the total of the discounted values of all active members' normal cost, assuming these to be paid in each case from the valuation date until retirement (termination, disability or death) date.
- The present value of projected benefits is calculated as the value of all benefit payments expected to be paid to the Plan's current members, including active and retired members, beneficiaries, and terminated members with vested rights.
- The accrued liability is the excess of the present value of projected benefits over the present value of future normal costs.
- The unfunded liability is the excess of the accrued liability over the assets of the fund, and represents that part of the accrued liability which has not been funded by accumulated past contributions.

Change in Actuarial Cost Method

- The statutory amortization date changed from July 1, 2020 to July 1, 2031.
- The Liquidity Trigger Adjustment that was added to the actuarial accrued liability in the 2008 and 2009 valuation is no longer applicable.
- Increases under 1998 and 1999 legislation are no longer excluded from the actuarial accrued liability.
- Annual post-retirement benefit increases are valued explicitly in the benefit amounts rather than implicitly through a difference in the pre and post-retirement investment return assumptions.

Actuarial Basis

Asset Valuation Method

The actuarial value of assets is set equal to the market value of assets.

Changes in Asset Valuation Method

- Prior to July 1, 2010, the Non-Retirement Benefit Fund (RBF) Reserve asset gains and losses were smoothed over a five year period.
- The Deposit Accumulation fund (or Survivor Benefit Fund) is now included in the total fund.

Actuarial Basis

Summary of Actuarial Assumptions

The following assumptions were used in valuing the liabilities and benefits under the plan. All assumptions are prescribed by Statutes, the LCPR, or the Board of Trustees and reflect the recently adopted changes during the summer of 2010.

Investment Return	8.50% compounded annually.		
Benefit Increases After Retirement	Payment of 1% annual cost-of-living adjustments after retirement accounted for explicitly.		
Salary Increases	Total reported pay for prior calendar year increased 1.98% (half year of 4.00%, compounded) to prior fiscal year and 4.00% annually for each future year.		
Mortality			
<i>Healthy Pre-retirement</i>	RP 2000 healthy sex distinct annuitant mortality table, white collar adjustment, projected to 2018.		
<i>Healthy Post-retirement</i>	RP 2000 healthy sex distinct annuitant mortality table, white collar adjustment, projected to 2018.		
<i>Disabled</i>	RP 2000 healthy sex distinct annuitant mortality table, white collar adjustment, reduced by 20%.		
Retirement	Members retiring from active status are assumed to retire at age 61. Members who have attained the highest assumed retirement age will retire in one year.		
Withdrawal	Age-related rates based on actual experience; see table of sample rates.		
Disability	Age-related rates based on actual experience; see table of sample rates.		
Allowance for Combined Service Annuity	Liabilities for active members are increased by 0.2% and liabilities for former members are increased by 30.00% to account for the effect of some members having eligibility for a Combined Service Annuity.		
Administrative Expenses	Prior year administrative expenses (excluding investment expenses) increased by 4% expressed as percentage of projected annual payroll.		
Investment Expenses	Investment expenses for the fiscal year ending June 30, 1992 are being amortized as follows:		
	<u>Beginning Balance</u>	<u>Fixed Annual Payment</u>	<u>Years Remaining</u>
	\$2,849,000	\$207,000	10
Return of Contributions	All employees withdrawing after becoming eligible for a deferred benefit are assumed to take the larger of their contributions accumulated with interest or the value of their deferred benefit.		
Commencement of Deferred Benefits	Members receiving deferred annuities (including current terminated deferred members) are assumed to begin receiving benefits at age 60.		
Percentage Married	67% of members are assumed to be married. Actual marital status is provided for members in payment status.		
Age of Spouse	Male members are assumed to have a beneficiary three years younger. For members in payment status, actual spouse date of birth is used.		

Actuarial Basis

Summary of Actuarial Assumptions (continued)

Form of Payment	Married members retiring from active status are assumed to elect a Straight Life Annuity.
Changes in Actuarial Assumptions	<ul style="list-style-type: none">▪ Pre-retirement and post-retirement mortality was changed from the average of male and female rates of the 1986 Projected Experience Table set back 1 year to RP 2000 healthy sex distinct annuitant mortality, white collar adjustment, projected to 2018.▪ Disabled mortality was changed from the average of male and female rates of the 1986 Projected Experience Table set back 1 year to RP 2000 healthy sex distinct annuitant mortality, white collar adjustment, reduced 20%.▪ The post-retirement investment return assumption was changed from 5.0% to 8.5%. The pre-retirement investment return assumption was changed from 6.0% to 8.5%.

Actuarial Basis

Summary of Actuarial Assumptions (continued)

Summary of Rates

Age	Mortality Rates (%)					
	Healthy Pre-Decrement		Healthy Post-Decrement		Disabled	
	Male	Female	Male	Female	Male	Female
20	0.0244%	0.0143%	0.0244%	0.0143%	0.03%	0.02%
25	0.0314%	0.0161%	0.0314%	0.0161%	0.03%	0.02%
30	0.0323%	0.0237%	0.0323%	0.0237%	0.04%	0.02%
35	0.0540%	0.0382%	0.0540%	0.0382%	0.06%	0.04%
40	0.0770%	0.0491%	0.0770%	0.0491%	0.09%	0.06%
45	0.1060%	0.0760%	0.1060%	0.0760%	0.18%	0.09%
50	0.1426%	0.1167%	0.1426%	0.1167%	0.48%	0.20%
55	0.1945%	0.2055%	0.1945%	0.2055%	0.43%	0.28%
60	0.3189%	0.3430%	0.3189%	0.3430%	0.53%	0.45%
65	0.5218%	0.5430%	0.5218%	0.5430%	0.93%	0.73%
70	0.7483%	0.8041%	0.7483%	0.8041%	1.54%	1.21%
75	2.9353%	2.4323%	2.9353%	2.4323%	2.69%	2.06%

Age	Withdrawal		Disability	
	Male	Female	Male	Female
20	21.00%	21.00%	0.21%	0.21%
25	11.00	11.00	0.21	0.21
30	5.00	5.00	0.23	0.23
35	1.50	1.50	0.30	0.30
40	1.00	1.00	0.41	0.41
45	1.00	1.00	0.61	0.61
50	1.00	1.00	0.93	0.93
55	1.00	1.00	1.60	1.60
60	1.00	1.00	0.00	0.00
65	0.00	0.00	0.00	0.00
70	0.00	0.00	0.00	0.00

Actuarial Basis

Summary of Plan Provisions

This summary of provisions reflects the interpretation of applicable Statutes for purposes of preparing this valuation. This interpretation is not intended to create or rescind any benefit rights in conflict with any Minnesota Statutes.

Plan Year	July 1 through June 30
Eligibility/Employee Rule	<p>An employee of the City of Minneapolis, the Metropolitan Airports Commission, the Met Council/Environmental Services, the Municipal Employees Retirement Fund, and Special School District No. 1 if covered prior to July 1, 1978. New employees are covered by the Public Employees Retirement Association (PERA) Plan.</p> <p>Effective July 1, 1992, licensed peace officers and firefighters who are employed by the Metropolitan Airports Commission and covered by the Minneapolis Employees Retirement Fund will receive the greater of retirement, disability, or survivor benefits under:</p> <ul style="list-style-type: none"> a) The Minneapolis Employees Retirement Fund; or b) The Public Employees Retirement Association (PERA) Police & Fire Plan
Contributions	<p>Member: 9.75% of salary</p> <p>Employer: 9.75% of salary (Employer Regular Contributions) 2.68% of salary plus employing unit's share of \$3.9 million (Employer Additional Contribution)</p>

City of Minneapolis	\$ 2,763,437
Minneapolis Schools	731,125
Metropolitan Airports Commission	402,512
MnSCU	2,926
Total:	\$ 3,900,000

Employer Supplemental Contribution — first due after June 30, 2012.
Equal to the larger of:

- Total actuarial required contributions minus member and employer regular and additional contributions less the State contribution; or
- \$27,000,000

The total employer contribution (Regular, Additional and Supplemental) can not exceed \$34,000,000.

Employer Special Additional Contribution — required if expected benefit payments will likely exceed assets during the year.

Actuarial Basis

Summary of Plan Provisions (continued)

Contributions

The Supplemental and Special Additional Contributions are allocated to the employers in proportion to their share of the actuarial accrued liability of MERF on July 1, 2009, as follows:

Employer	Allocation
City of Minneapolis	54.21%
Minneapolis Park Board	10.33%
Met Council	1.74%
Metropolitan Airport Commission	5.76%
Municipal Building Commission	1.08%
Minneapolis School District No. 1	23.04%
Hennepin County	3.74%
MnSCU	0.10%
Total	100.00%

State Contributions

Equal to the actuarial required contribution minus expected member and employer regular and additional contributions. The State's contribution can not exceed the following amounts:

Due Date	
September 15, 2010	\$ 9,000,000
September 15, 2011	\$ 22,750,000
September 15, 2012	\$ 22,750,000
September 15, 2013 and beyond	\$ 24,000,000

The State's contributions end on the earlier of September 15, 2031, or in the year following the first date on which MERF assets equal or exceed MERF actuarial accrued liability.

Allowable Service

Service during which member contributions were made. Allowable Service may also include certain leaves of absence, military service and service prior to becoming a member. Allowable service also includes time on duty disability provided that the member returns to active service if the disability ceases.

Salary

All amounts of salary, wages or compensation

Average Salary

Average of the five highest calendar years of salary out of the last ten calendar years.

Actuarial Basis

Summary of Plan Provisions (continued)

Retirement

Normal retirement benefit

<i>Age/Service requirements</i>	Age 60 and 10 years of employment. Any age with 30 years of employment. Proportionate retirement annuity is available at age 65 and 1 year allowable service. Retirement is mandatory at age 70.
<i>Amount</i>	2.00% of average salary for the first 10 years of allowable service plus 2.50% of average salary for each subsequent year of allowable service.

Disability

Disability benefit

<i>Age/Service requirements</i>	Total and permanent disability before age 60 with five years of allowable service, or no allowable service if a work-related disability.
<i>Amount</i>	2.00% of average salary for the first 10 years of disability service plus 2.50% of average salary for each subsequent year of disability service. Disability service is the greater of (a) or (b) where: (a.) equals allowable service plus service projected to age 60, subject to a maximum of 22 years, and (b.) equals allowable service. Benefit is reduced by Workers' Compensation benefits. Payments stop at age 60 or earlier if disability ceases or death occurs. Benefits may be reduced on resumption of partial employment.

Disability after separation

<i>Age/Service requirement</i>	Total and permanent disability after electing to receive a retirement benefit but before age 60.
<i>Amount</i>	Actuarial equivalent of total credit to member's account.

Retirement after disability

<i>Age/Service requirements</i>	Total and permanent disability after electing to receive a retirement benefit but before age 60. Employee is still disabled after age 60.
<i>Amount</i>	Benefit continues according to the option selected.

Actuarial Basis

Summary of Plan Provisions (continued)

Death

Pre-Retirement Survivor's Spouse Benefit

Age/Service requirements
Amount

Active member with 18 months of allowable service.

30% of salary averaged over the last six months to the surviving spouse plus 10% of salary averaged over the last six months to each surviving child. Minimum benefit is \$900 per month.

Pre-Retirement Survivor's Spouse Annuity

Age/Service requirements
Amount

Active member or former member who dies before retirement with 20 years of allowable service.

Actuarial equivalent of a single life annuity which would have been paid as a retirement benefit on the date of death without regard to eligibility age for retirement benefit. If there is no surviving spouse, the designated beneficiary may be a dependent child or dependent parent.

Refund of accumulated city contributions

Age/Service requirements
Amount

Active member or former member dies after 10 years of allowable service and prior to retirement.

Present value of the City's annual installments of \$60 or, in the case of a former member, the net accumulation of city deposits. This benefit is not payable if survivor's benefits are paid.

Lump sum

Age/Service requirements
Amount

Death prior to service or disability retirement without an eligible surviving beneficiary.

\$750 with less than 10 years allowable service, or \$1,500 with 10 or more years of allowable service.

Refund of member contributions at death

Age/Service requirements
Amount

Active member or former member dies before retirement.

The excess of the member's contributions (exclusive of the contributions to the survivor's account) plus interest to the date of death.

Termination

Deferred benefit

Age/Service requirements
Amount

Three years of allowable service.

Benefit computed under law in effect at termination and increased by the following annual percentage:

- (a.) 0.00% prior to July 1, 1971, and
- (b.) 5.00% from July 1, 1971 to January 1, 1981, and
- (c.) 3.00% thereafter until the annuity begins.

Amount is payable at or after age 60.

Actuarial Basis

Summary of Plan Provisions (continued)

<p><u>Refund of member's contributions upon termination</u> <i>Age/Service requirements</i> <i>Amount</i></p>	<p>Termination of public service. Member's contributions with interest.</p>
<p>Form of payment</p>	<ul style="list-style-type: none"> ▪ Life annuity. ▪ Life annuity with 3, 5, 10 or 15 years guaranteed ▪ Joint & Survivor (with or without bounce back feature)
<p>Two Dollar Bill and Annuity</p>	<p>Optional Two Dollar Bill money purchase annuity available at age 55 with 20 years of service if member had service prior to June 28, 1973. According to PERA, this option is rarely utilized. We have assumed that remaining active members will not elect this optional benefit.</p>
<p>Benefit increases</p>	<p>Benefit recipients receive future annual 1.0% benefit increases. If the accrued liability funding ratio of the General Employees Retirement Plan reaches 90% (on a Market Value of Assets basis), the benefit increase will change to 2.5%.</p>
<p>Changes in Plan Provisions</p>	<ul style="list-style-type: none"> ▪ The administration of the Minneapolis Employees Retirement Fund as the MERF division is transferred to the Public Employees Retirement Association Board of Trustees. ▪ Post-retirement benefit increases change from one layer relating to the Consumer Price Index and a second layer relating to investment performance to 1.0% beginning January 1, 2011. If the accrued liability funding ratio of PERA's General Employees Retirement Plan reaches 90% (on a Market Value of Assets basis), the benefit increase changes to 2.5%. ▪ Employer and State Contribution requirements were modified.

Summary of All Changes

The following changes in methods, assumptions, and plan provisions and actuarial assumptions were recognized as of July 1, 2010:

Change in Actuarial Cost Method

- The statutory amortization date changed from July 1, 2020 to July 1, 2031.
- The Liquidity Trigger Adjustment that was added to the actuarial accrued liability in the 2008 and 2009 valuation is no longer applicable.
- Increases under 1998 and 1999 legislation are no longer excluded from the actuarial accrued liability.
- Annual post-retirement benefit increases are valued explicitly in the benefit amounts rather than implicitly through a difference in the pre and post-retirement investment return assumptions.

Changes in Asset Valuation Method

- Prior to July 1, 2010, the Non-Retirement Benefit Fund (RBF) Reserve asset gains and losses were smoothed over a five year period.
- The Deposit Accumulation fund (or Survivor Benefit Fund) is now included in the total fund.

Changes in Actuarial Assumptions

- Pre-retirement and post-retirement mortality was changed from the average of male and female rates of the 1986 Projected Experience Table set back 1 year to RP 2000 healthy sex distinct annuitant mortality, white collar adjustment, projected to 2018.
- Disabled mortality was changed from the average of male and female rates of the 1986 Projected Experience Table set back 1 year to RP 2000 healthy sex distinct annuitant mortality, white collar adjustment, reduced 20%.
- The post-retirement investment return assumption was changed from 5.0% to 8.5%. The pre-retirement investment return assumption was changed from 6.0% to 8.5%.

Changes in Plan Provisions

- The administration of the Minneapolis Employees Retirement Fund as the MERF division is transferred to the Public Employees Retirement Association Board of Trustees.
- Post-retirement benefit increases change from one layer relating to the Consumer Price Index and a second layer relating to investment performance to 1.0% beginning January 1, 2011. If the accrued liability funding ratio of PERA's General Employees Retirement Plan reaches 90% (on a Market Value of Assets basis), the benefit increase changes to 2.5%.
- Employer and State Contribution requirements were modified.

Summary of All Changes

Financial Impact Reported by Fund Actuary

The information in the table below was prepared by the Fund actuary, as part of the regular actuarial valuation report. We have provided this for informational purposes only.

	Before Amortization Period, Plan and Assumption Changes	Reflecting Amortization Period Change	Reflecting Amortization Period, Plan and Assumption Changes	Total Change
Accrued Liability Funding Ratio (AVA)	57.0%	57.0%	65.6%	8.6%
Unfunded Accrued Liability (000's)	\$635,000	\$635,000	\$442,000	\$(193,000)
Normal Cost Rate (000's)	899	899	\$520	(379)
Amortization of Unfunded (000's)	86,331	54,012	45,846	(40,485)
Expenses (000's)	1,492	1,492	1,492	0
Total Required Contribution (000's)	\$88,722	56,403	\$47,858	\$(40,864)

Refer to the *Actuarial Basis* section of this report for a complete description of these changes.

COLA Discussion

A very important assumption affecting the valuation results is the expectation of future post-retirement benefit increases. Currently, post-retirement increases are 1%. The accrued liability funding ratio of the General Employees Retirement Plan (on a market value of assets basis and assuming 1.0% benefit increases) is currently 66%. If the General Employees Retirement Plan (PERA General) reaches a funding ratio of 90% (on a market value of assets basis) in the future, post-retirement increases in the Minneapolis Employees Retirement Fund will change to the 2.5% level.

Fund actuary performed a projection of liabilities and assets for PERA General, using the 2010 valuation results as a baseline (including a 1.0% benefit increase assumption) and assuming future experience follows the valuation assumptions. The projection indicates that, without contribution increases, changes in benefits or assumptions, or favorable experience, the funded status of PERA General is not expected to reach 90%. We concur with that analysis and agree with its conclusion.

The liabilities in this report are calculated using the reduced 1.0% annual increases for all future years. According to the Fund actuary report, this approach was prescribed by PERA based on their interpretation of applicable Minnesota Statutes (and their consultation with the LCPR).

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**Minneapolis Employees Retirement Fund
Active Members as of June 30, 2010**

<u>Age</u>	<u>Years of Service</u>								<u>ALL</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<25	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	17	17
55-59	0	0	0	0	0	0	0	53	53
60-64	0	0	0	0	0	0	0	47	47
65+	0	0	0	0	0	0	0	26	26
ALL	0	0	0	0	0	0	0	143	143

Average Annual Earnings

<u>Age</u>	<u>Years of Service</u>								<u>ALL</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<25	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	56588	56588
55-59	0	0	0	0	0	0	0	60471	60471
60-64	0	0	0	0	0	0	0	61712	61712
65+	0	0	0	0	0	0	0	56670	56670
ALL	0	0	0	0	0	0	0	59726	59726

SERVICE RETIREMENTS
Retired as of June 30, 2010

Age	Years of Service							ALL
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	35	35
55-59	0	7	6	0	0	0	255	268
60-64	2	31	14	9	10	8	476	550
65-69	1	40	25	11	7	16	366	466
70-74	0	33	38	10	10	38	279	408
75-79	5	35	30	23	24	60	271	448
80-84	1	29	28	33	66	90	271	518
85+	4	16	18	118	128	127	256	667
ALL	13	191	159	204	245	339	2209	3360

Average Annual Benefit

Age	Years of Service							ALL
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	36454	36454
55-59	0	4722	8215	0	0	0	38597	37032
60-64	868	5122	10048	12686	22103	35130	43011	38892
65-69	385	3415	8204	12219	18214	30584	44193	37056
70-74	0	3445	8601	12907	16590	29198	43741	34433
75-79	613	4590	9161	12598	21930	26341	45459	33827
80-84	1598	3654	7657	12291	17592	24611	49890	34023
85+	1282	4139	6739	9982	18722	23485	49857	29255
ALL	916	4058	8380	11034	18768	25540	44623	34583

DISABILITY RETIREMENTS
Disabled as of June 30, 2010

Age	Years of Service							ALL
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	1	1
55-59	0	0	1	4	4	1	4	14
60-64	1	0	10	2	10	8	3	34
65-69	0	1	1	5	3	8	6	24
70-74	0	0	4	7	6	4	3	24
75-79	0	0	4	4	3	6	1	18
80-84	0	3	3	2	2	3	0	13
85+	0	0	3	3	4	3	2	15
ALL	1	4	26	27	32	33	20	143

Average Annual Benefit

Age	Years of Service							ALL
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	25796	25796
55-59	0	0	5818	26258	26411	17288	25802	24071
60-64	22800	0	20370	26842	31398	31653	35602	28065
65-69	0	1586	19137	29387	28714	32391	33496	29746
70-74	0	0	20219	28733	29289	30625	34560	28497
75-79	0	0	16075	19470	25226	36940	29407	26050
80-84	0	7490	20095	14000	17174	26049	0	17173
85+	0	0	3628	16777	19438	25943	30848	18566
ALL	22800	6014	17116	24555	27165	31205	31578	25772

SURVIVORS
Since Death as of June 30, 2010

Age	Years of Service							ALL
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50	0	0	2	2	0	1	8	13
50-54	0	0	1	0	0	0	8	9
55-59	0	2	0	2	4	7	15	30
60-64	0	0	1	2	1	7	28	39
65-69	0	2	10	6	4	7	20	49
70-74	0	2	1	3	12	13	46	77
75-79	0	3	8	10	10	22	58	111
80-84	0	4	9	10	19	22	118	182
85+	0	3	12	39	41	57	178	330
ALL	0	16	44	74	91	136	479	840

Average Annual Benefit

Age	Years of Service							ALL
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50	0	0	1824	2128	0	29261	18238	14082
50-54	0	0	1824	0	0	0	34372	30756
55-59	0	8215	0	13804	28463	28055	30607	27113
60-64	0	0	13829	12840	9892	27201	34236	30729
65-69	0	13829	14361	18093	16796	28447	34607	25271
70-74	0	3750	17397	18859	20699	27755	44191	35370
75-79	0	5149	12707	12452	20145	28539	39122	30090
80-84	0	5066	12326	16471	20161	26812	37917	31556
85+	0	8028	10754	12376	17737	22601	38505	28803
ALL	0	6962	11862	13440	19242	25603	37914	29788