



**Cavanaugh Macdonald**  
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**New Mexico Magistrate Retirement Fund  
Annual Actuarial Valuation  
as of June 30, 2011**





# Cavanaugh Macdonald

CONSULTING, LLC

*The experience and dedication you deserve*

October 27, 2011

The Retirement Board  
Public Employees Retirement Association  
Santa Fe, New Mexico

Members of the Board:

We have conducted the annual actuarial valuation of the New Mexico Magistrate Retirement Fund as of June 30, 2011; the results of the valuation are contained in the following report. The annual valuation is used to determine the sufficiency of the statutory contribution rates and, if necessary, the amount required to fund the annual normal cost and fully amortize the unfunded actuarial accrued liability with annual payments over a 30-year period. The results of this valuation apply to the fiscal year beginning July 1, 2011 and ending June 30, 2012 (FY 2012). Information contained in our report for plan years ending prior to June 30, 2010 is based upon valuations performed by the Fund's prior actuary.

In performing the valuation, we relied on data supplied by the Public Employees Retirement Association (PERA) and performed limited tests on the data for consistency and reasonableness. In determining the Fund's liabilities, future events, such as investment returns, deaths, retirements, etc., are anticipated based upon the set of actuarial assumptions as approved by the Board. New economic assumptions were adopted for the June 30, 2011 valuations as follows:

Assumption	Previous	Current
Rate of Inflation	4.00%	3.50%
Investment Rate of Return	8.00%	7.75%
Salary Increases	4.75%	4.25%
Rate of Payroll Growth	4.50%	4.00%

Additionally, the contribution shift from employer to employee was extended and increased, resulting in employee contributions of 10.75% for fiscal years 2012 and 2013 and reverting back to 7.50% for fiscal year 2014.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: fund experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

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This is to certify that the undersigned are members of the American Academy of Actuaries and have experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the Fund.

Respectfully submitted,

A handwritten signature in blue ink that reads 'John J. Garrett'.

John J. Garrett, ASA, FCA, MAAA  
Principal and Consulting Actuary

A handwritten signature in blue ink that reads 'Jonathan T. Craven'.

Jonathan T. Craven, ASA, EA, FCA, MAAA  
Senior Actuary



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## Section I: Board Summary



The table below summarizes the results of the June 30, 2011 actuarial valuation as compared with the prior year.

**Table I-1: Comparative Summary of Principal Results**

Valuation Date	June 30, 2011	June 30, 2010
Total Annual Payroll	\$ 3,405,121	\$ 3,519,570
Total Valuation Payroll	\$ 3,541,326	\$ 3,677,951
Actuarial Accrued Liability (AAL)		
Active and Deferred Vested Members	\$ 17,796,227	\$ 17,584,782
Retired Members and Survivors	<u>37,632,938</u>	<u>35,092,034</u>
Total	\$ 55,429,165	\$ 52,676,816
Actuarial Value of Assets	\$ 33,121,149	\$ 34,651,696
Funded Ratio	59.75 %	65.78 %
Unfunded Actuarial Accrued Liability (UAAL) (AAL - Actuarial Value of Assets)	\$ 22,308,016	\$ 18,025,120
<b>Calculation of Required Contribution (Fiscal Year Ending)</b>	June 30, 2012	June 30, 2011
Normal Cost		
Retirement	23.68 %	25.01 %
Termination	5.67 %	5.82 %
Pre-Retirement Survivors	1.73 %	1.77 %
Disability	<u>0.00 %</u>	<u>0.00 %</u>
Total Normal Cost	31.08 %	32.60 %
UAAL 30-Year Amortization Rate	<u>34.77 %</u>	<u>26.29 %</u>
Total Required Contribution Rate	65.85 %	58.89 %
Total Required Contribution Amount	\$ 2,332,126	\$ 2,166,091
Statutory Contribution Rates		
Employer Contribution Rate	7.75 %	9.50 %
Expected Docket Fees	16.21 %	11.55 %
Member Contribution Rate	<u>10.75 %</u>	<u>9.00 %</u>
Total Statutory Rate	34.71 %	30.05 %
Expected Statutory Amount	\$ 1,229,194	\$ 1,105,224
Deficiency in Statutory Rate	31.14 %	28.84 %
Deficiency in Expected Statutory Amount	\$ 1,102,932	\$ 1,060,867



## Section I: Board Summary

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### Summary of Key Findings

The funding policy for the Fund determines the employer contribution required to satisfy the annual normal cost plus an amount to fully amortize the unfunded actuarial accrued liability (UAAL) over a period not to exceed 30 years. The calculated total contribution rate for the Fund in the fiscal year ending June 30, 2012 (FY 2012) is 65.85% of covered payroll. This is an increase to the employer contribution requirement of 6.96% of payroll from the prior valuation.

The total normal cost contribution as a percent of valuation payroll decreased from 32.60% to 31.08%. The UAAL increased from \$18.0 million to \$22.3 million resulting in an increase to the annual amortization amount from 26.29% to 34.77% of payroll. The increase in the amortization rate was exacerbated by the decline in valuation payroll for the second year in a row. The funded ratio has decreased from 65.8% to 59.8%. The UAAL and funded ratio are reconciled in Table IV-3. We note the following key findings:

- The Fund experienced an actuarial loss on Fund assets of \$2,479,411 for the plan year related to the 0.66% investment return on the actuarial value of assets. This represents a 5.3% decrease to the funded ratio. Table III-3 provides the calculation of the investment loss for this year.
- The Fund experienced a net decrease of \$733,473 on Fund liabilities due to non-investment related experience. This represents a 1.6% increase to the funded ratio.
- The Fund received \$944,389 less in contributions than expected. This represents a 1.7% decrease to the funded ratio.
- As a result of an economic study performed in the last year, there were assumption changes made for the current valuation. These changes resulted in an increase of \$1,155,764 to Fund liabilities and a decrease of 1.2% to the funded ratio.
- In addition to the changes in the actuarially determined contributions, beginning July 1, 2011 the 1.5% of payroll contribution shift from the employer contribution rate to the employee contribution rate has been extended and increased by 1.75% for two years. The employer contribution rate is expected to revert back to 11.0% of payroll beginning July 1, 2013.
- The financing period for the unfunded liability based upon the statutory contribution rates is an infinite period for the third consecutive year and therefore does not satisfy the Board's funding objectives. In accordance with the Board's Funding and Contribution Policies, a recommendation to increase the Magistrate Retirement Fund's statutory rates is necessary.
- We recommend the Board consider a 2% annual increase in the statutory rates for each year over a four-year period which is the maximum allowed for consideration under the Board's policies.



## Section I: Board Summary

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Section II of the report provides summarized information on the membership data used in the valuation. Section III covers the Fund's assets and Section IV covers the Fund's liabilities. The results of the valuation are provided in Section V and the accounting information is in Section VI. The appendices provide additional information on A) the Fund members; B) the actuarial assumptions and methods; and C) the summary of the benefit provisions of the Fund. It is important to note that all information contained in this report for periods prior to June 30, 2010 were produced by a prior actuarial consulting firm.



## Section II: Membership Data

Data regarding the membership of the Fund for use in the valuation were furnished by PERA. The following table summarizes the membership data as of June 30, 2011 and is compared with that reported for the prior year.

**Table II-1: Summary of Membership Data as of June 30, 2011**

Group	June 30, 2011	June 30, 2010
<b>Total Active Members</b>	<b>45</b>	<b>46</b>
<b>Inactive Members</b>		
Deferred Vested	16	12
Other	<u>0</u>	<u>1</u>
<b>Total Inactive Members</b>	<b>16</b>	<b>13</b>
<b>Retirees</b>		
Service*	68	59
Disabled	2	2
Beneficiaries	<u>8</u>	<u>8</u>
<b>Total Retirees</b>	<b>78</b>	<b>69</b>
<b>Totals</b>	<b>139</b>	<b>128</b>

\* Includes 1 Co-Payee as of June 30, 2011.

**Table II-2: Historical Summary of Active Membership Valuation Data**

Valuation Date	Number	Annual Payroll	Annual Average Pay	% Change in Average Pay
6/30/2011	45	\$ 3,405,121	\$ 75,669	(1.10)%
6/30/2010	46	3,519,570	76,512	0.07 %
6/30/2009	54	4,128,599	76,456	2.29 %
6/30/2008	45	3,363,342	74,741	12.18 %
6/30/2007	52	3,464,587	66,627	5.77 %



## Section II: Membership Data



**Table II-3: Deferred Members, Retired Members and Beneficiaries as of June 30, 2011**

<b>Group</b>	<b>Number</b>	<b>Total Annual Benefits</b>	<b>Average Annual Benefits</b>	<b>Average Age</b>
<b>Deferred Vested</b>	<b>16</b>	<b>\$ 463,139</b>	<b>\$ 28,946</b>	<b>54.99</b>
<b>Retirees</b>				
Service	68	2,752,653	40,480	69.90
Disability	2	76,532	38,266	62.58
Survivors	<u>8</u>	<u>225,585</u>	<u>28,198</u>	<u>74.82</u>
<b>Retiree Totals</b>	<b>78</b>	<b>\$3,054,770</b>	<b>\$ 39,164</b>	<b>70.21</b>
<b>Total</b>	<b>94</b>	<b>\$3,517,910</b>	<b>\$ 37,425</b>	<b>67.62</b>

## Section III: Fund Assets



The following tables provide information on the Fund's assets at market value and the development of the actuarial value of assets.

**Table III-1: Market Value Reconciliation**

	June 30, 2011	June 30, 2010
Beginning of Year Market Value	\$ 28,876,413	\$ 26,270,170
Audit Adjustment	-	-
Revised Beginning of Year Market Value	\$ 28,876,413	\$ 26,270,170
Revenues:		
Member Contributions	363,234	330,086
Docket Fees	573,948	424,702
Employer Contributions	320,696	400,615
Purchase of Service	-	
Investment Income		
Adjustments of investments to market value	4,317,614	2,547,048
Interest, dividends, etc.	634,718	730,618
Realized gains (losses)	1,126,756	469,954
Security lending	(59,625)	442,477
Other Income	129,908	11
Total Revenues	\$ 7,407,249	\$ 5,345,511
Expenditures:		
Benefit Payments	2,954,578	2,675,332
Refunds of Member Contributions	56,446	-
Administrative and Investment Expenses	74,532	63,936
Total Expenditures	\$ 3,085,556	\$ 2,739,268
End of Year Market Value	\$ 33,198,106	\$ 28,876,413

The market value rate of return for the plan year is 21.7%. The Fund's cash flow is -5.9% as a percentage of average market value. A mature system such as the Magistrate Retirement Fund is expected to exhibit negative net cash flow as the number of members receiving benefit payments becomes a larger portion of total membership. The degree of negative cash flow of the Fund is significant and may require additional considerations to reduce the amount of negative cash flow. We will continue to monitor this in each future valuation.

## Section III: Fund Assets



The actuarial value of assets represents a "smoothed" value developed with the purpose of dampening the impact of market volatility on the assets used in determining valuation results. The actuarial value of assets has been calculated by spreading the recognition of unexpected investment income over four years. The amount of unexpected investment income in each year is the difference between expected actuarial value investment income and actual market value investment income. The actuarial value is limited in the degree it can vary from market value by use of a 20% corridor. Table III-2 below provides the calculation of the actuarial value of assets.

**Table III-2: Development of Actuarial Value of Assets as of June 30, 2011**

1. Actuarial Value Beginning of Year		\$	34,651,696
2. Actuarial Value Beginning of Year (prior to adjustment for corridor)			35,511,964
3. Market Value End of Year			33,198,106
4. Market Value Beginning of Year		\$	28,876,413
5. Cash Flow			
a. Contributions		\$	1,257,878
b. Service Purchases			-
c. Benefit Payments and Refunds			(3,011,024)
d. Net		\$	(1,753,146)
6. Investment Income			
a. Market Total (3 - 4 - 5d)		\$	6,074,839
b. Assumed Rate			8.00%
c. Amount for Immediate Recognition			2,770,831
d. Amount for Phased-In Recognition			3,304,008
7. Phased-In Recognition of Investment Income			
a. Current Year: 0.25 *6.d.		\$	826,002
b. First Prior Year (2009/2010)	\$ 1,191,076 x 25%		297,769
c. Second Prior Year (2008/2009)	(11,986,348) x 25%		(2,996,587)
d. Third Prior Year (2007/2008)	(6,142,736) x 25%		(1,535,684)
e. Total Recognized Investment Gain		\$	(3,408,500)
8. Audit Adjustment		\$	-
9. Preliminary Actuarial Value (2 + 5d +6c + 7e + 8)		\$	33,121,149
10. Application of 20% Corridor			
a. Minimum Actuarial Value: 80% x 3		\$	26,558,486
b. Maximum Actuarial Value: 120% x 3		\$	39,837,727
c. Corridor Adjustment		\$	-
<b>d. Actuarial Value End of Year</b>		<b>\$</b>	<b>33,121,149</b>
11. Difference Between Market & Actuarial Values			\$76,957
<b>12. Rate of Return on Actuarial Value</b>			<b>0.66 %</b>
<b>13. Actuarial Value of Assets as a % of Market Value of Assets</b>			<b>99.77 %</b>



### Section III: Fund Assets

The actuarial valuation assumes the rate of investment return on the assets of the Fund is 7.75% annually beginning with the June 30, 2011 valuation; the assumed rate of return was 8.00% for the prior valuation. This assumption is based upon the reasonable long-term expected return on the assets. In each year, the Fund will experience actuarial gains and losses due to the actual investment return of the assets. Table III-3 provides the calculation of the gain or loss due to the investment experience on the actuarial value of assets for the year ending June 30, 2011.

**Table III-3: Actuarial Investment Gain (Loss) for the Year Ended June 30, 2011**

1. Beginning of Year Actuarial Value of Assets (AVA)	\$ 34,651,696
2. Employee and Employer Contributions	1,257,878
3. Benefit Payments	(3,011,024)
4. Interest [1 x 8.00% + (2 + 3) x 8.00% x 0.5]	2,702,010
5. Expected End of Year AVA (1 + 2 + 3 + 4)	35,600,560
6. Actual End of Year AVA	33,121,149
<b>7. Actuarial Investment Gain (Loss) (6 - 5)</b>	<b>\$ (2,479,411)</b>



## Section IV: Fund Liabilities

The total actuarial present value of benefits is the value as of the valuation date of all future benefits expected to be paid to current members of the Fund. An actuarial cost method allocates each individual's present value of benefits to past and future years of service. The actuarial accrued liability includes the portion of the active member present value of benefits allocated to past service as well as the entire present value of benefits for retirees, beneficiaries and inactive members. The portion of the actuarial present value allocated to the future service of active members is called the present value of future normal costs. Table IV-1 presents the calculation and allocation of the actuarial present value of benefits.

**Table IV-1: Allocation of the Actuarial Present Value of Benefits as of June 30, 2011**

	<b>Actuarial Accrued Liability</b>	<b>Present Value of Future Normal Cost</b>	<b>Actuarial Present Value of Benefits</b>
<b>Active Members</b>			
Service Retirement	\$12,425,537	\$4,860,672	\$ 17,286,209
Termination Benefits	826,084	\$1,384,143	2,210,227
Survivor Benefits	511,720	386,882	898,602
Disability Retirement	-	-	-
Total for Active Members	\$13,763,341	\$6,631,697	\$ 20,395,038
<b>Inactive Members</b>	\$ 4,032,886		\$ 4,032,886
<b>Retirees and Beneficiaries</b>			
Service Retirements	\$34,303,913		\$ 34,303,913
Beneficiaries	2,227,260		2,227,260
Disability Retirements	1,101,765		1,101,765
Total for Retirees and Beneficiaries	\$37,632,938		\$ 37,632,938
<b>Total</b>	<b>\$55,429,165</b>	<b>\$6,631,697</b>	<b>\$ 62,060,862</b>



## Section IV: Fund Liabilities

Under the valuation funding method, an unfunded actuarial accrued liability (UAAL) exists to the extent that the actuarial accrued liability exceeds the actuarial value of assets as presented in Section III. The calculation of the UAAL and Funded Ratio as of the valuation date is shown in Table IV-2.

**Table IV-2: Calculation of the Unfunded Actuarial Accrued Liability and Funded Ratio**

	June 30, 2011	June 30, 2010
1. Actuarial Accrued Liability	55,429,165	52,676,816
2. Actuarial Value of Assets	33,121,149	34,651,696
3. Unfunded Actuarial Accrued Liability (1 - 2)	22,308,016	18,025,120
Funded Ratio (2 / 1)	59.8%	65.8%

Although the terminology used to describe the excess of the Fund's actuarial accrued liability over the Fund's actuarial value of assets is call the "unfunded" actuarial accrued liability, the calculated required annual contribution in the valuation includes an annual amortization payment required to fully amortize the UAAL within 30 years.

The funded ratio is the ratio of the actuarial value of assets to the actuarial accrued liability (Table IV-1) as of the valuation date. As of June 30, 2011, the funded ratio of the Fund is 59.8% as compared to a ratio of 65.8% as of June 30, 2010. The ratio is a commonly used measure of the funding progress and can be useful in reviewing the historical trend of a Fund's funding progress. Such a review should also consider the impact to this measure over the historical period due to changes to fund benefits, changes to the actuarial assumptions and methods, and the significant impact that investment experience can have on the ratio over short-term periods. We caution that no single "point in time" measure can provide a universal basis for comparing one plan's funded status to another.



## Section IV: Fund Liabilities

The calculation of the Fund's actuarial assets and liabilities requires the use of several assumptions concerning the future experience of the Fund and its members. In each annual valuation, the latest year of actual experience is compared to that expected by the prior valuation. The differences are actuarial gains and losses which decrease or increase the UAAL. Table IV-3 provides the reconciliation of the UAAL.

**Table IV-3: Reconciliation of the UAAL**

	UAAL	Funded Ratio
<b>1. Beginning of Year</b>	<b>\$ 18,025,120</b>	<b>65.8 %</b>
2. Normal Cost	1,199,121	
3. Expected Contributions	(2,166,091)	
4. Interest [ (1 x 8%) + (2 + 3) x 8% x 0.5 ]	1,403,331	
5. Expected End of Year (1 + 2 + 3 + 4)	<b>\$ 18,461,481</b>	<b>66.4 %</b>
6. Actuarial Experience (Gain) / Loss		
Contribution Shortfall (with interest)	\$ 944,541	(1.7)%
Investment Experience	2,479,411	(5.3)%
Liability Experience	(733,473)	1.6 %
Total Actuarial Experience (Gain) / Loss	<b>\$ 2,690,479</b>	
7. End of Year Prior to Plan/Assumption Changes (5 + 6)	<b>\$ 21,151,960</b>	<b>61.0 %</b>
8. Change in Employee Contribution Rate	292	0.0 %
9. Change in Actuarial Assumptions	1,155,764	(1.2)%
<b>10. Actual End of Year (7 + 8 + 9)</b>	<b>\$ 22,308,016</b>	<b>59.8 %</b>



## Section V: Actuarial Valuation Results

Section IV of this report presented the Fund's actuarial accrued liability as the portion of the present value of benefits allocated to past years of service. The portion of the active members' present value of benefits allocated to future years of service is funded through annual normal cost contributions comprised of both active member and employer contributions. The portion of the total annual normal cost amount in excess of the expected amount of active member contributions is the employer portion of the Fund's normal cost. The normal cost amount developed as of the valuation date is presented in Table V-1.

The employer's annual required contribution is the dollar amount necessary to fund the annual normal cost of the Fund and fully amortize the UAAL over 30 years. The amount calculated is expected to remain constant over the remaining amortization period and is provided in Table V-1.

**Table V-1: Calculation of Required Contribution Rate**

	June 30, 2011	June 30, 2010
1. Total Valuation Payroll	\$ 3,541,326	\$ 3,677,951
2. Present Value of Future Benefits	62,060,862	59,450,762
3. Present Value of Future Normal Costs	6,631,697	6,773,946
4. Actuarial Accrued Liability (2 - 3)	\$ 55,429,165	\$ 52,676,816
5. Actuarial Value of Assets	33,121,149	34,651,696
6. Unfunded Actuarial Accrued Liability (UAAL) (4 - 5)	\$ 22,308,016	\$ 18,025,120
7. UAAL Amortization Payment (30 year funding)	\$ 1,231,379	\$ 966,970
a. Amortization Payment as a Percent of Payroll (7 / 1)	34.77%	26.29%
8. Total Normal Cost	\$ 1,100,747	\$ 1,199,121
a. Normal Cost as a Percent of Payroll (8 / 1)	31.08%	32.60%
9. Total Required Contribution	\$ 2,332,126	\$ 2,166,091
a. Required Contribution Rate (7a + 8a)	65.85%	58.89%
10. Expected Statutory Contribution Rates		
a. Employer Contribution Rate	7.75%	9.50%
b. Expected Docket Fees as a Percent of Payroll	16.21%	11.55%
c. Member Contribution Rate	10.75%	9.00%
d. Total Statutory Contribution Rate (a + b + c)	34.71%	30.05%
11. (Excess)/Shortfall in Statutory Rates (9a - 10d)	31.14%	28.84%





## Section VI: Accounting Information

The tables provided in this section present disclosure information necessary to comply with GASB requirements and are relevant for the annual financial reporting of the Fund.

**Table VI-1: GASB Statement No. 25 Schedule of Funding Progress**

Actuarial Valuation Date	Actuarial Value of Plan Assets (a)	Actuarial Liability Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Annual Payroll (c)	UAAL as a Percentage of Annual Payroll ((b - a) / c)
6/30/2011	\$33,121,149	\$55,429,165	\$22,308,016	59.8 %	\$3,405,121	655.1 %
6/30/2010	34,651,696	52,676,816	18,025,120	65.8 %	3,519,570	512.1 %
6/30/2009	31,524,204	47,567,604	16,043,400	66.3 %	4,128,599	388.6 %
6/30/2008	38,866,453	41,721,278	2,854,825	93.2 %	3,363,342	84.9 %
6/30/2007	37,241,628	36,964,449	(277,179)	100.7 %	3,464,587	(8.0)%
6/30/2006	33,694,422	33,362,138	(332,284)	101.0 %	3,149,560	(10.6)%
6/30/2005	31,303,435	31,384,962	81,527	99.7 %	3,196,052	2.6 %
6/30/2004	30,071,628	30,194,583	122,955	99.6 %	3,002,422	4.1 %
6/30/2003	29,629,462	29,078,050	(551,412)	101.9 %	3,081,850	(17.9)%
6/30/2002	32,039,588	28,959,427	(3,080,161)	110.6 %	3,996,832	(77.1)%

**Table VI-2: Schedule of Employer Contributions**

Fiscal Year Ended June 30	Actuarial Valuation Date	Annual Required Contribution (ARC)
2012	6/30/2011	\$1,951,433*
2011	6/30/2010	2,013,684
2010	6/30/2009	1,698,108
2009	6/30/2008	1,151,061
2008	6/30/2007	1,029,865
2007	6/30/2006	943,884
2006	6/30/2005	1,009,203
2005	6/30/2004	927,233
2004	6/30/2003	894,349
2003	6/30/2002	881,229
2002	6/30/2001	778,882

\*Current ARC is amount of employer required contribution based on expected increase in payroll. Actual ARC will be based on actual payroll for the plan year when known.

## Section VI: Accounting Information



**Table VI-3: Solvency Test**

Valuation Date	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered by Actuarial Value of Assets		
	(1) Active Member Contributions	(2) Retirees, Survivors and Inactive Members	(3) Active Members (Employer Financed Portion)	Actuarial Value of Assets	(1)	(2)	(3)
6/30/2011	\$ 3,002,793	\$41,665,824	\$ 10,760,548	\$33,121,149	100.00%	72.29%	0.00%
6/30/2010	3,051,400	37,809,620	11,815,796	34,651,696	100.00	83.58	0.00
6/30/2009	2,898,183	29,327,794	15,341,627	31,524,204	100.00	97.61	0.00
6/30/2008	2,591,066	25,590,320	13,539,892	38,866,453	100.00	100.00	78.92
6/30/2007	2,253,925	25,128,887	9,581,637	37,241,628	100.00	100.00	100.00

**Table VI-4: Schedule of Retirants Added to and Removed from Rolls**

Valuation Date	Added to Rolls		Removed from Rolls		Rolls End of Year		% Increase in Annual Allowances	Average Annual Allowances
	Number Added	Annual Allowances	Number Removed	Annual Allowances	Number	Annual Allowances		
6/30/2011	11	\$ 395,293	2	\$ 295,966	78	\$ 3,054,770	3.36%	\$ 39,164
6/30/2010	9	444,623	1	35,735	69	2,955,443	16.06%	42,833
6/30/2009	7	372,241	2	81,882	61	2,546,555	12.87%	41,747
6/30/2008	1	**	0	**	56	2,256,196	3.73%	40,289
6/30/2007	7	**	0	**	55	2,174,981	19.24%	39,545



**Table VI-5: Summary of Actuarial Methods and Assumptions**

Valuation Date	June 30, 2011
Actuarial cost method	Entry Age Normal
Amortization method	Level Percent of Payroll, Open
Payroll Growth Rate	4.00%
Remaining amortization period	30 years
Asset valuation method	4-year Smoothed Market
Actuarial assumptions:	
Investment rate of return*	7.75%
Projected salary increases*	4.25%
Post-Retirement Benefit Increases	3.00% compounded annually
* Includes inflation at 3.50%	

## Appendix A: Additional Membership Data



**Table A-1: Schedule of Active Participant Data as of June 30, 2011**

Nearest Age	Completed Years of Service							Total	Payroll
	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30+		
35 to 39	1	0	1	0	0	0	0	2	\$ 152,954
40 to 44	0	1	0	0	0	1	0	2	\$ 154,192
45 to 49	1	2	1	3	3	0	0	10	\$ 765,398
50 to 54	1	3	1	0	0	0	0	5	\$ 382,390
55 to 59	5	3	2	0	1	1	2	14	\$ 1,032,451
60	0	1	1	1	0	0	0	3	\$ 229,434
61	0	0	0	0	0	0	0	0	\$ -
62	0	1	1	0	0	0	0	2	\$ 152,956
63	0	0	0	0	0	0	0	0	\$ -
64	0	1	1	0	0	0	0	2	\$ 152,956
65	0	0	0	0	0	0	0	0	\$ -
66	0	1	0	0	0	0	0	1	\$ 76,478
67	1	0	0	0	0	0	0	1	\$ 76,478
68	0	0	1	0	0	0	0	1	\$ 76,478
69	0	1	0	1	0	0	0	2	\$ 152,956
70	0	0	0	0	0	0	0	0	\$ -
71	0	0	0	0	0	0	0	0	\$ -
72	0	0	0	0	0	0	0	0	\$ -
73	0	0	0	0	0	0	0	0	\$ -
74	0	0	0	0	0	0	0	0	\$ -
75	0	0	0	0	0	0	0	0	\$ -
76	0	0	0	0	0	0	0	0	\$ -
77	0	0	0	0	0	0	0	0	\$ -
78	0	0	0	0	0	0	0	0	\$ -
79	0	0	0	0	0	0	0	0	\$ -
80 & Over	0	0	0	0	0	0	0	0	\$ -
<b>Total</b>	<b>9</b>	<b>14</b>	<b>9</b>	<b>5</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>45</b>	<b>\$ 3,405,121</b>

Average Age: 54.64

Average Service: 11.47



**Table A-2: Number of Annual Retirement Allowances of Benefit Recipients as of June 30, 2011**

Type of Pension	Number	Total Annual Benefits	Average Annual Pension
<b>Normal Retirement Pensions</b>			
Two Life 75% Survivor Pension:			
Retired Member Recipient	67	\$ 2,746,928	\$ 40,999
Survivor Recipient	8	\$ 225,585	\$ 28,198
Co-Payee Recipient	1	\$ 5,725	\$ 5,725
<b>Total Normal Retirement Pensions</b>	<b>76</b>	<b>\$ 2,978,239</b>	<b>\$ 39,187</b>
<b>Disability Retirement Pensions</b>			
Duty Disability	0	N/A	N/A
Non-Duty Disability	2	\$ 76,532	\$ 38,266
Survivor Recipient	0	N/A	N/A
Co-Payee Recipient	0	N/A	N/A
<b>Total Disability Retirement Pensions</b>	<b>2</b>	<b>\$ 76,532</b>	<b>\$ 38,266</b>
<b>Pre-Retirement Survivor Pensions</b>			
Survivor Spouse Recipient	0	N/A	N/A
Survivor Child Recipient	0	N/A	N/A
<b>Total Pre-Retirement Survivor Pensions</b>	<b>0</b>	<b>N/A</b>	<b>N/A</b>
<b>Total Pensions Being Paid</b>	<b>78</b>	<b>\$ 3,054,770</b>	<b>\$ 39,164</b>



## Appendix A: Additional Membership Data

**Table A-3: Distribution of Participants Receiving Benefits as of June 30, 2011**

Attained Age	Retired Member		Disabled Member		Survivor		Totals	
	Number	Annual Pensions	Number	Annual Pensions	Number	Annual Pensions	Number	Annual Pensions
Under 40	0	\$ -	0	\$ -	0	\$ -	0	\$ -
40 to 44	1	5,725	0	0	0	0	1	5,725
45 to 49	1	14,187	0	0	0	0	1	14,187
50 to 54	1	12,943	0	0	1	35,410	2	48,353
55 to 59	5	266,722	0	0	0	0	5	266,722
60 to 64	14	606,773	2	76,532	0	0	16	683,305
65 to 69	16	518,403	0	0	0	0	16	518,403
70 to 74	7	301,817	0	0	3	86,669	10	388,486
75 to 79	8	366,642	0	0	1	27,936	9	394,579
80 to 84	12	508,506	0	0	1	27,605	13	536,111
85 to 89	3	150,935	0	0	1	20,945	4	171,880
90 to 94	0	0	0	0	1	27,020	1	27,020
95 to 99	0	0	0	0	0	0	0	0
100 & Over	0	0	0	0	0	0	0	0
<b>Total</b>	<b>68</b>	<b>\$2,752,653</b>	<b>2</b>	<b>\$76,532</b>	<b>8</b>	<b>\$225,585</b>	<b>78</b>	<b>\$3,054,770</b>

**Table A-4: Distribution of Retirees & Beneficiaries by Years of Service at Retirement**

	Years of Credited Service at Retirement							
	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30+	Total
Average Monthly Benefit	\$ 3,215	\$3,210	\$ 3,897	\$ 2,968	\$ 3,978	\$ 3,527	\$4,777	\$3,470
Average Final Average Salary	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Number of Retirees/Beneficiaries	8	22	16	6	5	2	1	60

\* Does not include 18 retirees/beneficiaries with missing years of service at retirement.

**Table A-5: Distribution of Recent Retiree Ages at Retirement**

	2006-07 Retirees	2007-08 Retirees	2008-09 Retirees	2009-10 Retirees	2010-11 Retirees	All Current Retirees & Beneficiaries
Number	10	2	4	6	7	78
Average Monthly Benefit at Retirement	\$ 2,615	\$ 1,707	\$ 2,447	\$ 3,398	\$ 3,232	\$ 2,671
Average Age at Retirement	60.58	59.75	61.13	61.58	61.47	61.58



**Table A-6: Status Reconciliation**

	Active Members	Terminated Members *	Pension Recipients			Total
			Service Retired	Disability Retired	All Beneficiaries	
<b>June 30, 2010</b>	<b>46</b>	<b>13</b>	<b>59</b>	<b>2</b>	<b>8</b>	<b>128</b>
Increase (Decrease) From:						
Service Retirement	(6)		6			0
Disability Retirement						0
Deaths			(2)			(2)
Survivors						0
Other Terminations						0
Vested Terminations	(4)	4				0
Refund of Contributions	(2)	(1)				(3)
New Entrants/Rehires	11	(1)				10
Data Adjustments		1	5			6
<b>June 30, 2011</b>	<b>45</b>	<b>16</b>	<b>68</b>	<b>2</b>	<b>8</b>	<b>139</b>

\* Includes 16 deferred vested members at June 30, 2011.



## Appendix B: Summary of Actuarial Assumptions and Methods

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### Actuarial Cost Methods Used for the Valuation

An actuarial cost method is a procedure for allocating the actuarial present value of benefits and expenses to time periods. The method used for this valuation is known as the individual entry-age actuarial cost method and has the following characteristics:

- (i) The annual normal costs for each individual active magistrate are sufficient to accumulate the value of the magistrate's pension at the time of retirement.
- (ii) Each annual normal cost is a constant percentage of the magistrate's year-by-year projected compensation.

The individual entry-age actuarial cost method allocates the actuarial present value of each magistrate's projected benefits on a level basis over the magistrate's compensation between the entry-age of the magistrate and the expected exit ages.

The portion of the actuarial present value allocated to the valuation year is called the normal cost. The portion of the actuarial present value not provided for by the actuarial present value of future costs is called the actuarial accrued liability. Deducting actuarial value of assets from the actuarial accrued liability determines the unfunded actuarial accrued liability. Unfunded actuarial accrued liability was amortized as a level percent of payroll over 30 years to determine the computed contribution for fiscal integrity. This period is consistent with the policy established by the Retirement Board in October 1996.

Active magistrate payroll was projected to increase 4.0% per year (4.5% prior to the June 30, 2011 valuation) for the purpose of determining the contribution needed to amortize the unfunded actuarial accrued liability. This estimate is consistent with the base rate of increase in salaries used to calculate actuarial present values.

The actuarial value of assets used for funding purposes is derived as follows: prior year actuarial value of assets is increased by contributions and expected investment income and reduced by refunds, benefit payments and expenses. To this amount 25% of the difference between expected and actual investment income for each of the previous four years is added. The actuarial value is limited in the degree it can vary from market value by use of a 20% corridor.





## Appendix B: Summary of Actuarial Assumptions and Methods

### Actuarial Assumptions Used for the Valuation

**Assumed Rate of Investment Return.** 7.75%, net of administrative and investment expenses (beginning with the June 30, 2011 valuation).

**Price Inflation.** 3.5% per annum, compounded annually (beginning with the June 30, 2011 valuation).

**Real Investment Return.** 4.25% per annum, compounded annually (beginning with the June 30, 2011 valuation).

**Salary Increases.** Annual salaries of active members are assumed to increase at an annual rate of 4.25% per year. This assumption was first used in the June 30, 2011 valuation.

**Rates of Retirement.** These rates are used to measure the probability of an eligible magistrate retiring at the indicated ages.

Ages	Active Magistrates Retiring Within the Year Following Attainment of Indicated Ages
50-54	15 %
55-59	10
60-69	20
70	100

A member was assumed to be eligible for normal retirement after attaining 24 years of service, regardless of age; age 60 with 15 years of service; or age 64 with 5 or more years of service, provided that the member had a minimum of 5 years of service under the Magistrate Retirement Fund.

**Rates of Disability.** Beginning with the June 30, 2008 valuation there are assumed to be no future disabled retirees



## Appendix B: Summary of Actuarial Assumptions and Methods

**Rates of Separation from Active Membership.** The rates are used to measure probabilities of active members terminating that status for a reason other than disability or death. The rates do not apply to magistrates who are eligible for retirement.

Ages	Percent of Active Magistrate Separating Within the Next Year
20	4.00 %
25	4.00
30	4.00
35	4.00
40	4.00
45	4.00
50	4.00
55	4.00

**Mortality Assumption.** The 2000 Group Annuity Mortality Table (1971 GAM projected), set back 3 years for men and 7 years for women for healthy lives. Special disabled mortality is used for disabled lives. No provision was made for future mortality improvement. Rates are shown for sample ages in the following schedule.

Age	Mortality Rates			
	Pre- and Post Retirement		Post-Disablement	
	Male	Female	Male	Female
30	0.0566	0.0468	4.4270	2.6300
35	0.0758	0.0598	2.9780	2.4200
40	0.1072	0.0809	2.0450	2.1800
45	0.1655	0.1156	1.9280	2.0800
50	0.3107	0.1871	2.1270	2.1900
55	0.5363	0.3499	2.4660	2.4900
60	0.8309	0.5899	3.0070	2.8800
65	1.3130	0.9013	3.8570	3.2300
70	2.2037	1.4413	5.1870	3.6200
75	3.7677	2.4514	7.2610	4.0200
80	5.8349	4.1064	10.4530	4.6500
85	9.4487	6.4629	15.2880	6.8600



## Appendix B: Summary of Actuarial Assumptions and Methods

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### Miscellaneous and Technical Assumptions

<b>Marriage Assumption:</b>	All members are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses. At retirement, 87% of members are assumed to be married for purposes of valuing death after retirement benefits.
<b>Pay Increase Timing:</b>	Beginning of (Fiscal) year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
<b>Decrement Timing:</b>	Decrements of all types are assumed to occur mid-year.
<b>Eligibility Testing:</b>	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
<b>Decrement Relativity:</b>	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
<b>Decrement Operation:</b>	Disability and mortality decrements operate during the first 5 years of service. Only mortality operates during retirement eligibility.
<b>Incidence of Contributions:</b>	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report and the actual payroll payable at the time contributions are made.
<b>Normal Form of Benefit:</b>	A 75% automatic joint and survivor payment is the assumed normal form of benefit.
<b>Benefit Service:</b>	Exact fractional service is used to determine the amount of benefit payable.



## Appendix B: Summary of Actuarial Assumptions and Methods

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### Definitions of Technical Terms

**Accrued Service.** Service credited under the system which was rendered before the date of the actuarial valuation.

**Actuarial Accrued Liability.** The difference between the actuarial present value of future benefit payments and the actuarial present value of future normal costs. Also referred to as “accrued liability” or “prior service liability.”

**Actuarial Cost Method.** A mathematical budgeting procedure for allocating the dollar amount of the “actuarial present value of future benefit payments” between future normal cost and actuarial accrued liability. Sometimes referred to as the “actuarial valuation cost method.”

**Actuarial Equivalent.** A single amount or series of amounts of equal actuarial present value to another single amount or series of amounts, computed on the basis of appropriate actuarial experience estimates.

**Actuarial Present Value.** The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest and by probabilities of payment. Also referred to as “present value.”

**Amortization.** Paying off an interest-discounted amount with periodic payments of interest and principal – as opposed to paying off with a lump sum payment.

**Experience Gain (Loss).** The difference between actual actuarial costs and anticipated actuarial costs – during the period between two valuation dates.

**Normal Cost.** The actuarial cost allocated to the current year by the actuarial cost method.

**Unfunded Actuarial Accrued Liability.** The difference between the actuarial accrued liability and the funding value of assets. Sometimes referred to as the “unfunded accrued liability.”



## **Appendix C: Summary of Plan Provisions**

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### **Membership**

Includes all magistrates. Magistrates with service prior to the effective date of the Magistrate Retirement Fund (1984) may elect to remain under the provisions of PERA and forfeit any benefits payable under the Magistrate Retirement Fund. The irrevocable election must have been made prior to July 1, 1984.

### **Voluntary Retirement**

A magistrate may voluntarily retire: (1) at age 64 with 5 or more years of service; (2) at age 60 with 15 or more years of service; or (3) at any age with 24 or more years of service. Magistrates with one or more years of service in PERA, ERA or JRA may combine service credits to satisfy these voluntary retirement conditions.

### **Final Average Salary**

The magistrate's salary received during the last 1 year in office prior to retirement.

### **Retirement Pension**

Annual pension is 37.5% of final average salary (FAS) plus 3.75% of FAS for each year of service in excess of 5 years. Maximum is 75% of FAS (15 or more years of service).

### **Survivor's Pension – Retired Magistrates**

The surviving spouse of a retired magistrate receives a pension of 75 percent of the magistrate's pension until death. Pension is payable to deceased magistrate's minor and dependent children if there is no eligible surviving spouse.

### **Survivor's Pension – Active Magistrates**

Applicable if magistrate had 5 or more years of magistrate service. The surviving spouse would receive 75 percent of magistrate's vested pension until death. Pension is payable to deceased magistrate's minor and dependent children if there is no eligible surviving spouse.



## **Appendix C: Summary of Plan Provisions**

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### **Disability**

Applicable if magistrate has 5 or more years of magistrate service and becomes incapacitated to perform duties of office. Magistrate would receive vested pension. Five year service requirement is waived if the disability is duty-related.

### **Deferred Retirement Pension (Vested Retirement)**

If magistrate service terminates after 5 years of such service, the magistrate and spouse retain entitlement to benefits of the fund.

Annual pension is 37.5% of FAS plus 3.75% of FAS for each year of service in excess of 5 years. Maximum is 75% of FAS (15 or more years of service).

Payment of the magistrate's pension commences at age 60 if the magistrate has 15 or more years of service or at age 64 if the magistrate has 5 or more years of service but less than 15 years of service.

### **Cost-of-Living Increases**

Pensions are increased each July 1 by 3% if retirement has been in effect for at least 2 full calendar years. If retired on account of disability or if at least age 65, the 2 calendar year waiting period is reduced to 1 full calendar year.

### **Member Contributions**

Members contribute 9.0% of salary for fiscal years 2010 and 2011, 10.75% for fiscal years 2012 and 2013, and 7.5% thereafter.

### **Refund of Magistrate's Contributions**

If a magistrate leaves service or dies and no pension becomes payable, the accumulated contributions are refunded or paid to the designated beneficiary.

### **Public Payments**

\$25.00 from each civil action docket fee and \$10 from each civil jury fee paid in the magistrate court. Statutory employer contributions are 9.5% of salary for fiscal years 2010 and 2011, 7.75% for fiscal years 2012 and 2013, and 11.0% thereafter.