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**PERA**

Public Employees  
Retirement Association  
of New Mexico

**INVESTED IN TOMORROW.**

**New Mexico Magistrate Retirement Fund  
Annual Actuarial Valuation  
as of June 30, 2015**





# Cavanaugh Macdonald

CONSULTING, LLC

*The experience and dedication you deserve*

October 29, 2015

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, 2015; 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, 2015 and ending June 30, 2016 (FY 2016). 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.

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.

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,



## TABLE OF CONTENTS

<u>Section</u>	<u>Item</u>	<u>Page No.</u>
I	Board Summary	1
II	Membership Data	3
III	Fund Assets	5
IV	Fund Liabilities	8
V	Actuarial Funding Calculation	11
VI	Accounting Information	13
 <u>Appendices</u>		
A	Additional Membership Data	15
B	Summary of Actuarial Assumptions and Methods	19
C	Summary of Plan Provisions	24

## Section I: Board Summary



The table below summarizes the results of the June 30, 2015 actuarial valuation as compared with the prior year.

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

Valuation Date	June 30, 2015	June 30, 2014
Total Annual Payroll	\$ 5,065,798	\$ 3,515,567
Total Valuation Payroll	\$ 5,243,101	\$ 3,638,612
Actuarial Accrued Liability (AAL)		
Active and Deferred Vested Members	\$ 13,384,385	\$ 12,476,654
Retired Members and Survivors	<u>39,196,377</u>	<u>38,663,761</u>
Total	\$ 52,580,762	\$ 51,140,415
Actuarial Value of Assets	\$ 32,803,715	\$ 32,970,978
Funded Ratio	62.4%	64.5%
Unfunded Actuarial Accrued Liability (UAAL) (AAL - Actuarial Value of Assets)	\$ 19,777,047	\$ 18,169,437
<b>Calculation of Required Contribution (Fiscal Year Ending)</b>	<b>June 30, 2016</b>	<b>June 30, 2015</b>
Normal Cost		
Retirement	11.66 %	14.42 %
Termination	3.83 %	4.82 %
Pre-Retirement Survivors	0.43 %	0.46 %
Disability	<u>0.00 %</u>	<u>0.00 %</u>
Total Normal Cost	15.92 %	19.70 %
Expected Administrative Expenses	0.45 %	0.45 %
UAAL 30-Year Amortization Rate	<u>22.03 %</u>	<u>29.17 %</u>
Actuarially Determined Contribution Rate	38.40 %	49.32 %
Actuarially Determined Contribution Amount	\$ 2,013,479	\$ 1,794,493
Statutory Contribution Rates		
Employer Contribution Rate	15.00 %	11.00 %
Expected Docket Fees	7.99 %	11.63 %
Member Contribution Rate*	<u>10.50 %</u>	<u>10.50 %</u>
Total Statutory Rate	33.49 %	33.13 %
Expected Statutory Amount	\$ 1,755,915	\$ 1,205,472
Deficiency in Statutory Rate	4.91 %	16.19 %
Deficiency in Expected Statutory Amount	\$ 257,564	\$ 589,021



## 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 actuarially determined contribution rate for the Fund in the fiscal year ending June 30, 2016 (FY 2016) is 38.40% of covered payroll. This is a decrease to the total contribution requirement of 10.92% of payroll from the prior valuation.

The total normal cost contribution as a percent of valuation payroll decreased from 19.70% to 15.92%. Although the UAAL increased slightly from \$18.2 million to \$19.8 million, there was a decrease to the annual amortization amount from 29.17% to 22.03% of payroll due to the additional payroll from previously exempted magistrates. The funded ratio has decreased from 64.5% to 62.4%. 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 \$46,167 for the plan year related to the 7.60% investment gain on the actuarial value of assets, which is less than the assumed rate of return of 7.75%. This represents a 0.1% decrease to the funded ratio. Table III-3 provides the calculation of the investment loss for this year.
- The Fund experienced a net increase of \$829,375 on Fund liabilities due to non-investment related experience. This loss includes salary increases that were larger than expected. This represents a 1.0% decrease to the funded ratio.
- The Fund received \$382,518 less in contributions than expected. This represents a 0.7% decrease to the funded ratio.
- The financing period for the unfunded liability based upon the statutory contribution rates decreased from an infinite period to 58 years.

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, 2015 and is compared with that reported for the prior year.

**Table II-1: Summary of Membership Data as of June 30, 2015**

Group	June 30, 2015	June 30, 2014
<b>Total Active Members</b>	<b>60</b>	<b>45</b>
<b>Inactive Members</b>		
Deferred Vested	16	12
Other	<u>0</u>	<u>0</u>
<b>Total Inactive Members</b>	<b>16</b>	<b>12</b>
<b>Retirees</b>		
Service*	85	78
Disabled	3	3
Beneficiaries	<u>14</u>	<u>13</u>
<b>Total Retirees</b>	<b>102</b>	<b>94</b>
<b>Totals</b>	<b>178</b>	<b>151</b>

\* Includes 4 Co-Payees as of June 30, 2015 and 2 Co-Payees as of June 30, 2014.

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

Valuation Date	Number	Annual Payroll	Annual Average Pay	% Change in Average Pay
6/30/2015	60	\$ 5,065,798	\$ 84,430	8.07 %
6/30/2014	45	3,515,567	78,124	2.11 %
6/30/2013	41	3,136,834	76,508	(0.01)%
6/30/2012	42	3,213,712	76,517	1.12 %
6/30/2011	45	3,405,121	75,669	(1.10)%
6/30/2010	46	3,519,570	76,512	0.07 %

## Section II: Membership Data



**Table II-3: Deferred Members, Retired Members and Beneficiaries as of June 30, 2015**

<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>\$ 368,247</b>	<b>\$ 23,015</b>	<b>56.03</b>
<b>Retirees</b>				
Service	85	3,382,822	39,798	70.11
Disability	3	141,539	47,180	64.55
Survivors	14	487,626	34,830	74.17
<b>Retiree Totals</b>	<b>102</b>	<b>\$4,011,987</b>	<b>\$ 39,333</b>	<b>70.50</b>
<b>Total</b>	<b>118</b>	<b>\$4,380,234</b>	<b>\$ 37,121</b>	<b>68.54</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, 2015	June 30, 2014
Beginning of Year Market Value	\$ 35,184,910	\$ 32,439,317
Audit Adjustment	-	216,853
Revised Beginning of Year Market Value	\$ 35,184,910	\$ 32,656,170
Revenues:		
Member Contributions	489,642	266,120
Docket Fees	418,980	423,221
Employer Contributions	517,622	369,823
Purchase of Service	-	-
Investment Income		
Interest, dividends, etc.	1,118,277	718,931
Realized/Unrealized gains (losses)	(471,400)	4,574,241
Security lending	(2,844)	(20,169)
Other Income	(76,365)	-
Settlement Award	56,879	-
Total Revenues	\$ 2,050,791	\$ 6,332,167
Expenditures:		
Benefit Payments	3,955,687	3,689,881
Refunds of Member Contributions	4,918	15,477
Investment Expenses	64,942	73,794
Administrative Expenses	22,660	24,275
Total Expenditures	\$ 4,048,207	\$ 3,803,427
End of Year Market Value	\$ 33,187,494	\$ 35,184,910

The market value rate of return for the plan year is 1.71%. The Fund's cash flow is -7.5% 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 expected to improve over time due to the passage of HB 216. 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. 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, 2015**

1. Actuarial Value Beginning of Year		\$	32,970,978
2. Market Value End of Year			33,187,494
3. Market Value Beginning of Year (with audit adjustment)		\$	35,184,910
4. Cash Flow			
a. Contributions		\$	1,426,244
b. Service Purchases			-
c. Benefit Payments and Refunds			(3,960,605)
d. Administrative Expenses			(22,660)
e. Other			(19,486)
f. Net		\$	(2,576,507)
5. Investment Income			
a. Market Total (2 - 3 - 4f)		\$	579,091
b. Assumed Rate			7.75%
c. Amount for Immediate Recognition			2,455,411
d. Amount for Phased-In Recognition			(1,876,320)
6. Phased-In Recognition of Investment Income			
a. Current Year: 0.25 * 5d		\$	(469,080)
b. First Prior Year (2013/2014)	\$ 2,837,135	x 25%	709,284
c. Second Prior Year (2012/2013)	1,489,806	x 25%	372,452
d. Third Prior Year (2011/2012)	(2,635,290)	x 25%	(658,823)
e. Total Recognized Investment Gain		\$	(46,167)
7. Audit Adjustment		\$	-
8. Actuarial Value (1 + 4f + 5c + 6e + 7)		\$	32,803,715
9. Difference Between Market & Actuarial Values (2 - 8)			383,779
<b>10. Rate of Return on Actuarial Value</b>			<b>7.60 %</b>
<b>11. Actuarial Value of Assets as a % of Market Value of Assets</b>			<b>98.84 %</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. 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, 2015.

**Table III-3: Actuarial Investment Gain (Loss) for the Year Ended June 30, 2015**

1. Beginning of Year Actuarial Value of Assets (AVA)	\$ 32,970,978
2. Employee and Employer Contributions	1,426,244
3. Benefit Payments	(3,960,605)
4. Administrative Expenses	(22,660)
5. Other	(19,486)
6. Interest [1 x 7.75% + (2 + 3 + 4 + 5) x 7.75% x 0.5]	2,455,411
7. Expected End of Year AVA	32,849,882
8. Actual End of Year AVA	32,803,715
<b>9. Actuarial Investment Gain (Loss) (8 - 7)</b>	<b>\$ (46,167)</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, 2015**

	Actuarial Accrued Liability	Present Value of Future Normal Cost	Actuarial Present Value of Benefits
<b>Active Members</b>			
Service Retirement	\$ 9,242,173	\$ 3,580,275	\$ 12,822,448
Termination Benefits	1,320,232	1,279,861	2,600,093
Survivor Benefits	172,872	139,735	312,607
Disability Retirement	-	-	-
Total for Active Members	\$10,735,277	\$ 4,999,871	\$ 15,735,148
<b>Inactive Members</b>	\$ 2,649,108		\$ 2,649,108
<b>Retirees and Beneficiaries</b>			
Service Retirements	\$33,526,460		\$ 33,526,460
Beneficiaries	3,984,187		3,984,187
Disability Retirements	1,685,730		1,685,730
Total for Retirees and Beneficiaries	\$39,196,377		\$ 39,196,377
<b>Total</b>	<b>\$52,580,762</b>	<b>\$ 4,999,871</b>	<b>\$ 57,580,633</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, 2015	June 30, 2014
1. Actuarial Accrued Liability	52,580,762	51,140,415
2. Actuarial Value of Assets	32,803,715	32,970,978
3. Unfunded Actuarial Accrued Liability (1 - 2)	19,777,047	18,169,437
Funded Ratio (2 / 1)	62.4%	64.5%

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 actuarially determined 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, 2015, the funded ratio of the Fund is 62.4% as compared to a ratio of 64.5% as of June 30, 2014. 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>\$ 18,169,437</b>	<b>64.5 %</b>
2. Normal Cost, including expenses	733,255	
3. Expected Contributions	(1,794,493)	
4. Other Income/Expense	42,146	
5. Interest [ (1 x 7.75%) + (2 + 3 + 4) x 7.75% x 0.5 ]	1,368,642	
6. Expected End of Year	\$ 18,518,987	64.2 %
7. Actuarial Experience (Gain) / Loss		
Contribution Shortfall (with interest)	\$ 382,518	(0.7)%
Investment Experience	46,167	(0.1)%
Liability Experience	829,375	(1.0)%
Total Actuarial Experience (Gain) / Loss	\$ 1,258,060	
8. End of Year Prior to Plan/Assumption Changes (6 + 7)	\$ 19,777,047	62.4 %
9. Plan changes	-	
10. Change in Actuarial Assumptions	-	
<b>11. Actual End of Year (8 + 9 + 10)</b>	<b>\$ 19,777,047</b>	<b>62.4 %</b>



## **Section V: Actuarial Funding Calculation**

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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 actuarially determined 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 as a percentage of payroll over the remaining amortization period and is provided in Table V-1.

## Section V: Actuarial Funding Calculation



**Table V-1: Calculation of Actuarially Determined Contribution Rate**

	June 30, 2015	June 30, 2014
1. Total Valuation Payroll	\$ 5,243,101	\$ 3,638,612
2. Present Value of Future Benefits	57,580,633	55,031,236
3. Present Value of Future Normal Costs	4,999,871	3,890,821
4. Actuarial Accrued Liability (2 - 3)	\$ 52,580,762	\$ 51,140,415
5. Actuarial Value of Assets	32,803,715	32,970,978
6. Unfunded Actuarial Accrued Liability (UAAL) (4 - 5)	\$ 19,777,047	\$ 18,169,437
7. UAAL Amortization Payment (30 year funding)	\$ 1,155,135	\$ 1,061,238
a. Amortization Payment as a Percent of Payroll (7 / 1)	22.03%	29.17%
8. Total Normal Cost	\$ 834,750	\$ 716,881
a. Normal Cost as a Percent of Payroll (8 / 1)	15.92%	19.70%
9. Expected Administrative Expenses	\$ 23,594	\$ 16,374
a. Administrative Expenses as a Percent of Payroll (9 / 1)	0.45%	0.45%
10. Actuarially Determined Contribution (ADC)	\$ 2,013,479	\$ 1,794,493
a. ADC Rate (7a + 8a + 9a)	38.40%	49.32%
11. Expected Statutory Contribution Rates		
a. Employer Contribution Rate	15.00%	11.00%
b. Expected Docket Fees as a Percent of Payroll	7.99%	11.63%
c. Member Contribution Rate	10.50%	10.50%
d. Total Statutory Contribution Rate (a + b + c)	33.49%	33.13%
12. (Excess)/Shortfall in Statutory Rates (10a - 11d)	4.91%	16.19%



## Section VI: Accounting Information

The tables provided in this section present information relevant for the annual financial reporting of the Fund. GASB Statement No. 67 required disclosure information will be provided in a separate supplemental report. GASB Statement No. 25 information is provided below.

**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)
6/30/2015	\$32,803,715	\$52,580,762	\$19,777,047	62.4 %	\$5,065,798	390.4 %
6/30/2014	32,970,978	51,140,415	18,169,437	64.5 %	3,515,567	516.8 %
6/30/2013	31,813,605	54,498,646	22,685,041	58.4 %	3,136,834	723.2 %
6/30/2012	30,878,948	58,037,075	27,158,127	53.2 %	3,213,712	845.1 %
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)%

**Table VI-2: Solvency Test**

Valuation Date	Aggregate Accrued Liabilities For			Actuarial Value of Assets	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)		(1)	(2)	(3)
6/30/2015	\$ 3,073,097	\$ 41,845,485	\$ 7,662,180	\$32,803,715	100.00%	71.05%	0.00%
6/30/2014	2,913,700	40,865,470	7,361,245	32,970,978	100.00	73.55	0.00
6/30/2013	3,309,456	41,374,066	9,815,124	31,813,605	100.00	68.89	0.00
6/30/2012	3,014,932	43,497,240	11,524,903	30,878,948	100.00	64.06	0.00
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



## Section VI: Accounting Information



**Table VI-3: 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		
6/30/2015	9	\$ 132,776	1	\$ 34,707	102	\$ 4,011,987	2.51%	\$ 39,333
6/30/2014	9	543,699	1	59,234	94	3,913,918	14.13%	41,637
6/30/2013	4	240,678	3	89,904	86	3,429,452	4.60%	39,877
6/30/2012	10	411,841	3	187,934	85	3,278,678	7.33%	38,573
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

**Table VI-4: Summary of Actuarial Methods and Assumptions**

Valuation Date	June 30, 2015
Actuarial cost method	Entry Age Normal
Amortization method	Level Percent of Payroll, Open
Payroll Growth Rate	3.50%
Remaining amortization period	30 years
Asset valuation method	4-year Smoothed Market
Actuarial assumptions:	
Investment rate of return*	7.75%
Administrative expenses	0.45% of payroll
Projected salary increases*	3.75%
Post-Retirement Benefit Increases	0.67% compounded annually
* Includes inflation at 3.00%	

## Appendix A: Additional Membership Data



**Table A-1: Schedule of Active Participant Data as of June 30, 2015**

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+		
30 to 34	0	1	0	0	0	0	0	1	\$ 84,344
35 to 39	1	0	1	0	0	0	0	2	\$ 169,978
40 to 44	3	2	2	3	0	0	0	10	\$ 843,440
45 to 49	1	0	0	1	3	0	0	5	\$ 421,720
50 to 54	4	0	5	2	3	0	0	14	\$ 1,180,816
55 to 59	11	1	1	0	0	0	0	13	\$ 1,099,051
60	3	0	0	0	0	0	0	3	\$ 253,032
61	1	0	1	1	0	0	0	3	\$ 254,322
62	0	1	0	1	0	0	0	2	\$ 168,688
63	0	0	1	0	0	0	0	1	\$ 84,344
64	0	0	1	0	0	0	0	1	\$ 84,344
65	0	0	0	0	0	0	0	0	\$ -
66	0	1	0	0	0	0	0	1	\$ 84,344
67	1	0	0	0	0	0	0	1	\$ 84,344
68	1	0	0	0	0	0	0	1	\$ 84,344
69	0	0	0	0	0	0	0	0	\$ -
70	0	0	0	0	0	0	0	0	\$ -
71	1	1	0	0	0	0	0	2	\$ 168,688
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>27</b>	<b>7</b>	<b>12</b>	<b>8</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>60</b>	<b>\$ 5,065,798</b>

Average Age: 53.23

Average Service: 9.03



**Table A-2: Number of Annual Retirement Allowances of Benefit Recipients as of June 30, 2015**

Type of Pension	Number	Total Annual Benefits	Average Annual Pension
<b>Normal Retirement Pensions</b>			
Two Life 75% Survivor Pension:			
Retired Member Recipient	81	\$ 3,340,941	\$ 41,246
Survivor Recipient	13	\$ 441,289	\$ 33,945
Co-Payee Recipient	4	\$ 41,881	\$ 10,470
<b>Total Normal Retirement Pensions</b>	<b>98</b>	<b>\$ 3,824,111</b>	<b>\$ 39,022</b>
<b>Disability Retirement Pensions</b>			
Duty Disability	1	\$ 46,177	\$ 46,177
Non-Duty Disability	2	\$ 95,362	\$ 47,681
Survivor Recipient	0	N/A	N/A
Co-Payee Recipient	0	N/A	N/A
<b>Total Disability Retirement Pensions</b>	<b>3</b>	<b>\$ 141,539</b>	<b>\$ 47,180</b>
<b>Pre-Retirement Survivor Pensions</b>			
Survivor Spouse Recipient	1	\$ 46,337	\$ 46,337
Survivor Child Recipient	0	N/A	N/A
<b>Total Pre-Retirement Survivor Pensions</b>	<b>1</b>	<b>\$ 46,337</b>	<b>\$ 46,337</b>
<b>Total Pensions Being Paid</b>	<b>102</b>	<b>\$ 4,011,987</b>	<b>\$ 39,333</b>



## Appendix A: Additional Membership Data

**Table A-3: Distribution of Participants Receiving Benefits as of June 30, 2015**

Attained Age	Retired Member		Disabled Member		Survivor Beneficiaries		Totals	
	Number	Annual Pensions	Number	Annual Pensions	Number	Annual Pensions	Number	Annual Pensions
Under 40	0	\$ -	0	\$ -	1	\$ 46,337	1	\$ 46,337
40 to 44	0	0	0	0	0	0	0	0
45 to 49	3	86,594	0	0	0	0	3	86,594
50 to 54	3	29,783	0	0	0	0	3	29,783
55 to 59	3	18,780	0	0	1	38,318	4	57,098
60 to 64	15	714,847	1	58,723	1	50,003	17	823,573
65 to 69	18	637,375	2	82,815	1	37,168	21	757,358
70 to 74	19	773,494	0	0	1	34,391	20	807,885
75 to 79	7	311,448	0	0	4	115,649	11	427,097
80 to 84	8	418,722	0	0	2	71,709	10	490,431
85 to 89	8	335,434	0	0	2	64,812	10	400,246
90 to 94	1	56,345	0	0	0	0	1	56,345
95 to 99	0	0	0	0	1	29,239	1	29,239
100 & Over	0	0	0	0	0	0	0	0
<b>Total</b>	<b>85</b>	<b>\$3,382,822</b>	<b>3</b>	<b>\$ 141,539</b>	<b>14</b>	<b>\$487,626</b>	<b>102</b>	<b>\$4,011,987</b>

**Table A-4: Distribution of Retirees by Years of Service at Retirement (not including Disabled Members, Beneficiaries, and Co-Payees)**

	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*	\$ 3,359	\$2,936	\$ 4,011	\$ 4,064	\$ 3,665	\$ 3,016	\$2,898	\$3,477
Average Final Average Salary	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Number of Retirees*	5	24	15	18	6	7	5	80

\* Does not include 1 retiree with missing years of service at retirement.

**Table A-5: Distribution of Recent Retiree Ages at Retirement (not including Disabled Members, Beneficiaries, and Co-Payees)**

	2009-10 Retirees	2010-11 Retirees	2011-12 Retirees	2012-13 Retirees	2013-14 Retirees	2014-15 Retirees	All Current Retirees & Beneficiaries
Number	5	7	5	3	7	6	81
Average Monthly Benefit at Retirement	\$ 4,770	\$ 4,110	\$ 2,729	\$ 5,304	\$ 4,713	\$ 4,379	\$ 3,550
Average Age at Retirement	61.40	60.86	65.40	55.00	62.42	60.17	61.07



## Appendix A: Additional Membership Data

**Table A-6: Status Reconciliation**

	Active Members	Terminated Members	Pension Recipients			Total
			Service Retired	Disability Retired	All Beneficiaries	
<b>June 30, 2014</b>	<b>45</b>	<b>12</b>	<b>78</b>	<b>3</b>	<b>13</b>	<b>151</b>
Increase (Decrease) From:						
Service Retirement	(5)	(1)	6			
Disability Retirement						
Deaths			(1)			(1)
Survivors					1	1
Co-Payee			2			2
Other Terminations						
Vested Terminations	(5)	5				
Refund of Contributions	(1)					(1)
New Entrants/Rehires	26					26
Data Adjustments						
<b>June 30, 2015</b>	<b>60</b>	<b>16</b>	<b>85</b>	<b>3</b>	<b>14</b>	<b>178</b>



## 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. Expected administrative expenses of 0.45% of payroll is included in the calculation of the annual contribution requirement.

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 3.5% per year (4.0% prior to the June 30, 2014 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. As of June 30, 2012, the actuarial value is no longer limited in the degree it can vary from market value by use of a 20% corridor. This change was recommended in the latest experience study and is consistent with the asset valuation method used in the other PERA plans.



## Appendix B: Summary of Actuarial Assumptions and Methods

### Actuarial Assumptions Used for the Valuation

#### Economic Assumptions (effective with June 30, 2014 valuation)

**Assumed Rate of Investment Return.** 7.75%, net of investment expenses.

**Price Inflation.** 3.0% per annum, compounded.

**Real Investment Return.** 4.75% per annum, compounded annually.

**Salary Increases.** Annual salaries of active members are assumed to increase at an annual rate of 3.75% per year.

**Administrative Expenses.** 0.45% of payroll.

#### Demographic Assumptions (effective with June 30, 2012 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
50-61	25 %
62	30
63-69	25
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 65 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	6.00 %
25	6.00
30	6.00
35	6.00
40	6.00
45	6.00
50	6.00
55	6.00

**Mortality Assumption (effective with June 30, 2014 valuation).** The mortality assumptions are based on the RP-2000 Mortality Tables (Combined table for healthy post-retirement, Employee table for active members, and Disabled table for disabled retirees before retirement age) with projection to 2018 using Scale AA. This assumption includes between 5% and 8% margin sufficient to allow for modest future improvement in the rates of mortality.

Sample Mortality Rates								
Pre-Retirement			Post-Retirement			Disabled		
Age	Male	Female	Age	Male	Female	Age	Male	Female
25	0.0003	0.0002	45	0.0012	0.0008	45	0.0178	0.0056
30	0.0004	0.0002	50	0.0015	0.0012	50	0.0208	0.0085
35	0.0007	0.0004	55	0.0026	0.0024	55	0.0251	0.0143
40	0.0009	0.0005	60	0.0050	0.0046	60	0.0314	0.0200
45	0.0012	0.0008	65	0.0099	0.0089	65	Uses healthy post-retirement rates upon surviving to normal retirement age.	
50	0.0015	0.0012	70	0.0169	0.0153	70		
55	0.0021	0.0022	75	0.0294	0.0243	75		
60	0.0036	0.0036	80	0.0537	0.0404	80		
65	0.0059	0.0053	85	0.0976	0.0695	85		





## 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 at the beginning of 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 that received HJC/HB 216 exemptions prior to July 1, 2014 do not become members until the exemptions expire.

### **Voluntary Retirement**

A magistrate may voluntarily retire: (1) at age 65 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**

For service credit earned before June 30, 2014, the salary received during the last 1 year in office prior to retirement. For service credit earned on or after July 1, 2014, the average salary received for the highest 5 year consecutive period.

### **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). For service credit earned on or after July 1, 2014, 3.5% of five year final average salary with a maximum of 85% of 5 year final average salary.

### **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). For service credit earned on or after July 1, 2014, 3.5% of five year final average salary with a maximum of 85% of 5 year final average salary.

Payment of the magistrate's pension commences at age 60 if the magistrate has 15 or more years of service or at age 65 if the magistrate has 5 or more years of service but less than 15 years of service.

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

Effective July 1, 2014, there will be no COLA increases for 2014 and 2015. Starting July 1, 2016, annual 2% COLA increases will be subject to PERA's certification based on the Fund's current year and projected next year funded ratio being equal to or greater than 100%. At a minimum, a 2% COLA increase will be granted every third year. COLA increases are subject to the following eligibility periods:

- If member retires prior to July 1, 2014, COLA is payable after retirement has been in effect for at least 2 full calendar years.
- If member retires on or after July 1, 2014 but prior to July 1, 2015, COLA is payable after retirement has been in effect for at least 3 full calendar years.
- If member retires on or after July 1, 2015 but prior to July 1, 2016, COLA is payable after retirement has been in effect for at least 4 full calendar years.
- If member retires on or after July 1, 2016, COLA is payable after retirement has been in effect for at least 7 full calendar years.

If retired on account of disability or if at least age 65, the above waiting period is reduced to 1 full calendar year.



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

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### **Member Contributions**

Members contribute 10.5% of salary beginning July 1, 2014

### **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 15% of salary.