[^0]1624 LaSalle Parc Drive

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, 2008.

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.

## Board of Trustees

MPERS
October 17, 2008

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

June 30, 2008
I. Membership Census

1) Retirees
3,896
2) Actives
5,908
213
3) DROP
II. Annual Benefits
III. Total Payroll
IV. Valuation Assets
V. Investment Yield

| Market Value | $-7.63 \%$ |
| :---: | :---: |
| 5 year avg. | $7.61 \%$ |
| 10 year avg. | $4.50 \%$ |
| Actuarial Value | $\underline{6.41 \%}$ |
| 5 year avg. | $10.04 \%$ |
| 10 year avg. | $5.90 \%$ |
| DROP Accounts | $\underline{5.91 \%}$ |

DROP Accounts
\$ 85,848,060
252,562, 020
1,600,941,810
$43,428,131$
$17.20 \%$
Pension Accruals
(Normal Costs)
VI. Cost to Fund Annual
VII. Unfunded Actuarial

Accrued Liability
VIII. Funded Percentage

240,293,185
86.9\%

39, 837,614
17.39\%

38,555,196
IX. Funding Requirements (Mid Year Payment)

| 1) | Employee Rate | 7.50\% | 7.50\% | 7.50\% |
| :---: | :---: | :---: | :---: | :---: |
| 2) | Employer Rate ${ }^{1}$ | 10.25\% | 10.50\% | 15.50\% |
|  | Premium Tax Allocation ${ }^{1}$ (Current Year) | 15,000,000(est) | 14,455,288 | 12,817,414 |
| 3) | Projected Employer Rate ${ }^{1}$ (Next Year) | 11.00\%(est) | 9.50\% | 13.75\% |

Funding requirement measures the cost of benefits in effect on June 30, 2008.
${ }^{1}$ 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.

Board of Trustees
MPERS
October 17, 2008

## Changes in Unfunded Actuarial Liability

The Actuarial Valuation for the plan year ending June 30, 2008 discloses an increase in the value of the plan's unfunded actuarial accrued liability due primarily to favorable 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 $\$ \$ 188.2$ million to $\$ 240.3$ 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 6/30/2007
\$ 188,239, 087

INCREASES

Interest on Unfunded Liability 14,117,932
Investment Loss 16,478,804

Experience Loss 44,821,037

Retiree COLA 2,087,831
Incurred Increases 77,505,604

DECREASES
Amortization Payment 14,344,834
Employer Contribution Variance $\quad 11,106,672$

Incurred Decreases 25,451,506

UNFUNDED LIABILITY 6/30/2008

Board of Trustees
MPERS
October 17, 2008

## 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 $4 / 10^{\text {th }}$ 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
October 17, 2008

## 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$6 / 30 / \mathrm{YY}$

| Employee Rate | Employer Rate | $\begin{aligned} & \text { IPT } \\ & \text { Rate } \end{aligned}$ | Insurance Premium | Unfunded Liability | Funded Percent | Market Yield | Actuarial Yield |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7.00\% | 9.00\% | 1.63\% | 1,538,104 | 2,361,789 | 99.6\% | 8.20\% | 8.81\% |
| 8.00\% | 9.00\% | 12.55\% | 12,153,985 | 4,252,517 | 99.3\% | 12.63\% | 10.06\% |
| 8.00\% | 9.00\% | 3.49\% | 3,418,553 | -7,285,866 | 101.1\% | 13.14\% | 13.03\% |
| 7.50\% | 9.00\% | 2.88\% | 2,822,166 | -3,640,164 | 100.5\% | 0.32\% | 7.81\% |
| 7.50\% | 9.00\% | 2.74\% | 2,751,785 | 6,618,618 | 99.1\% | 12.09\% | 5.50\% |
| 7.50\% | 9.00\% | 3.41\% | 3,569,803 | -27,156,135 | 103.3\% | 11.07\% | 12.97\% |
| 7.50\% | 9.00\% | 4.05\% | 5,005,376 | -18,182,503 | 102.0\% | 13.86\% | 14.90\% |
| 7.50\% | 9.00\% | 1.14\% | 1,498,487 | -68,156,543 | 107.2\% | 14.80\% | 12.44\% |
| 7.50\% | 9.00\% | 2.12\% | 3,041,136 | -110, 425,877 | 110.6\% | 9.26\% | 13.71\% |
| 7.50\% | 9.00\% | 0.00\% | 0 | -110,301, 247 | 109.5\% | 3.66\% | 7.91\% |
| 7.50\% | 9.00\% | 0.00\% | 0 | -14, 071,173 | 101.1\% | -3.35\% | 2.06\% |
| 7.50\% | 9.00\% | 0.00\% | 0 | 195,180, 068 | 85.9\% | -5.41\% | -5.10\% |
| 7.50\% | 15.25\% | 2.44\% | 4,806,272 | 379,484,302 | 73.9\% | 3.90\% | -7.12\% |
| 7.50\% | 21.50\% | 4.16\% | 8,689,205 | 423,352, 255 | 72.9\% | 12.87\% | 7.80\% |
| 7.50\% | 20.25\% | 4.70\% | 10,135,228 | 318,760,111 | 79.5\% | 9.34\% | 9.44\% |
| 7.50\% | 16.50\% | 5.17\% | 11,539,000 | 279,073,905 | 83.1\% | 8.72\% | 13.20\% |
| 7.50\% | 13.75\% | 5.59\% | 12,817,388 | 181,195,765 | 89.4\% | 16.46\% | 13.58\% |
| 7.50\% | 9.50\% | 5.72\% | 14,455,288 | 240,293,185 | 86.9\% | -7.63 | 6.41\% |

## 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 July 16, 2004 can be obtained from the Retirement System Office.

Board of Trustees
MPERS
October 17, 2008

## Legislative Changes

Act 110 changes the non-service disability eligibility requirement from 5 years to 10 years of service. The Act is effective July 1, 2008.

Act 113 grants the Board of Trustees the authority to grant one future, one-time, permanent $3 \%$ cost-of-living adjustment to retirees and survivors from excess interest earnings. This adjustment is not subject to the Target Ratio criteria.

Act 827 grants to members eligible to participate in DROP on or after January 1, 2004 the right to make an irrevocable election to waive his rights as protected by the Constitution of Louisiana relative to the interest earned by his DROP account in lieu of money market rates.

## 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, 2008 the funding target is .95671, which is greater than the current .86949 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

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## 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.
I. Normal Costs
(to fund annual pension accruals)
Active Members with Complete Data
a) Retirement Benefits
b) Disability Benefits
c) Survivor Benefits
d) Voluntary Termination
e) Expenses

TOTAL NORMAL COST

| $\$ 33,076,389$ | 13 |
| ---: | ---: |
| $2,499,148$ |  |
| $1,365,910$ |  |
| $5,392,684$ |  |
| $1,094,000$ |  |
| $43,428,131$ | 17 |

13.10\%
. $99 \%$
.54\%
2.14\%
.43\%

| \$ 29,949,257 | $13.07 \%$ |
| ---: | ---: |
| $2,575,620$ | $1.13 \%$ |
| $1,245,857$ | $.55 \%$ |
| $5,002,880$ | $2.18 \%$ |
| $1,064,000$ | $.46 \%$ |
|  |  |
| $39,837,614$ | $17.39 \%$ |

II. Actuarial Accrued Liability
a) Active Members

1) Retirement Benefits
2) Disability Benefits
3) Survivor Benefits
4) Voluntary Termination

$$
\begin{array}{rr}
705,546,161 & 634,105,691 \\
12,864,760 & 10,019,922 \\
11,022,848 & 10,011,043 \\
19,146,099 & 17,532,326 \\
\hline & \\
748,579,868 & 671,668,982
\end{array}
$$

b) Retired and Inactive Members

1) Regular Retirees

$$
\begin{array}{r}
693,227,166 \\
33,607,018 \\
108,807,918 \\
9,006,630 \\
4,205,886 \\
163,252,327 \\
80,548,182 \\
\hline 1,092,655,127
\end{array}
$$

665,513,409
2) Disabled Retirees
3) Survivors
4) Vested Deferred \& Transfers
5) Contributions Refunded
6) DROP Deferred Benefits
7) DROP Account Balance

32,650,137
104, 125, 361
9,277,591
3,915,829
158,513,499
$73,871,563$
$1,047,867,389$

TOTAL ACCRUED LIABILITY
1,841,234,995
$1,719,536,371$

## Exhibit 1 (Continued)

## Costs, Liabilities \& Contributions

```
June 30, 2008
$ 1,841,234,995
1,600,941, 810
1,531,297,284
IV. Unfunded Actuarial Accrued Liabilities - (Surplus)
240,293,185
188,239, 087
a) Change over prior year
b) Funded Percentage
52, 054, 098
-90, 834, 818
86.9\%
89.05\%
```

V. Employer Contributions

To Fund current Plan Year ${ }^{1}$
a) Employer Portion of Normal Cost
b) Amortization Payments
c) Employer Shortfall Credit
TOTAL Required Contribution Estimated Premium Tax Offset
Net Employer Contribution

| 25,387,604 | 23,485, 819 |
| :---: | :---: |
| 18,580, 048 | 13,403,545 |
| -802,173 | 431,841 |
| 43,165,479 | 37,321,205 |
| 15,000,000 (est) | 14,455,288 |
| 28,165,479 | 22,865,917 |
| 10.25\% (est) | 10.00\% |

VI. Projected Employer Contributions

To Fund Next Plan Year ${ }^{1}$
a) Employer Portion of Normal Cost
b) Amortization Payments
c) Employer Shortfall Credit
TOTAL Projected Contribution Estimated Premium Tax Offset Net Employer Contribution
VII. Current Payroll
Projected Payroll - Mid Year
Projected Payroll - Next Year

| 26,522,497 | 24,532,866 |
| :---: | :---: |
| 18,580, 048 | 13,403,545 |
| -487,184 | -445,286 |
| 44,615,361 | 37,491,125 |
| 15,000,000 (est) | 14,455,288 |
| 29,615,361 | 22,904, 041 |
| 11.00\% (est) | 9.50\% |
| 252,562, 020 | 229,145, 048 |
| 256,480,197 | 232, 675, 127 |
| 267,945,538 | 243,048,266 |

${ }^{1}$ 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 <br> FOR FISCAL YEAR ENDING

OPERATING REVENUES:

1. Contribution Income

Member
Employer
2. Other Income

General Fund/Premium Tax

$$
12,217,914
$$

Merger Interest
Transfers
Miscellaneous
TOTAL CONTRIBUTIONS

$$
\frac{319,768}{66,744,263}
$$

3. Investment Income

Investments
4. Total Revenues
-118, 410, 098
$-4,493,097$
$-122,903,195$
$-53,595,451$
June 30, 2008

$$
\$ 17,157,738
$$

Less, Manager fees TOTAL INVESTMENT INCOME

$$
\begin{array}{r}
\$ 18,637,104 \\
35,174,945
\end{array}
$$

$$
\begin{array}{r}
14,455,288 \\
84,889 \\
955,158 \\
360 \\
\hline 69,307,744
\end{array}
$$

---------Prior Years-------June 30, 2007 June 30, 2006

$$
\begin{array}{r}
12,817,388 \\
96,467 \\
343,337 \\
681 \\
\hline 66,282,613
\end{array}
$$

\$ 16, 878, 085
35,867, 002
37,221,473

## OPERATING EXPENSES:

1. General Administration Other Expenses
92, 841, 073
2. Benefits Paid
a) Pension Benefits
b) Return of Contrib.
c) Transfers TOTAL BENEFITS PAID
3. Total Expenses

$$
\begin{array}{r}
1,094,511 \\
94,896
\end{array}
$$

$$
\begin{array}{r}
1,063,168 \\
94,428
\end{array}
$$

892,225
561, 868

| $\frac{-5,173,962}{232,956,935}$ | $\frac{-4,019,378}{114,870,803}$ |
| :--- | :--- |
| $299,239,548$ | $181,615,066$ |

299, 239, 548
181, 615, 066

92, 841, 073
2,842,220
$\frac{0}{95,683,293}$
96, 872,700
$-150,468,151$
206, 328, 256
91, 999, 875

## EXHIBIT 2 (Continued)

Financial Summary

## FINANCIAL SUMMARY STATEMENT OF ASSETS FOR FISCAL YEAR ENDING

June 30, 2008
\$ 16, 264, 396
39, 380, 469
$199,014,122$
87, 264, 987
130, 495, 197
$44,693,248$
3. Equities, Insurance Agreements

Domestic Stock
Foreign Stocks
4. Other Investments
5. Other Assets

Property/Equipment
Real Estate
Receivables (-) Payables
Receivables from Mergers

TOTAL ASSETS
Market Value
Valued at Cost

1,476,652,461
$1,438,094,799$
, , ,

1. Short Term Assets

Cash in Banks
Cash Equivalents
2. Bonds

Domestic and Foreign
Pooled Funds
Real Estate Funds
Mutual Funds

644,791,428
176,653,335

83,504,186

2,517,916
21, 125, 881
29,746,917
1,200,379
--------Prior Years--------
June 30, 2007 June 30,2006

## ASSETS

## INVESTMENT YIELD:

To Actuarial Value
-Net of Mergers
DROP Account Yield
Market Value
$6.41 \%$
$6.41 \%$
$5.91 \%$
$-7.63 \%$
$13.57 \%$
$13.58 \%$
$13.08 \%$
$16.46 \%$
13.20\%

634,416,607 568,232,813
342,868,811 228,978,543

98,553,462 1,779,569

|  |  |
| ---: | ---: |
| $2,574,618$ | $2,639,998$ |
| $19,994,127$ | $83,753,228$ |
| $36,443,184$ | $-63,536,182$ |
| $1,336,889$ | $1,537,367$ |

$$
\begin{array}{rr}
\$ 9,295,570 & \$ 10,882,724 \\
35,964,735 & 29,054,919
\end{array}
$$

| $183,798,885$ | $206,779,897$ |
| ---: | ---: |
| $71,772,589$ | $203,729,874$ |
| $133,418,423$ | $146,959,606$ |
| $56,682,712$ | $\mathrm{n} / \mathrm{a}$ |

$$
\begin{array}{ll}
1,627,120,612 & 1,420,792,356 \\
1,349,537,379 & 1,247,655,333
\end{array}
$$

ACTUARIAL VALUE OF ASSETS:

```
TOTAL Assets, less
Change in Unrealized (G/L)
    Plan Year - 2 (wt. 1/4)
    Plan Year - 1 (wt. 2/4)
    Plan Year (wt. 3/4)
```

    Valuation Assets
    $1,476,652,461$

11,026,896
104,446,210
-239,025,571

1,600, 941, 810

1,627,120,612

47,900, 892
11, 026, 896
104,446,210
1,531,297,284

1,420,792,356

66,360,372
47,900, 892
11,026,896

1,371,981, 645

## EXHIBIT 3

## PENSION ACCOUNTING <br> 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 | Actuarial | Unfunded |  |  | UAAL as a |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Actuarial | Value of | Accrued | AAL | Funded | Covered | Percentage of |
| Valuation | Assets | Liability (AAL) | (UAAL) | Ratio | Payroll | Payroll |
| Date | (a) | (b) | (b-a) | (a/b) | (c) | ( $(\mathrm{b}-\mathrm{a}) / \mathrm{c})$ |
| 1999 | 1,148,896 | 1,038,470 | -110, 426 | 110.6 | 143,670 | -76.9 |
| 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 | 1,841,234 | 240,293 | 86.9 | 252,562 | 95.1 |

The total actuarial accrued liability determined using the Individual Entry Age Normal cost method increased by $\$ 121,698,624$ from June 30,2007 to June 30,2008 . There was a net experience loss of $\$ 44,821,037$.

## EXHIBIT 3 (Continued)

## Pension Accounting \& Financial Disclosure

## SUPPLEMENTARY INFORMATION

## SCHEDULE OF EMPLOYER CONTRIBUTIONS

| Fiscal Year | Actuarial Required Contribution $^{\mathbf{1}}$ | Percent Contributed | Annual Pension Cost (APC) ${ }^{\frac{1}{1}}$ | Actual Contribution ${ }^{1}$ | Percentage of APC Contributed | Net <br> Pension Obligation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1999 | 13,568,502 | 99.3 | 13,578,983 | 13,478,928 | 99.3 | 63,093 |
| 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, 074,581 | 51,457,721 | 128.4 | -9,099,441 |

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
(2) Interest on Net Pension Obligation
(3) Amortization of Net Pension Obligation
(4) Accrued Pension Cost(1)+(2)-(3)
(5) Employer Contribution
(6) Increase (-decrease) in Net Pension Obligation
(7) Net Pension Obligation Beginning of Year
(8) Net Pension Obligation End of Year (6) + (7)
\$40, 351, 047
171,277
$\frac{447,742}{40,074,581}$

51,457,721
-11, 383, 140
2,283,698
$-9,099,442$

1
${ }^{1}$ 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

| Fiscal | Revenues by Source |  |  | Total |
| :---: | :---: | :---: | :---: | :---: |
|  | Members | Employer | Investment |  |
| Year End | Contribution | Contribution | Income |  |
| 1999 | 10, 930, 972 | 43,841, $701^{1}$ | 99,479,917 | 154, 252,590 |
| 2000 | 12, 376,419 | $87,844,851^{1}$ | 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 | $-53,595,451$ |

## Expenses by Type

| Fiscal |  |  |
| :---: | :---: | :---: |
| Year End | Benefits | Refunds |
| 1999 | 50,777, 251 | 1,752,904 |
| 2000 | 54,814,794 | 2,027,856 |
| 2001 | 59,414,407 | 2,689,175 |
| 2002 | 67,241,501 | 2,767,657 |
| 2003 | 71,862,749 | 2,491,874 |
| 2004 | 76,534,487 | 2,143,792 |
| 2005 | 82,597,961 | 2,565,141 |
| 2006 | 83,500,279 | 4,660,819 |
| 2007 | 87,910,584 | 3,843,112 |
| 2008 | 92,841, 073 | 2,842,220 |


| Administrative <br> Expenses | Total |
| :---: | :---: |
|  | 2 |
| 714,756 | $53,244,911$ |
| 701,576 | $57,544,226$ |
| 784,496 | $62,888,078$ |
| 860,049 | $70,869,207$ |
| 983,765 | $75,338,388$ |
| 946,014 | $79,624,293$ |
| $1,041,947$ | $86,205,049$ |
| $1,454,093$ | $89,615,191$ |
| $1,157,596$ | $92,911,292$ |
|  |  |
| $1,189,407$ | $96,872,700$ |

[^1]
## 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:

|  | $\begin{array}{r} --2008-- \\ \text { Census } \\ \hline \end{array}$ | $\begin{gathered} --2007--- \\ \text { Census } \end{gathered}$ | $\begin{gathered} --2006-- \\ \text { Census } \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| Active Members | 5,705 | 5,645 | 5,575 |
| DROP to Active | 203 | 195 | 194 |
| Regular Retirees | 2,671 | 2,613 | 2,517 |
| Disability Retirees | 200 | 201 | 208 |
| Survivors | 1,025 | 1,020 | 1,014 |
| Vested \& Reciprocals | 114 | 108 | 99 |
| Due Refunds | 1,095 | 993 | 926 |
| DROP Participants | 213 | 217 | 227 |
| TOTAL | 11,226 | 10,992 | 10,760 |

MEMBERSHIP PROFILE
CATEGORIZED BY AGE AND YEARS EMPLOYED

CELLS DEPICT - $\quad$\begin{tabular}{l}
MEMBER COUNT <br>
<br>

$\quad$

TOTAL SALARY
\end{tabular}

MUNICIPAL POLICE SYSTEM ACTIVE MEMBERS

VALUATION DATE 6/30/2008



MEMBERSHIP PROFILE
CATEGORIZED BY AGE AND YEARS RETIRED
CELLS DEPICT - MEMBER COUNT

MUNICIPAL POLICE SYSTEM DISABILITY RETIREES

VALUATION DATE 6/30/2008



MEMBERSHIP PROFILE
CATEGORIZED BY AGE AND YEARS EMPLOYED

CELLS DEPICT $-\quad$| MEMBER COUNT |
| :--- |

MUNICIPAL POLICE SYSTEM TERM-VESTED/RECIPROCAL

VALUATION DATE 6/30/2008


## 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:
$31 / 3 \%$ 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:
$31 / 3 \%$ 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.

## 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 Reg.1.412(c)(2)-1-(6) \& (7) 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 fiveyear observation period (1999-2003) 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 1983 Sex Distinct Group Annuity Mortality Table for the current valuation; 1971 GAM in valuations prior to June 30, 2005.

## DISABILITY ASSUMPTION:

Rates of total and permanent disability were projected by age in accordance with the Eleventh Actuarial Valuation of the Railroad Retirement System. For mortality after disability, rates were on the Eleventh Actuarial Valuation of the Railroad Retirement System for occupational disabilities. As an approximation of the Railroad Retirement tables, an age set-up of the 1971 GAM table was used equal to $1 / 2$ the rate at disability and the rate at age 82

## 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 1999-2003 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 | $1.25 x$ |
| :--- | :--- |
| 2nd year | $1.00 x$ |
| 3rd year | $1.00 x$ |
| 4th year | $1.00 x$ |
| 5th year | $1.00 x$ |

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 1983 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:

| Age at <br> Death | Number of <br> Minor Chn. | Years for Youngest <br> Child to Attain Majority |
| :---: | :---: | :---: |
| 25 | 1.3 | 17 |
| 30 | 1.8 | 15 |
| 35 | 2.2 | 13 |
| 40 | 2.1 | 10 |
| 45 | 1.7 | 8 |
| 50 | 1.2 | 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 6/30/2004

| Age | - Death Male | Rates Female | Disability <br> Rates | Termination Rates | Retirement Rates | DROP <br> Rates | Dur | Salary Scale |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 18 | . 00035 | . 00017 | . 0001 | . 1100 | . 0000 | . 000 | 1 | 1.1500 |
| 19 | . 00036 | . 00018 | . 0001 | . 1100 | . 0000 | . 000 | 2 | 1.1000 |
| 20 | . 00038 | . 00019 | . 0001 | . 1000 | . 0000 | . 000 | 3 | 1.0600 |
| 21 | . 00039 | . 00020 | . 0001 | . 1000 | . 0000 | . 000 | 4 | 1.0600 |
| 22 | . 00041 | . 00021 | . 0001 | . 1000 | . 0000 | . 000 | 5 | 1.0600 |
| 23 | . 00042 | . 00023 | . 0001 | . 0950 | . 0000 | . 000 | 6 | 1.0600 |
| 24 | . 00044 | . 00024 | . 0001 | . 0950 | . 0000 | . 000 | 7 | 1.060 |
| 25 | . 00046 | . 00025 | . 0001 | . 0950 | . 0000 | . 000 | 8 | 1.0550 |
| 26 | . 00049 | . 00027 | . 0010 | . 0950 | . 0000 | . 000 | 9 | 1.0550 |
| 27 | . 00051 | . 00028 | . 0010 | . 0950 | . 0000 | . 000 | 10 | 1.0550 |
| 28 | . 00054 | . 00030 | . 0010 | . 0950 | . 0000 | . 000 | 11 | 1.0550 |
| 29 | . 00057 | . 00032 | . 0015 | . 0750 | . 0000 | . 000 | 12 | 1.0500 |
| 30 | . 00061 | . 00034 | . 0015 | . 0750 | . 0000 | . 000 | 13 | 1.0500 |
| 31 | . 00065 | . 00036 | . 0015 | . 0650 | . 0000 | . 000 | 14 | 1.0500 |
| 32 | . 00069 | . 00039 | . 0015 | . 0650 | . 0000 | . 000 | 15 | 1.0500 |
| 33 | . 00073 | . 00041 | . 0015 | . 0650 | . 0000 | . 000 | 16 | 1.0500 |
| 34 | . 00078 | . 00044 | . 0015 | . 0650 | . 0000 | . 000 | 17 | 1.0440 |
| 35 | . 00086 | . 00048 | . 0015 | . 0650 | . 0000 | . 000 | 18 | 1.0440 |
| 36 | . 00091 | . 00050 | . 0015 | . 0400 | . 0000 | . 000 | 19 | 1.0440 |
| 37 | . 00097 | . 00054 | . 0035 | . 0400 | . 0000 | . 000 | 20 | 1.0440 |
| 38 | . 00104 | . 00057 | . 0035 | . 0400 | . 0000 | . 000 | 21 | 1.0440 |
| 39 | . 00113 | . 00062 | . 0035 | . 0400 | . 0000 | . 000 | 22 | 1.0440 |
| 40 | . 00124 | . 00066 | . 0035 | . 0400 | . 0000 | . 000 | 23 | 1.0440 |
| 41 | . 00137 | . 00072 | . 0035 | . 0400 | . 0000 | . 000 | 24 | 1.0440 |
| 42 | . 00153 | . 00078 | . 0035 | . 0400 | . 0000 | . 000 | 25 | 1.0400 |
| 43 | . 00172 | . 00084 | . 0035 | . 0400 | . 2500 | . 000 | 26 | 1.0400 |
| 44 | . 00193 | . 00092 | . 0035 | . 0400 | . 2500 | . 150 | 27 | 1.0400 |
| 45 | . 00218 | . 00101 | . 0035 | . 0400 | . 2500 | . 150 | 28 | 1.0400 |
| 46 | . 00247 | . 00112 | . 0035 | . 0400 | . 2500 | . 350 | 29 | 1.0400 |
| 47 | . 00279 | . 00124 | . 0035 | . 0400 | . 2500 | . 350 | 30 | 1.0400 |
| 48 | . 00314 | . 00137 | . 0035 | . 0400 | . 1500 | . 400 | 31 | 1.0400 |
| 49 | . 00351 | . 00151 | . 0035 | . 0400 | . 1500 | . 150 | 32 | 1.0400 |
| 50 | . 00391 | . 00165 | . 0035 | . 1000 | . 3000 | . 400 | 33 | 1.0400 |
| 51 | . 00432 | . 00179 | . 0035 | . 0500 | . 2500 | . 400 | 34 | 1.0400 |
| 52 | . 00475 | . 00195 | . 0035 | . 0500 | . 2500 | . 200 | 35 | 1.0400 |
| 53 | . 00520 | . 00212 | . 0035 | . 0500 | . 3000 | . 150 | 36 | 1.0400 |
| 54 | . 00566 | . 00231 | . 0060 | . 0500 | . 3500 | . 150 | 37 | 1.0400 |
| 55 | . 00613 | . 00254 | . 0060 | . 0500 | . 5000 | . 200 | 38 | 1.0400 |
| 56 | . 00662 | . 00280 | . 0100 | . 0500 | . 2500 | . 300 | 39 | 1.0400 |
| 57 | . 00714 | . 00310 | . 0010 | . 0500 | . 2000 | . 200 | 40 | 1.0400 |
| 58 | . 00772 | . 00344 | . 0010 | . 0500 | . 2000 | . 150 | 41 | 1.0400 |
| 59 | . 00838 | . 00382 | . 0010 | . 0500 | . 2000 | . 150 | 42 | 1.0400 |
| 60 | . 00916 | . 00424 | . 0010 | . 0500 | . 5000 | . 150 | 43 | 1.0400 |
| 61 | . 01006 | . 00470 | . 0010 | . 0500 | . 5000 | . 000 | 44 | 1.0400 |
| 62 | . 01113 | . 00521 | . 0010 | . 0500 | . 1500 | . 000 | 45 | 1.0400 |
| 63 | . 01239 | . 00577 | . 0000 | . 0500 | . 1500 | . 000 | 46 | 1.0400 |
| 64 | . 01387 | . 00639 | . 0000 | . 0500 | . 5000 | . 000 | 47 | 1.0400 |
| 65 | . 01559 | . 00706 | . 0000 | . 0500 | . 5000 | . 000 | 48 | 1.0400 |
| 66 | . 01758 | . 00782 | . 0000 | . 0500 | . 5000 | . 000 | 49 | 1.0400 |
| 67 | . 01980 | . 00868 | . 0000 | . 0000 | . 5000 | . 000 | 50 | 1.0400 |
| 68 | . 02223 | . 00970 | . 0000 | . 0000 | . 9900 | . 000 | 51 | 1.0400 |
| 69 | . 02482 | . 01092 | . 0000 | . 0000 | . 9900 | . 000 | 52 | 1.0400 |
| 70 | . 02753 | . 01238 | . 0000 | . 0000 | . 9900 | . 000 | 53 | 1.0400 |
| 71 | . 03035 | . 01413 | . 0000 | . 0000 | . 9900 | . 000 | 54 | 1.0400 |
| 72 | . 03337 | . 01616 | . 0000 | . 0000 | . 9900 | . 000 | 55 | 1.0400 |
| 73 | . 03668 | . 01848 | . 0000 | . 0000 | . 9900 | . 000 | 56 | 1.0400 |
| 74 | . 04039 | . 02109 | . 0000 | . 0000 | 9900 | . 000 | 57 | 1.0400 |

## 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 $1 / 30^{\text {th }}$ of the difference between $100 \%$ and the Initial Funded Ratio $\qquad$

Changes in Funded Ratio after the 1986 fiscal year end:

| Date of Change | Change in fund |
| :---: | :---: |
| 6/30/87 | -. 08841 |
| 6/30/88 | . 12270 |
| 6/30/91 | -. 00911 |
| 6/30/93 | -. 01350 |
| 6/30/96 | -. 01671 |
| 6/30/99 | -. 00572 |
| 6/30/00 | -. 05719 |
| 6/30/04 | -. 00961 |
| 6/30/05 | . 03942 |

Total Change in Funded Ratio
Number of years elapsed since the date of each change multiplied by $1 / 30^{\text {th }}$ of the amount of opposite arithmetic sign of such change:

| Date of Change | Amortization o |
| :---: | :---: |
| 6/30/87 | . 06189 |
| 6/30/88 | -. 08180 |
| 6/30/91 | . 00516 |
| 6/30/93 | . 00675 |
| 6/30/96 | . 00668 |
| 6/30/99 | . 00172 |
| 6/30/00 | . 01525 |
| 6/30/04 | . 00128 |
| 6/30/05 | -. 00394 |

Total Amortization of Changes
Target Ratio as of the end of the just completed fiscal year
Actual Funded Ratio of the system as of the just completed fiscal year $\qquad$

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, 2008

| DATE |
| :--- |
| $\mathbf{6 / 3 0}$ |
|  |
| 1996 |
| 1997 |
| 1998 |
| 1999 |
| 2000 |
| 2001 |
| 2002 |
| 2003 |
| 2004 |
| 2005 |
| 2006 |
| 2007 |
| 2008 |

## DESCRIPTION

Change in Liability
Change in Liability
Change in Liability
Change in Liability
Change in Liability
Change in Liability
Change in Liability
Change in Liability
Change in Liability
Change in Liability
Change in Liability Change in Liability Change in Liability


TOTAL OUTSTANDING BALANCE

| INITIAL <br> LIABILITY | YEARS <br> REMAING |
| ---: | :---: |
| $-27,209,779$ |  |
| $7,807,987$ | 4 |
| $-50,648,475$ | 5 |
| $-45,292,161$ | 6 |
| $-4,827,975$ | 7 |
| $90,820,890$ | 8 |
| $207,093,231$ | 24 |
| $184,314,964$ | 25 |
| $31,940,093$ | 26 |
| $-99,765,418$ | 27 |
| $-35,359,493$ | 28 |
| $-84,963,993$ | 29 |
| $63,387,672$ | 30 |

MID-YEAR PAYMENT
-2,926, 013
841,299
$-5,467,821$
$-4,898,745$
-523,140
9,858,426
16,863,393
15, 023, 577
2,605,951
$-8,147,262$
-2,887, 604
$-6,938,516$
5,176,503

18,580, 048

## EMPLOYER'S CONTRIBUTION VARIANCE

1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
Contribution Variance
Contribution Variance
Contribution Variance
Contribution Variance
Contribution Variance
Contribution Variance
Contribution Variance
Contribution Variance
Contribution Variance
Contribution Variance
Contribution Variance
Contribution Variance
Contribution Variance
Contribution Variance
Contribution Variance
LOTAL EMPLOYER CREDIT
L
LOTAL UNFUNDED ACTUARIAL
ACCRUED LIABILITY

| $-228,116$ | 1 |
| ---: | ---: |
| 303,610 | 2 |
| 227,328 | 3 |
| 76,966 | 4 |
| $-176,672$ | 5 |
| 89,574 | 6 |
| 15,208 | 7 |
| $-65,357$ | 8 |
| $-88,166$ | 9 |
| $-225,280$ | 10 |
| $13,640,571$ | 11 |
| $-2,113,182$ | 12 |
| $-2,889,137$ | 13 |
| $-4,778,013$ | 14 |
| $-11,106,672$ | 15 |


| $-23,562$ | $-24,430$ |
| ---: | ---: |
| 60,658 | 32,582 |
| 65,913 | 24,446 |
| 28,799 | 8,293 |
| $-80,008$ | $-19,073$ |
| 47,150 | 9,688 |
| 9,050 | 1,648 |
| $-43,084$ | $-7,094$ |
| $-63,404$ | $-9,587$ |
| $-174,624$ | $-24,537$ |
| $11,286,825$ | $1,488,086$ |
| $-1,851,799$ | $-230,895$ |
| $-2,659,607$ | $-315,678$ |
| $-4,595,076$ | $-522,064$ |
| $-11,106,672$ | $-1,213,558$ |

240, 293, 185

[^2]
[^0]:    Charles G. Hall
    F.C.A., M.A.A.A., A.S.A.

    October 17, 2008

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

[^1]:    ${ }^{1}$ Includes merger contract prepayments of $\$ 30,248,342$ in 1999 and $\$ 72,283,023$ in 2000.

    2 Includes other expenses incurred not directly related to the administration of daily operation. (See Exhibit 2).

[^2]:    ${ }^{1}$ Act 1079 of 2003 changed amortization period effective June 30, 2002

