TO: Members of the Legislative Commission on Pensions and Retirement

FROM: Ed Burek, Deputy Director

RE: S.F. 2038 (Michel); H.F. 2173 (Larson): Bloomington Fire Relief Association; Extending Amortization Date and Tying it to PERA-General Full Funding Date, Increasing Interest Assumption, and Revising Actuarial Valuation of Assets Determination

DATE: April 4, 2005

Summary of S.F. 2038 (Michel); H.F. 2173 (Larson)

S.F. 2038 (Michel); H.F. 2173 (Larson) revises the full funding date from December 31, 2010, to December 31, 2031, and tying that new date thereafter to match any change in the General Employees Retirement Plan of the Public Employees Retirement Association (PERA-General) full funding date; by revising the interest (rate of return) assumption from five percent to six percent; and by changing the actuarial value of asset definition from market value to the value of all assets at cost, including any realized gain or loss, plus the average total unrealized gain or loss for the most recent five-year period ending with the end of the plan year immediately preceding the actuarial valuation report transmission date.

Background on Bloomington Fire Relief Association

1. General. The Bloomington Fire Relief Association is considered to be a volunteer fire relief association although, unlike any other volunteer fire association, its members receive retirement benefits which are based on the salary of a paid position. It is by far the largest volunteer fire relief association in the state in terms of assets, with approximately $92 million in assets according to the most recent available actuarial valuation report.

   According to the benefit summary in that report, the retirement benefit is one-third of the most recent three-year average monthly salary of a top grade city police officer. Members are eligible to retire at age 50 with 20 years of service. The disability benefit is the same as the retirement benefit if the disability is duty related. If it is non-duty related, the disability benefit is five percent of the retirement benefit for each year of service provided up to 20 years. The plan also provides death benefits to a surviving spouse and dependent children.

   The plan is funded through a combination of city and state funding. Since the plan is a volunteer plan, no employee contribution is made. The state funding is provided by the fire state aid program, which is based on a two percent tax on the premiums received by insurance companies on fire insurance policies. The amount generated by that tax is distributed to jurisdictions that have firefighters, with half based on population in the jurisdiction relative to the statewide total population, and half based on property wealth in the jurisdiction relative to statewide totals. Each year, the plan's actuary (Milliman USA) provides an actuarial report in which the actuary computes the plan's total contribution requirements, which is the sum of plan normal cost, expenses, and an amortization requirement, if applicable. If there is unfunded liability, this amount is to be amortized by December 31, 2010. If there are surplus assets (assets in excess of 100 percent funding), one-tenth of the excess is used as a negative amortization factor, reducing the total contributions that would otherwise be required. The city is responsible for funding any portion of the total contribution requirement that is not covered by the state aid. Generally, this is occurring with a one-year delay. For example, when the January 1, 2004, actuarial report is completed, based on data through December 31, 2003, the city then knows how much it should have contributed during 2003. If the amount needed is in excess of the amount contributed, the city then adds that additional amount to the tax levy.

2. State Aid. The state aid received by Bloomington for its relief association in recent years is shown below.

Table 1

Amounts Contributed by the State Through the
Fire State Aid Program

Year	Amount
1990	$291,900
1991	$255,322
1992	$251,423
1993	$238,064
1994	$253,157
1995	$267,134
1996	$349,562
1997	$340,683
1998	$355,234
1999	$360,549
2000	$370,100
2001	$363,938
2002	$411,764
2003	$495,967

3. Actuarial Presentation. Partial actuarial information on the plan is provided below from the January 1, 2000, through January 1, 2004, reports. The information below for 2003 is from the January 1, 2004 valuation, which was based on 2003 data, and similarly for the early years shown. In the first two years, the plan has so much surplus assets that negative amortization was more than sufficient to completely eliminate the contribution requirement, and no city contribution was needed. In 2002 and 2003, however, the surplus dwindled and then disappeared, creating the need for a city contribution. In 2004, the plan again moved to more than 100 percent funding, but the total requirement of $1.056 million is considerably above the state aid for that year, again leading to a need for a city contribution.

Table 2

Bloomington Fire Relief Association Actuarial Data

	2003		2002		2001		2000		1999	
Membership										
Active Members		142		152		160		150		139
Service Retirees		116		115		110		106		103
Disabilitants		10		12		10		9		6
Survivors		13		14		13		14		14
Deferred Retirees		11		9		11		12		11
Nonvested Former Members		0		0		0		0		0
Total Membership		292		302		304		291		273
Funded Status										
Accrued Liability		$83,388,410		$81,361,778		$76,035,748		$71,967,391		$66,819,827
Current Assets		$91,904,999		$78,447,409		$93,960,664		$103,718,180		$110,084,568
Unfunded Accrued Liability		($8,516,589)		$2,914,369		($17,924,916)		($31,750,789)		($43,264,741)
Funding Ratio	110.21%		96.42%		123.57%		144.12%		164.75%	
Financing Requirements										
Covered Payroll		$8,792,640		$9,172,896		$9,329,280		$8,262,000		$7,197,420
Benefits Payable		$2,654,204		$2,445,360		$2,248,525		$2,130,596		$1,974,852
Normal Cost	32.18%	$2,829,793	31.84%	$2,921,050	31.55%	$2,943,251	31.86%	$2,632,139	31.82%	$2,289,828
Administrative Expenses	0.89%	$78,610	0.94%	$86,558	0.91%	$84,590	0.91%	$75,547	1.74%	$125,406
Normal Cost & Expense	33.08%	$2,908,403	32.79%	$3,007,608	32.46%	$3,027,841	32.77%	$2,707,686	33.56%	$2,415,234
Normal Cost & Expense	33.08%	$2,908,403	32.79%	$3,007,608	32.46%	$3,027,841	32.77%	$2,707,686	33.56%	$2,415,234
Amortization	(9.69%)	($852,007)	4.68%	$429,215	(19.21%)	($1,792,492)	(38.43%)	($3,175,079)	(60.11%)	($4,326,474)
Total Requirements	23.39%	$2,056,396	37.46%	$3,436,823	13.24%	$1,235,349	(5.66%)	($467,393)	(26.55%)	($1,911,240)

4. Investment Issues. The bill is basically an effort to revise actuarial assumptions to reduce Bloomington funding requirements and to get more stability into those funding requirements. This effort ought to be coupled with improvements in the plan's investment program. Improved investment returns will lower contribution requirements and add more stability, lessening the need to rely on smoothing techniques and other assumption revisions.

   Recent Legislative Commission on Pensions and Retirement staff's work reviewing the investment performance of larger Minnesota public plans for the 1994 through the third quarter of 2004 indicated that the Bloomington Fire Relief Association had the lowest return in the group over that nearly 11-year period. The State Board of Investment and a few other pension funds had returns that were about three percentage points higher per year. An additional three percent return on the Bloomington Fire Relief Association portfolio would amount to $2.7 million per year. These additional assets would have lessened the Bloomington contribution requirements by creating more surplus assets to offset the contribution requirements that occurred, and by lessening the amortization requirement in years where there was an unfunded.

   The Bloomington Fire Relief Association returns over time also indicated an unusual pattern. It did not display a consistent pattern that would be expected from either a conservative, moderate, or aggressive portfolio. When investment markets were down, as they were for a few years during this period, the Bloomington Fire Relief Association portfolio tended to lose more ground than nearly any other portfolio. This is acceptable if the portfolio has an aggressive mix, but if that were the case, one would expect the portfolio to do well in up markets. This did not occur. The Bloomington Fire Relief Association did worse than most portfolios in up markets. The Bloomington Fire Relief Association's inability to fully take advantage of up markets while being considerably harmed by down markets hurt the fund. The Bloomington Fire Relief Association long-term return was lower than the other pension funds while bearing considerably more risk (rate of return variability) than most of the funds. Improvements in this plan's investment approach can increase the long-term return and thus lessen the need for contributions, while a more stable return pattern would lessen the need for asset smoothing techniques.

Discussion of Issues

S.F. 2038 (Michel); H.F. 2173 (Larson) would revise the Bloomington Fire Relief Association funding requirements by making three changes. First, the bill would revise the full funding date from December 31, 2010, to December 31, 2031, and tie the date thereafter to match any change in the General Employees Retirement Plan of the Public Employees Retirement Association (PERA-General) full funding date. Second, the interest assumption is revised from five percent to six percent. Third, the plan's assets would be defined differently. Instead of using market value, the plan would use the market value plus the average total unrealized gain or loss for the most recent five-year period ending with the end of the plan year immediately preceding the actuarial valuation report date.

It will be difficult for the Commission to determine the need for any of these changes given the lack of supporting information as of this writing. An actuarial report for January 1, 2005, would provide the Commission with a more recent snapshot of this fund's condition, but none has yet been provided. Commission staff also has not been provided with information or analysis specifically supporting any of proposed recommendations. The plan's condition as of January 1, 2005, is not known, and it is not known with any precision whatsoever what the plan's revised condition would be if these changes are adopted by passing this bill. All Commission staff can provide at this time is a broad discussion of the general direction of the impact that any given change would cause.

The first proposed change is to extend the amortization date for any unfunded liability from 2010 to 2031, with any further changes in that date to be tied to further changes in the PERA-General full funding date. When a fund has an unfunded liability, extending the amortization date lowers the annual amortization requirement. Although the Bloomington Fire Relief Association had no unfunded liability in the last actuarial valuation Commission staff has on file (January 1, 2004), perhaps it currently does. A city with a relief association which suddenly has an unfunded liability may have a problem, since the 2010 full funding date is looming just a few years off. Any unfunded liability must be retired in a short period of time, creating a higher yearly amortization payment than would be the case if the full funding date were further in the future. The specific proposed solution, however, may be questioned. The year 2031 seems too far in the future given the magnitude of any likely level of unfunded liability. Also, there seems no reason to tie the full funding date for this local volunteer fire plan to PERA-General, which is a paid general employee plan. Finally, the way the PERA-General amortization date provision is drafted, it cannot change unless it is revised by the Legislature. The language is in Section 356.215, Subdivision 11, paragraph (e). This subdivision describes a methodology used to automatically revise the full funding date of applicable plans following a benefit change, an actuarial assumption change, a change in the actuarial cost method, or a combination of any of these three. However, paragraph (e), applicable to PERA-General, is drafted as an exception to the procedure stated in the remainder of that subdivision. Despite a change in PERA-General benefits, actuarial assumptions, or cost method, the PERA-General full funding date will be unchanged, staying at June 30, 2031.

The second change is to revise the interest rate, or more appropriately, the rate of return assumption, from five percent to six percent. This will lower contribution requirements, lessening the need for city contributions. If assets of the fund are assumed to grow at six percent rather than by five percent due to the investing in the markets, then any given level of assets are assumed to cover more liability. The computed full actuarial reserves for retirees are lowered, because assets prior to payout are presumed to grow at six percent rather than five percent. The actuarial work will assume that more of the eventual payout is provided by investment return rather than contributions.

The third change is the revised definition of assets for actuarial purposes. Rather then continuing to use market value, the plan would use the value of all assets at cost, including any realized gain or loss, plus the average total unrealized gain or loss for the most recent five-year period ending with the end of the plan year immediately preceding the actuarial valuation report transmission date. This proposed method is a minor variation on the method enacted several years ago for the Minneapolis Police Relief Association and the Minneapolis Fire Relief Association, except that these two Minneapolis plans use three-year rather than five-year averaging of the unrealized gain or loss portion of the calculation.

The Commission may wish to carefully review this portion of the proposal. This Minneapolis model has unusual properties and may not be an adequate smoothing technique. The Minneapolis approach was adopted for these two Minneapolis relief associations with little legislative discussion of the method, and may be intended by the relief associations to meet objectives other than creating more stable plan asset values over time. In the Minneapolis plans, certain post-retirement adjustments are contingent upon achieving certain funding ratios. A method that produces high estimates of value rather than low estimates would allow these funding ratio targets to be hit more easily. Basically, the proposal is to set the actuarial value of assets equal to the portfolio's cost plus realized gains and losses, plus an average of past unrealized gains or losses. A criticism of this approach is that the number can be manipulated to produce a desired outcome. If, for instance, markets have been rising for several years and the pension fund administration wishes to further boost the actuarial value of assets, the plan could sell many of its appreciated assets to produce a large realized gain. The method then would add the average of past unrecognized gains, which could create an actuarial value of assets which exceeds the market value. Having an actuarial value of assets in excess of market value when the market is rising would contradict the desired properties of a smoothing technique. An asset smoothing technique ought to level off the peaks and valleys, creating asset values below the market value in rising markets and above the market value in down markets.

Another way of viewing the flaw in the Minneapolis approach is to note that it creates double counting of some of the assets. In a market that has moved upward for a few years, many assets which have been in the portfolio for several years will be appreciated in value. The plan administration can recognize that value by selling the securities. The value of those assets also is part of the past unrecognized gains. Thus the assets are counted as recognized gains and are counted again when the past unrecognized gains are added to the calculation.

Pension policy issues raised by S.F. 2038 (Michel); H.F. 2173 (Larson), are as follows:

1. Need for any Change. The Commission may wish to delay any action on the bill unless the Commission is provided with clear documentation supporting the need to adopt changes proposed by the bill, and an estimate of the impact these changes will have on the plan's actuarial condition and the city's contribution requirements. As of this writing, Commission staff has not received material to support the proposed changes. As of the last actuarial report the Commission staff received (July 1, 2004) this fund had a 110 percent funding ratio, creating a large negative amortization amount. This does little to support a need for action to reduce the burden on the city.

2. Investment Program Issues. To an extent, the proposal is an effort to deal with fallout from a flawed investment program. Perhaps there is a need for some revision in the various actuarial assumptions and actuarial methods as proposed in the bill, but in part the bill is dealing with symptoms rather than underlying causes. Some of the pressure placed on the city to provide contributions stems from a decade of weak investment performance. The proposal to revise the actuarial value of assets from market value to a system based on cost and realized and unrealized gains reflects a desire to gain more stability in the portfolio's value over time. Again, some of the instability may be remedied by

revisions in the association's investment program, which in the last decade has created more variable returns than in most comparable large Minnesota public pension plans.

3. Proposed Amortization Date Issues. There are several issues or problems with the proposed amortization date change. The change from 2010 to 2031 may be too drastic a response to the problem, assuming a problem can be documented. The Commission may wish to consider a rolling ten-year period, or some other lesser period than a 2031 date. Second, the proposal to tie the new date to PERA-General's funding date, as that date may change over time, needs explanation. There seems no clear reason to tie an amortization date for the Bloomington Fire Relief Association to that of a general employee plan with no clear connection to the Bloomington Fire Relief Association and few similarities in terms of benefits, plan design, or coverage group. Also, the drafting suggests a belief that the PERA-General amortization date will be automatically revised over time by the actions of the mechanism specified in Section 356.215, Subdivision 11. It will not. The paragraph in that subdivision for PERA-General is an exception to the remainder of that subdivision and will leave the PERA-General amortization date unchanged, even if there are benefit changes, amortization changes, or actuarial method changes. If, at some future date, the Legislature chose to amend Section 356.215, Subdivision 11, Paragraph (e), due to a benefit plan change in PERA-General, or due to changes in PERA-General actuarial assumptions, the Bloomington Fire full funding date would also change, due to the crossreference on page 7, lines 17 and 18, of the bill. But there would be no justification for changing the Bloomington Fire date if no benefit changes or actuarial assumption changes were made in the Bloomington Fire Plan.

4. Proposed Interest Rate Assumption Issue. Under the bill, the interest rate used in the actuarial work will be six percent rather than five. An increase may be reasonable, given that this relief association is investing in the same markets as the State Board of Investment and the various other larger Minnesota public plans, which use an 8.5 percent interest assumption. The proposed change will lower plan cost, but without documentation from the Bloomington Fire Relief Association actuary, Commission staff has no estimate of the result other than to suggest a general direction.

5. Issues: Proposed Actuarial Value of Assets Method. The first issue for the Commission is whether any revision should be authorized. Market value, the approach now in law for this fund, is the truest measure of the asset value supporting the liabilities of the fund. It indicates how much the portfolio is worth if sold on the open market. The concern reflected in the draft is that market value can swing widely from year to year, which will impact the city's contribution requirement. If the Commission is convinced that some revision is needed, the question is whether to implement the proposal in this draft. As noted above, the proposed approach is flawed by being subject to manipulation, and by a general tendency to overstate assets when markets rise for several years because the approach counts recognized gains and prior year unrecognized gains due to the same assets. The opposite problem can occur when markets decline over several years. It is not clear that the suggested approach adds stability. It may help when markets are particularly variable, where a high-return year is likely to be followed by a negative-return year. But in reasonably stable markets were there is a prolonged upward trend or a prolonged downward trend, the provision may harm rather than help. The suggestion of using a five-year average of past unrecognized gains or losses rather than a three-year average, as in the Minneapolis plans, seems likely to have some positive impact, but it does not correct this base flaw in the approach.

   The Commission may wish to consider that extending the amortization date modestly would have an effect on city contributions that is similar to the contribution effect of using asset smoothing. Moving out the amortization date will lessen the contribution rate impact by lessening the amortization factor. The same impact could be produced by a well-designed smoothing technique, which restricted the change in asset value to produce a similar amortization factor. Since the smoothing technique proposed in the bill is suspect, the Commission may wish to consider not implementing any smoothing technique at this time, but instead permitting a modest extension of the full funding date.

6. Nonseverable Provision. The issue is the nonseverable provision in Section 4 of the bill, which declares that the sections of the bill are nonseverable. It is unclear why the provisions of the bill should be nonseverable. Any of the changes (with some possible modification) could be implemented independently and be of some assistance in lowering city contributions.

Amendments

LCPR05-208 removes the nonseverable language from section 4 of the bill.

LCPR05-209 removes the language extending the Bloomington Fire Relief Association amortization date to 2031, causing the amortization date to remain as in existing law, December 31, 2010.

LCPR05-210, an alternative to LCPR05-209, eliminates the December 31, 2010, amortization date for the Bloomington Fire Relief Association and resets it to December 31, 2015.

LCPR05-211, an alternative to LCPR05-209 or LCPR05-210, sets the Bloomington Fire Relief Association amortization date ten years from the date that an unfunded liability first occurs, and resets it using rolling ten-year periods as long as an unfunded liability remains.

LCPR05-212 removes the increase in the interest rate (investment return rate) from the bill.

LCPR05-213, an alternative to LCPR05-212, could be used to change the interest rate from six percent, as proposed in the bill, to a rate to be set by the Commission. If the Commission chooses to keep the rate at five percent as in current law, the Commission should use LCPR05-212 rather than is amendment.

LCPR05-214 will remove the proposed actuarial value of assets methodology from the bill, leaving the present procedure in place, which sets the actuarial value of assets equal to market value.

LCPR05-215, an alternative to LCPR05-214, would implement, for the Bloomington Fire Relief Association, the same system used to determine actuarial value of assets in the State Board of Investment funds, the first class city teacher fund associations, and Minneapolis Employees Retirement Association (MERF). That system is based on market value and past deviations between the past market values and the expected market values if assets has grown as expected given the interest rate assumption.