MINNEAPOLIS FIREFIGHTERS' RELIEF ASSOCIATION

SPECIAL FUND

Projected January 1, 2012 Actuarial Valuation
Upon PERA Merger

May 18, 2011

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Actuarial Certification

We certify that we have made a good faith effort to comply with the unsigned May 17, 2011 Points of Agreement provided by David H. Johnson in a 7:01 p.m. email to Mark Meyer in all respects and in a manner intended to conform to Minnesota State law and generally accepted actuarial principles.

We are available to answer any questions on the material contained in this report, or to provide explanations or further details as may be appropriate. The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report.

We believe the results are reasonable and fairly represent the actuarial status of this plan.

Respectfully submitted,

Mark D. Meyer, FSA, M
Consulting Actuary

P ter J. Cullen, EA, MAAA
Consulting Actuary

L/D/C/R: 4/GG/PC/MM

May 18, 2011

Summary of Results

	December 31, 2010	January 1, 2012*
A. Plan participant data		
1. Number of participants		
a. Active employees	23	23
b. Retirees	326	322
c. Disability	47	47
d. Survivng spouses	155	146
e. Total	551	538
B. Normal costs		
1. Total normal cost		
a. Amount	$353,487	N/A
b. Percentage of active payroll	19.45%	0.00%
2. Employer normal cost		
a. Amount	208,059	N/A
b. Percentage of active payroll	11.45%	0.00%
C. Amortization payments		
1. Unfunded actuarial accrued liability	$54,748,868	N/A
2. Unfunded present value of benefits	N/A	$17,529,555
3. Amortization payment	6,684,906	1,839,815
D. Value of plan assets		
1. Market value	$217,162,646	$226,000,000
2. Actuarial value (for calculating contributions)	186,987,970	N/A
E. Benefit liabilities		
1. Present value of future benefits	242,282,865	243,529,555
2. Actuarial accrued liability	241,736,838	N/A
F. Funded status		
1. Actuarial value of assets as a percent of liabilities	77.4%	N/A
2. Market value of assets as a percent of liabilities	89.8%	92.8%

* The January 1, 2012 results are projected based on the December 31, 2010 census data used in the 12/31/2010 actuarial valuation report.

Historical Unit Values

		Current		PERA	
	Effective Date	Contract Unit Values	Annual Member Benefit*	Proposed Unit Values	Annual Member Benefit**
1999	01/01/99	$64.9037			
	10/15/99	67.8887			
2000	01/01/00	67.9408			
	10/15/00	69.8559			
2001	01/01/01	70.4249			
	10/15/01	72.4039			
2002	01/01/02	73.0107			
	10/15/02	74.4474			
2003	01/01/03	74.4474			
	10/15/03	75.6284			
2004	01/01/04	79.3547			
	10/15/04	79.5518			
2005	01/01/05	79.5518			
	07/01/05	80.9824			
	10/15/05	82.6062			
2006	01/01/06	82.6062			
	10/15/06	83.1522			
2007	01/01/07	83.1522			
	09/09/07	85.5889			
2008	01/01/08	85.8168			
	10/26/08	88.3800			
2009	01/01/09	88.3800			
	12/01/09	82.3200			
2010	01/01/10	82.3300			
	10/15/10	82.3300			
2011	01/01/11	82.3300			
2012	01/01/12	85.6232	$43,154	104.651	$54,000
2013	01/01/13	89.0481	44,880	109.011	56,250
2014	01/01/14	92.6101	46,675	114.825	59,250
2015	01/01/15	96.3145	48,542	124.031	64,000
2016	01/01/16	100.1670	50,484	125.891	64,960

The unit values as of December 1, 2009 and January 1, 2010 were determined by Rice, Michels and Walther based on the most recent union contract (expired December 31, 2010) and the November 20, 2009 court order.

*Annual benefit payable for retiree with 42 units.

**Annual benefit payable for retiree with 43 units.

Funding Basis

Actuarial Values Used to Determine Contribution

	December 31, 2010	January 1, 2012
A. Actuarial present value of projected benefits (the value of all future benefits to be paid to the current group of members)		
1. Active members	$17,035,514	$15,995,943 *
2. Vested terminated members	0	0
3. Retired members	167,017,555	167,492,507 *
4. Spouses and children receiving benefits	32,104,314	34,285,238 *
5. Disabled members receiving benefits	26,125,482	25,755,866 *
6. Total present value of projected benefits	242,282,865	243,529,555 *
B. Amortization of unfunded actuarial accrued liability		
1. Total actuarial accrued liability	$241,736,838	N/A
2. Actuarial value of assets	186,987,970	N/A
3. Unfunded actuarial accrued liability (1. - 2.)	54,748,868	N/A
4. Funded status (2. / 3.)	77.4%	N/A
5. Amortization payment (see page 5)	6,684,906	N/A
C. Amortization of unfunded present value of benefits		
1. Total present value of benefits (A.6.)	N/A	$243,529,555
2. Projected market value of assets**	N/A	226,000,000
3. Unfunded present value of benefits (1. - 2.)	N/A	17,529,555
4. Funded status (2. / 3.)	N/A	92.8%
5. Amortization payment (see page 5)	N/A	1,839,815

* This liability was determined using projected annual cash benefit payments. An adjustment factor of 0.5% was used to reflect that payments are made exactly on the first of the month rather than approximately middle of the year.

** This assumes investment gains such that benefit payments less contributions will be met by investment earnings so that the 4/30/2011 value of assets will be maintained.

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Funding Basis

Amortization Schedule - Current

Date Established	Date Payments Assumed to Commence	Original / Remaining Amortization Period*	Present Value (at 6%) December 31, 2010	Amortization Payment
12/31/2003	10/1/2005	15 / 9	38,187,534	$5,533,223
12/31/2004	10/1/2006	15 / 10	(24,473,185)	(3,277,035)
12/31/2005	10/1/2007	15 / 11	13,298,065	1,661,717
12/31/2006	10/1/2008	15 / 12	2,359,694	277,387
12/31/2007	10/1/2009	15 / 13	(12,634,285)	(1,406,531)
12/31/2008	10/1/2010	15 / 14	6,140,883	651,112
12/31/2009	10/1/2011	15 / 15	30,055,565	3,049,851
12/31/2010	10/1/2012	15 / 15	1,814,597	195,182
Total			54,748,868	6,684,906

Amortization Schedule - PERA

Assumed Payment Date	Amortization Payment	Present Value as of 1/1/2012	Amortization Based on Valuation January 1
12/1/2012	$1,839,815	$1,707,249	2012
12/1/2013	1,839,815	1,573,501	2012
12/1/2014	1,839,815	1,450,232	2012
12/1/2015	1,839,815	1,336,619	2012
12/1/2016	1,839,815	1,231,907	2012
12/1/2017	1,839,815	1,135,398	2012
12/1/2018	1,839,815	1,046,450	2012
12/1/2019	1,839,815	964,470	2012
12/1/2020	1,839,815	888,912	2012
12/1/2021	1,839,815	819,274	2012
12/1/2022	1,839,815	755,091	2012
12/1/2023	1,839,815	695,937	2012
12/1/2024	1,839,815	641,416	2012
12/1/2025	1,839,815	591,167	2012
12/1/2026	1,839,815	544,854	2012
12/1/2027	1,839,815	502,170	2012
12/1/2028	1,839,815	462,830	2012
12/1/2029	1,839,815	426,571	2012
12/1/2030	1,839,815	393,153	2012
12/1/2031	1,839,815	362,353	2012

Total Present Value of Amortization Payments (at 8.5%)	17,529,555
Unfunded Present Value of Benefits as of 1/1/2012	17,529,555

* The amortization period is the lesser of 15 years and the benefit life expectancy for the fund. See Minn. Stat. §423C.15

Actuarial Methods and Assumptions

	Current	PERA
1. Mortality	The 1983 GAM mortality table set forward 2 years for females.	The RP-2000 annuitant fully generational mortality table with white collar adjustment.
2. Retirement Age	Active members are assumed to retire at the later of attaining age 57 or in one year.	Active members are assumed to retire at the later of attaining age 57 or January 1, 2012.
3. Interest Rate	6% compounded annually.*	8.5% compounded annually.
4. Unit value/Salary Scale	The annualized value of $82.33 as of December 31, 2010, with 4% annual increases.*	All unit values after January 1, 2015 are assumed to increase 1.5% per year.
5. Actuarial Cost Method	The Entry Age Normal Cost Method. Under this method, the normal cost for an individual member is the level annual dollar amount required, beginning on the date of joining the association, to accumulate the funds needed to pay the member's accrued benefits by their assumed retirement age. The actuarial accrued liability is the accumulated value of these annual normal costs on a given date. The normal cost and accrued liability for the plan is the total of these values for all members.*	N/A
6. Beneficiary Data	85% of active employees are assumed to be married. Actual spouse data is used for retirees. Where spouse birthdates are not on file, wives are assumed to be 3 years younger than husbands.	85% of active employees are assumed to be married. Actual spouse data is used for retirees. Where spouse birthdates are not on file, wives are assumed to be 3 years younger than husbands.

* The interest rate and unit value increase assumptions and the actuarial cost method are prescribed by Minnesota Statute §356.215. The remaining assumptions cannot be changed without approval by the Legislative Commission on Pensions and Retirement.

Minn. Stat. §69.77 subd. 4(c)(2) requires that there be no explicit recognition of expenses. This may need to be revised as the plan matures.

Summary of Plan Provisions

1. Normal Retirement Benefit*	Annual benefit of 1.6/80 of base pay for each year of service up to 25 years. An additional 2 units are awarded for the 20th year of service, for a maximum of 42 units. Members may choose among alternative survivor payment forms (see 4. below) which modify the number of units payable to the member and their spouse. A member who is single at the time of retirement and who has at least 25 years of service may choose to receive 42.3 units on the condition of a reduced survivor payment to any future spouse. "Base pay" for this purpose means the maximum monthly salary of a first grade firefighter. Members must be at least age 50 with 5 years of service to receive this benefit.
2. Surviving Spouse's Benefit*	Annual benefit of 22/80 of base pay for the surviving spouse of an active or retired member. Upon retirement, members may choose an alternate form of payment that provides 50%, 75% or 100% of their benefit to their spouse after their death. The 22 units are adjusted if one of these alternate forms is selected. Retiring members who are unmarried may elect an actuarial increase.
3. Surviving Children's Benefit*	Annual benefit of 8/80 of base pay for each surviving child of an active or retired member. Benefits continue to age 18 or if the child is a full-time student, to age 22. The total benefit for surviving children and spouse combined is limited to 42/80 of base pay.
4. Member Contributions	Members are required to contribute 8% of base pay. After 25 years of service, member contributions are paid to a separate health insurance account.
5. Post-retirement Benefits	No liability was included for future post-retirement benefits or 110% bill payments because the amount, if any, is contingent upon future investment results and such amounts are generally not material.

Due to the advanced age and service of active members, the deferred vested and disability benefits are obsolete.

* The 2012 liabilities are based on a 2.381% increase to retiree units (43 ÷ 42), a 4.5455% increase to surviving spouse units (23 ÷ 22), and a 2.4390% increase to disabilitant units (42 ÷ 41).