

## *Hall Actuarial Associates*

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December 21, 2009

Board of Trustees  
MUNICIPAL POLICE EMPLOYEES'  
RETIREMENT SYSTEM  
7722 OFFICE PARK BOULEVARD, Suite 200  
Baton Rouge, Louisiana 70809-7601

Gentlemen:

This report presents the results of the actuarial valuation of assets and liabilities, as well as funding requirements, for the Municipal Police Employees' Retirement System as of June 30, 2009.

This report has been prepared in accordance with generally accepted actuarial principles and practices and to the best of my knowledge, fairly reflects the actuarial present value of accrued benefits of the Municipal Police Employees' Retirement System.

In preparing this valuation, I have relied upon the information provided regarding plan provisions, plan membership, plan assets and other matters as detailed in the exhibits of this report. In particular, I have relied upon the statement of assets as audited by Duplantier, Hrapmann, Hogan and Maher, Certified Public Accountants.

The present values shown herein have been estimated on the basis of actuarial method, as specified in Louisiana Revised Statutes Title 11 Section 22(7). The Actuarial Assumptions, which have been approved by the Board of Trustees, are appropriate for the purposes of this valuation are reasonable in the aggregate, and when applied in combination represents my best estimates of the anticipated experience under the plan.

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December 21, 2009

A brief summary of the more important figures developed in this valuation, with comparable results from previous valuations are as follows:

	<u>June 30, 2009</u>	<u>-----Prior Years-----</u>	
		<u>June 30, 2008</u>	<u>June 30, 2007</u>
I. Membership Census			
1) Retirees	3,984	3,896	3,834
2) Actives	6,071	5,908	5,840
3) DROP	185	213	217
4) Vested Deferred	112	114	108
II. Annual Benefits	\$ 90,285,300	\$ 85,848,060	\$ 81,976,596
III. Total Payroll	270,236,561	252,562,020	229,145,048
IV. Valuation Assets	1,297,128,398	1,600,941,810	1,531,297,284
V. Investment Yield			
Market Value	<u>-24.24%</u>	<u>-7.63%</u>	<u>16.46%</u>
5 year avg.	0.64%	7.61%	10.18%
10 year avg.	0.74%	4.50%	6.80%
Actuarial Value	<u>-16.71%</u>	<u>6.41%</u>	<u>13.58%</u>
5 year avg.	4.51%	10.04%	7.18%
10 year avg.	2.71%	5.90%	6.48%
DROP Accounts	<u>-17.23%</u>	<u>5.91%</u>	<u>13.08%</u>
VI. Cost to Fund Annual Pension Accruals (Normal Costs)	45,725,218 16.92%	43,428,131 17.20%	39,837,614 17.39%
VII. Unfunded Actuarial Accrued Liability	691,265,960	240,293,185	188,239,087
VIII. Funded Percentage	65.2%	86.9%	89.05%
IX. Funding Requirements (Mid Year Payment)			
1) Employee Rate	7.50%	7.50%	7.50%
2) Employer Rate <sup>1</sup>	24.00%	10.50%	10.50%
Premium Tax Allocation <sup>1</sup> (Current Year)	15,112,480(est)	15,071,968	14,455,288
3) Projected Employer Rate <sup>1</sup> (Next Year)	25.00%(est)	11.00%	9.50%

Funding requirement measures the cost of benefits in effect on June 30, 2009.

<sup>1</sup> The rate is based on the estimated allocation from the Insurance Premium Tax Fund. The actual rate will be determined based on the actual allocation from the Insurance Premium Tax Fund determined by PERSAC.

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 MPERS  
 December 21, 2009

**Changes in Unfunded Actuarial Liability**

The Actuarial Valuation for the plan year ending June 30, 2009 discloses an increase in the value of the plan's unfunded actuarial accrued liability due primarily to unfavorable investment performance. It is generally appropriate for the current valuation process to disclose the source and causes of any significant changes in the plan from year to year. Changes that occur are generally the result of changes in actuarial assumptions, gains or losses resulting from actual experience which differs significantly from expected plan experience or some external force such as plan restructuring.

During the past fiscal year, the actuarial unfunded accrued liability/ (surplus) increased from \$240.3 million to \$691.3 million dollars.

To clarify the decrease in the actuarial unfunded accrued liability, the following gain/loss analysis is presented as follows:

**CHANGE IN UNFUNDED LIABILITY (SURPLUS)**

UNFUNDED LIABILITY 6/30/2008		\$ 240,293,185
INCREASES		
Interest on Unfunded Liability	18,021,989	
Investment Loss	382,028,504	
Experience Loss	33,663,036	
Employer Contribution Variance	3,102,817	
Experience Study Assumptions	<u>32,588,922</u>	
Incurring Increases	469,405,268	
DECREASES		
Amortization Payment	<u>18,432,493</u>	
Incurring Decreases	18,432,493	
UNFUNDED LIABILITY 6/30/2009		\$ 691,265,960

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December 21, 2009

### History of Changes in Funding Requirements

The Legislature recognized that the statutory employee and employer contribution rates were not sufficient to fund the benefit structure of the new retirement system. The State allocated 4/10<sup>th</sup> of 1% of the casualty insurance premium to supplement the employers' contribution and supplement the merger of under-funded municipalities. Previously, employees and employers contributed a combined 14% of payroll, which is now 10.0% below the current projected actuarial funding requirement.

During the early 1980's, the tax revenue as a percentage of payroll continued to decline. This was largely due to the influx of new members resulting from mergers of non-participating municipalities. Unlike the employee contribution rate, the tax revenue is not fixed as a percentage of payrolls. The table at the end of this section indicates that portion of the employers' contribution rate that is supplemented by the Insurance Premium Tax.

1988 Legislative Session: Two bills were enacted which had a tremendous impact on the future funding of the system. The Insurance Premium Tax, which was dedicated by statute, was revoked. As a result of Act 81, the employee contribution rate was raised from 7% to 8% of payroll. Furthermore, Act 81 required the employer to fund the employer portion, raising the employer rate from 7% to approximately 12.0%. The contribution rates were increased to replace the lost revenue provided by the insurance premium tax in order to meet actuarial funding requirements.

1990 Legislative Session: The Actuarial Forecast Committee set the employer contribution rate at 11.38%, 9.00% plus a \$2,236,000 appropriation. However, Governor Roemer vetoed the enabling legislation which resulted in a reversion to the higher 11.38% rate for the municipalities during the 1990-1991 fiscal year.

1991 Legislative Session: Act 397 reestablished the employee rate at 7% and the employer rate at 9%, the balance of the funding requirement from the Insurance Premium Tax. The excess, if any, would revert to the general fund. Act 456 added a 25 year at any age retirement eligibility benefit. Members' contribution rate was increased from 7% to 8%. Members pay the increased rate for thirty years or until the system becomes 100% funded. At that time, the employee contribution rate decreases to 7.5%. The plan became fully funded on June 30, 1993, the employee rate decreased to 7.5% effective July 1, 1994.

2001 Legislative Session: Act 1160 reallocates the distribution of the .7% Insurance Premium Tax. La. State Police receives the first \$1,500,000. The balance is divided into fourths. One fourth is allocated each to Municipal Police, Firefighters, Sheriffs' and the Merger Fund. Amounts allocated in excess of current funding requirements are reallocated to the remaining Funds. Excesses after reallocation are returned to the State's General Fund.

Board of Trustees  
 MPERS  
 December 21, 2009

**History of Changes in Funding Requirements (continued)**

2005 Legislative Session: Act 448 urges the Municipal Police, Firefighters, Sheriffs' to review their actuarial assumptions for the purpose of reducing the employers' contribution rate. Effective July 1, 2005, the Board of Trustees' voted to increase the actuarial discount rate to 7.5%, reducing the 05-06 PERSAC rate from 20.25% to 16.50%.

Tax Revenue as a Percentage of Contributions

Year End 6/30	Employee Rate	Employer Rate	IPT Rate	Insurance Premium	Unfunded Liability	Funded Percent	Market Yield	Actuarial Yield
1991	7.00%	9.00%	1.63%	1,538,104	2,361,789	99.6%	8.20%	8.81%
1992	8.00%	9.00%	12.55%	12,153,985	4,252,517	99.3%	12.63%	10.06%
1993	8.00%	9.00%	3.49%	3,418,553	-7,285,866	101.1%	13.14%	13.03%
1994	7.50%	9.00%	2.88%	2,822,166	-3,640,164	100.5%	0.32%	7.81%
1995	7.50%	9.00%	2.74%	2,751,785	6,618,618	99.1%	12.09%	5.50%
1996	7.50%	9.00%	3.41%	3,569,803	-27,156,135	103.3%	11.07%	12.97%
1997	7.50%	9.00%	4.05%	5,005,376	-18,182,503	102.0%	13.86%	14.90%
1998	7.50%	9.00%	1.14%	1,498,487	-68,156,543	107.2%	14.80%	12.44%
1999	7.50%	9.00%	2.12%	3,041,136	-110,425,877	110.6%	9.26%	13.71%
2000	7.50%	9.00%	0.00%	0	-110,301,247	109.5%	3.66%	7.91%
2001	7.50%	9.00%	0.00%	0	-14,071,173	101.1%	-3.35%	2.06%
2002	7.50%	9.00%	0.00%	0	195,180,068	85.9%	-5.41%	-5.10%
2003	7.50%	9.00%	2.44%	4,806,272	379,484,302	73.9%	3.90%	-7.12%
2004	7.50%	15.25%	4.16%	8,689,205	423,352,255	72.9%	12.87%	7.80%
2005	7.50%	21.50%	4.70%	10,135,228	318,760,111	79.5%	9.34%	9.44%
2006	7.50%	20.25%	5.17%	11,539,000	279,073,905	83.1%	8.72%	13.20%
2007	7.50%	16.50%	5.59%	12,817,388	181,195,765	89.4%	16.46%	13.58%
2008	7.50%	13.75%	5.72%	14,455,288	240,293,185	86.9%	-7.63%	6.41%
2009	7.50%	9.50%	5.88%	15,071,968	691,265,960	65.2%	-24.24%	-16.71%
2010	7.50%	11.00%	5.52%	15,112,480				

Board of Trustees  
MPERS  
December 21, 2009

**Reporting Disclosures**

Exhibit 3 "Pension Accounting and Financial Disclosure" contains disclosure of the accrued liabilities under the Entry Age Normal Actuarial Cost Method required by the Governmental Accounting Board Statement No. 25.

The Board of Trustees approved a five year Experience Study which adjusted the actuarial assumptions. The adopted rates are subject to the Legislative Actuary's review, but are utilized in this valuation. The new assumptions are illustrated in Exhibit 6. A copy of the study dated May 22, 2009 can be obtained from the Retirement System Office.

**Legislative Changes**

Act 270 permits the member to make an irrevocable election at retirement to receive a reduced benefit which increases 2.5% annually. The increases begin on the 1<sup>st</sup> retirement anniversary date, but not before the retiree attains age 55 or would have attained age 55 in the case of a surviving spouse.

Act 300 permits the election of the Initial Benefit Option for the supplement service earned following DROP participation.

**Consideration for Cost-of-Living Increase**

The Development of the Target Ratio (see Exhibit 7) makes specific provisions for the determination of whether or not a retirement system is systematically approaching the targeted funding ratio. This is an important consideration for both retired members and the Board of Trustees. The Board is specifically prohibited from granting a cost-of-living raise to retirees and survivors by Act 256 of the 1986 regular session unless the system has met the Funding Target or unless the Legislature authorizes a COLA.

For the plan year ending June 30, 2009 the funding target is .94938, which is greater than the current .65235 funding ratio. Therefore, the Board is not permitted to consider granting a cost-of-living increase by statute.

The format of this report was designed with the intent of highlighting the pertinent results of the valuation's funding requirements. Should you have any questions or comments, please do not hesitate to contact me.

Sincerely,

Charles G. Hall, FCA, MAAA, ASA  
Actuary

## TABLE OF CONTENTS

		<u>Pages</u>
<b>EXHIBIT 1</b>	<b>DEVELOPMENT OF COSTS, LIABILITIES &amp; CONTRIBUTIONS</b> Provides a detail by benefit type of the cost to accrue annual pension benefits, liabilities accrued to date and funding requirements	8 - 9
<b>EXHIBIT 2</b>	<b>FINANCIAL SUMMARY</b> Contains the statement of revenue and expenses as well as assets available to pay pension benefits	10 - 11
<b>EXHIBIT 3</b>	<b>PENSION ACCOUNTING AND FINANCIAL DISCLOSURE</b> NCGA STMT 6 changes in credited projected benefits	12 - 14
<b>EXHIBIT 4</b>	<b>CENSUS DATA</b> Describes the employee data, data processing for valuation purposes and depicts employee profiles by classification, age and service	15 - 22
<b>EXHIBIT 5</b>	<b>PRINCIPLE PROVISIONS OF THE RETIREMENT SYSTEM</b> Restates in summary outline form the basic plan provisions which were incorporated in the projected retirement pension benefit	23 - 28
<b>EXHIBIT 6</b>	<b>ACTUARIAL COST METHODS AND ASSUMPTIONS</b> Discloses rates of mortality, disability, retirement termination and other assumptions which are presumed to reflect the experience of the retirement system in aggregate	29 - 32
<b>EXHIBIT 7</b>	<b>DEVELOPMENT OF TARGET RATIO</b> Discloses the development and history of the Target Ratio for COLA purposes	33
<b>EXHIBIT A</b>	<b>AMORTIZATION SCHEDULE</b>	34

**EXHIBIT 1**  
**DEVELOPMENT**  
**OF**  
**COSTS, LIABILITIES AND CONTRIBUTIONS**

Normal Costs and Accrued Liabilities are calculated in accordance with the Individual entry Age Normal Actuarial Cost Method, and the Actuarial Assumptions outlined in Exhibit 6 based on the Provisions of the Plan as summarized in Exhibit 5.

	<u>June 30, 2009</u>		<u>June 30, 2008</u>	
	<u>Dollar</u>	<u>% of</u>	<u>Dollar</u>	<u>% of</u>
	<u>Amount</u>	<u>Salary</u>	<u>Amount</u>	<u>Salary</u>
I. Normal Costs				
(to fund annual pension accruals)				
Active Members with Complete Data				
a) Retirement Benefits	\$ 36,214,431	13.40%	\$ 33,076,389	13.10%
b) Disability Benefits	1,834,950	.68%	2,499,148	.99%
c) Survivor Benefits	1,056,925	.39%	1,365,910	.54%
d) Voluntary Termination	5,393,912	2.00%	5,392,684	2.14%
e) Expenses	<u>1,225,000</u>	<u>.45%</u>	<u>1,094,000</u>	<u>.43%</u>
TOTAL NORMAL COST	45,725,218	16.92%	43,428,131	17.20%
II. Actuarial Accrued Liability				
a) Active Members				
1) Retirement Benefits	826,134,164		705,546,161	
2) Disability Benefits	9,877,392		12,864,760	
3) Survivor Benefits	8,163,349		11,022,848	
4) Voluntary Termination	<u>19,822,827</u>		<u>19,146,099</u>	
	863,997,732		748,579,868	
b) Retired and Inactive Members				
1) Regular Retirees	745,639,326		693,227,166	
2) Disabled Retirees	33,742,499		33,607,018	
3) Survivors	94,792,222		108,807,918	
4) Vested Deferred & Transfers	8,693,511		9,006,630	
5) Contributions Refunded	8,260,193		4,205,886	
6) DROP Deferred Benefits	152,151,127		163,252,327	
7) DROP Account Balance	<u>81,117,748</u>		<u>80,548,182</u>	
	1,124,396,626		1,092,655,127	
TOTAL ACCRUED LIABILITY	1,988,394,358		1,841,234,995	



**Exhibit 1 (Continued)**  
**Costs, Liabilities & Contributions**

	<u>June 30, 2009</u>	<u>--Prior Year--</u> <u>June 30, 2008</u>
II. Actuarial Accrued Liability		
TOTAL (Preceding page)	\$ 1,988,394,358	\$ 1,841,234,995
III. Valuation Assets	1,297,128,398	1,600,941,810
IV. Unfunded Actuarial Accrued Liabilities - (Surplus)	691,265,960	240,293,185
a) Change over prior year	450,972,775	52,054,098
b) Funded Percentage	65.2%	86.9%
V. Employer Contributions		
<u>Current Plan Year</u> <sup>1</sup>		
a) Employer Portion of Normal Cost	26,394,873	25,387,604
b) Amortization Payments	55,188,509	18,580,048
c) Employer Shortfall Credit	<u>-438,717</u>	<u>-802,173</u>
TOTAL Required Contribution	81,144,665	43,165,479
Estimated Premium Tax Offset	<u>15,112,480 (est)</u>	<u>15,071,968</u>
Net Employer Contribution	66,032,185	28,093,511
	24.00% (est)	10.50%
	<u>11.00%</u>	<u>9.50%</u>
<u>PERSAC approved Rate</u>	<u>11.00%</u>	<u>9.50%</u>
VI. Projected Employer Contributions		
<u>Next Plan Year</u> <sup>1</sup>		
a) Employer Portion of Normal Cost	27,362,469	26,522,497
b) Amortization Payments	55,188,509	18,580,048
c) Employer Shortfall Credit	<u>3,591,393</u>	<u>-487,184</u>
TOTAL Projected Contribution	86,142,371	44,615,361
Estimated Premium Tax Offset	<u>15,112,480 (est)</u>	<u>15,071,968</u>
Net Employer Contribution	71,029,891	29,543,393
	25.00% (est)	11.00%
VII. Current Payroll	270,236,561	252,562,020
Projected Payroll - Mid Year	273,648,150	256,480,197
Projected Payroll - Next Year	283,679,677	267,945,538

<sup>1</sup> Dollar Amounts reflect estimated payments due mid-year on January 1st. The Net Employer Rate is rounded to the nearest .25%, but not less than 9.00%

## EXHIBIT 2

**FINANCIAL SUMMARY  
STATEMENT OF REVENUES AND EXPENSES  
FOR FISCAL YEAR ENDING**

	<u>June 30, 2009</u>	-----Prior Years----- <u>June 30, 2008</u>	<u>June 30, 2007</u>
<u>OPERATING REVENUES:</u>			
1. Contribution Income			
Member	\$ 19,706,503	\$ 18,637,104	\$ 17,157,738
Employer	25,721,837	35,174,945	35,867,002
2. Other Income			
General Fund/Premium Tax	15,071,968	14,455,288	12,817,388
Merger Interest	87,632	84,889	96,467
Transfers	17,785	955,158	343,337
Miscellaneous	0	360	681
TOTAL CONTRIBUTIONS	60,605,725	69,307,744	66,282,613
3. Investment Income			
Investments	-348,172,039	-118,410,098	238,130,897
Less, Manager fees	-4,198,804	-4,493,097	-5,173,962
TOTAL INVESTMENT INCOME	-352,370,843	-122,903,195	232,956,935
4. Total Revenues	-291,765,118	-53,595,451	299,239,548
<u>OPERATING EXPENSES:</u>			
1. General Administration	1,223,868	1,094,511	1,063,168
Other Expenses	91,727	94,896	94,428
2. Benefits Paid			
a) Pension Benefits	96,126,722	92,841,073	87,910,584
b) Return of Contrib.	2,560,257	2,842,220	3,843,112
c) Transfers	715,460	0	0
TOTAL BENEFITS PAID	99,402,439	95,683,293	91,753,696
3. Total Expenses	100,718,034	96,872,700	92,911,292
<u>NET INCOME:</u>	-392,483,152	-150,468,151	206,328,256

**EXHIBIT 2 (Continued)**  
**Financial Summary**

**FINANCIAL SUMMARY**  
**STATEMENT OF ASSETS**  
**FOR FISCAL YEAR ENDING**

	<u>June 30, 2009</u>	<u>-----Prior Years-----</u>	
		<u>June 30, 2008</u>	<u>June 30, 2007</u>
<b><u>ASSETS</u></b>			
1. Short Term Assets			
Cash in Banks	\$ 9,784,982	\$ 16,264,396	\$ 9,295,570
Cash Equivalents	31,940,207	39,380,469	35,964,735
2. Bonds			
Domestic and Foreign	152,597,174	199,014,122	183,798,885
Pooled Funds	92,783,249	87,264,987	71,772,589
Real Estate Funds	88,669,410	130,495,197	133,418,423
Mutual Funds	76,150,585	44,693,248	56,682,712
3. Equities, Insurance Agreements			
Domestic Stock	361,332,647	644,791,428	634,416,607
Foreign Stocks	183,934,457	176,653,335	342,868,811
Partnerships	29,518,146	n/a	n/a
4. Other Investments	25,871,496	83,504,186	98,553,462
5. Other Assets			
Property/Equipment	2,473,997	2,517,916	2,574,618
Real Estate	13,614,077	21,125,881	19,994,127
Receivables (-) Payables	14,529,460	29,746,917	36,443,184
Receivables from Mergers	<u>969,422</u>	<u>1,200,379</u>	<u>1,336,889</u>
TOTAL ASSETS			
Market Value	1,084,169,309	1,476,652,461	1,627,120,612
Valued at Cost	1,205,022,121	1,438,094,799	1,349,537,379
<b><u>INVESTMENT YIELD:</u></b>			
To Actuarial Value	-16.71%	6.41%	13.57%
-Net of Mergers	-16.73%	6.41%	13.58%
DROP Account Yield	-17.23%	5.91%	13.08%
Market Value	-24.24%	-7.63%	16.46%
<b><u>ACTUARIAL VALUE OF ASSETS:</u></b>			
TOTAL Assets, less	1,084,169,309	1,476,652,461	1,627,120,612
Change in Unrealized (G/L)			
Plan Year - 2 (wt. 1/4)	104,446,210	11,026,896	47,900,892
Plan Year - 1 (wt. 2/4)	-239,025,571	104,446,210	11,026,896
Plan Year (wt. 3/4)	<u>-159,410,474</u>	<u>-239,025,571</u>	<u>104,446,210</u>
Valuation Assets	1,297,128,398	1,600,941,810	1,531,297,284

## EXHIBIT 3

**PENSION ACCOUNTING  
AND  
FINANCIAL DISCLOSURE**

The Governmental Accounting Standards Board (GASB) was established as an arm of the Financial Accounting Foundation in April, 1984 by amendment to the Foundation's certificate of incorporation and by-laws. GASB's objective is to promulgate standards of financial accounting and reporting relative to the activities and transactions of state and local governmental entities. The following disclosures and statistical tables are in accordance with the GASB's Statement No. 25.

**SCHEDULE OF FUNDING PROGRESS**

(Dollar amounts in thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability(AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Payroll ((b-a)/c)
2000	1,277,548	1,167,247	-110,301	109.5	163,773	-71.6
2001	1,275,128	1,261,057	-14,071	101.1	181,738	-7.7
2002	1,189,425	1,384,605	195,180	85.9	187,568	104.1
2003	1,076,306	1,455,791	379,484	73.9	197,254	192.4
2004	1,138,387	1,561,739	423,252	72.9	208,756	202.7
2005	1,233,572	1,552,332	318,760	79.5	215,639	147.8
2006	1,371,982	1,651,056	279,074	83.1	223,214	125.0
2007	1,531,297	1,719,536	188,239	89.1	229,145	82.2
2008	1,600,942	1,841,235	240,293	86.9	252,562	95.1
2009	1,297,128	1,988,394	691,266	65.2	270,237	255.8

The total actuarial accrued liability determined using the Individual Entry Age Normal cost method increased by \$147,159,263 from June 30, 2008 to June 30, 2009. There was a net experience loss of \$33,663,036.

**EXHIBIT 3 (Continued)****Pension Accounting & Financial Disclosure****SUPPLEMENTARY INFORMATION****SCHEDULE OF EMPLOYER CONTRIBUTIONS**

<u>Fiscal Year</u>	<u>Actuarial Required Contribution</u> <sup>1</sup>	<u>Percent Contributed</u>	<u>Annual Pension Cost (APC)</u> <sup>1</sup>	<u>Actual Contribution</u> <sup>1</sup>	<u>Percentage of APC Contributed</u>	<u>Net Pension Obligation</u> <sup>1</sup>
2000	15,362,721	99.9	15,370,370	15,347,513	99.9	85,949
2001	17,123,946	100.4	17,131,525	17,189,303	100.3	28,172
2002	22,389,583	100.4	22,400,294	22,477,751	100.4	-49,285
2003	27,268,852	100.3	27,283,821	27,494,127	100.7	-259,591
2004	57,420,770	76.2	57,445,752	43,780,202	76.2	13,405,959
2005	58,109,563	103.6	57,593,472	60,222,742	104.6	10,776,689
2006	48,370,710	106.0	47,919,406	51,259,847	107.0	7,436,248
2007	45,699,034	110.5	45,324,500	50,477,050	111.4	2,283,698
2008	40,351,047	127.5	40,074,582	51,457,721	128.4	-9,099,441
2009	45,398,734	93.2	45,547,987	42,295,917	92.86	-5,847,371

Analysis of the percentage contributed over a period of years will give a relative indication of the funding progress for the liabilities of the Municipal Police Employees' Retirement System.

The difference between the Actuarial Required Contribution and the APC is the amortization payment for the Net pension Obligation (see Exhibit A).

**DEVELOPMENT OF NET  
PENSION OBLIGATION:**

(1) Actuarial Required Contribution	\$ 45,398,734
(2) Interest on Net Pension Obligation	-682,458
(3) Amortization of Net Pension Obligation	<u>-831,711</u>
(4) Accrued Pension Cost(1)+(2)-(3)	45,547,987
(5) Employer Contribution	42,295,917
(6) Increase (-decrease) in Net Pension Obligation	3,252,070
(7) Net Pension Obligation Beginning of Year	-9,099,441
(8) Net Pension Obligation End of Year (6) + (7)	-5,847,371

<sup>1</sup> Actuarial Contributions, the Annual Pension Cost (APC), and the actual employer contribution made have been adjusted with interest at the valuation rate to the end of the fiscal year in accordance with GASB's Statement No. 25.

**EXHIBIT 3 (Continued)****Pension Accounting & Financial Disclosure**

## STATISTICAL DATA

COMPARATIVE SUMMARY OF REVENUES BY SOURCE  
AND EXPENSES BY TYPE

## Revenues by Source

<u>Fiscal</u> <u>Year End</u>	<u>Members</u> <u>Contribution</u>	<u>Employer</u> <u>Contribution</u>	<u>Investment</u> <u>Income</u>	<u>Total</u>
2000	12,376,419	87,844,851	44,467,036	144,688,306
2001	13,838,527	18,415,443	-34,986,464	-2,732,494
2002	14,032,129	23,068,690	-63,719,980	-26,619,161
2003	14,727,154	27,321,001	41,473,699	83,521,854
2004	15,646,734	42,887,212	141,065,828	199,599,774
2005	16,136,038	58,324,486	114,154,056	188,614,580
2006	16,878,085	49,759,155	114,977,826	181,615,066
2007	17,157,738	49,124,875	232,956,935	299,239,548
2008	18,637,104	50,670,640	-122,903,195	-53,595,451
2009	19,706,503	40,899,222	-352,370,843	-291,765,118

## Expenses by Type

<u>Fiscal</u> <u>Year End</u>	<u>Benefits</u>	<u>Refunds</u>	<u>Administrative</u> <u>Expenses</u> <sup>1</sup>	<u>Total</u>
2000	54,814,794	2,027,856	701,576	57,544,226
2001	59,414,407	2,689,175	784,496	62,888,078
2002	67,241,501	2,767,657	860,049	70,869,207
2003	71,862,749	2,491,874	983,765	75,338,388
2004	76,534,487	2,143,792	946,014	79,624,293
2005	82,597,961	2,565,141	1,041,947	86,205,049
2006	83,500,279	4,660,819	1,454,093	89,615,191
2007	87,910,584	3,843,112	1,157,596	92,911,292
2008	92,841,073	2,842,220	1,189,407	96,872,700
2009	96,842,182	2,560,257	1,315,595	100,718,034

<sup>1</sup> Includes other expenses incurred not directly related to the administration of daily operation.  
(See Exhibit 2).

## EXHIBIT 4

## CENSUS DATA

The data contained in this valuation is summarized on the following pages with exceptions noted below. The profile depicted in the cellular graphs represents "error-free data", which serves as the basis for determining costs and liabilities. Active members are allocated to cells based upon attained age and years of service. Retirees and Survivors are allocated to cells based upon attained age and years elapsed since retirement or commencement of benefits.

The validity of the results of any actuarial valuation is dependent upon the accuracy of the data base. Prior to processing, suspicious data and data containing errors were purged from the data base and processed separately based on the following error types:

- missing sex code
- missing or invalid date of birth
- missing or invalid date of employment
- missing or invalid salary
- invalid retirement dates

There were no records purged this year from the data base containing errors or categorized as suspicious data which is a significant reduction when compared to previous years. Suspicious data are not necessarily errors, but data which falls outside the parameters of the editing process for further checking.

Salary data contained in the profiles and valuation report exceed the sums reported by internal audit due to salary annualization. In the valuation process, membership data with fractional service annualizes the salary in the first year of employment.

The following is a summary by participant status of the data submitted for valuation:

	---2009---	---2008---	---2007---
	<u>Census</u>	<u>Census</u>	<u>Census</u>
Active Members	5,872	5,705	5,645
DROP to Active	199	203	195
Regular Retirees	2,749	2,671	2,613
Disability Retirees	197	200	201
Survivors	1,038	1,025	1,020
Vested & Reciprocals	112	114	108
Due Refunds	1,197	1,095	993
DROP Participants	<u>185</u>	<u>213</u>	<u>217</u>
TOTAL	11,549	11,226	10,992

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS EMPLOYED

MUNICIPAL POLICE SYSTEM  
ACTIVE MEMBERS

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY

VALUATION DATE 6/30/2009

Age	YEARS EMPLOYED									Total	
	(0-1)	[1-5)	[5-10)	[10-15)	[15-20)	[20-25)	[25-30)	[30-35)	[35- )		
[ 0-19)	8	2	0	0	0	0	0	0	0	0	10
	168471	67458	0	0	0	0	0	0	0	0	235929
[20-24)	193	189	4	0	0	0	0	0	0	0	386
	5486130	6205132	164861	0	0	0	0	0	0	0	11856123
[25-29)	185	556	161	1	0	0	0	0	0	0	903
	5852549	20902243	6873944	54257	0	0	0	0	0	0	33682993
[30-34)	99	361	414	139	2	0	0	0	0	0	1015
	2975799	13175892	18015112	6883585	94973	0	0	0	0	0	41145361
[35-39)	99	210	296	380	136	2	0	0	0	0	1123
	3038872	7740009	12740429	18798407	7250584	121183	0	0	0	0	49689484
[40-44)	61	136	161	233	316	121	4	0	0	0	1032
	1858126	4751762	6601587	11356873	16818481	7391199	339671	0	0	0	49117699
[45-49)	20	69	100	122	174	229	113	1	0	0	828
	567214	2253171	3966562	5742208	9082258	14017458	7725285	55637	0	0	43409793
[50-54)	7	24	57	62	73	69	109	11	0	0	412
	228594	894494	2158980	2800126	3593097	3924812	7316978	869448	0	0	21786529
[55-59)	1	3	26	27	33	16	24	3	1	0	134
	40939	149321	864447	1082468	1483260	927733	1653098	218945	61085	0	6481296
[60-64)	1	0	3	5	4	7	1	2	0	0	23
	26833	0	103728	196310	150985	349632	38766	161419	0	0	1027673
[65-69)	0	1	0	1	3	1	0	0	0	0	6
	0	22949	0	41413	138560	46652	0	0	0	0	249574
[70-74)	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
TOTALS	674	1551	1222	970	741	445	251	17	1	0	5872
salary	20243527	56162431	51489650	46955647	38612198	26778669	17073798	1305449	61085	0	258682454

AVERAGES --- Attained Age 37.95  
Service Years 9.56  
Active Salary 44,054



MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS EMPLOYED

MUNICIPAL POLICE SYSTEM  
ACTIVE AFTER DROP

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY  
DROP BENEFITS

VALUATION DATE 6/30/2009

Age	YEARS EMPLOYED									Total	
	(0-1)	[1-2)	[2-3)	[3-4)	[4-5)	[5-10)	[10-15)	[15-20)	[20- )		
[ 0-34)	0	0	0	0	0	0	0	0	0	0	0
:	0	0	0	0	0	0	0	0	0	0	0
:	0	0	0	0	0	0	0	0	0	0	0
[35-39)	0	0	0	0	0	0	0	0	0	0	0
:	0	0	0	0	0	0	0	0	0	0	0
:	0	0	0	0	0	0	0	0	0	0	0
[40-44)	0	0	0	0	0	0	0	0	0	0	0
:	0	0	0	0	0	0	0	0	0	0	0
:	0	0	0	0	0	0	0	0	0	0	0
[45-49)	6	4	0	0	0	0	0	0	0	0	10
:	260523	244657	0	0	0	0	0	0	0	0	505180
:	228660	144996	0	0	0	0	0	0	0	0	373656
[50-54)	18	8	10	5	3	3	0	0	0	0	47
:	798886	416889	622432	340400	177133	203589	0	0	0	0	2559329
:	680628	235896	324036	138216	95448	101196	0	0	0	0	1575420
[55-59)	17	11	18	11	3	30	1	0	0	0	91
:	638733	709402	1035011	670313	198487	1995723	81217	0	0	0	5328886
:	453252	351900	558816	334764	101436	896880	35292	0	0	0	2732340
[60-64)	4	2	7	5	8	7	15	2	1	1	51
:	236542	65632	409296	308634	422245	458458	1054549	122232	83124	83124	3160712
:	87900	36708	196056	150264	154092	202704	397704	49728	42684	42684	1317840
[65-69)	0	0	0	0	0	0	0	0	0	0	0
:	0	0	0	0	0	0	0	0	0	0	0
:	0	0	0	0	0	0	0	0	0	0	0
[70-74)	0	0	0	0	0	0	0	0	0	0	0
:	0	0	0	0	0	0	0	0	0	0	0
:	0	0	0	0	0	0	0	0	0	0	0
TOTALS											
count	45	25	35	21	14	40	16	2	1	1	199
salary	1934684	1436580	2066739	1319347	797865	2657770	1135766	122232	83124	83124	11554107
benefit	1450440	769500	1078908	623244	350976	1200780	432996	49728	42684	42684	5999256

AVERAGES --- Attained Age 56.94  
Post Drop Years 3.90  
Active Salary 58,061  
Annual Benefit 30,147

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS RETIRED

MUNICIPAL POLICE SYSTEM  
REGULAR RETIREES

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2009

Age	YEARS RETIRED										Total	
	(0-1)	[1-2)	[2-3)	[3-4)	[4-5)	[5-10)	[10-15)	[15-20)	[20- )			
[ 0-39)	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
[40-44)	1	0	0	0	0	0	0	0	0	0	0	1
	29736	0	0	0	0	0	0	0	0	0	0	29736
[45-49)	11	14	13	7	4	1	0	0	0	0	0	50
	451536	548580	414336	192900	124716	42192	0	0	0	0	0	1774260
[50-54)	18	19	44	58	51	114	6	0	0	0	0	310
	575484	799776	1748784	2297988	1855884	3836424	78600	0	0	0	0	11192940
[55-59)	15	19	23	57	76	333	90	15	1	0	0	629
	313800	419088	612876	2001180	2464512	10972944	2543160	300420	12852	0	0	19640832
[60-64)	2	5	8	13	27	214	286	94	26	0	0	675
	57540	108264	264768	336216	904476	5443404	7659744	2868660	453204	0	0	18096276
[65-69)	1	3	3	3	7	51	124	204	76	0	0	472
	5640	103752	44304	84576	140328	1277748	2894616	5570052	1128876	0	0	11249892
[70-74)	0	0	0	1	3	12	23	57	173	0	0	269
	0	0	0	62676	69456	253176	360852	1484424	3685944	0	0	5916528
[75-79)	0	0	0	0	0	4	6	25	143	0	0	178
	0	0	0	0	0	51096	134688	594912	2982900	0	0	3763596
[80-84)	0	0	0	0	0	0	2	8	105	0	0	115
	0	0	0	0	0	0	17532	150888	2091096	0	0	2259516
[85-89)	0	0	0	0	0	1	1	1	40	0	0	43
	0	0	0	0	0	6360	35544	59544	682356	0	0	783804
[90-99)	0	0	0	0	0	0	0	0	7	0	0	7
	0	0	0	0	0	0	0	0	100032	0	0	100032
TOTALS												
count	48	60	91	139	168	730	538	404	571			2749
benefit	1433736	1979460	3085068	4975536	5559372	21883344	13724736	11028900	11137260			74807412

AVERAGES --- Attained Age 64.04  
Years Retired 13.46  
Annual Benefit 27,213

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS RETIRED

MUNICIPAL POLICE SYSTEM  
DISABILITY RETIREES

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2009

Age	YEARS RETIRED									Total	
	(0-1)	[1-2)	[2-3)	[3-4)	[4-5)	[5-10)	[10-15)	[15-20)	[20- )		
[ 0-39)	1	5	3	1	2	3	0	0	0	15	
	40344	64440	40932	35400	27228	36708	0	0	0	245052	
[40-44)	1	2	1	1	1	8	5	0	0	19	
	27720	53712	39864	34308	12156	103392	57108	0	0	328260	
[45-49)	1	0	2	1	2	15	3	3	1	28	
	33516	0	60780	12792	32712	199080	34788	36636	11844	422148	
[50-54)	0	0	4	3	2	4	16	6	2	37	
	0	0	77448	58572	28992	67380	243336	80892	22776	579396	
[55-59)	0	0	2	0	0	4	8	8	11	33	
	0	0	22056	0	0	51228	107076	106668	108228	395256	
[60-64)	1	1	0	0	0	3	4	5	12	26	
	11676	13164	0	0	0	31248	64104	90276	153756	364224	
[65-69)	0	0	0	0	0	0	2	3	17	22	
	0	0	0	0	0	0	14856	29940	257496	302292	
[70-74)	0	0	0	0	0	0	1	0	5	6	
	0	0	0	0	0	0	11976	0	68364	80340	
[75-79)	0	0	0	0	0	0	0	0	9	9	
	0	0	0	0	0	0	0	0	98064	98064	
[80-84)	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
[85-89)	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
[90-99)	0	0	0	0	0	0	0	0	2	2	
	0	0	0	0	0	0	0	0	27732	27732	
TOTALS	count	4	8	12	6	7	37	39	25	59	197
	benefit	113256	131316	241080	141072	101088	489036	533244	344412	748260	2842764

AVERAGES --- Attained Age 55.74  
Years Retired 15.40  
Annual Benefit 14,430

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS RETIRED

MUNICIPAL POLICE SYSTEM  
SURVIVOR BENEFITS

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2009

Age	YEARS RETIRED									Total
	(0-1)	[1-2)	[2-3)	[3-4)	[4-5)	[5-10)	[10-15)	[15-20)	[20- )	
[ 0-39)	2	8	9	1	6	15	12	15	9	77
	46956	111048	88632	21588	72804	92280	88956	93732	53052	669048
[40-44)	0	10	8	0	1	5	12	5	2	43
	0	97368	52116	0	14280	45408	72300	39372	26616	347460
[45-49)	0	4	1	2	3	4	11	4	5	34
	0	77112	41928	28872	47244	61740	79944	37116	60672	434628
[50-54)	6	2	5	0	4	8	29	9	11	74
	89868	71976	178896	0	90264	115932	225312	112584	95172	980004
[55-59)	0	0	1	1	4	18	8	13	19	64
	0	0	22860	16272	80808	401952	118584	199416	205944	1045836
[60-64)	0	0	0	3	1	18	35	11	21	89
	0	0	0	32988	23280	296628	628044	164772	234828	1380540
[65-69)	0	2	0	1	0	5	18	33	50	109
	0	56964	0	31692	0	72492	326724	554100	549876	1591848
[70-74)	0	0	0	0	0	3	15	18	84	120
	0	0	0	0	0	25632	142392	251316	981288	1400628
[75-79)	0	0	0	0	0	4	3	5	139	151
	0	0	0	0	0	38100	36240	59688	1678128	1812156
[80-84)	1	0	0	0	0	1	3	4	118	127
	60564	0	0	0	0	4800	44568	73704	1305792	1489428
[85-89)	0	0	0	0	0	1	0	1	90	92
	0	0	0	0	0	4896	0	15300	953628	973824
[90-99)	0	0	0	0	1	0	1	0	56	58
	0	0	0	0	12456	0	6636	0	490632	509724
TOTALS	9	26	24	8	20	82	147	118	604	1038
benefit	197388	414468	384432	131412	341136	1159860	1769700	1601100	6635628	12635124

AVERAGES --- Attained Age 68.06  
Years Retired 23.43  
Annual Benefit 12,173

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS RETIRED

MUNICIPAL POLICE SYSTEM  
DROP PARTICIPANTS

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2009

Age	YEARS PARTICIPATED									Total
	(0-1)	[1-2)	[2-3)	[3-4)	[4-5)	[5-10)	[10-15)	[15-20)	[20- )	
[ 0-39)	0	0	0	0	0	0	0	0	0	0
[40-44)	0	0	0	0	0	0	0	0	0	0
[45-49)	13	9	6	0	0	0	0	0	0	28
[50-54)	19	36	34	0	0	0	0	0	0	89
[55-59)	11	19	21	0	0	0	0	0	0	51
[60-64)	3	9	3	0	0	0	0	0	0	15
[65-69)	1	1	0	0	0	0	0	0	0	2
[70-74)	0	0	0	0	0	0	0	0	0	0
[75-79)	0	0	0	0	0	0	0	0	0	0
[80-84)	0	0	0	0	0	0	0	0	0	0
[85-89)	0	0	0	0	0	0	0	0	0	0
[90-99)	0	0	0	0	0	0	0	0	0	0
TOTALS	47	74	64	0	0	0	0	0	0	185
benefit	1825812	3055776	2400300	0	0	0	0	0	0	7281888

AVERAGES --- Attained Age 54.14  
Years Retired 1.55  
Annual Benefit 39,362

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS EMPLOYED

MUNICIPAL POLICE SYSTEM  
TERM-VESTED/RECIPROCAL

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2009

Age	YEARS EMPLOYED									Total
	(0-1)	[1-5)	[5-10)	[10-15)	[15-20)	[20-25)	[25-30)	[30-35)	[35- )	
[ 0-19)	0	0	0	0	0	0	0	0	0	0
[ 20-24)	0	0	0	0	0	0	0	0	0	0
[ 25-29)	0	0	0	0	0	0	0	0	0	0
[ 30-34)	0	0	0	2	0	0	0	0	0	2
[ 35-39)	0	0	0	18120	0	0	0	0	0	18120
[ 40-44)	0	0	0	16	2	0	0	0	0	18
[ 45-49)	0	0	0	193680	22272	0	0	0	0	215952
[ 50-54)	0	0	0	17	13	3	0	0	0	33
[ 55-59)	0	0	0	176112	208104	52416	0	0	0	436632
[ 60-64)	0	0	0	12	14	9	0	0	0	35
[ 65-69)	0	0	0	161802	176112	173358	0	0	0	511272
[ 70-74)	0	0	0	9	13	0	0	0	0	22
TOTALS	0	0	0	96912	158496	0	0	0	0	255408
count	0	0	0	0	1	0	0	0	0	1
benefit	0	0	0	0	7692	0	0	0	0	7692
count	0	0	1	56	43	12	0	0	0	112
benefit	0	0	1656	646626	572676	225774	0	0	0	1446732

AVERAGES --- Attained Age 45.68  
Service Years 15.25  
Annual Benefit 12,917

EXHIBIT 5

SUMMARY OF THE MUNICIPAL POLICE EMPLOYEES'  
RETIREMENT SYSTEM PLAN PROVISIONS

EFFECTIVE DATE:

July 1, 1973

EMPLOYEE:

Any full-time police officer empowered to make arrests, employed by a municipality of the State and engaged in law enforcement, earning at least \$375/month excluding state supplemental pay, or an elected Chief of Police whose salary is at least \$100.00 per month, and any employee of this System. City or Ward Marshals, elected Councilmen and Mayors excluded.

EMPLOYER:

Any municipality in the State which employs a full-time police officer, empowered to make arrests, or which has an elected Chief of Police whose salary is at least \$100.00 per month; and Municipal Police Employees' Retirement System.

MEMBERSHIP:

1. Persons who were members on 9/7/77 must remain members and persons hired on or after 9/9/77 must become members as a condition of employment, if under age 50; providing they do not have to pay social security (Act 141 of 1983).
2. Persons who transferred from another police retirement system in 1973 and 1974 under R.S. 42:697 as it read at that time (Act 46 of 1972).
3. Persons who transferred from another police retirement system in 1975 and 1976 under R.S. 42:697 as it read at that time (Act 548 of 1975).
4. Persons who became members under R.S. 42:697 and are having credit/or will have credit "recognized" between this system and another system or systems (Act 416 of 1976 AMENDED by Act 344 of 1978 and Act 103 of 1979).
5. Persons who became members because of a merger agreement entered into between a local police pension fund and this retirement system.
6. Employees, employed by any municipality or parish of this state which has its employees covered under the federal Social Security program, may elect not to be or become a member. Any member who elects not to be a member shall be refunded his employee contributions received by the system, without interest (Act 32 of 1984).

**EXHIBIT 5 (Continued)**  
**Plan Provisions**

**CREDITABLE SERVICE:**

As follows:

1. Prior Service - service credit which was not credited in any other retirement system and for which a prior service certificate was issued.
2. Membership Service - service as a member for which the system received contribution. Qualifying cadet service may be purchased per Act 215 of 1992.

**NOTE:** a. No prior service credit to be given for employee who becomes member after July 31, 1976; extended to 1/1/77 for employee who is required to pay Social Security contributions.

- b. Credit for military service up to July 1, 1973 given, not to exceed 4 years, provided employee pays employee and employer contributions that would have been required based on rate of pay when first hired as police officer, plus 6% compound interest.

**EMPLOYEE CONTRIBUTIONS:**

7% of earnable compensation (Over 30 years of service, no contributions required).  
8.0% effective July 1, 1989; 7.5% effective July 1, 1994.

**EMPLOYER CONTRIBUTIONS:**

Municipality Rate set at 9%; balance to be determined by the Actuarial Forecast Committee and to be funded from dedicated Insurance Premium Tax.

**EARNABLE COMPENSATION:**

Full amount of regular salary earned by an employee for a given month, including State supplemental pay, but excluding overtime pay.

**AVERAGE FINAL COMPENSATION:**

Average annual earned compensation of an employee for any period of highest 36 successive or joined month's earnable compensation.

**NORMAL RETIREMENT:**

The average compensation of a member for purposes of computing benefits cannot increase more than 25% per year. (Effective 1/1/87 Act 367 of 1986)

**ELIGIBILITY:**

20 years of service and age 50 or 12 years of service and age 55 or 25 years of service at any age; member of the System for one year.



**EXHIBIT 5 (Continued)**  
**Plan Provisions**

BENEFIT:

3 1/3% of average final compensation times years of creditable service.  
(not to exceed 100% of final salary).

ANNUITY FORM:

An annuity payable for the lifetime of the member.

**EARLY RETIREMENT:**

ELIGIBILITY:

20 years of service regardless of attained age.

BENEFIT:

3 1/3% of Average Final Compensation multiplied by creditable service actuarially reduced for retirement prior to age 50.

**EARLY REDUCED RETIREMENT:**

ELIGIBILITY:

20 years of Service Credit regardless of attained age.

BENEFIT:

Normal retirement benefit, based upon service accrued to date, actuarially reduced from the earliest date member would be eligible if employment had continued to the earliest normal retirement date.

**DISABILITY BENEFITS:**

ELIGIBILITY:

Any member may retire due to total and permanent disability, with at least five (5) years of creditable service, unless injuries were sustained in the performance of official duty.

BENEFIT:

3% of Average Final Compensation multiplied by years of creditable service, but not less than 40% nor more than 60% of Average Final Compensation. 100% of Average Final Compensation if in a coma, is paraplegic or loses the use of a limb

**NOTE:** Upon reaching age, disability pensioner receives greater of the disability benefit or the accrued benefit earned to date of disability.

**EXHIBIT 5 (Continued)**  
**Plan Provisions**

**DEATH BENEFITS:**

ELIGIBILITY:

1. Death of active contributing member or disability retiree.
2. Death of member eligible for retirement, except for the one year of membership requirement.
3. Death of member while in the line of duty.

BENEFIT:

1. Surviving spouse receives the retirement benefit the member had earned to his date of death, but not less than 40% and not more than 60% of the member's Average Final Compensation. Benefit ceases upon widow's death or remarriage, unless member was killed in the line of duty or the spouse attains age 55.
2. Automatic Option 2 for widow or shall be paid benefits as provided above in (1), whichever is greater.
3. Surviving spouse receives 100% of member's Average Final Compensation

**NOTE:**

Surviving minor children with surviving spouse receive benefits equal to the greater of 10% of average compensation or \$200 per month per child payable to age 18, except for retarded children and those who go directly to college after high school (maximum extension, four years).

Surviving minor children with no surviving spouse receive benefits equal to 30% of average compensation with an aggregate limit of 60% of average compensation. If only one surviving minor child, benefits equal 40% of average compensation.

**VESTING:**

ELIGIBILITY:

1. Member who terminates employment after one year as member of the System before attaining age 50 with 20 years of creditable service.
2. Member who terminates employment after one year as member of the System before attaining age 55, with 12 years of creditable service.
3. Member who terminates receives refund and returns, must complete 3 additional years service in order to repay refund with 5% compound interest.

**EXHIBIT 5 (Continued)**  
**Plan Provisions**

**BENEFIT:**

1. Deferred retirement benefit payable at age 50.
2. Deferred retirement benefit payable at age 55.

**NOTE:** Terminated vested member shall be covered by survivor benefit provision.

**OPTIONAL FORMS OF BENEFIT:**

1. Balance of value of annuity to beneficiary if death before receiving value of annuity at time of retirement.
2. 100% survivor's benefits - reduced retirement benefit continued to beneficiary at member's death.
3. 50% survivor's benefits - 50% of reduced retirement benefit continued to beneficiary at member's death.
4. Initial Benefit Option - maximum benefit actuarially reduced for partial lump sum equal to not more than 36 months of maximum monthly pension.
5. Other benefits of equal actuarial value, upon approval of Board.

The normal form and options 1-4 can be elected in the form of an increasing annuity which permits the member to make an election at retirement to receive an actuarially reduced benefit which increases 2.5% annually. The increases begin on the 1<sup>st</sup> retirement anniversary date, but not before the retiree attains age 55 or would have attained age 55 for a surviving spouse.

**COST OF LIVING INCREASE:**

The Board of Trustees is authorized to provide a cost of living increase for retirees not to exceed 3% of the original benefit for each year of retirement and an additional 2% for retirees age 65 and over, provided the system has reached its Funding Target.

**DEFERRED RETIREMENT OPTION PLAN:**

(Act 475 of 1984)

Instead of terminating employees and accepting a service retirement allowance, any member who has met the following eligibility requirements may elect to participate in the Deferred Retirement Option Plan (DROP) and defer receipt of benefits.

**ELIGIBILITY:**

Twenty (20) years of creditable service (including reciprocal service) and eligible to receive a normal service retirement allowance.

**BENEFIT:**

Duration of participation is specified not exceed three years, effective July 1, 1992.

**EXHIBIT 5 (Continued)**  
**Plan Provisions**

BENEFIT:

Upon termination of employment at the end of or prior to the end of the specified period of participation, a participant will receive, at his option:

1. Lump sum payment (equal to the account balance)
- 2 a true annuity based upon his account; or
3. any other method of payment if approved by the board of trustees. Monthly benefits being paid into the fund during participation will begin being paid to the retiree.

If a participant dies during the period of participation in the program, a lump sum payment equal to his account balance shall be paid to the beneficiary, or if none, to his estate; in addition, normal survivor benefits payable to survivors of retirees shall be payable.

If employment is not terminated at the end of the specified period of participation, then:

1. payment into account shall cease;
2. payment from account is suspended until employment is terminated; and
3. participant shall resume active contributions to the system.

Then, upon termination of employment, the benefit payments indicated above shall be paid. The participant shall receive an additional retirement benefit based on additional service rendered since termination of participation in the fund, usually the normal method of computation of benefit subject to the following:

1. If additional service was less than 36 months, average compensation figure used to calculate additional benefit shall be that used to calculate original benefit.
2. If additional service was 36 or more months, the average compensation figure used to calculate the additional benefit shall be based on compensation during the period of additional service.

**NOTE:** DROP Accounts shall earn interest following termination of DROP at a rate .5% below the actuarial rate of the System's investment portfolio.

Effective 1/1/2004 new DROP accounts are credited with Money Market rates or self directed accounts approved by the Board of Trustees.

**EXHIBIT 6****ACTUARIAL COST METHODS AND ASSUMPTIONS****COST METHOD:**

The individual "Entry Age Normal" cost method was used to calculate the funding requirements of the retirement system. Under this cost method, the actuarial present value of projected benefits of each individual included in the valuation is allocated on a level basis as percentage of payroll for each participant between entry age and assumed retirement age(s). That portion of the actuarial present value attributable to current year benefit accruals is called the Normal Cost. The actuarial present value of future benefits in excess of the actuarial present value of future normal costs is called the actuarial accrued liability.

**ASSET VALUATION:**

For the Plan Year ending prior to June 30, 1999 equities are valued at a four year weighted average. The computation of the actuarial value of assets is the sum of the bonds at amortized cost, less a weighted average of unrealized losses or (gains) in the market value of equities, plus the market value of equities.

Effective June 30, 1999 the Board of Trustees approved a change in the Asset Valuation Method. The Actuarial Value of Assets is the market value of assets adjusted for a four year weighted average in the unrealized gain or loss in the value of all assets. This value is determined in accordance with Regs. 1.412(c)(2)-1(b)(6) of the Internal Revenue Service Code and is subject to the Corridor Limits defined therein.

As a result of the change in the Asset Valuation Method, the reporting of realized income has been changed to realized, plus unrealized income for valuations beginning on June 30, 1999 and thereafter.

**ACCOUNTING DISCLOSURE:**

The Governmental Accounting Standards Board Statement No. 25 requires disclosure of certain Actuarial Liabilities for Public Employee Retirement Systems. The disclosures illustrated in Exhibit 3 were developed using the Entry Age Normal cost method. The statement of assets provided by the independent auditors was a copy of the final draft prior to publication. Should the statement of assets received differ from the final audit report, a revised actuarial statement will be issued, but only to the extent that any difference in reporting affects the employer's Premium Tax Allocation or the yield to the Actuarial Value of Assets.

**ACTUARIAL ASSUMPTIONS:**

The Retirement System is required to conduct an experience study every five years, but the scope of such a study is not necessarily limited to a five year period. The current five-year observation period (2004-2008) was chosen to coincide with the most recent period of data reporting following the restructuring of the Deferred Retirement Option Program.

**EXHIBIT 6 (Continued)**  
**Cost Methods & Assumptions**

**MORTALITY ASSUMPTIONS:**

Pre-retirement deaths and post-retirement life expectancies were projected in accordance with the experience of the RP-2000 Sex Distinct Mortality Table for the current valuation; 1983 Sex Distinct Group Annuity Mortality Table in valuations prior to June 30, 2009.

**DISABILITY ASSUMPTION:**

Rates for total and permanent disability were projected in accordance in accordance with the experience of the RP-2000 Sex Distinct Disability Mortality Table.

**RETIREMENT/DROP ASSUMPTION:**

Retirement without reduction in benefits can occur at any given age after satisfying the service eligibility requirements. Absent from the plan is a traditional "Normal Retirement Age". Since the age and service requirements are varied, the frequency of retirements will depend on the exposure plus intangibles such as health, economy, Social Security and other work patterns.

DROP is viewed as an alternative form of benefit accrual since mandatory terminate is not required following participation. Therefore, at eligibility, the probability of DROP accrual is determined in conjunction with regular benefit accrual. Retirement rates were projected based on the 2004-2008 Experience Study for the Municipal and State Police Retirement Plan.

**TERMINATION ASSUMPTIONS:**

Voluntary termination or withdrawal rates are the same as those used in prior valuations. During the first five years of employment, the probability of voluntarily terminating is a multiple of the attained age rate as follows:

1st year	1.25x
2nd year	1.20x
3rd year	1.15x
4th year	1.10x
5th year	1.00x

Furthermore, for members terminating with twelve (12) or more years of service it is assumed that 20% will not withdraw their accumulated employee contributions.

**EXHIBIT 6 (Continued)**  
**Cost Methods & Assumptions**

**SALARY GROWTH:**

The rates of annual salary growth are base upon the members years of service and are illustrated in the rate tables at the end of this exhibit.

**FAMILY STATISTICS:**

The composition of the Family was based on Age-Specific Fertility Rates from the 2007 Vital Statistics of the United States. 80% of the membership was assumed to be married with the wife assumed to be three (3) years younger than the husband. Sample rates are as follows:

<u>Age at Death</u>	<u>Number of Minor Chn.</u>	<u>Years for Youngest Child to Attain Majority</u>
25	1.2	17
30	1.4	15
35	1.7	13
40	1.7	10
45	1.4	8
50	1.1	4

**REMARRIAGE:**

Annuities payable to the spouse which cease upon death or remarriage were taken from "A Technical Note for the Construction of Widow's Annuities. "The Remarriage and Mortality rates used to develop these annuities were based on the graduated rates from "Mortality and Remarriage Experience for Widow's Beneficiaries under OASDI.

**ASSUMPTION FOR INCOMPLETE DATA:**

Records identified as containing suspicious data or errors in data were assumed to possess the same characteristics of "good data" in the same cohort.

**INVESTMENT EARNINGS:**

The actuarial discount rate for valuation purposes was 7%, net expenses, prior to July 1, 2005. Effective July 1, 2005, Board approved an increase in the rate to 7.5%.

**ADMINISTRATIVE EXPENSES:**

These expenses are included in Normal Cost and are assumed to be \$1,094,000 per year. Investment Expenses are not included in Normal Cost but are treated as a direct offset to investment income. The Employer portion of the Normal Cost includes an allocation for administrative expenses.

ACTUARIAL TABLES AND RATES  
NEW RATES 6/30/2009

Age	- Death Rates -		Disability	Termination	Retirement	DROP	Dur	Salary
	Male	Female	Rates	Rates	Rates	Rates		Scale
18	.000316	.000188	.0001	.0850	.0000	.000	1	1.1000
19	.000331	.000190	.0001	.0850	.0000	.000	2	1.0600
20	.000345	.000191	.0001	.0850	.0000	.000	3	1.0350
21	.000357	.000192	.0001	.0850	.0000	.000	4	1.0350
22	.000366	.000194	.0001	.0850	.0000	.000	5	1.0440
23	.000373	.000197	.0001	.0850	.0000	.000	6	1.0440
24	.000376	.000201	.0001	.0800	.0000	.000	7	1.0440
25	.000376	.000207	.0010	.0800	.0000	.000	8	1.0440
26	.000378	.000214	.0010	.0800	.0000	.000	9	1.0500
27	.000382	.000223	.0010	.0700	.0000	.000	10	1.0500
28	.000393	.000235	.0010	.0700	.0000	.000	11	1.0420
29	.000412	.000248	.0010	.0700	.0000	.000	12	1.0420
30	.000444	.000264	.0020	.0700	.0000	.000	13	1.0420
31	.000499	.000307	.0020	.0600	.0000	.000	14	1.0420
32	.000562	.000350	.0020	.0600	.0000	.000	15	1.0420
33	.000631	.000394	.0020	.0600	.0000	.000	16	1.0420
34	.000702	.000435	.0020	.0600	.0000	.000	17	1.0420
35	.000773	.000475	.0020	.0600	.0000	.000	18	1.0420
36	.000841	.000514	.0020	.0500	.0000	.000	19	1.0500
37	.000904	.000554	.0020	.0500	.0000	.000	20	1.0500
38	.000964	.000598	.0030	.0500	.0000	.000	21	1.0600
39	.001021	.000648	.0030	.0360	.0000	.000	22	1.0550
40	.001079	.000706	.0030	.0360	.0000	.000	23	1.0550
41	.001142	.000774	.0030	.0360	.0000	.000	24	1.0550
42	.001215	.000852	.0030	.0360	.0000	.000	25	1.0550
43	.001299	.000937	.0030	.0360	.0000	.000	26	1.0600
44	.001397	.001029	.0030	.0360	.0000	.000	27	1.0500
45	.001508	.001124	.0030	.0360	.0000	.045	28	1.0500
46	.001616	.001223	.0030	.0360	.0000	.045	29	1.0500
47	.001734	.001326	.0010	.0400	.2500	.045	30	1.0500
48	.001860	.001434	.0010	.0400	.2500	.045	31	1.0400
49	.001995	.001550	.0010	.0400	.2500	.045	32	1.0400
50	.002138	.001676	.0035	.0500	.2700	.045	33	1.0400
51	.002449	.001852	.0050	.0500	.2700	.070	34	1.0400
52	.002667	.002018	.0050	.0500	.2700	.050	35	1.0400
53	.002916	.002207	.0025	.0500	.2700	.050	36	1.0400
54	.003196	.002424	.0025	.0500	.3000	.065	37	1.0400
55	.003624	.002717	.0025	.0500	.4500	.025	38	1.0400
56	.004200	.003090	.0025	.0500	.2500	.025	39	1.0400
57	.004693	.003478	.0025	.0500	.2500	.080	40	1.0400
58	.005273	.003923	.0010	.0500	.2500	.080	41	0.0000
59	.005945	.004441	.0010	.0500	.2500	.060	42	0.0000
60	.006747	.005055	.0010	.0500	.3000	.040	43	0.0000
61	.007676	.005814	.0010	.0500	.3000	.040	44	0.0000
62	.008757	.006657	.0010	.0500	.3000	.040	45	0.0000
63	.010012	.007648	.0010	.0500	.3000	.040	46	0.0000
64	.011280	.008619	.0010	.0000	.3000	.040	47	0.0000
65	.012737	.009706	.0000	.0500	.3000	.040	48	0.0000
66	.014409	.010954	.0000	.0500	.3000	.040	49	0.0000
67	.016075	.012163	.0000	.0000	.9900	.040	50	0.0000
68	.017871	.013445	.0000	.0000	.9900	.000	51	0.0000
69	.019802	.014860	.0000	.0000	.9900	.000	52	0.0000
70	.022206	.016742	.0000	.0000	.9900	.000	53	0.0000
71	.024570	.018579	.0000	.0000	.9900	.000	54	0.0000
72	.027281	.020665	.0000	.0000	.9900	.000	55	0.0000
73	.030387	.022970	.0000	.0000	.9900	.000	56	0.0000
74	.033900	.025458	.0000	.0000	.9900	.000	57	0.0000



**EXHIBIT 7**  
**DEVELOPMENT OF TARGET RATIO**

Funded Ratio of the System as of the 1986 fiscal year end .93194

Number of years elapsed since the 1986 fiscal year end multiplied by  
1/30<sup>th</sup> of the difference between 100% and the Initial Funded Ratio .05218

Changes in Funded Ratio after the 1986 fiscal year end:

<u>Date of Change</u>	<u>Change in funded Ratio</u>
<u>6/30/87</u>	<u>-.08841</u>
<u>6/30/88</u>	<u>.12270</u>
<u>6/30/91</u>	<u>-.00911</u>
<u>6/30/93</u>	<u>-.01350</u>
<u>6/30/96</u>	<u>-.01671</u>
<u>6/30/99</u>	<u>-.00572</u>
<u>6/30/00</u>	<u>-.05719</u>
<u>6/30/04</u>	<u>-.00961</u>
<u>6/30/05</u>	<u>.03942</u>
<u>6/30/09</u>	<u>-.01087</u>

Total Change in Funded Ratio -.04900

Number of years elapsed since the date of each change multiplied by  
1/30<sup>th</sup> of the amount of opposite arithmetic sign of such change:

<u>Date of Change</u>	<u>Amortization of Change</u>
<u>6/30/87</u>	<u>.06483</u>
<u>6/30/88</u>	<u>-.08589</u>
<u>6/30/91</u>	<u>.00547</u>
<u>6/30/93</u>	<u>.00720</u>
<u>6/30/96</u>	<u>.00724</u>
<u>6/30/99</u>	<u>.00191</u>
<u>6/30/00</u>	<u>.01716</u>
<u>6/30/04</u>	<u>.00160</u>
<u>6/30/05</u>	<u>-.00526</u>
<u>6/30/09</u>	<u>.00000</u>

Total Amortization of Changes .01426

Target Ratio as of the end of the just completed fiscal year .94938

Actual Funded Ratio of the system as of the just completed fiscal year .65235

This system has not met the target ratio required to grant a cost-of-living increase to current benefit recipients.

## EXHIBIT A

**AMORTIZATION OF UNFUNDED  
ACTUARIAL ACCRUED LIABILITY  
VALUATION RATE 7.50%**

JUNE 30, 2009

<u>DATE</u> <u>6/30</u>	<u>DESCRIPTION</u>	<u>AMTZ.</u> <u>METHOD</u>	<u>AMTZ.</u> <u>PERIOD</u>	<u>INITIAL</u> <u>LIABILITY</u>	<u>YEARS</u> <u>REMAING</u>	<u>REMAINING</u> <u>BALANCE</u>	<u>MID-YEAR</u> <u>PAYMENT</u>
1996	Change in Liability	L	15	-27,209,779	2	-5,447,304	-2,926,013
1997	Change in Liability	L	15	7,807,987	3	2,268,379	841,299
1998	Change in Liability	L	15	-50,648,475	4	-18,987,857	-5,467,821
1999	Change in Liability	L	15	-45,292,161	5	-20,549,565	-4,898,745
2000	Change in Liability	L	15	-4,827,975	6	-2,545,958	-523,140
2001	Change in Liability	L	15	90,820,890	7	54,138,859	9,858,426
2002	Change in Liability	L	30 <sup>1</sup>	207,093,231	23	188,947,810	16,863,393
2003	Change in Liability	L	30	184,314,964	24	171,079,216	15,023,577
2004	Change in Liability	L	30	31,940,093	25	30,118,022	2,605,951
2005	Change in Liability	L	30	-99,765,418	26	-95,449,698	-8,147,262
2006	Change in Liability	L	30	-35,359,493	27	-34,254,716	-2,887,604
2007	Change in Liability	L	30	-84,963,993	28	-83,258,951	-6,938,516
2008	Change in Liability	L	30	63,387,672	39	62,774,635	5,176,503
2009	Change in Liability	L	30	448,280,459	30	<u>448,280,459</u>	<u>36,608,4610</u>
TOTAL OUTSTANDING BALANCE						697,113,331	55,188,509
<b>EMPLOYER'S CONTRIBUTION VARIANCE</b>							
1995	Contribution Variance	L	15	303,610	1	31,425	32,582
1996	Contribution Variance	L	15	227,328	2	45,510	24,446
1997	Contribution Variance	L	15	76,966	3	22,360	8,293
1998	Contribution Variance	L	15	-176,672	4	-66,233	-19,073
1999	Contribution Variance	L	15	89,574	5	40,641	9,688
2000	Contribution Variance	L	15	15,208	6	8,020	1,648
2001	Contribution Variance	L	15	-65,357	7	-38,959	-7,094
2002	Contribution Variance	L	15	-88,166	8	-58,220	-9,587
2003	Contribution Variance	L	15	-225,280	9	-162,280	-24,537
2004	Contribution Variance	L	15	13,640,571	10	10,590,457	1,488,086
2005	Contribution Variance	L	15	-2,113,182	11	-1,751,287	-230,895
2006	Contribution Variance	L	15	-2,889,137	12	-2,531,775	-315,678
2007	Contribution Variance	L	15	-4,778,013	13	-4,398,419	-522,064
2008	Contribution Variance	L	15	-11,106,672	14	-10,681,428	-1,213,558
2009	Contribution Variance	L	15	3,102,817	15	<u>-3,102,817</u>	<u>-339,029</u>
TOTAL EMPLOYER CREDIT						-5,847,371	-438,717
<b>TOTAL UNFUNDED ACTUARIAL ACCRUED LIABILITY</b>						691,265,960	

<sup>1</sup>Act 1079 of 2003 changed amortization period effective June 30, 2002