05 - 0149

Judges Retirement Fund

Actuarial Valuation and Review
as of July 1, 2004

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SEGAL

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February 7, 2005

Mr. Dave Bergstrom
Minnesota State Retirement System
Judges Retirement Fund
60 Empire Drive, Suite 300
St. Paul, Minnesota 55103-3000

Dear Mr. Bergstrom:

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 2005 and analyzes the preceding year's experience.

The census and financial information on which our calculations were based was prepared by the Minnesota State Retirement System. 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 Thompson

Leslie L. Thompson, FSA, MAAA, EA
Senior Vice President and Actuary

Wally Malles

Wally Malles, ASA, MAAA, EA
Associate Actuary

cc: *Legislative Commission on Pensions and Retirement (3 copies)*
Minnesota Legislative Reference Library (6 copies)
Minnesota Department of Finance (2 copies)

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Purpose

This report has been prepared by The Segal Company to present a valuation of the Minnesota State Retirement System (Judges 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:

- Applicable Minnesota Statutes;
- The benefit provisions of the Retirement Fund as administered by the Fund;
- The characteristics of covered active participants, inactive vested participants, pensioners 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 statutory contribution rate under Chapter 490 is equal to 28.04% of payroll compared to the required contribution rate under Chapter 356 of 29.42% of payroll. Therefore, the contribution deficiency is expected to be 1.38% of payroll or $492,619.
- The funded ratio based on the actuarial value of assets over the actuarial accrued liability as of July 1, 2004 is 73.00% compared to 76.09% as of July 1, 2003. This ratio is a measure of funding status, and its history is a measure of funding progress, and is the ratio required to be reported under GASB 25.
- As indicated on page 4 of this report, the total unrecognized investment loss as of June 30, 2004 is approximately $2.6 million. 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.
- There were no changes in plan provisions, actuarial assumptions or actuarial cost methods since the prior valuation. This is the first year that The Segal Company prepared the actuarial valuation of the Fund.

Summary of Key Valuation Results

	2004	2003
Contributions (% of payroll) for plan year beginning July 1:		
Statutory – Chapter 490	28.04%	28.42%
Required – Chapter 356	29.42%	26.73%
Sufficiency/(Deficiency)	-1.38%	1.69%
Funding elements for plan year beginning July 1:		
Normal cost	$6,224,006	$5,797,000
Market value of assets	136,305,284	128,164,000
Actuarial value of assets (AVA)	138,948,244	134,142,000
Actuarial accrued liability (AAL)	190,338,344	176,291,000
Unfunded/(Overfunded) actuarial accrued liability	51,390,100	42,149,000
Funded ratios:		
Accrued Benefit Funded Ratio	76.53%	79.67%
Current assets (AVA)	$138,948,244	$134,142,000
Current benefit obligations	181,571,180	168,378,000
Projected Benefit Funded Ratio	97.53%	103.23%
Current and expected future assets	$234,704,109	$234,217,000
Current and expected future benefit obligations (Present Value of Benefits)	240,656,254	226,882,000
GASB 25/27 for plan year beginning July 1:		
Annual required employer contributions	$6,628,062	$6,483,000
Accrued Liability Funded Ratio (AVA/AAL)	73.00%	76.09%
Covered actual payroll	$34,682,561	$33,771,000
Demographic data for plan year beginning July 1:		
Number of pensioners and beneficiaries	254	253
Number of vested terminated participants	18	26
Number of other non-vested terminated participants	0	1
Number of active participants	294	288
Total projected payroll	$35,697,480	$34,270,000
Average projected payroll	121,420	118,993

A. PARTICIPANT DATA

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

This section presents a summary of significant statistical data on these participant 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 participant population has changed over the past three valuations can be seen in this chart.

CHART 1

Participant Population: 2002 – 2004

Year Ended June 30	Active Participants	Vested Terminated Participants*	Pensioners and Beneficiaries	Ratio of Non-Actives to Actives
2002	283	24	256	0.99
2003	288	26	253	0.97
2004	294	18	254	0.93

** Excludes terminated participants due a refund of employee contributions.*

Active Participants
Plan costs are affected by the age, years of service and payroll of active participants. In this year's valuation, there were 294 active participants with an average age of 55.9, average years of service of 11.4 years and average projected payroll of $121,420. The 288 active participants in the prior valuation had an average age of 54.7, average service of 10.2 years and average projected payroll of $118,993.

Inactive Participants
In this year's valuation, there were 18 participants with a vested right to a deferred or immediate vested benefit.

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

CHART 2

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

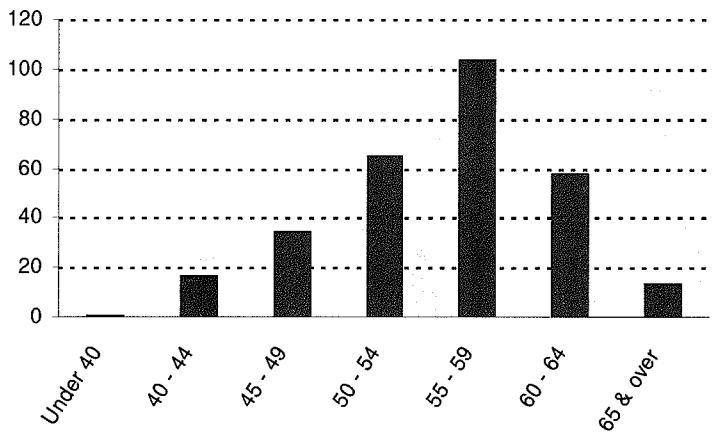
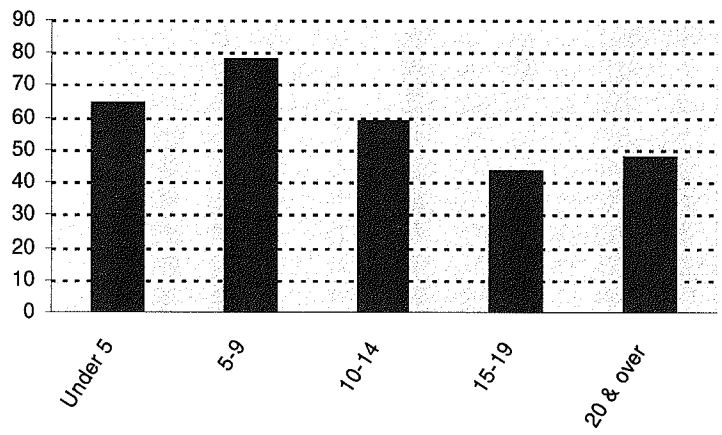


CHART 3

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



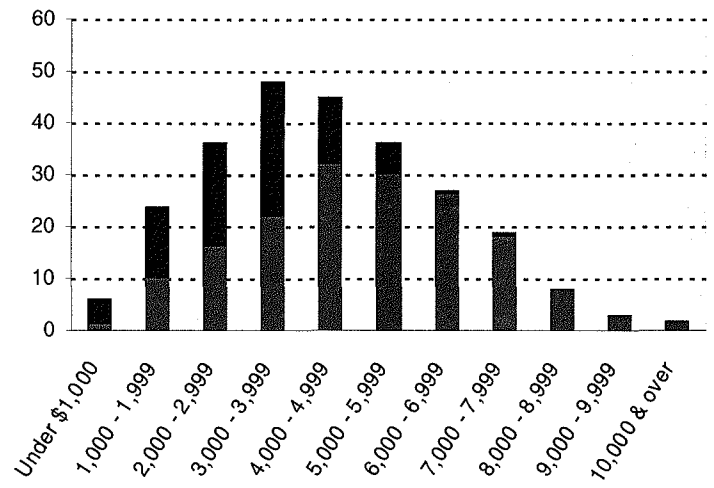
Pensioners and Beneficiaries

As of June 30, 2004, 168 pensioners (162 retired and 6 disabled participants) and 86 beneficiaries were receiving average monthly benefits of $4,450. For comparison, in the previous valuation, there were 166 pensioners (160 retired and 6 disabled participants) and 87 beneficiaries receiving average monthly benefits of $4,392.

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

CHART 4

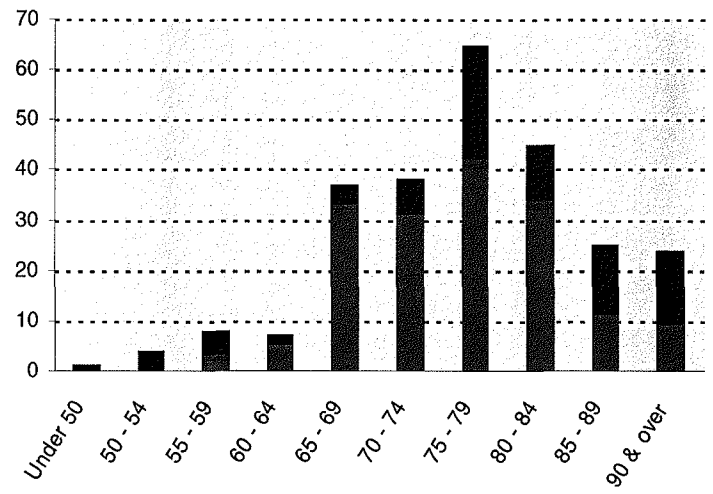
Distribution of Pensioners and Beneficiaries by Type and by Monthly Amount as of June 30, 2004



Prorata
Disability
Regular

CHART 5

Distribution of Pensioners 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. 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. 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			$136,305,284
2.	Calculation of unrecognized return			
	(a) Year ended June 30, 2004	$1,560,800	80%	$1,248,640
	(b) Year ended June 30, 2003	-1,912,000	60%	-1,147,200
	(c) Year ended June 30, 2002	-4,777,000	40%	-1,910,800
	(d) Year ended June 30, 2001	-4,168,000	20%	-833,600
	(e) Total unrecognized return			-$2,642,960
3.	Actuarial value of assets ("Current Assets"): (1) – (2e)			$138,948,244

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.

For the plan year ended June 30, 2004, the total loss is $9,535,684, including a loss of $3,891,745 from investments and a loss of $5,643,939 from all other sources. The net experience variation from individual sources other than investments was 2.97% of the actuarial accrued liability.

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	-$3,891,745
2.	Net gain/(loss) from other experience	-5,643,939
3.	Net experience gain/(loss): (1) + (2)	-$9,535,684

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 III presents a schedule 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 IV.

EXHIBIT A

Table of Plan Coverage

Category	Year Ended June 30 2004	Year Ended June 30 2003	Change From Prior Year
Active participants in valuation:			
Number	294	288	2.1%
Average age	55.9	54.7	N/A
Average service	11.4	10.2	N/A
Total projected payroll	$35,697,480	$34,270,000	4.2%
Average projected payroll	121,420	118,993	2.0%
Total active vested participants	229	161	42.2%
Vested terminated participants	18	26	-30.8%
Retired participants:			
Number in pay status	162	160	1.3%
Average age	76.1	76.0	N/A
Average monthly benefit	$5,086	$5,029	1.1%
Disabled participants:			
Number in pay status	6	6	0.0%
Average age	74.4	73.4	N/A
Average monthly benefit	$5,936	$5,813	2.1%
Beneficiaries:			
Number in pay status	86	87	-1.1%
Average age	78.1	78.6	N/A
Average monthly benefit	$3,148	$3,125	0.7%
Other non-vested terminated participants	0	1	-100.0%

EXHIBIT B

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

	Years of Service					
Age	Total	Under 5	5-9	10-14	15-19	20 & over
Under 40	1	- -	1	- -	- -	- -
	$122,241	- -	$122,241	- -	- -	- -
40 - 44	17	10	5	2	- -	- -
	122,711	$123,039	122,241	$122,242	- -	- -
45 - 49	35	19	11	4	1	- -
	124,074	122,664	123,522	131,214	$128,353	- -
50 - 54	65	18	21	18	5	3
	122,989	123,131	122,621	122,930	123,464	$124,279
55 - 59	104	14	24	24	23	19
	120,805	122,242	119,890	121,824	118,174	122,802
60 - 64	58	4	13	10	11	20
	119,469	128,226	122,863	125,897	106,634	119,356
65 & over	14	- -	3	1	4	6
	118,519	- -	122,241	122,241	114,489	118,725
Total	294	65	78	59	44	48
	$121,420	$123,102	$121,904	$123,510	$115,787	$120,949

EXHIBIT C

Reconciliation of Participant Data

	Active Participants	Vested Terminated Participants	Other Non-Vested Terminated Participants	Disableds	Retired Participants	Beneficiaries	Total
Number as of July 1, 2003	288	26	1	6	160	87	568
Changes	6	-8	-1	0	2	-1	-2
Number as of July 1, 2004	294	18	0	6	162	86	566

EXHIBIT D

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

		Non-MPRIF Assets	MPRIF Reserve	Market Value
A.	Assets available at beginning of period	$33,052,000	$95,112,000	$128,164,000
B.	Operating revenues:			
	1. Member contributions	$2,642,587	$0	$2,642,587
	2. Employer contributions	7,109,925	0	7,109,925
	3. MPRIF income	0	7,501,917	7,501,917
	4. Net investment income			
	(a) Interest and dividends	$9,819,500	$0	$9,819,500
	(b) Net appreciation/(depreciation)	-5,320,574	0	-5,320,574
	(c) Investment expenses	-38,565	0	-38,565
	(d) Net subtotal	$4,460,361	$0	$4,460,361
	5. Other	12,224	0	12,224
	6. Total additions	$14,225,097	$7,501,917	$21,727,014
C.	Operating expenses:			
	1. Benefits	$0	$13,520,057	$13,520,057
	2. Refunds	0	0	0
	3. Administrative expenses	31,024	0	31,024
	4. Other	34,649	0	34,649
	5. Total operating expenses	$65,673	$13,520,057	$13,585,730
D.	Other changes in reserves:			
	1. Annuities awarded	-$7,278,240	$7,278,240	$0
	2. Mortality gain/(loss)	-1,573,253	1,573,253	0
	3. Change in MPRIF assumptions	0	0	0
	4. Total other changes	-$8,851,493	$8,851,493	$0
E.	Assets available at end of period	$38,359,931	$97,945,353	$136,305,284
F.	Determination of current year unrecognized asset return (UAR)			
	1. Average balance:			
	(a) Non-MPRIF assets available at BOY: (A)			$33,052,000
	(b) Non-MPRIF assets available at EOY*: (E) – (D.2)			39,933,184
	(c) Average balance: [(F.1.a) + (F.1.b) – (B.4.d) – (B.5)]/2			34,256,300
	2. Expected return: 8.50% x (F.1.c)			2,911,785
	3. Actual return: (B.4.d) + (B.5)			4,472,585
	4. Current year UAR: (F.3) – (F.2)			$1,560,800

** Before adjustment for MPRIF Mortality Gain/Loss.*

EXHIBIT E

Table of Financial Information for Year Ended June 30, 2004

	Market Value	Cost Value
Assets in trust		
Cash, equivalents, short-term securities:	$10,078,426	$10,078,426
Fixed income	6,483,874	6,678,322
Equity	23,302,290	23,425,902
Equity in MPRIF	97,945,353	97,945,353
Total assets in trust	$137,809,943	$138,128,003
Assets receivable	-$1,455,949	-$1,455,949
Total assets	$136,353,994	$136,672,054
Amounts currently payable	-$48,710	-$48,710
Assets available for benefits		
MPRIF reserves	$97,945,353	$97,945,353
Member reserves	20,252,191	20,252,191
Other non-MPRIF reserves	18,107,740	18,425,800
Net Assets at Market/Cost Value	$136,305,284	$136,623,344
Net Assets at Actuarial Value	$138,948,244	$138,948,244

EXHIBIT F

Development of the Fund Through June 30, 2004

Year Ended June 30	Employer Contributions	Employee Contributions	Net Investment Return*	Administrative Expenses	Benefit Payments	Actuarial Value of Assets at End of Year
2003	$6,923,000	$2,574,000	$6,861,000	$37,000	$13,558,000	$134,142,000
2004	7,109,925	2,642,587	8,604,813	31,024	13,520,057	138,948,244

** Net Investment Return on an Actuarial Value of Assets basis and 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		$42,149,000
2. Normal cost at beginning of year		5,797,000
3. Total contributions		9,752,512
4. Interest		3,660,928
5. Expected unfunded/(overfunded) actuarial accrued liability (1) + (2) – (3) + (4)		$41,854,416
6. Changes due to:		
(a) Investments	$3,891,745	
(b) MPRIF mortality	1,573,253	
(c) Other experience	4,070,686	
(d) Total changes		9,535,684
7. Unfunded/(Overfunded) actuarial accrued liability at end of year		$51,390,100

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: 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 reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.

Accrued Benefit Funded Ratio: A current year funded status that measures the percent of benefits covered by Current Assets. This ratio is based on benefits earned to the valuation date (accrued service) and includes future salary increases to retirement. The liability for these benefits is defined as the Current Benefit Obligations. The Accrued Benefit Funded Ratio is calculated as the Actuarial Value of Assets (Current Assets) divided by the Current Benefit Obligations.

Projected Benefit Funded Ratio: A projected funded status that measures contribution sufficiency/deficiency, which is based on a present value of all plan benefits for the lifetime of all plan members. The liability for these benefits is defined as the Current and Expected Future Benefit Obligations, or Present Value of Benefits. The Current and Expected Future Assets are determined as the sum of the Actuarial Value of Assets (Current Assets), the Present Value of Expected Future Statutory Supplemental Contributions and the Present Value of Future Normal Costs. The Projected Benefit Funded Ratio is calculated as the Current and Expected Future Assets divided by the Current and Expected Future Benefit Obligations. If the ratio is equal to or more than 100%, there is a contribution sufficiency, and if it is less than 100% there is a contribution deficiency.

EXHIBIT I

Summary of Actuarial Valuation Results

The valuation was made with respect to the following data supplied to us:

1.	Pensioners as of the valuation date (including 86 beneficiaries in pay status)		254
2.	Participants inactive during year ended June 30, 2004 with vested rights		18
3.	Participants active during the year ended June 30, 2004		294
	Fully vested	229	
	Not vested	65	

The actuarial factors as of the valuation date are as follows:

1.	Normal cost		$6,224,006
2.	Present value of future benefits		240,656,254
3.	Present value of future normal costs		50,317,910
4.	Actuarial accrued liability		190,338,344
	Pensioners and beneficiaries	$107,846,046	
	Inactive participants with vested rights	1,583,914	
	Participants due refunds	0	
	Active participants	80,908,384	
5.	Actuarial value of assets ($136,305,284 at market value)		138,948,244
6.	Unfunded actuarial accrued liability		$51,390,100

EXHIBIT I (continued)

Summary of Actuarial Valuation Results

	Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability
A. Determination of Actuarial Accrued Liability			
1. Active participants:			
(a) Death benefits	$4,692,898	$2,784,367	$1,908,531
(b) Disability benefits	6,453,366	3,391,683	3,061,683
(c) Withdrawal benefits	0	0	0
(d) Retirement benefits	119,696,842	43,908,646	75,788,196
(e) Refunds	383,188	233,214	149,974
(f) Total	$131,226,294	$50,317,910	$80,908,384
2. Vested terminated participants	$1,583,914	$0	$1,583,914
3. Other non-vested terminated participants	0	0	0
4. Annuitants in MPRIF	97,945,353	0	97,945,353
5. Annuitants not in MPRIF	9,900,693	0	9,900,693
6. Total	$240,656,254	$50,317,910	$190,338,344
B. Determination of Unfunded Actuarial Accrued Liability			
1. Actuarial Accrued Liability			$190,338,344
2. Actuarial Value of Assets			138,948,244
3. Unfunded Actuarial Accrued Liability: (1) – (2)			$51,390,100
C. Determination of Supplemental Contribution Rate			
1. Present value of future payrolls through the amortization date of July 1, 2020			$432,330,689
2. Supplemental contribution rate: (B.3) / (C.1)			11.89%

EXHIBIT II
Actuarial Balance Sheet

A.	Current Assets			$138,948,244
B.	Expected Future Assets			
	1. Present Value of Expected Future Statutory Supplemental Contributions			$45,437,955
	2. Present Value of Future Normal Costs			50,317,910
	3. Total Expected Future Assets			$95,755,865
C.	Total Current and Expected Future Assets			$234,704,109
D.	Current Benefit Obligations	**Non-Vested**	**Vested**	**Total**
	1. Benefit recipients:			
	(a) Retirement annuities	$0	$79,513,420	$79,513,420
	(b) Disability benefits	0	3,034,987	3,034,987
	(c) Beneficiaries	0	25,297,639	25,297,639
	2. Vested terminated participants	0	1,583,914	1,583,914
	3. Other non-vested terminated participants	0	0	0
	4. Active participants	4,062,167	68,079,053	72,141,220
	5. Total Current Benefit Obligations	$4,062,167	$177,509,013	$181,571,180
E.	Expected Future Benefit Obligations			59,085,074
F.	Total Current and Expected Future Benefit Obligations - Present Value of Benefits: (D.5 + E)			$240,656,254
G.	Current Unfunded Actuarial Liability (D.5 - A)			$42,622,936
H.	Current and Future Unfunded Actuarial Liability (F - C)			$5,952,145

EXHIBIT III

Supplementary Information Required by the GASB – Schedule of Employer Contributions

Year Ended June 30	Actuarially Required Contribution Rate (a)	Actual Covered Payroll (b)	Actual Member Contributions (c)	Annual Required Employer Contributions [(a) x (b)] – (c) = (d)	Actual Employer Contributions[1] (e)	Percentage Contributed (e) / (d)
1991	23.59%	$18,410,000	$799,000	$3,544,000	$0	0.00%
1992	25.10%	22,765,000	988,000	4,726,000	4,722,000	99.92%
1993	26.59%	22,084,000	1,409,000	4,463,000	4,845,000	108.56%
1994	26.29%	22,264,000	1,416,000	4,437,000	4,912,000	110.71%
1995	28.27%	22,877,000	1,455,000	5,012,000	5,162,000	102.99%
1996	27.32%	22,421,000	1,426,000	4,699,000	4,972,000	105.81%
1997	27.01%	22,909,000	1,457,000	4,731,000	6,632,000	140.18%
1998	27.60%	24,965,000	1,570,000	5,320,000	7,129,000	134.00%
1999	27.32%	32,940,000	2,069,000	6,930,000	7,051,000	101.75%
2000	26.75%	26,315,000	2,107,000	4,932,000	7,298,000	147.97%
2001	24.58%[2]	28,246,000	2,162,000	4,781,000	7,793,000	163.00%
2002	26.72%	31,078,000	2,345,000	5,959,000	8,369,000	140.44%
2003	26.82%[3]	33,771,000	2,574,000	6,483,000	6,923,000	106.79%
2004	26.73%	34,682,561	2,642,587	6,628,062	7,109,925	107.27%
2005	29.42%					

(1) *Includes contributions from other sources (if applicable).*

(2) *Actuarially Required Contribution Rate prior to change in plan provisions and Asset Valuation Method is 26.81%.*

(3) *Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 26.75%.*

EXHIBIT IV

Supplementary Information Required by the GASB – Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded 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	$33,559,000	$78,429,000	$44,870,000	42.79%	$18,410,000	243.73%
07/01/1992	37,768,000	83,969,000	46,201,000	44.98%	22,765,000	202.95%
07/01/1993	44,156,000	90,509,000	46,353,000	48.79%	22,084,000	209.89%
07/01/1994	50,428,000	98,313,000	47,885,000	51.29%	22,264,000	215.08%
07/01/1995	56,813,000	102,238,000	45,425,000	55.57%	22,877,000	198.56%
07/01/1996	64,851,000	108,150,000	43,299,000	59.96%	22,421,000	193.12%
07/01/1997	74,681,000	117,714,000	43,033,000	63.44%	22,909,000	187.84%
07/01/1998	86,578,000	130,727,000	44,149,000	66.23%	24,965,000	176.84%
07/01/1999	97,692,000	139,649,000	41,957,000	69.96%	32,940,000	127.37%
07/01/2000	111,113,000	153,660,000	42,547,000	72.31%	26,315,000	161.68%
07/01/2001	123,589,000	165,244,000	41,655,000	74.79%	28,246,000	147.47%
07/01/2002	131,379,000	171,921,000	40,542,000	76.42%	31,078,000	130.45%
07/01/2003	134,142,000	176,291,000	42,149,000	76.09%	33,771,000	124.81%
07/01/2004	138,948,244	190,338,344	51,390,100	73.00%	34,682,561	148.17%

EXHIBIT V

Determination of Contribution Sufficiency

		July 1, 2004	
A.	**Statutory Contributions – Chapter 490**	**Percent of Payroll**	**Dollar Amount**
1.	Member Contributions*	8.00%	$2,689,962
2.	Employer Contributions	20.50%	7,317,983
3.	Total**	28.04%	$10,007,945
B.	**Required Contributions – Chapter 356**		
1.	Normal Cost		
	(a) Retirement Benefits	15.18%	$5,418,901
	(b) Disability Benefits	1.16%	412,838
	(c) Survivors	1.01%	359,484
	(d) Deferred Retirement Benefits	0.00%	0
	(e) Refunds	0.09%	32,783
	(f) Total	17.44%	$6,224,006
2.	Amortization of Supplemental Contribution UAAL	11.89%	4,244,430
3.	Allowance for Expenses	0.09%	32,128
4.	Total	29.42%	$10,500,564
C.	**Contribution Sufficiency (Deficiency) (A.3 – B.4)**	-1.38%	-$492,619
D.	**Projected annual payroll for fiscal year beginning on the valuation date**		$35,697,480

** The dollar mount is 8.00% of the contributing members projected annual payroll of $33,624,524.*

*** The total percent of payroll is the total dollar amount expressed as a percentage of projected annual payroll (D).*

EXHIBIT VIII

Supplementary Information Required by the GASB

Valuation date	July 1, 2004
Actuarial cost method	Entry Age Normal
Amortization method	Level percentage of payroll
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	8.50% per annum
Post-retirement	8.50% per annum (payment of earnings on retired reserves in excess of 6.00% accounted for by 6.00% post-retirement assumption)
Plan membership:	
Pensioners and beneficiaries receiving benefits	254
Terminated participants entitled to, but not yet receiving benefits	18
Other non-vested terminated participants	0
Active participants	294
Total	566

EXHIBIT VIII

Actuarial Assumptions and Actuarial Cost Method

Net Investment Return:		
Pre-Retirement:	8.50% per annum.	
Post-Retirement:	8.50% per annum.	
Benefit Increases After Retirement:	Payment of earnings on retired reserves in excess of 6.00% accounted for by using a 6.00% post-retirement assumption.	
Salary Increases:	5.00% annually.	
Mortality Rates:		
Healthy Pre-Retirement:	Male:	1983 Group Annuity Mortality Table for males set back four years.
	Female:	1983 Group Annuity Mortality Table for females set back two years.
Healthy Post-Retirement:	Male:	1983 Group Annuity Mortality Table for males.
	Female:	1983 Group Annuity Mortality Table for females.
Disabled:	Male:	Combined Annuity Mortality Table.
	Female:	Combined Annuity Mortality Table.

Retirement Rates:	Age-related table as follows: Ages: 62-64 10.00% 65-67 20.00 68-70 30.00 71 & over 100.00
Withdrawal Rates:	None.
Disability Rates:	Rates adopted by MSRS based on actual experience, most recently adjusted in 1979, as shown in rate table.
Allowance for Combined Service Annuity:	Liabilities for active members are increased by 0.00% and liabilities for former members are increased by 30.00% to account for the effect of some participants having eligibility for a Combined Service Annuity.
Expenses:	Prior year administration expenses expressed as percentage of prior year payroll.
Return of Contributions:	N/A
Percent Married:	Marital status as indicated by data.
Age of Spouse:	Females are assumed to be three years younger than males.
Social Security:	N/A
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 accrued rate had always been in effect.
Asset Valuation Method:	Market Value 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). Transition rules apply between July 1, 2001 and July 1, 2003, when the method is fully in effect.

Payment on the Unfunded Actuarial Accrued Liability:

A level percentage of payroll each year to the statutory amortization date assuming payroll increases of 5.00% per annum. If there is a negative Unfunded Actuarial Accrued Liability, the surplus amount shall be amortized over 30 years as a level percentage of payroll.

Summary of Rates:

Shown below for selected ages:

	Rates(%)							
	Death		Withdrawal		Disability		Retirement	
Age	Male	Female	Male	Female	Male	Female	Male	Female
20	0.03%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
25	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00
30	0.05	0.03	0.00	0.00	0.02	0.00	0.00	0.00
35	0.06	0.04	0.00	0.00	0.02	0.01	0.00	0.00
40	0.09	0.06	0.00	0.00	0.02	0.02	0.00	0.00
45	0.14	0.08	0.00	0.00	0.03	0.05	0.00	0.00
50	0.25	0.14	0.00	0.00	0.14	0.10	0.00	0.00
55	0.43	0.21	0.00	0.00	0.34	0.24	0.00	0.00
60	0.66	0.34	0.00	0.00	0.76	0.62	0.00	0.00
65	1.01	0.58	0.00	0.00	0.00	0.00	20.00	20.00
70	1.76	0.97	0.00	0.00	0.00	0.00	30.00	30.00

Changes in Actuarial Assumptions and Actuarial Cost Methods:

There have been no changes in the actuarial assumptions or actuarial cost methods since the prior valuation.

EXHIBIT IX

Summary of Plan Provisions – BASIC

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:	A judge or justice of any court who is not covered under the Social Security Act. If the member was active prior to January 1, 1974, benefits may be computed according to provisions of the prior plan.
Contributions:	
Member:	8.15% of salary. Members who were active prior to January 1, 1974 may contribute 4.00% to a special survivor retirement account. Contributions after maximum benefit is reached are redirected to the Unclassified Plan.
Employer:	20.50% of salary.
Allowable Service:	Service as a judge. Half credit is received for service not compensated at an annual salary or for service while entitled to practice law. Credit may also be earned for uncredited judicial service if the appropriate employee contributions, with interest, are made.
Salary:	Salary set by law.
Average Salary:	Average of the five highest years of salary of the last 10 years prior to retirement.
Retirement:	
Normal Retirement Benefit:	
Age/Service Requirement:	(a) Age 65 and five years of Allowable Service. (b) Age 70.
Amount:	2.70% of Average Salary for each year of Allowable Service prior to July 1, 1980 and 3.20% of Average Salary for each year of Allowable Service after June 30, 1980.

	Maximum benefit of 76.80% of average salary for the five highest years preceding retirement.
Early Retirement Benefit:	
Age/Service Requirement:	Age 62 and five years of Allowable Service.
Amount:	Normal Retirement Benefit based on Allowable Service and Average Salary at retirement date with reduction of 0.50% for each month the member is under age 65 at time of retirement.
Form of Payment:	Life annuity. Actuarially equivalent options are: (a) 50% or 100% joint and survivor (b) 50% or 100% bounce back joint and survivor (c) 10 or 15 year certain and life
Benefit Increases:	Benefits may be increased each January 1 depending on the investment performance of the Minnesota Post Retirement Investment Fund (MPRIF).
Disability:	
Disability Benefit:	
Age/Service Requirement:	Permanent inability to perform the functions of judge.
Amount:	No benefit is paid by the Fund. Instead salary is continued for one year but not beyond age 70. Employee contributions continue and Allowable Service is earned.
Retirement After Disability:	
Age/Service Requirement:	Member is still disabled after salary payments cease after one year or at age 70, if earlier.
Amount:	Larger of 25.00% of Average Salary or the Normal Retirement Benefit, without reduction.
Benefit Increases:	Same as for retirement.

EXHIBIT X

Summary of Plan Provisions - COORDINATED

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:	A judge or justice of any court who is covered under the Social Security Act.
Contributions:	
Member:	8.00% of salary. (Amended 1998) Contributions after maximum benefit is reached are redirected to the Unclassified Plan.
Employer:	20.50% of salary.
Allowable Service:	Service as a judge. Half credit is received for service not compensated at an annual salary or for service while entitled to practice law. Credit may also be earned for uncredited judicial service if the appropriate employee contributions, with interest, are made.
Salary:	Salary set by law.
Average Salary:	Average of the five highest years of salary of the last 10 years prior to retirement.
Retirement:	
Normal Retirement Benefit:	
Age/Service Requirement:	(a) Age 65 and five years of Allowable Service. (b) Age 70.
Amount:	2.70% of Average Salary for each year of Allowable Service prior to July 1, 1980 and 3.20% of Average Salary for each year of Allowable Service after June 30, 1980. Maximum benefit of 76.80% of average salary for the five highest years preceding retirement.

Early Retirement Benefit:	
Age/Service Requirement:	Age 62 and five years of Allowable Service.
Amount:	Normal Retirement Benefit based on Allowable Service and Average Salary at retirement date with reduction of .50% for each month the member is under age 65 at time of retirement.
Form of Payment:	Life annuity. Actuarially equivalent options are: (a) 50% or 100% joint and survivor (b) 50% or 100% bounce back joint and survivor (c) 10 or 15 year certain and life
Benefit Increases:	Benefits may be increased each January 1 depending on the investment performance of the Minnesota Post Retirement Investment Fund (MPRIF).
Disability:	
Disability Benefit:	
Age/Service Requirement:	Permanent inability to perform the functions of judge.
Amount:	No benefit is paid by the Fund. Instead salary is continued for one year but not beyond age 70. Employee contributions continue and Allowable Service is earned.
Retirement After Disability:	
Age/Service Requirement:	Member is still disabled after salary payments cease after one year or at age 70, if earlier.
Amount:	Larger of 25.00% of Average Salary or the Normal Retirement Benefit, without reduction.
Benefit Increases:	Same as for retirement.
Death:	
Survivor's Benefit:	
Age/Service Requirement:	Active or disabled member dies before retirement or a former member eligible for a deferred annuity dies.

Amount:	Larger of 25.00% of Average Salary or 60.00% of Normal Retirement Benefit had the member retired at date of death. If a member became deceased prior to July 1, 1997 and the beneficiary was not eligible to commence their survivor benefits before July 1, 1997, an actuarial increase shall be made for the change in the post-retirement interest rates from 5.00% to 6.00%. Benefit paid to spouse for life. If no spouse, benefit is paid to surviving dependent children until child marries, dies, or attains age 18 (age 22 if full-time student).
Benefit Increases:	Same as for retirement.
Prior Survivors' Benefit:	
Age/Service Requirement:	Retired member dies who did not elect an optional annuity and such member retired prior to January 1, 1974 or was in office prior to January 1, 1974 and continued contributing 4.00% of pay to provide this post-retirement death benefit.
Amount:	50% of the retired member's benefit continues to the surviving spouse if married three years. Benefit begins immediately unless spouse is not yet age 40 and continues to death. If a member became deceased prior to July 1, 1997 and the beneficiary was not eligible to commence their survivor benefits before July 1, 1997, an actuarial increase shall be made for the change in the post-retirement interest rates from 5.00% to 6.00%.
Benefit Increases:	Adjusted by MSRS to provide same increase as MPRIF.
Refund of Contributions:	
Age/Service Requirement:	Member dies prior to retirement or former member eligible for a deferred annuity dies and survivors' benefits are not payable.
Amount:	Member's contributions with 5.00% interest.
Termination:	
Refund of Contributions:	
Age/Service Requirement:	Termination of service as a judge.

Amount:	Member's contributions with 5.00% interest. A deferred annuity may be elected in lieu of a refund.
Deferred Benefit:	
Age/Service Requirement:	Five years of Allowable Service.
Amount:	Benefit computed under law in effect at termination. Amount is payable as a normal or early retirement annuity. If a member terminated employment prior to July 1, 1997 but was not eligible to commence their pension before July 1, 1997, an actuarial increase shall be made for the change in the post-retirement interest rates from 5.00% to 6.00%.
Changes in Plan Provisions:	There have been no changes in plan provisions since the prior valuation.