

05 - 0149

**Judges Retirement Fund**

*Actuarial Valuation and Review  
as of July 1, 2004*

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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.*

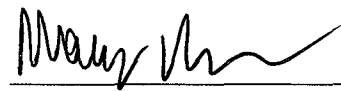
*This actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate.*

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

*Sincerely,*

*THE SEGAL COMPANY*

By:   
\_\_\_\_\_  
*Leslie L. Thompson, FSA, MAAA, EA  
Senior Vice President and Actuary*

  
\_\_\_\_\_  
*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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## SECTION 1: Valuation Summary for the Judges Retirement Fund

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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.

## SECTION 1: Valuation Summary for the Judges Retirement Fund

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### 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.

**SECTION 1: Valuation Summary for the Judges Retirement Fund**

**Summary of Key Valuation Results**

	<b>2004</b>	<b>2003</b>
<b>Contributions (% of payroll) for plan year beginning July 1:</b>		
Statutory – Chapter 490	28.04%	28.42%
Required – Chapter 356	29.42%	26.73%
Sufficiency/(Deficiency)	-1.38%	1.69%
<b>Funding elements for plan year beginning July 1:</b>		
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
<b>Funded ratios:</b>		
<u>Accrued Benefit Funded Ratio</u>	76.53%	79.67%
Current assets (AVA)	\$138,948,244	\$134,142,000
Current benefit obligations	181,571,180	168,378,000
<u>Projected Benefit Funded Ratio</u>	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
<b>GASB 25/27 for plan year beginning July 1:</b>		
Annual required employer contributions	\$6,628,062	\$6,483,000
<u>Accrued Liability Funded Ratio (AVA/AAL)</u>	73.00%	76.09%
Covered actual payroll	\$34,682,561	\$33,771,000
<b>Demographic data for plan year beginning July 1:</b>		
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

## SECTION 2: Valuation Results for the Judges Retirement Fund

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### 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.*

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**CHART 1**  
**Participant Population: 2002 – 2004**

<b>Year Ended June 30</b>	<b>Active Participants</b>	<b>Vested Terminated Participants*</b>	<b>Pensioners and Beneficiaries</b>	<b>Ratio of Non-Actives to Actives</b>
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.

**SECTION 2: Valuation Results for the Judges Retirement Fund**

**Active Participants**

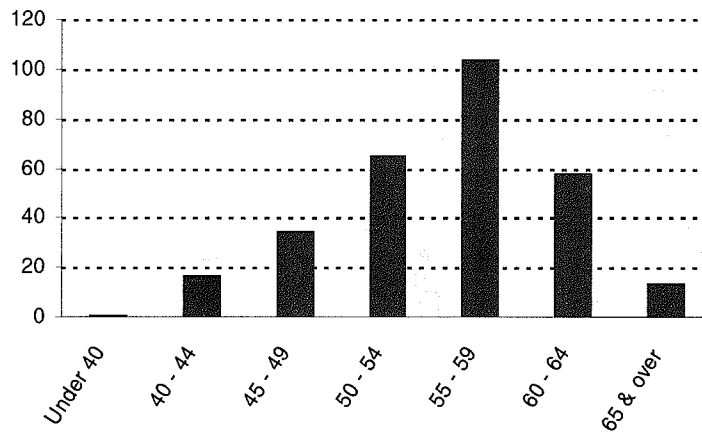
Plan costs are affected by the age, years of service and payroll of active participants. In this year's valuation, there were 294 active participants with an average age of 55.9, average years of service of 11.4 years and average projected payroll of \$121,420. The 288 active participants in the prior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

**Inactive Participants**

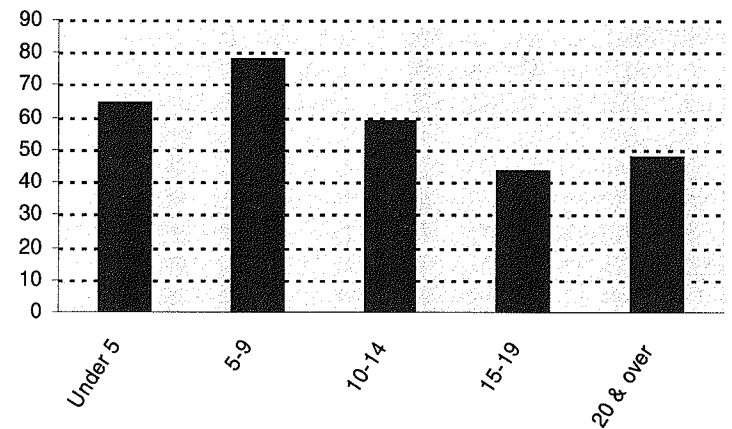
In this year's valuation, there were 18 participants with a vested right to a deferred or immediate vested benefit.

*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**





**SECTION 2: Valuation Results for the Judges Retirement Fund**

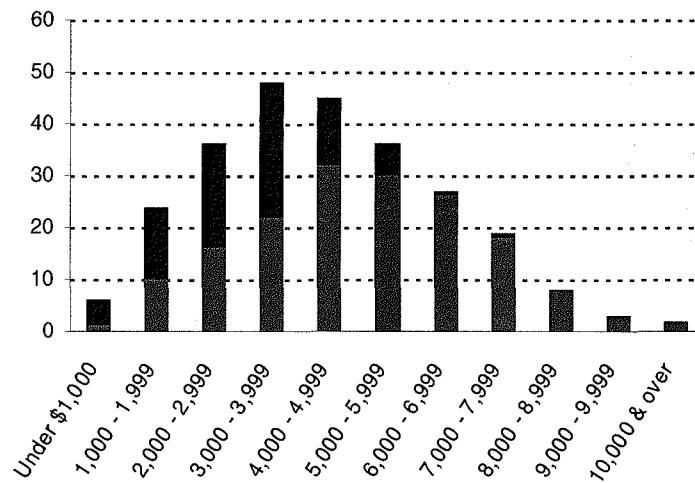
**Pensioners and Beneficiaries**

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.

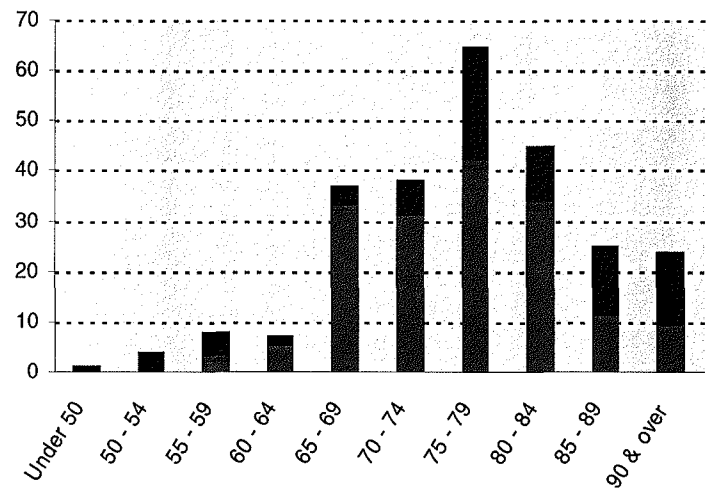
*These graphs show a distribution of the current pensioners and beneficiaries based on their monthly amount and age, by type of pension.*

- Prorata
- Disability
- Regular

**CHART 4**  
**Distribution of Pensioners and Beneficiaries by Type and by Monthly Amount as of June 30, 2004**



**CHART 5**  
**Distribution of Pensioners and Beneficiaries by Type and by Age as of June 30, 2004**



**SECTION 2: Valuation Results for the Judges Retirement Fund**

**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)			<u>\$138,948,244</u>

## SECTION 2: Valuation Results for the Judges Retirement Fund

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### 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.*

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#### CHART 7

#### Actuarial Experience for Year Ended June 30, 2004

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

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## SECTION 2: Valuation Results for the Judges Retirement Fund

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### 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.

**SECTION 3: Supplemental Information for the Judges Retirement Fund**

**EXHIBIT A**

**Table of Plan Coverage**

<b>Category</b>	<b>Year Ended June 30</b>		<b>Change From Prior Year</b>
	<b>2004</b>	<b>2003</b>	
<b>Active participants in valuation:</b>			
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%
<b>Vested terminated participants</b>	18	26	-30.8%
<b>Retired participants:</b>			
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%
<b>Disabled participants:</b>			
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%
<b>Beneficiaries:</b>			
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%
<b>Other non-vested terminated participants</b>	0	1	-100.0%

**SECTION 3: Supplemental Information for the Judges Retirement Fund**

**EXHIBIT B**

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

Age	Years of Service					
	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

**SECTION 3: Supplemental Information for the Judges Retirement Fund**

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**EXHIBIT C**

**Reconciliation of Participant Data**

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

**SECTION 3: Supplemental Information for the Judges Retirement Fund**

**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	<u>-38,565</u>	<u>0</u>	<u>-38,565</u>
(d) Net subtotal	\$4,460,361	\$0	\$4,460,361
5. Other	<u>12,224</u>	<u>0</u>	<u>12,224</u>
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	<u>34,649</u>	<u>0</u>	<u>34,649</u>
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	<u>0</u>	<u>0</u>	<u>0</u>
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)			<u>4,472,585</u>
4. Current year UAR: (F.3) – (F.2)			\$1,560,800

\* Before adjustment for MPRIF Mortality Gain/Loss.



**SECTION 3: Supplemental Information for the Judges Retirement Fund**

**EXHIBIT E**

**Table of Financial Information for Year Ended June 30, 2004**

	<b>Market Value</b>	<b>Cost Value</b>
<b>Assets in trust</b>		
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	<u>97,945,353</u>	<u>97,945,353</u>
Total assets in trust	\$137,809,943	\$138,128,003
<b>Assets receivable</b>	-\$1,455,949	-\$1,455,949
<b>Total assets</b>	\$136,353,994	\$136,672,054
<b>Amounts currently payable</b>	-\$48,710	-\$48,710
<b>Assets available for benefits</b>		
MPRIF reserves	\$97,945,353	\$97,945,353
Member reserves	20,252,191	20,252,191
Other non-MPRIF reserves	<u>18,107,740</u>	<u>18,425,800</u>
<b>Net Assets at Market/Cost Value</b>	<u>\$136,305,284</u>	<u>\$136,623,344</u>
<b>Net Assets at Actuarial Value</b>	<u>\$138,948,244</u>	<u>\$138,948,244</u>

**SECTION 3: Supplemental Information for the Judges Retirement Fund**

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**EXHIBIT F**

**Development of the Fund Through June 30, 2004**

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<b>Year Ended June 30</b>	<b>Employer Contributions</b>	<b>Employee Contributions</b>	<b>Net Investment Return*</b>	<b>Administrative Expenses</b>	<b>Benefit Payments</b>	<b>Actuarial Value of Assets at End of Year</b>
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

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*\* Net Investment Return on an Actuarial Value of Assets basis and net of investment fees.*

**SECTION 3: Supplemental Information for the Judges Retirement Fund**

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**EXHIBIT G**

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

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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		<u>3,660,928</u>
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		<u>9,535,684</u>
7. Unfunded/(Overfunded) actuarial accrued liability at end of year		<u>\$51,390,100</u>

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**SECTION 3: Supplemental Information for the Judges Retirement Fund**

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**EXHIBIT H**

**Definitions of Pension Terms**

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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.

**SECTION 3: Supplemental Information for the Judges Retirement Fund**

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**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.

**SECTION 4: Reporting Information for the Judges Retirement Fund**

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**EXHIBIT I**

**Summary of Actuarial Valuation Results**

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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	

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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

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**SECTION 4: Reporting Information for the Judges Retirement Fund**

**EXHIBIT I (continued)**

**Summary of Actuarial Valuation Results**

	Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability
<b>A. Determination of Actuarial Accrued Liability</b>			
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	<u>383,188</u>	<u>233,214</u>	<u>149,974</u>
(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	<u>9,900,693</u>	<u>0</u>	<u>9,900,693</u>
6. Total	\$240,656,254	\$50,317,910	\$190,338,344
<b>B. Determination of Unfunded Actuarial Accrued Liability</b>			
1. Actuarial Accrued Liability			\$190,338,344
2. Actuarial Value of Assets			<u>138,948,244</u>
3. Unfunded Actuarial Accrued Liability: (1) – (2)			\$51,390,100
<b>C. Determination of Supplemental Contribution Rate</b>			
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%

**SECTION 4: Reporting Information for the Judges Retirement Fund**

**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				<u>50,317,910</u>
3. Total Expected Future Assets				\$95,755,865
C. Total Current and Expected Future Assets				\$234,704,109
D. Current Benefit Obligations				
		<b><u>Non-Vested</u></b>	<b><u>Vested</u></b>	<b><u>Total</u></b>
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		<u>4,062,167</u>	<u>68,079,053</u>	<u>72,141,220</u>
5. Total Current Benefit Obligations		\$4,062,167	\$177,509,013	\$181,571,180
E. Expected Future Benefit Obligations				<u>59,085,074</u>
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



**SECTION 4: Reporting Information for the Judges Retirement Fund**

**EXHIBIT III**

**Supplementary Information Required by the GASB – Schedule of Employer Contributions**

<b>Year Ended June 30</b>	<b>Actuarially Required Contribution Rate (a)</b>	<b>Actual Covered Payroll (b)</b>	<b>Actual Member Contributions (c)</b>	<b>Annual Required Employer Contributions [(a) x (b)] – (c) = (d)</b>	<b>Actual Employer Contributions<sup>(1)</sup> (e)</b>	<b>Percentage Contributed (e) / (d)</b>
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% <sup>(2)</sup>	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% <sup>(3)</sup>	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%					

<sup>(1)</sup> Includes contributions from other sources (if applicable).

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

<sup>(3)</sup> Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 26.75%.

**SECTION 4: Reporting Information for the Judges Retirement Fund**

**EXHIBIT IV**

**Supplementary Information Required by the GASB – Schedule of Funding Progress**

<b>Actuarial Valuation Date</b>	<b>Actuarial Value of Assets (a)</b>	<b>Actuarial Accrued Liability (AAL) (b)</b>	<b>Unfunded AAL (UAAL) (b) – (a)</b>	<b>Funded Ratio (a) / (b)</b>	<b>Actual Covered Payroll (Previous FY) (c)</b>	<b>UAAL as a Percentage of Covered Payroll [(b) – (a)] / (c)</b>
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%

**SECTION 4: Reporting Information for the Judges Retirement Fund**

**EXHIBIT V**

**Determination of Contribution Sufficiency**

	July 1, 2004	
	Percent of Payroll	Dollar Amount
<b>A. Statutory Contributions – Chapter 490</b>		
1. Member Contributions*	8.00%	\$2,689,962
2. Employer Contributions	<u>20.50%</u>	<u>7,317,983</u>
3. Total**	<u>28.04%</u>	<u>\$10,007,945</u>
<b>B. Required Contributions – Chapter 356</b>		
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	<u>0.09%</u>	<u>32,783</u>
(f) Total	17.44%	\$6,224,006
2. Amortization of Supplemental Contribution UAAL	11.89%	4,244,430
3. Allowance for Expenses	<u>0.09%</u>	<u>32,128</u>
4. Total	<u>29.42%</u>	<u>\$10,500,564</u>
<b>C. Contribution Sufficiency (Deficiency) (A.3 – B.4)</b>	-1.38%	-\$492,619
<b>D. Projected annual payroll for fiscal year beginning on the valuation date</b>		\$35,697,480

\* The dollar amount 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).

**SECTION 4: Reporting Information for the Judges Retirement Fund**

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**EXHIBIT VIII**

**Supplementary Information Required by the GASB**

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<b>Valuation date</b>	July 1, 2004
<b>Actuarial cost method</b>	Entry Age Normal
<b>Amortization method</b>	Level percentage of payroll
<b>Remaining amortization period</b>	16 years remaining as of July 1, 2004
<b>Asset valuation method</b>	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).

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**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)

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**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	<u>294</u>
Total	566

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**SECTION 4: Reporting Information for the Judges Retirement Fund**

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**EXHIBIT VIII**

**Actuarial Assumptions and Actuarial Cost Method**

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**Net Investment Return:**

*Pre-Retirement:* 8.50% per annum.

*Post-Retirement:* 8.50% per annum.

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**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.

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**Salary Increases:** 5.00% annually.

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**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.

**SECTION 4: Reporting Information for the Judges Retirement Fund**

<b>Retirement Rates:</b>	Age-related table as follows: <table border="0"> <tr> <td>Ages:</td> <td>62-64</td> <td>10.00%</td> </tr> <tr> <td></td> <td>65-67</td> <td>20.00</td> </tr> <tr> <td></td> <td>68-70</td> <td>30.00</td> </tr> <tr> <td></td> <td>71 &amp; over</td> <td>100.00</td> </tr> </table>	Ages:	62-64	10.00%		65-67	20.00		68-70	30.00		71 & over	100.00
Ages:	62-64	10.00%											
	65-67	20.00											
	68-70	30.00											
	71 & over	100.00											
<b>Withdrawal Rates:</b>	None.												
<b>Disability Rates:</b>	Rates adopted by MSRS based on actual experience, most recently adjusted in 1979, as shown in rate table.												
<b>Allowance for Combined Service Annuity:</b>	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.												
<b>Expenses:</b>	Prior year administration expenses expressed as percentage of prior year payroll.												
<b>Return of Contributions:</b>	N/A												
<b>Percent Married:</b>	Marital status as indicated by data.												
<b>Age of Spouse:</b>	Females are assumed to be three years younger than males.												
<b>Social Security:</b>	N/A												
<b>Actuarial Cost Method:</b>	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.												
<b>Asset Valuation Method:</b>	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												

**SECTION 4: Reporting Information for the Judges Retirement Fund**

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:

Age	Rates(%)							
	Death		Withdrawal		Disability		Retirement	
	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.

**SECTION 4: Reporting Information for the Judges Retirement Fund**

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**EXHIBIT IX**

**Summary of Plan Provisions – BASIC**

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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.

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<b>Plan Year:</b>	July 1 through June 30.
<b>Eligibility:</b>	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.
<b>Contributions:</b>	
<i>Member:</i>	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.
<i>Employer:</i>	20.50% of salary.
<b>Allowable Service:</b>	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.
<b>Salary:</b>	Salary set by law.
<b>Average Salary:</b>	Average of the five highest years of salary of the last 10 years prior to retirement.
<b>Retirement:</b>	
<i>Normal Retirement Benefit:</i>	
<i>Age/Service Requirement:</i>	(a) Age 65 and five years of Allowable Service. (b) Age 70.
<i>Amount:</i>	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.



## SECTION 4: Reporting Information for the Judges Retirement Fund

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	Maximum benefit of 76.80% of average salary for the five highest years preceding retirement.
<i><u>Early Retirement Benefit:</u></i>	
<i>Age/Service Requirement:</i>	Age 62 and five years of Allowable Service.
<i>Amount:</i>	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.
<i>Form of Payment:</i>	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
<i>Benefit Increases:</i>	Benefits may be increased each January 1 depending on the investment performance of the Minnesota Post Retirement Investment Fund (MPRIF).

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### **Disability:**

<i><u>Disability Benefit:</u></i>	
<i>Age/Service Requirement:</i>	Permanent inability to perform the functions of judge.
<i>Amount:</i>	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.
<i><u>Retirement After Disability:</u></i>	
<i>Age/Service Requirement:</i>	Member is still disabled after salary payments cease after one year or at age 70, if earlier.
<i>Amount:</i>	Larger of 25.00% of Average Salary or the Normal Retirement Benefit, without reduction.
<i>Benefit Increases:</i>	Same as for retirement.

**SECTION 4: Reporting Information for the Judges Retirement Fund**

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**EXHIBIT X**

**Summary of Plan Provisions - COORDINATED**

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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.

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<b>Plan Year:</b>	July 1 through June 30
<b>Eligibility:</b>	A judge or justice of any court who is covered under the Social Security Act.
<b>Contributions:</b>	
<i>Member:</i>	8.00% of salary. (Amended 1998) Contributions after maximum benefit is reached are redirected to the Unclassified Plan.
<i>Employer:</i>	20.50% of salary.
<b>Allowable Service:</b>	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.
<b>Salary:</b>	Salary set by law.
<b>Average Salary:</b>	Average of the five highest years of salary of the last 10 years prior to retirement.
<b>Retirement:</b>	
<i>Normal Retirement Benefit:</i>	
<i>Age/Service Requirement:</i>	(a) Age 65 and five years of Allowable Service. (b) Age 70.
<i>Amount:</i>	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.

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**SECTION 4: Reporting Information for the Judges Retirement Fund**

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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.

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**Death:**

Survivor's Benefit:

*Age/Service Requirement:*

Active or disabled member dies before retirement or a former member eligible for a deferred annuity dies.

**SECTION 4: Reporting Information for the Judges Retirement Fund**

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*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.

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**Termination:**

*Refund of Contributions:*

*Age/Service Requirement:* Termination of service as a judge.

**SECTION 4: Reporting Information for the Judges Retirement Fund**

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*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%.

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**Changes in Plan Provisions:** There have been no changes in plan provisions since the prior valuation.