Minneapolis Employees Retirement Fund

Actuarial Valuation and Review
as of July 1, 2004

SEGAL

The Segal Company
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October 14, 2004

Ms. Judith M. Johnson
Executive Director
Chief Investment Officer
800 Baker Building
706 2nd Avenue South
Minneapolis, Minnesota, 55402

Dear Ms. Johnson:

We are pleased to submit this Actuarial Valuation and Review as of July 1, 2004. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2004 and analyzes the preceding year's experience.

The census information on which our calculations were based was prepared by the Fund and the financial information was provided by the Fund. That assistance is gratefully acknowledged. The actuarial calculations were completed under our supervision.

This actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

THE SEGAL COMPANY

By:

Leslie L. Thompson, FSA, MAAA, EA	*Wally Malles, ASA, MAAA, EA*	*Susan M. Hogarth*
Senior Vice President and Actuary	*Associate Actuary*	*Actuarial Associate*

cc: Legislative Commission on Pensions and Retirement
Minnesota Department of Finance

SECTION 1

VALUATION SUMMARY

SECTION 2

VALUATION RESULTS

SECTION 3

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SECTION 4

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Purpose

This report has been prepared by The Segal Company to present a valuation of the Minneapolis Employees Retirement Fund as of July 1, 2004. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- Section 356.215 of the Minnesota Statutes;
- The benefit provisions of the Retirement Fund, as administered by the Legislative Commission on Pensions and Retirement;
- The characteristics of covered active members, inactive vested members, retired participants and beneficiaries as of July 1, 2004, provided by the Fund;
- The assets of the Fund as of June 30, 2004, provided by the Fund;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

Significant Issues in Valuation Year

The following key findings were the result of this actuarial valuation:

- The funded ratio based on the actuarial value of assets over the actuarial accrued liability as of July 1, 2004 is 92.10%, compared to 92.31% as of July 1, 2003. This ratio is a measure of funding status, and its history is a measure of funding progress.
- As indicated in Section 2, Subsection B of this report, the total unrecognized investment loss as of June 30, 2004 is $28,042,310. This investment loss will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years, to the extent it is not offset by recognition of investment gains derived from future experience. This implies that earning the assumed rate of investment return of 6.00% per year on a **market value** basis will result in investment losses on the actuarial value of assets in the next few years. Therefore, if the actual market return is equal to the assumed 6.00% rate and all other actuarial assumptions are met, the contribution requirements would still increase in each of the next few years.
- The statutory contribution rate under Chapter 422A is equal to 63.91% of payroll compared to the required contribution rate under Chapter 356 of 63.92% of payroll. Therefore the contribution deficiency is expected to be $0.
- The number of active plan participants continues to rapidly decline, since the plan is closed to new participants and current active participants are approaching retirement age. There were 836 active participants as of July 1, 2002, 705 active participants as of July 1, 2003, and 552 active participants as of July 1, 2004.
- There were no changes in plan provisions, actuarial assumptions or actuarial cost methods since the prior valuation. However, this is the first year that The Segal Company prepared the actuarial valuation of the Fund.
- This valuation includes an analysis of liability gains and losses by source (Chart 8) on an actuarially determined basis. The previous valuation referred to “RBF (Retirement Benefit Fund) Mortality” which was the amount of reserves necessary to be transferred to the RBF fund. This item has been re-named as the “RBF Transfer of Reserves” to be consistent with the Minnesota Statutes.
- The liability loss due to age and service retirements occurring different than assumed as of July 1, 2004 was $9.3 million, shown in Chart 8 on page 6. This loss explains the change in liability due to retirements not always occurring at the assumed age of 61. Losses will continue to occur until the experience and the assumption match.

Summary of Key Valuation Results

	2004	2003
Contributions (% of payroll) for plan year beginning July 1:		
Statutory – Chapter 422A	63.91%	52.50%
Required – Chapter 356	63.92%	52.49%
Funding elements for plan year beginning July 1:		
Normal cost	$5,725,402	$6,894,000
Market value of assets	1,485,346,553	1,471,326,000
Actuarial value of assets	1,513,388,863	1,519,421,000
Actuarial accrued liability*	1,643,139,996	1,645,921,000
Unfunded/(overfunded) actuarial accrued liability	129,751,133	126,500,000
GASB 25/27 for plan year ending June 30:		
Annual required contributions	$14,118,490	$14,739,000
Funded ratio	92.10%	92.31%
Covered actual payroll	$33,266,242	$40,537,000
Demographic data for plan year beginning July 1:		
Number of retired participants and beneficiaries	4,981	4,960
Number of vested former members	181	189
Number of active members	552	705
Total projected payroll	$31,019,951	$38,461,000
Average actual payroll	54,034	52,451
Average projected payroll**	56,196	54,555

* *Increases under 1998 and 1999 legislation are not included in this liability, because these costs are excluded from state - provided funding.*

** *Payroll projected by the assumed salary scale.*

A. MEMBER DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, including active members, vested terminated members, retired participants and beneficiaries.

This section presents a summary of significant statistical data on these member groups.

More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A, B, and C.

A historical perspective of how the member population has changed over the past three valuations can be seen in this chart.

CHART 1

Member Population: 2002 – 2004

Year Ended June 30	Active Members	Vested Terminated Members*	Retired Participants and Beneficiaries	Ratio of Non-Actives to Actives
2002	836	200	5,021	6.25
2003	705	189	4,960	7.30
2004	552	181	4,981	9.35

**Excludes terminated members due a refund of employee contributions*

Active Members

Plan costs are affected by the age, years of service and payroll of active members. In this year's valuation, there were 552 active members with an average age of 54.9, average years of service of 29.2 years and average projected payroll of $56,196. The 705 active members in the prior valuation had an average age of 54.3, average service of 28.7 years and average projected payroll of $54,555.

Inactive Members

In this year's valuation, there were 181 members with a vested right to a deferred or immediate vested benefit.

These graphs show a distribution of active members by age and by years of service.

CHART 2

Distribution of Active Members by Age as of June 30, 2004

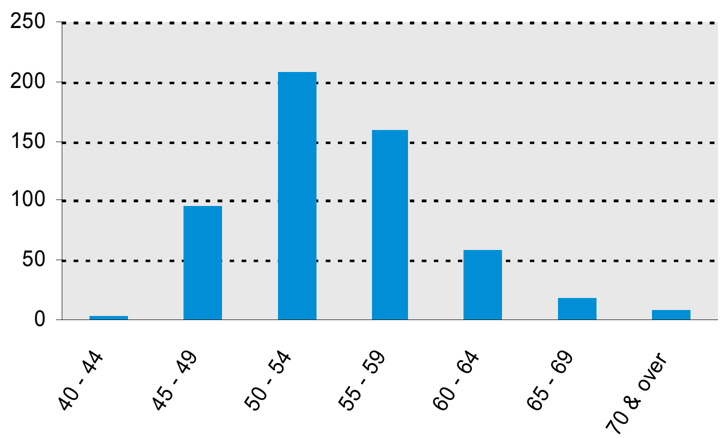
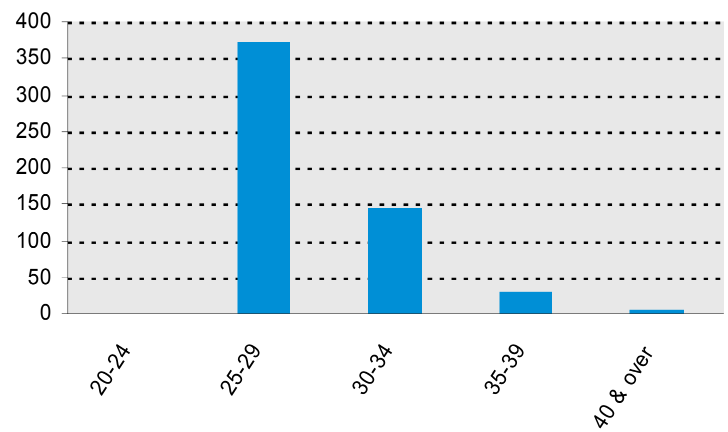


CHART 3

Distribution of Active Members by Years of Service as of June 30, 2004



Retired Participants and Beneficiaries
As of June 30, 2004, 3,982 retired participants and 999 beneficiaries were receiving total monthly benefits of $11,547,445. For comparison, in the previous valuation, there were 3,946 retired participants and 1,014 beneficiaries receiving monthly benefits of $11,254,515.

These graphs show a distribution of the current retired participants and beneficiaries based on their monthly amount and age, by type of pension.

CHART 4

Distribution of Retired Participants and Beneficiaries by Type and by Monthly Amount as of June 30, 2004

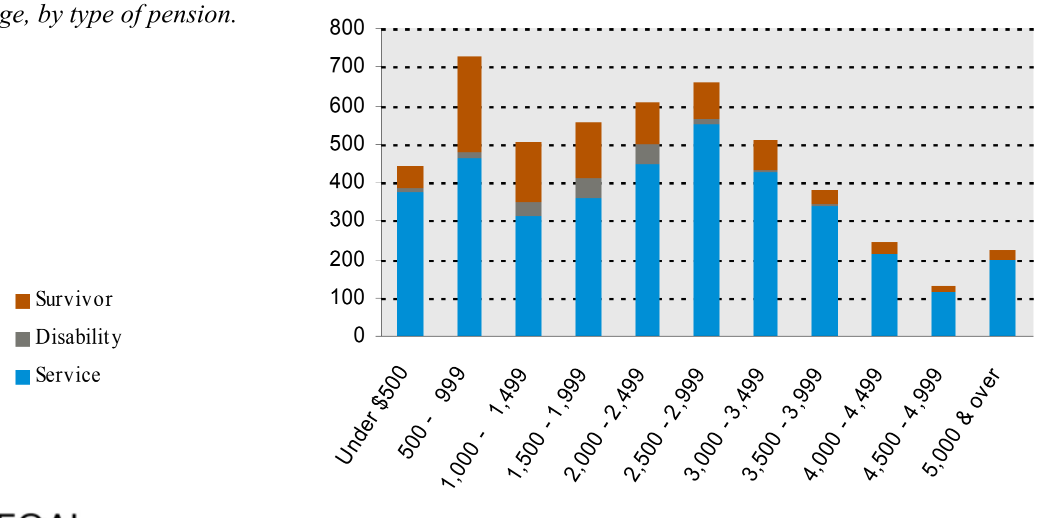
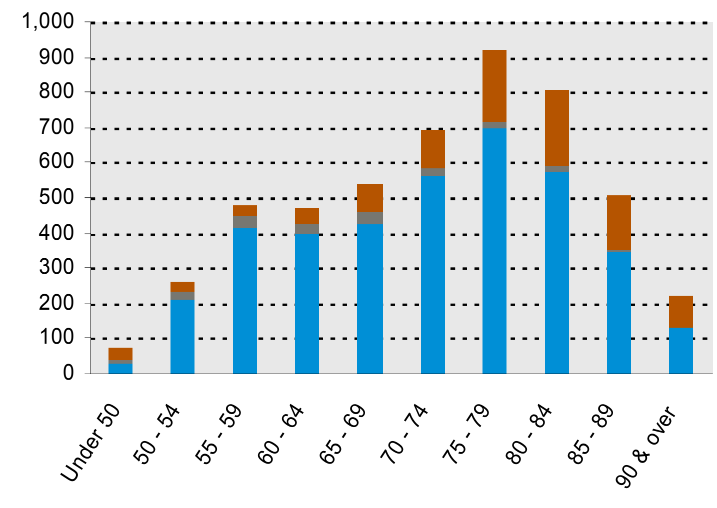


CHART 5

Distribution of Retired Participants and Beneficiaries by Type and by Age as of June 30, 2004



B. FINANCIAL INFORMATION

It is desirable to have level and predictable plan costs from one year to the next. For this reason, Minnesota Statutes require an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable. The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

Both the actuarial value and market value of assets are representations of the Fund's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets. The actuarial asset value is significant because the Fund's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

The chart shows the determination of the actuarial value of assets as of the valuation date.

CHART 6

Determination of Actuarial Value of Assets for Year Ended June 30, 2004

		Original Amount	% Not Recognized	
1.	Market value of assets available for benefits			$1,485,346,553
2.	Calculation of unrecognized return			
	(a) Year ended June 30, 2004	$5,077,112	80%	$4,061,690
	(b) Year ended June 30, 2003	-13,528,000	60%	-8,116,800
	(c) Year ended June 30, 2002	-36,876,000	40%	-14,750,400
	(d) Year ended June 30, 2001	-46,184,000	20%	-9,236,800
	(e) Total unrecognized return			-$28,042,310
3.	Actuarial value of assets: (1) – (2e)			$1,513,388,863

C. ACTUARIAL EXPERIENCE

To calculate the required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The experience gain/(loss) is ($37,269,082), ($17,864,808) from investments and ($19,404,274) from all other sources. The net experience variation from individual sources other than investments was (1.2)% of the actuarial accrued liability. A discussion of the major components of the actuarial experience is on the following page.

This chart provides a summary of the actuarial experience during the past year.

CHART 7

Actuarial Experience for Year Ended June 30, 2004

1.	Net gain/(loss) from investments	-$17,864,808
2.	Net gain/(loss) from other experience*	-19,404,274
3.	Net experience gain/(loss): (1) + (2)	-$37,269,082

** Details in Chart 8*

Other Experience
There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- retirement experience (earlier or later than expected),
- mortality (more or fewer deaths than expected),
- cost-of-living adjustments different than assumed, and
- salary increases different than assumed.

The net loss from this other experience for the year ended June 30, 2004 amounted to ($19,404,274) which is (1.2)% of the actuarial accrued liability.

A brief summary of the demographic gain/(loss) experience of the Fund for the year ended June 30, 2004 is shown in the chart below.

The chart shows elements of the experience gain/(loss) for the most recent year.

CHART 8

Experience Due to Changes in Demographics for Year Ended June 30, 2004

1.	Age and service retirements	-$9,262,753
2.	Post-retirement mortality*	-4,723,169
3.	Salary increases less than assumed	2,145,308
4.	Cost-of-living adjustment	-9,436,008
5.	Other items	1,872,348
6.	Total	-$19,404,274

* *For the year ended June 30, 2004, the post-retirement mortality gain/(loss) has been actuarially determined as the liability change that occurs when mortality assumptions are not met.*

D. INFORMATION REQUIRED BY THE GASB

Governmental Accounting Standards Board (GASB) reporting information provides standardized information for comparative purposes of governmental pension plans. This information allows a reader of the financial statements to compare the funding status of one governmental plan to another on relatively equal terms.

Critical information to GASB is the historical comparison of the GASB required contribution to the actual contributions. This comparison demonstrates whether a plan is being funded on an actuarially sound basis and in accordance with the GASB funding requirements. Section 4, Exhibit II presents a representation of this information for the Fund.

The other critical piece of information regarding the Fund's financial status is the funded ratio. This ratio compares the actuarial value of assets to the actuarial accrued liabilities of the plan as calculated under GASB. High ratios indicate a well-funded plan with assets sufficient to pay most benefits. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other changes.

GASB requires that the actuarial value of assets be used to determine the funded ratio, as shown in Section 4, Exhibit III.

EXHIBIT A
Table of Plan Coverage

Category	Year Ended June 30 2004	Year Ended June 30 2003	Change From Prior Year
Active members in valuation:			
Number	552	705	-21.7%
Average age	54.9	54.3	N/A
Average service	29.2	28.7	N/A
Total projected payroll	$31,019,951	$38,461,000	-19.3%
Average projected payroll	56,196	54,555	3.0%
Total active vested members	552	705	-21.7%
Vested terminated members	181	189	-4.2%
Retired participants:			
Number in pay status	3,791	3,749	1.1%
Average age	73.0	73.0	N/A
Average monthly benefit	$2,448	$2,407	1.7%
Disabled members:			
Number in pay status	191	197	-3.0%
Average age	66.9	66.0	N/A
Average monthly benefit	$1,804	$1,774	1.7%
Beneficiaries in pay status	999	1,014	-1.5%

EXHIBIT B

Members in Active Service as of June 30, 2004
By Age, Years of Service, and Average Projected Payroll

		Years of Service								
Age	**Total**	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40 & over**
Under 25	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
25 - 29	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
30 - 34	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
35 - 39	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
40 - 44	3	- -	- -	- -	- -	- -	3	- -	- -	- -
	$59,055	- -	- -	- -	- -	- -	$59,055	- -	- -	- -
45 - 49	96	- -	- -	- -	- -	- -	88	8	- -	- -
	52,857	- -	- -	- -	- -	- -	52,777	$53,739	- -	- -
50 - 54	208	- -	- -	- -	- -	1	157	48	2	- -
	57,134	- -	- -	- -	- -	$36,206	57,156	58,113	$42,363	- -
55 - 59	160	- -	- -	- -	- -	- -	94	51	14	1
	59,799	- -	- -	- -	- -	- -	59,946	61,058	55,413	$43,128
60 - 64	59	- -	- -	- -	- -	- -	25	25	7	2
	55,536	- -	- -	- -	- -	- -	54,719	53,827	65,399	52,584
65 - 69	18	- -	- -	- -	- -	- -	3	8	6	1
	41,174	- -	- -	- -	- -	- -	35,015	32,102	55,315	47,379
70 & over	8	- -	- -	- -	- -	- -	2	4	- -	2
	37,391	- -	- -	- -	- -	- -	65,494	20,545	- -	42,980
Total	552	- -	- -	- -	- -	1	372	144	29	6
	$56,196	$0	$0	$0	$0	$36,206	$56,543	$55,680	$56,903	$46,939

EXHIBIT C
Reconciliation of Member Data

	Active Members	Vested Former Members	Disableds	Retired Participants	Beneficiaries	Total
Number as of July 1, 2003	705	189	197	3,749	1,014	5,854
New members	0	N/A	N/A	N/A	N/A	0
Terminations – with vested rights	-3	3	0	0	0	0
Terminations – without vested rights	0	N/A	N/A	N/A	N/A	0
Retirements	-146	-20	N/A	166	N/A	0
New disabilities	-1	0	1	N/A	N/A	0
Died with beneficiary	-1	0	-3	-42	54	8
Died without beneficiary	-1	-1	-4	-85	-60	-151
Estate - Expiry	0	0	0	0	-9	-9
Lump sum payoffs	-1	-1	0	0	N/A	-2
Service buy back	N/A	11	0	3	0	14
Number as of July 1, 2004	552	181	191	3,791	999	5,714

EXHIBIT D

Summary Statement of Income and Expenses on an Market Value Basis for Year Ended June 30, 2004

	Non-RBF Assets	RBF Reserve	Market Value
A. Assets available at beginning of period	$215,763,195	$1,255,562,000	$1,471,325,195
B. Operating Revenues:			
1. Member Contributions	$3,342,960	$0	$3,342,960
2. Employer Contributions	38,366,010	0	38,366,010
3. State Contribution	7,093,000	0	7,093,000
4. Net Investment Income	16,864,262	0	16,864,262
5. RBF Income	0	86,890,958	86,890,958
6. Total Operating Revenue	$65,666,232	$86,890,958	$152,557,190
C. Operating Expenses:			
1. Service Retirements	$0	$126,973,403	$126,973,403
2. Disability Benefits	5,918,787	0	5,918,787
3. Survivor Benefits	4,343,308	0	4,343,308
4. Refunds	579,783	0	579,783
5. Administrative Expenses	717,952	0	717,952
6. Other (Employer Contribution on cash settlement)	2,599	0	2,599
7. Total Operating Expenses	$11,562,429	$126,973,403	$138,535,832
D. Other Changes in Reserves			
1. Annuities Awarded	-$75,860,924	$75,860,924	$0
2. RBF Transfer of Reserves*	-8,783,588	8,783,588	0
3. Total Other Changes	-$84,644,512	$84,644,512	$0
E. Assets available at end of period	$185,222,486	$1,300,124,067	$1,485,346,553
F. Determination of Current Year Unrecognized Asset Return			
1. Average Balance:			
(a) Non-RBF Assets Available at BOY: (A)	$215,763,195		
(b) Non-RBF Assets Available at EOY**: (E) – (D.2)	194,006,074		
(c) Average Balance [(a) + (b) – Net Investment Income) / 2]	196,452,504		
2. Expected Return: 6.00% x (F.1.c.)	11,787,150		
3. Actual Return: (B.4)	16,864,262		
4. Current Year Unrecognized Asset Return: (F.3) – (F.2)	$5,077,112		

* *Labeled as Mortality Gain/(Loss) for the year ended June 30, 2003*

** *Before adjustment for RBF Transfer of Reserves*

EXHIBIT E
Table of Financial Information for Year Ended June 30, 2004

	Market Value		Cost Value	
Cash, Equivalents, Short-Term Securities		$1,982,833		$1,982,833
Investments:				
Fixed Income		62,935,076		64,116,141
Equity		0		0
Other Assets		0		0
Equity in Retirement Benefit Fund (RBF)		1,300,124,067		1,300,124,067
Total Assets in Trust		$1,365,041,976		$1,366,223,041
Assets Receivable				
Receivable assets per financial statement		$17,294,896		$17,294,896
RBF Transfer of Reserves*:				
Equity in RBF	$1,300,124,067		$1,300,124,067	
Expected Reserve Cumulative Total	1,291,340,479		1,291,340,479	
Total RBF Transfer of Reserves*		-8,783,588		-8,783,588
Total Assets Receivable		$8,511,308		$8,511,308
Total Assets		$1,373,553,284		$1,374,734,349
Amounts Currently Payable		$2,492,881		$2,492,881
Assets Available for Benefits				
Deposit Accumulation:				
Deposit Accumulation Reserve	$79,719,925		$80,900,989	
RBF Transfer of Reserves*	-8,783,588		-8,783,588	
Total Deposit Accumulation		$70,936,337		$72,117,401
Disability Benefits		$70,540,996		$66,923,853
RBF Reserves		1,300,124,067		1,300,124,067
Survivor Benefits		43,745,153		42,394,264
Net assets at market value		$1,485,346,553		$1,481,559,585
Net assets at actuarial value		$1,513,388,863		$1,513,388,863

* *Labeled as RBF Mortality Gain/(Loss) for the year ended June 30, 2003*

EXHIBIT F

Development of the Fund Through June 30, 2004

Year Ended June 30	Employer Contributions	Employee Contributions	State Contributions	Net Investment Return*	Administrative Expenses	Benefit Payments	Actuarial Value of Assets at End of Year
1998	- -	- -	- -	- -	- -	- -	$1,207,065,000
1999	$14,722,996	$6,937,655	$7,032,750	$189,050,787	$858,663	$96,290,525	1,327,660,000
2000	13,013,923	6,069,060	3,085,000	174,870,360	742,134	107,465,209	1,416,491,000
2001	11,233,852	5,368,087	3,224,000	192,612,050	699,869	121,070,120	1,507,159,000
2002	12,260,956	4,779,661	4,510,000	143,429,981	748,180	131,170,418	1,540,221,000
2003	29,057,000	4,167,000	11,142,000	70,337,030	737,000	134,766,030	1,519,421,000
2004	38,366,010	3,342,960	7,093,000	83,699,126	717,952	137,815,281	1,513,388,863

** Net of investment fees*

EXHIBIT G

Development of Unfunded/(Overfunded) Actuarial Accrued Liability for Year Ended June 30, 2004

1. Unfunded/(Overfunded) actuarial accrued liability at beginning of year		$126,500,000
2. Normal cost at beginning of year including expenses		8,168,000
3. Total contributions		48,801,970
4. Interest		
(a) For whole year on (1) + (2)	$8,080,080	
(b) For half year on (3)	1,464,059	
(c) Total interest: (4a) – (4b)		6,616,021
5. Expected unfunded/(overfunded) actuarial accrued liability: (1) + (2) – (3) + (4)		$92,482,051
6. Changes due to (gain)/loss from:		
(a) Investments		$17,864,808
(b) Age and service retirements		9,262,753
(c) Post-retirement mortality*		4,723,169
(d) Salary increases less than assumed		-2,145,308
(e) Cost-of-living adjustment		9,436,008
(f) Other items		-1,872,348
(g) Total changes due to (gain)/Loss		$37,269,082
7. Changes due to plan provisions		0
8. Changes due to actuarial assumptions		0
9. Unfunded/(Overfunded) actuarial accrued liability at end of year		$129,751,133

* *For the year ended June 30, 2004, the post-retirement mortality gain/(loss) has been actuarially determined as the liability change that occurs when mortality assumptions are not met.*

EXHIBIT H
Definitions of Pension Terms

The following list defines certain technical terms for the convenience of the reader:

Assumptions or Actuarial Assumptions: The estimates on which the cost of the Fund is calculated including:

(a) Investment return — the rate of investment yield that the Fund will earn over the long-term future;

(b) Mortality rates — the death rates of employees and pensioners; life expectancy is based on these rates;

(c) Retirement rates — the rate or probability of retirement at a given age;

(d) Turnover rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

Normal Cost: The amount of contributions required to fund the benefit allocated to the current year of service.

Actuarial Accrued Liability For Actives: The equivalent of the accumulated normal costs allocated to the years before the valuation date.

Actuarial Accrued Liability For Pensioners: The single sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.

Unfunded Actuarial Accrued Liability: The extent to which the actuarial accrued liability of the Fund exceeds the assets of the Fund. There is a wide range of approaches to paying off the unfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.

Amortization of the Unfunded Actuarial Accrued Liability /Supplemental Contribution:	Payments made over a period of years equal in value to the Fund's unfunded actuarial accrued liability.
Investment Return:	The rate of earnings of the Fund from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.

EXHIBIT I
Summary of Actuarial Valuation Results

The valuation was made with respect to the following data supplied to us:		
1. Retired participants as of the valuation date (including 999 beneficiaries in pay status)		4,981
2. Members inactive during year ended June 30, 2004 with vested rights		181
3. Members active during the year ended June 30, 2004		552
Fully vested	552	
The actuarial factors as of the valuation date are as follows:		
1. Normal cost		$5,725,402
2. Actuarial accrued liability		1,643,139,996
Annuitants in RBF	$1,300,124,067	
Annuitants not in RBF – Disability Benefits	67,162,387	
Annuitants not in RBF – Survivor Benefits*	36,873,368	
Inactive members with vested rights	15,451,121	
Active members	223,529,053	
3. Actuarial value of assets ($1,485,346,553 at market value as reported by the Fund)		1,513,388,863
4. Unfunded/(Overfunded) actuarial accrued liability		$129,751,133
The determination of the supplemental contribution rate is as follows:		
1. Present value of $1.00 per year paid monthly through the amortization date of June 30, 2020 (16 years remaining)		10.14
2. Supplemental contribution: (UAAL / 10.14)		$12,795,970

* *Increases under 1998 and 1999 legislation are not included in this liability, because these costs are excluded from state - provided funding.*

EXHIBIT II

Supplementary Information Required by the GASB – Schedule of Employer Contributions

Plan Year Ended June 30	Actuarially Required Contribution Rate (a)	Actual Covered Payroll (b)	Actual Member Contributions (c)	Annual Required Contributions [(a) x (b)] – (c) = (d)	Actual Employer Contributions* (e)	Percentage Contributed (e) / (d)
1991	39.15%	$89,240,000	$9,073,000	$25,864,000	$27,716,000	107.16%
1992	43.78%	88,706,000	9,024,000	29,811,000	25,387,000	85.16%
1993	44.57%	85,768,000	8,724,000	29,503,000	30,441,000	103.18%
1994	44.37%	82,819,000	8,582,000	28,165,000	30,668,000	108.89%
1995	46.21%	80,239,000	8,083,000	28,995,000	29,720,000	102.50%
1996	44.48%	72,458,000	7,691,000	24,538,000	30,750,000	125.31%
1997	45.74%	70,538,000	7,345,000	24,919,000	29,642,000	118.95%
1998	42.41%	67,434,000	6,785,000	21,814,000	26,183,000	120.03%
1999	36.80%	64,075,000	6,938,000	16,641,000	23,279,000	139.89%
2000	34.65%	54,223,000	6,069,000	12,719,000	16,662,000	131.00%
2001	36.85%	46,812,000	5,368,000	11,882,000	17,621,000	148.30%
2002	41.78%	43,461,000	4,780,000	13,378,000	21,158,000	158.16%
2003	46.64%	40,537,000	4,167,000	14,739,000	40,199,000	272.73%
2004	52.49%	33,266,242	3,342,960	14,118,490	45,459,010	321.98%

* *Includes amortization obligations not yet paid.*

EXHIBIT III

Supplementary Information Required by the GASB – Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) – (a)	Funded Ratio (a) / (b)	Actual Covered Payroll (Previous FY) (c)	UAAL as a Percentage of Covered Payroll [(b) – (a) / (c)]
07/01/1991	$823,957,000	$1,119,876,000	$295,919,000	73.58%	$89,240,000	331.60%
07/01/1992	838,094,000	1,129,421,000	291,327,000	74.21%	88,706,000	328.42%
07/01/1993	888,587,000	1,172,908,000	284,321,000	75.76%	85,768,000	331.50%
07/01/1994	909,342,000	1,207,396,000	298,054,000	75.31%	82,819,000	359.89%
07/01/1995	964,886,000	1,230,966,000	266,080,000	78.38%	80,239,000	331.61%
07/01/1996	1,018,540,000	1,266,324,000	247,784,000	80.43%	72,458,000	341.97%
07/01/1997	1,081,106,000*	1,283,763,000	202,657,000	84.21%	70,538,000	287.30%
07/01/1998	1,207,065,000*	1,350,683,000	143,618,000	89.37%	67,434,000	212.97%
07/01/1999	1,327,660,000*	1,434,147,000	106,487,000	92.57%	64,075,000	166.19%
07/01/2000	1,416,491,000*	1,515,963,000	99,471,000	93.44%	54,223,000	183.45%
07/01/2001	1,507,159,000*	1,615,972,000	108,813,000	93.27%	46,812,000	232.45%
07/01/2002	1,540,221,000*	1,667,871,000	127,650,000	92.35%	43,461,000	293.71%
07/01/2003	1,519,421,000*	1,645,921,000	126,500,000	92.31%	40,537,000	312.06%
07/01/2004	1,513,388,863*	1,643,139,996	129,751,133	92.10%	33,266,242	390.04%

* *Includes amortization obligations not yet paid.*

Exhibit IV

Determination of Contribution Sufficiency

		July 1, 2004	
A. Statutory Contributions – Chapter 422A		**Percent of Payroll**	**Dollar Amount**
1.	Employee Contributions: 9.75% for 2004	9.75%	$3,024,445
2.	Employer Contributions: See Formula*	27.03%	8,385,962
3.	Employer Contributions**: Exhibit VI	1.13%	351,106
4.	State Contributions: Exhibit V	26.00%	8,064,635
5.	Total	63.91%	$19,826,148
B. Required Contributions – Chapter 356		**Percent of Payroll**	**Dollar Amount**
1.	Normal Cost	18.46%	$5,725,402
2.	Supplemental Contribution Amortization***: Exhibit I	41.25%	12,795,970
3.	Supplemental Contribution Amortization**: Exhibit VI	1.13%	351,106
4.	Allowance for Administrative Expenses:	2.41%	746,670
	• 2004 Administrative Expenses ($717,952) loaded by 4.00%		
5.	Contribution Amortization for 1992 Investment Expenses	0.67%	207,000
6.	Total	63.92%	$19,826,148
C. Contribution Sufficiency / (Deficiency) (A.5 – B.6)		-0.01%	
1.	Projected annual payroll for fiscal year beginning on the valuation date		$31,019,951

* *As a percent of payroll:*

18.46%	*Normal cost, plus*
2.41%	*Allowance for administrative expenses, plus*
0.67%	*Contribution amortization for 1992 investment expense, plus*
(9.75%)	*Employee contributions*
11.79%	*Employer normal cost, plus*
2.68%	*Supplemental contribution, plus*
12.57%	*$3,900,000 supplemental contribution*
27.03%	*Total employer contributions, adjusted for rounding*

** *Increases under 1998 and 1999 legislation are included in this line item.*
*** *Increases under 1998 and 1999 legislation are not included in this line item.*

Exhibit V

Allocation of Supplemental Contribution

Employer	Active Fund Accrued Liability	July 1, 2004 Current Assets: Employee	Current Assets: Employer	Unfunded Actuarial Liability: Dollar Amount	Unfunded Actuarial Liability: % of Total UAL
MnSCU	$406,724	$161,995	$700,435	$0	0.00%
City of MPLS	156,293,721	58,954,639	17,611,700	79,727,382	61.23%
SSD1	54,795,770	19,523,898	-9,780,398	45,052,270	34.60%
Subtotal	$211,496,215	$78,640,532	$8,531,737	$124,779,652	95.83%
Airport	$12,032,839	$4,567,855	$2,037,796	$5,427,188	4.17%
Grand Total	$223,529,054	$83,208,387	$10,569,533	$130,206,840	100.00%

Employer	2.68% of Payroll	$3,900,000	Allocation of Remaining Employer Contribution	$1,000,000 Credit	Total Employer Portion	Total State Portion	Total Supplemental Contribution
MnSCU	$1,489	$0	$0	$0	$1,489	$0	$1,489
City of MPLS	585,772	2,387,970	-319,019	26,644	2,681,367	5,152,861	7,834,228
SSD1	196,743	1,349,400	-46,312	15,056	1,514,887	2,911,774	4,426,661
Subtotal	$784,004	$3,737,370	-$365,331	$41,700	$4,197,743	$8,064,635	$12,262,378
Airport	$47,331	$162,630	$365,331	-$41,700	$533,592	$0	$533,592
Grand Total	$831,335	$3,900,000	$0	$0	$4,731,335	$8,064,635	$12,795,970

Increases under 1998 and 1999 legislation are not included in this exhibit. Effective with the June 30, 2000 fiscal year, increases to non-RBF short service survivor benefits are paid in a one-time lump sum payment by each affected local employer. The billable amounts are shown in Exhibit VI of this report.

Exhibit VI

Increase in Unfunded Accrued Liability due to Benefit Improvement

Employer	July 1, 1998 Short Service Survivor Benefit	January 1, 2005 Short Service Survivor COLA	Total
MnSCU	$0	$0	$0
City of MPLS	1,245,062	146,024	1,391,086
SSD1	354,260	44,104	398,364
Airport	14,507	1,823	16,330
Grand Total	$1,613,829	$191,951	$1,805,780

Increases under 1998 and 1999 legislation are shown in this exhibit.

Effective with the June 30, 2000 fiscal year, increases to non-RBF short service survivor benefits are paid in a one-time lump sum payment by each affected local employer. Increase in unfunded accrued liability is shown above.

Employer	July 1, 1998 Short Service Survivor Benefit	January 1, 2005 Short Service Survivor COLA	Total
MnSCU	$0	$0	$0
City of MPLS	122,787	146,024	268,811
SSD1	34,937	44,104	79,041
Airport	1,431	1,823	3,254
Grand Total	$159,155	$191,951	$351,106

The Fiscal Year 2004 annual payment by local employer is shown above.

Exhibit VII

Total Employer Contribution Amounts for Fiscal Year 2004

July 1, 2004

	Normal Cost	Supplemental Contribution		Short Service Survivor Additional Benefit	01/01/2005 COLA	
Employer	**% of Payroll**	**% of Payroll**	**Fixed $ Amount**	**Fixed $ Amount**	**Fixed $ Amount**	**Total**
MnSCU	$6,551	$1,489	$0	$0	$0	$8,040
City of MPLS	2,576,959	585,772	2,095,595	122,787	146,024	5,527,137
SSD1	865,521	196,743	1,318,144	34,937	44,104	2,459,449
Airport	208,223	47,331	486,261	1,431	1,823	745,069
Grand Total	$3,657,254	$831,335	$3,900,000	$159,155	$191,951	$8,739,695

		Normal Cost	Supplemental Contribution		Short Service Survivor Additional Benefit	01/01/2005 COLA	
Employer	**Payroll**	**% of Payroll**	**% of Payroll**	**Fixed $ Amount**	**Fixed $ Amount**	**Fixed $ Amount**	**Total**
MnSCU	$55,560	11.79%	2.68%	0.00%	0.00%	0.00%	14.47%
City of MPLS	21,857,155	11.79%	2.68%	9.59%	0.56%	0.67%	25.29%
SSD1	7,341,141	11.79%	2.68%	17.96%	0.48%	0.60%	33.51%
Airport	1,766,095	11.79%	2.68%	27.53%	0.08%	0.10%	42.18%
Grand Total	$31,019,951	11.79%	2.68%	12.57%	0.51%	0.62%	28.17%

EXHIBIT VIII

Supplementary Information Required by the GASB

Valuation date	July 1, 2004
Actuarial cost method	Entry Age Normal
Amortization method	Level dollar
Remaining amortization period	16 years remaining as of July 1, 2004
Asset valuation method	Market Value, adjusted for amortization obligations receivable at the end of each fiscal year, less a percentage of the Unrecognized Asset Return determined at the close of each of the four preceding fiscal years. Unrecognized Asset Return is the difference between actual net return on Market Value of Assets and the asset return expected during that fiscal year (based on the assumed interest rate employed in the July 1 Actuarial Valuation of the fiscal year).
Actuarial assumptions:	
Investment rate of return:	
Pre-retirement	6.00% per annum
Post-retirement	5.00% per annum
Projected salary increases	4.00% per annum
Plan membership:	
Retired participants and beneficiaries receiving benefits	4,981
Terminated members entitled to, but not yet receiving benefits	181
Active members	552
Total	5,714

EXHIBIT IX

Actuarial Assumptions and Actuarial Cost Method

Mortality Rates:

Healthy: Average of male and female rates of 1986 Projected Experience Table with a 1-year age setback

Disabled: Average of male and female rates of 1986 Projected Experience Table with a 1-year age setback

Mortality & Disability Rates before Retirement: Shown below for selected ages.

	Rate%		
Age	**Mortality**	**Withdrawal**	**Disability**
20	0.10	21.00	0.21
25	0.08	11.00	0.21
30	0.09	5.00	0.23
35	0.11	1.50	0.30
40	0.14	1.00	0.41
45	0.19	1.00	0.61
50	0.30	1.00	0.93
55	0.47	1.00	1.60
60	0.79	1.00	0
65	1.40	0	0
70	2.41	0	0

Retirement Rates: 100% at age 61.

Interest:	Pre-Retirement - 6.00% per annum Post-Retirement - 5.00% per annum
Salary Increases:	Total reported pay for prior calendar year increased 1.0198% to prior fiscal year and 4.00% annually for each future year.
Administrative Expenses:	Prior year administrative expenses (excluding investment expenses) increased by 4.00% expressed as a percentage of projected annual payroll.
Investment Expenses:	Investment expenses for the fiscal year ending June 30, 1992 are being amortized as follows:
Allowance for Combined Service Annuity:	Liabilities for active members are increased by 0.2% and liabilities for former members (not in payment status) are increased by 30.0% to account for the effect of some participants having eligibility for a Combined Service Annuity.
Return of Contributions:	All members withdrawing after becoming eligible for a deferred benefit were assumed to take the larger of their contributions accumulated with interest or the value of their deferred benefit.
Unknown Data For Participants:	Same as those exhibited by participants with similar known characteristics.
Percent Married:	67% of active members are assumed to be married.
Age of Spouse:	Females are assumed to be three years younger than males.
Benefit Increases After Retirement:	Payment of increases based on the excess of Retirement Benefit Fund earnings over 5.00% is accounted for by using a 5.00% post-retirement interest assumption.

Investment expenses amortization schedule:

Beginning Balance	Annual Payment	Years Remaining
$2,849,000	$207,000	16

Asset Valuation Method:	Market Value, adjusted for amortization obligations receivable at the end of each fiscal year, less a percentage of the Unrecognized Asset Return determined at the close of each of the four preceding fiscal years. Unrecognized Asset Return is the difference between actual net return on Market Value of Assets and the asset return expected during that fiscal year (based on the assumed interest rate employed in the July 1 Actuarial Valuation of the fiscal year).
Actuarial Cost Method:	Entry Age Normal Actuarial Cost Method. Entry Age is the age at the time the participant commenced employment. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are expressed as a level percentage of payroll, with Normal Cost determined as if the current benefit accrual rate had always been in effect.
Payment on the Unfunded Actuarial Accrued Liability:	A level dollar amount each year to the statutory amortization date, adjusted for timing of expected receipt. Employers are assumed to contribute 73% of billed contribution amounts on a monthly basis during the plan year. The remaining 27% of contributions are assumed to be deferred to payment in subsequent plan years.
Changes in Actuarial Assumptions and Actuarial Cost Methods:	There have been no changes in the actuarial assumptions or actuarial cost methods since the last valuation.

EXHIBIT X
Summary of Plan Provisions

This summary of provisions reflects the interpretation of applicable Statues by the Commission Actuary 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
Employee Rule:	
	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. 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 computed under: (a) the Minneapolis Employees Retirement Fund; or (b) the Public Employees Retirement Association (PERA) Police & Fire Plan.
Average Salary:	
Salary Considered	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.
Allowable Service:	
	Service during which member contributions are 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.

Contributions:	
Member	9.25% of Salary into the deposit accumulation fund and 0.50% of Salary (subject to annual adjustment) into the survivor benefit fund.
Employer	Any excess of normal cost plus administrative expenses over the required member contributions of 9.75% of Salary. The unfunded actuarial liability is funded partially by payments each year of 2.68% of Salary plus $3,900,000 from all Employers. The Metropolitan Airports Commission and the Met Council / Environmental Services pay any remaining required contributions allocated to them. The State Contribution for the Minnesota State Colleges and Universities, the City of Minneapolis/Hennepin County, and the Minneapolis Special School District No. 1 is determined as the lesser of the remaining payments required or $9,000,000. If the value of the remaining payments is larger than $11,910,000, the excess is reallocated to the employers. If the value of the remaining payments is less than $11,910,000, no additional payment is required.
Normal Retirement Benefit:	
Age/Service Requirement	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 of Allowable Service. Retirement is mandatory at age 70.
Amount	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.
Two Dollar Bill and Annuity:	
Age/Service Requirement	Age 55, 20 years of Allowable Service, and Allowable Service prior to June 28, 1973.
Amount	A pension based on the accumulation of annual installments of $2.00 per month for each year of Allowable Service using 6.00% interest plus an annuity based on the net accumulated contributions of the member. The combined pension and annuity is increased by three 25% increases where each increase is limited to $300 per year. Effective January 1, 2003, annual lump sum payment is divided by 12 and paid as monthly life annuity in the annuity form elected.

Disability Benefit:	
Age/Service Requirement	Total and permanent disability before age 60 with 5 years of Allowable Service, or no Allowable Service if a work-related disability.
Amount	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:	
Age/Service Requirement	Total and permanent disability after electing to receive a retirement benefit but before age 60.
Amount	Actuarial equivalent of total credit to member's account.
Retirement After Disability:	
Age/Service Requirement	Total and permanent disability after electing to receive a retirement benefit but before age 60. Employee is still disabled after age 60.
Amount	Benefit continues according to the option selected.
Pre-Retirement Survivor's Spouse Benefit:	
Age/Service Requirement	Active member with 18 months of Allowable Service.
Amount	30% of Salary averaged over the last 6 months to the surviving spouse plus 10% of Salary averaged over the last 6 months to each surviving child. Maximum benefit is $900 per month.

Pre-Retirement Survivor's Spouse Annuity:	
Age/Service Requirement	Active member or former member who dies before retirement with 20 years of Allowable Service.
Amount	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 Requirement	Active member or former member dies after 10 years of Allowable Service and prior to retirement.
Amount	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/Requirement	Death prior to service or disability retirement without an eligible surviving beneficiary.
Amount	$750 with less than 10 years of Allowable Service, or $1,500 with 10 or more years of Allowable Service.
Refund of Member Contributions at Death:	
Age/Service Requirement	Active member or former member dies before retirement.
Amount	The excess of the member's contributions (exclusive of the contributions to the survivor's account) plus interest to the date of death.

Termination:	
Age/Service Requirement	Three years of Allowable Service.
Amount	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.
Refund of Member's Contributions Upon Termination:	
Age/Service Requirement	Termination of public service.
Amount	Member's contributions with interest.
Form of Payment:	Life annuity.
Benefit Increases:	Annual post-retirement benefit increases are granted in a manner similar to the statewide Minnesota Post-Retirement Investment Fund. The methodology incorporates one layer relating to the Consumer Price Index and a second layer relating to investment performance on a smoothed basis. Over the long term, the methodology is designed to provide increases based on the excess of fund earnings over 5.0%.
Changes in Plan Provisions:	There have been no changes to the plan provisions since the last valuation.

EXHIBIT XI

Allocation of State and Supplemental Contributions

State Contribution:

The State Contribution is limited to a maximum of $9,000,000 for each fiscal year and is equal to the portion of the Supplemental Contribution, which is not allocated to the employers. The Allocation of Supplemental Contribution is explained below, regarding the calculation of the State Contribution.

The increase in unfunded accrued liability due to increases for short-term survivor benefits, either one-time adjustments or annual cost-of-living increases, is excluded from state-provided funding. The unfunded accrued liability amounts shown in Charts 7 and 8, and Exhibits G and I, do not include liability generated due to such increases until the date on which the funding for such increases is collected or becomes a collectable to the fund. Under law, billing is generated by the Fund as of the February 1 occurring during the fiscal year. Both assets and liabilities are then considered part of the general non-RBF fund.

Allocation of Supplemental Contribution:

The total Supplemental Contribution is allocated among the employers and the State using the following method.

1. Each employer's current assets is equal to the actuarial value of assets, which is allocated on the basis of the sum of the market value of assets and the employee assets for each employer respectively as provided by MERF.
2. The unfunded accrued liability (Dollar Amount) for each employer is calculated as the Active Fund accrued liability less current assets for the employee and employer, exclusive of any liability arising during the year due to 1998 or 1999 legislature as required by State statute. If, as of the valuation date, an employer's unfunded actuarial accrued liability is negative, the unfunded liability is deemed to be $0. The percentage of the total unfunded accrued liability is allocated by each employer's unfunded accrued liability dollar amount.

3. Each employer is charged 2.68% of payroll for the fiscal year.
4. The total employer contribution of $3,900,000 is allocated among the employers based on the unfunded accrued liability percentage - UAL% (2. above).
5. The initial Supplemental Contribution is allocated to each employer based on the UAL%.
6. The initial Supplemental Contribution for the Metropolitan Airport Commission is calculated as 5. less 3. less 4. above.
7. The State Contribution for each employer is calculated as 5. less 3. less 4. above for the Minnesota State Colleges and Universities, City of Minneapolis/Hennepin County, and the Minneapolis Special School District No. 1, less 6. above. By law, these are the only employers eligible to receive State Contributions, and Metropolitan Airport Commission is not eligible.
8. The State Contribution is determined as the lesser of the amount determined in 7. above or the State Contribution cap which is currently $9,000,000.
9. If the State Contribution (7. above) plus the Supplemental Contribution determined (6. above), is larger than $11,910,000, the excess of the State Contribution over $11,910,000 is reallocated among the employers. The excess will first be allocated on the basis of 6. above and then to the employers listed in 7. above based on their respective UAL%. If the State Contribution is less than $11,910,000, no employer contribution is required under this item 9. The airport receives no allocation from the State.
10. The total employer contribution for each employer is determined as the initial Supplemental Contribution (5. above) less the total State Contribution (7. above).
11. A hypothetical contribution of $1,000,000 is allocated among the employers based on the UAL%, which is used to reduce employer contributions only for the Metropolitan Airport Commission by law. This reduction is reallocated to the remaining employers.

12. The allocation of the remaining employer contribution for each employer is calculated as the initial Supplemental Contribution (5. above), less the State Contribution (7. above), less the sum of the preliminary employer contributions (3. plus 4. above), less the $1,000,000 credit (11. above).
13. The total Supplemental Contribution is the sum of the total Employer Portion contribution (10. above) plus the total State Portion contribution (7. above).

Exhibit V shows the development of the employer cost for each employer prior to consideration of 1998 and 1999 short service survivor benefit increases. Total employer cost is summarized in Exhibit VII.