PUBLIC EMPLOYEES' RETIREMENT FUND OF INDIANA

## ACTUARIAL VALUATION

JULY 1, 2009
$\qquad$

PUBLIC EMPLOYEES'

# RETIREMENT FUND OF INDIANA 

ACTUARIALVALUATION

VALUATION DATE<br>PLAN YEAR<br>July 1, 2009<br>July 1, 2009 -- June 30, 2010

# PUBLIC EMPLOYEES' <br> RETIREMENT FUND OF INDIANA 

## Summary of Actuarial Valuation as of July 1, 2009

## Introduction

As of the valuation date there were 147,792 active members, 65,099 pensioners and 10,670 terminated participants entitled to future benefits. See the exhibit labeled Summary of Employee Data for a breakdown of the members between state employees and employees of political subdivisions.

This report establishes the following contributions for the 2009-2010 Year:

|  | State |  | Political Subdivisions |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Annual Cost | \$ | 118,199,909 | \$ | 241,983,391 | \$ | 360,183,300 |
| Cost as \% of Anticipated Payroll |  | 7.00\% |  | 7.88\% |  | 7.57\% |

Beginning with the 2007 valuation, smoothing rules have been applied to the State employer contribution rate to help reduce wide variations in the employer contribution rates from year to year. These smoothing rules are also applied to individual political subdivisions participating in PERF. For the 2008 and 2009 valuations, an additional smoothing rule was applied such that no employer contribution rate decreases from the employer contribution rate developed from the 2007 valuation. The PERF Board of Trustees approved this additional smoothing rule upon recommendation by the actuary and PERF management. The additional smoothing rule is intended for the 2008 and 2009 valuations only, but may be extended to future valuations if deemed necessary.

This report reflects the plan provisions in effect as of July 1, 2009. Refer to the exhibit titled Summary of Major Plan Provisions for a brief description of benefits provided by this plan.

Prior to smoothing, the Total Annual Cost is composed of employer normal cost of $\$ 298,159,870$ and an amortization payment of $\$ 72,839,046$. As of July 1, 2009, the Unfunded Actuarial Accrued Liability is $\$ 936,944,440$. A breakdown and a comparison with the results of the prior valuation are provided in the exhibits titled Contribution Breakdown and Comparison.

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## Introduction, continued

Prior to smoothing, the Total Annual Cost for 2009, as a percent of anticipated payroll, increased to $7.796 \%$ as compared to $6.869 \%$ for 2007. The Fund had experience losses from investments yielding less than the assumed $7.25 \%$ (estimated return for the 2008 plan year was negative $0.94 \%$ on an actuarial value basis). In terms of actual dollars and prior to smoothing, the Total Annual Cost increased by $\$ 20,240,065$ from $\$ 304,924,107$ for the 2008 plan year to $\$ 370,998,916$ for the 2009 plan year.

## Actuarial Methods and Assumptions

The Entry Age Normal Cost Method was continued for determining the cost of retirement benefits, death benefits, disability benefits, and termination benefits. Valuation assets continue to be developed on an actuarial basis.

The actuarial assumptions used in this Valuation have been reviewed and continued from the prior Valuation. These assumptions are deemed to be representative of actual and anticipated future experience.

A brief explanation of the methods and a complete summary of the assumptions used may be found in the exhibits titled Actuarial Methods and Actuarial Assumptions.

## Valuation Data and Disclaimer

The valuation census data was provided by the Public Employees' Retirement Fund and transposed into a computer file for processing. Similar information has been furnished to us in the past, and the accuracy of this report depends on the accuracy of all data that has been furnished to us from time to time. Trust information was also furnished by the Public Employees' Retirement Fund. It is noted that we make no representation concerning the accuracy of any employee data or valuation information that has been furnished to us.

The Valuation has been prepared for the sole purpose of determining the contribution requirements for the respective plan year and for providing accounting data to meet the requirements of GASB \#25 and \#27. The figures in this Valuation should not be used as the basis for any other purpose for which it was not designed.

## Summary of Trust Experience

On an actuarial basis, the entire asset portfolio had net investment income for the 2008-2009 plan year that resulted in an estimated yield of negative $0.94 \%$. The approximate market basis return during the same time period was negative $21.11 \%$. See the exhibit labeled Ten Year Historical Investment Experience for more detail.

We will be pleased to furnish any additional information or answer any questions which may arise after your review of this report.

## PUBLIC EMPLOYEES' <br> RETIREMENT FUND OF INDIANA

## ACTUARIAL CERTIFICATION

The information and valuation results shown in this report are, to the best of my knowledge, complete and accurate and are based upon:

1. Employee census data as of July 1, 2009 submitted by the Public Employees' Retirement Fund (PERF). Although we did not audit this data, it appears to be sufficient and reliable for purposes of the report.
2. Financial data as of July 1, 2009 submitted by PERF. Although we did not audit this data, it appears to be sufficient and reliable for purposes of this report.
3. Actuarial assumptions which were chosen by the PERF Board of Trustees after consultation with the actuary with each assumption deemed to be reasonably related to past experience and to anticipated future experience.
4. Generally accepted actuarial principles and in accordance with the standards of practice by the Actuarial Standards Board.
5. Actuarial methods as stated in the report and our interpretation of plan provisions as summarized in the report.

Prepared and Submitted by
McCready and Keene, Inc.



Mccready andkeene,puc.

## SUMMARY OF CONTRIBUTIONS

TOTAL ANNUAL COST

COST AS PERCENTAGE OF ANTICIPATED PAYROLL
(interest adjusted for mid-year contribution)

| July 1, 2009 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| State** |  | Political Subdiv. |  | Total |  |
| \$ | 118,199,909 | \$ | 241,983,391 | \$ | 360,183,300 |
|  | 7.00\% |  | 7.88\% |  | 7.57\% |


| July 1, 2008 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| State** |  | Political Subdiv. |  | Total |  |
| \$ | 107,981,141 | \$ | 202,590,260 | \$ | 310,571,401 |
|  | 6.5\% |  | 7.1\% |  | 6.8\% |

## ** Smoothing rules:

1. Any increase or decrease between the current year's true rate and the previous year's actual rate shall be limited to one-half the increase or decrease rounded up to the next $0.25 \%$ multiple.
2. After the rounding describe in \#1, any decrease in the emplyer contribution rate shall be equal to the excess, if any, of the decrease over $1 \%$.
The employer contribution rate may not be less than the preceding year's employer contribution rate.
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## DEVELOPMENT OF FUNDED STATUS

|  |  | July 1, 2008 |  | July 1, 2009 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Actuarial Accrued Liability |  |  |  |  |
|  | -- Non-Retired Members | \$ | 6,181,524,200 | \$ | 6,225,705,492 |
|  | -- Annuity Savings Account |  | 2,694,331,410 |  | 2,669,318,240 |
|  | -- Retired, Beneficiaries, and Disabled |  | 4,227,365,567 |  | 4,611,256,619 |
|  | Total | \$ | 13,103,221,177 | \$ | 13,506,280,351 |
| Less: | Total Actuarial Assets |  | 12,780,116,052 |  | 12,569,335,911 |
| Equals: | Unfunded Actuarial Accrued Liability | \$ | 323,105,125 | \$ | 936,944,440 |
| Funded Status |  |  | 97.5\% |  | 93.1\% |

## CHANGE IN UNFUNDED ACTUARIAL ACCRUED LIABILITY

|  | Unfunded Actuarial Accrued Liability, Prior Year | 2007-2008 |  | 2008-2009 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | \$ | 218,863,969 | \$ | 323,105,125 |
| Plus: | Asset Experience (Gain) or Loss | \$ | 235,548,704 | \$ | 1,042,333,456 |
| Plus: | Liability Experience (Gain) or Loss |  | $(128,898,590)$ |  | $(424,818,257)$ |
| Plus: | Additional Liability Due to Change in Actuarial Assumptions |  | 0 |  | 0 |
| Plus: | Additional Liability Due to Change in Plan Provisions |  | 0 |  | 0 |
| Plus: | Amortization of Existing Bases |  | $(2,408,958)$ |  | $(3,675,884)$ |
| Equals: | Change in Unfunded Actuarial Accrued Liability | \$ | 104,241,156 | \$ | 613,839,315 |
|  | Unfunded Actuarial Accrued Liability, Current Year | \$ | 323,105,125 | \$ | 936,944,440 |

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## CONTRIBUTION BREAKDOWN AND COMPARISON

## TOTAL ANNUAL COST

Employer Normal Cost
Amortization of Unfunded Actuarial Accrued Liability Total

ANTICIPATED PAYROLL
COST AS PERCENTAGE OF ANTICIPATED PAYROLL

| July 1, 2009 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| State | Political Subdiv. |  | Total |  |
| \$ 103,491,300 | \$ | 194,668,570 | \$ | 298,159,870 |
| 24,800,374 |  | 48,038,672 |  | 72,839,046 |
| \$ 128,291,674 | \$ | 242,707,242 | \$ | 370,998,916 |
| \$ 1,749,780,803 | \$ | 3,181,642,137 | \$ | 4,931,422,940 |
| 7.598\% |  | 7.905\% |  | 7.796\% |

(interest adjusted for mid-year contribution)
DEVELOPMENT OF UNFUNDED ACTUARIAL ACCRUED LIABILITY

|  | July 1, 2009 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | State |  | Political Subdiv. |  | Total |  |
| Actuarial Accrued Liability |  |  |  |  |  |  |
| - Active Members | \$ | 2,263,622,086 | \$ | 3,552,449,183 | \$ | 5,816,071,269 |
| - Terminated Vested Members |  | 179,417,239 |  | 230,216,984 |  | 409,634,223 |
| Total | \$ | 2,443,039,325 | \$ | 3,782,666,167 | \$ | 6,225,705,492 |
| Less: Non-Retired Member Assets |  | 2,121,550,162 |  | 3,167,210,890 |  | 5,288,761,052 |
| Equals: Actual Unfunded Actuarial Accrued Liability (UAAL) | \$ | 321,489,163 | \$ | 615,455,277 | \$ | 936,944,440 |
| Unfunded Actuarial Accrued Liability, Prior Year | \$ | 44,359,668 | \$ | 278,745,457 | \$ | 323,105,125 |
| Less: Amortization of Unfunded Actuarial Liability, PY |  | 3,417,230 |  | 21,851,773 |  | 25,269,003 |
| Plus: Interest for Full Year at 7.25\% |  | 2,968,327 |  | 18,624,792 |  | 21,593,119 |
| Equals: Expected UAAL, prior to changes | \$ | 43,910,765 | \$ | 275,518,476 | \$ | 319,429,241 |
| Plus: Increase (Decrease) - Change in Assumptions |  | 0 |  | 0 |  | 0 |
| Plus: Increase (Decrease) - Change in Plan Provisions |  | 0 |  | 0 |  | 0 |
| Equals: Expected UAAL | \$ | 43,910,765 | \$ | 275,518,476 | \$ | 319,429,241 |
| Experience (Gain)/Loss [Actual UAAL - Expected UAAL] | \$ | 277,578,398 | \$ | 339,936,801 | \$ | 617,515,199 |

## TOTAL ANNUAL COST

Employer Normal Cost
Amortization of Unfunded Actuarial Accrued Liability Total
ANTICIPATED PAYROLL
COST AS PERCENTAGE OF ANTICIPATED PAYROLL

| July 1, 2008 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| State | Political Subdiv. |  | Total |  |
| \$ 98,916,617 | \$ | 180,738,487 | \$ | 279,655,104 |
| 3,417,230 |  | 21,851,773 |  | 25,269,003 |
| \$ 102,333,847 | \$ | 202,590,260 | \$ | 304,924,107 |
| \$ 1,661,248,319 | \$ | 2,939,105,575 | \$ | 4,600,353,894 |
| 6.383\% |  | 7.143\% |  | 6.869\% |

(interest adjusted for mid-year contribution)
DEVELOPMENT OF UNFUNDED ACTUARIAL ACCRUED LIABILITY

|  | July 1, 2008 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | State |  | Political Subdiv. |  | Total |  |
| Actuarial Accrued Liability |  |  |  |  |  |  |
| - Active Members | \$ | 2,272,481,545 | \$ | 3,427,008,829 | \$ | 5,699,490,374 |
| - Terminated Vested Members |  | 241,309,734 |  | 240,724,092 |  | 482,033,826 |
| Total | \$ | 2,513,791,279 | \$ | 3,667,732,921 | \$ | 6,181,524,200 |
| Less: Non-Retired Member Assets |  | 2,469,431,611 |  | 3,388,987,464 |  | 5,858,419,075 |
| Equals: Actual Unfunded Actuarial Accrued Liability (UAAL) | \$ | 44,359,668 | \$ | 278,745,457 | \$ | 323,105,125 |
| Unfunded Actuarial Accrued Liability, Prior Year | \$ | $(15,570,370)$ | \$ | 234,434,339 | \$ | 218,863,969 |
| Less: Amortization of Unfunded Actuarial Liability, PY |  | $(1,199,457)$ |  | 18,240,572 |  | 17,041,115 |
| Plus: Interest for Full Year at 7.25\% |  | $(1,041,891)$ |  | 15,674,048 |  | 14,632,157 |
| Equals: Expected UAAL, prior to changes | \$ | $(15,412,804)$ | \$ | 231,867,815 | \$ | 216,455,011 |
| Plus: Increase (Decrease) - Change in Assumptions |  | 0 |  | 0 |  | 0 |
| Plus: Increase (Decrease) - Change in Plan Provisions |  | 0 |  | 0 |  | 0 |
| Equals: Expected UAAL | \$ | $(15,412,804)$ | \$ | 231,867,815 | \$ | 216,455,011 |
| Experience (Gain)/Loss [Actual UAAL - Expected UAAL] | \$ | 59,772,472 | \$ | 46,877,642 | \$ | 106,650,114 |

Vested Benefits

- Active Members
- Terminated Vested Members

Total
Nonvested Benefits
Total Non-Retired Actuarial Present Value of Accumulated
Benefits

Non-Retired Member Assets

- Market Value
- Actuarial Value

Ratio of Assets to Present Value of Vested Accumulated Plan Benefits

- Market Value
0.547
0.549
0.548
- Actuarial Value
1.338
1.342
1.340

Ratio of Assets to Present Value of Total Accumulated Plan
Benefits

- Market Value

| 0.494 | 0.480 | 0.486 |
| :--- | :--- | :--- |
| 1.209 | 1.174 | 1.188 |

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## ACTUARIAL PRESENT VALUE OF ACCUMULATED PLAN BENEFITS FOR NON-RETIRED MEMBERS

|  | July 1, 2008 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | State |  | Political Subdivisions |  | Total |  |
| Vested Benefits |  |  |  |  |  |  |
| - Active Members | \$ | 1,407,354,886 | \$ | 2,010,460,879 | \$ | 3,417,815,765 |
| - Terminated Vested Members |  | 241,309,734 |  | 240,724,092 |  | 482,033,826 |
| Total | \$ | 1,648,664,620 | \$ | 2,251,184,971 | \$ | 3,899,849,591 |
| Nonvested Benefits |  | 168,391,735 |  | 329,145,752 |  | 497,537,487 |
| Total Non-Retired Actuarial Present Value of Accumulated Benefits | \$ | 1,817,056,355 | \$ | 2,580,330,723 | \$ | 4,397,387,078 |
| Non-Retired Member Assets |  |  |  |  |  |  |
| - Market Value | \$ | 2,171,567,250 | \$ | 2,980,205,711 | \$ | 5,151,772,961 |
| - Actuarial Value |  | 2,469,431,611 |  | 3,388,987,464 |  | 5,858,419,075 |
| Ratio of Assets to Present Value of Vested Accumulated |  |  |  |  |  |  |
| Plan Benefits |  |  |  |  |  |  |
| - Market Value |  | 1.317 |  | 1.324 |  | 1.321 |
| - Actuarial Value |  | 1.498 |  | 1.505 |  | 1.502 |
| Ratio of Assets to Present Value of Total Accumulated Plan Benefits |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| - Market Value |  | 1.195 |  | 1.155 |  | 1.172 |
| - Actuarial Value |  | 1.359 |  | 1.313 |  | 1.332 |

## STATEMENT OF CHANGES IN THE PRESENT VALUE OF ACCUMULATED PLAN BENEFITS

 ("PVAB") FOR NON-RETIRED MEMBERSActuarial Present Value of Accumulated Plan Benefits, July 1, 2008
Plus: Increase Due to Additional Benefits Accumulated
Less: Transfers to Retired and Disabled Status
Plus: Interest Due to Decrease in the Discount Period (@) 7.25\%
Plus: Increase (Decrease) Due to Change in Plan Provisions
Plus: Increase (Decrease) Due to Change in Actuarial Assumptions
Plus: Actuarial Experience (Gain)/Loss and Other Miscellaneous Items
Actuarial Present Value of Accumulated Plan Benefits, June 30, 2009
\$ 4,397,387,078
349,421,838

535,970,005

365,191,635

0

0
(123,644,336)
\$ 4,452,386,210

## STATEMENT OF INCOME

July 1, 2008 - June 30, 2009

Net Value of Assets for Benefits, July 1, 2008

## Receipts:

Employer Contributions Made During the Year State
Political Subdivisions
Employee Contributions Made During the Year State
Political Subdivisions
Investment Income and Dividends Net of Fees
Security Lending Income Net of Fees
Net Transfers In
Miscellaneous Income
Total Receipts
Disbursements:
Benefits Paid During the Year
Refund of Contributions and Interest
Administrative Expenses
Net Transfers Out
Miscellaneous Disbursements
Total Disbursements

Net Value of Assets for Benefits, June 30, 2009

Market Value
\$ 12,073,469,938

\$ 536,783,325
36,098,593
21,497,782
5,132,542

|  |
| :--- |
| $\$ \quad 599,512,242$ |

\$ 9,442,335,540

## DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS

Actuarial Value, Prior June 30

## Receipts

Employer Contributions Made During the Year
Member Contributions Made During the Year
Miscellaneous Income - Not Investment Related
Expected Investment Earnings - Beginning Value
Expected Investment Earnings - Contributions Total Receipts

Disbursements
Benefits Paid During the Year
Refund of Contributions and Interest
Miscellaneous Expenses - Not Investment Related
Expected Investment Expenses - Disbursements
Total Disbursements

Expected Actuarial Value, Current June 30
Actual Market Value, Current June 30
Actuarial Value, Current June 30
[75\% of Expected Actuarial Value] plus
[25\% of Actual Market Value]

| July 1, 2008 |  | July 1, 2009 |  |
| :---: | :---: | :---: | :---: |
| \$ | 12,220,934,214 | \$ | 12,780,116,052 |
| \$ | 303,912,775 | \$ | 323,151,092 |
|  | 155,729,094 |  | 160,033,862 |
|  | 0 |  | 3,147,867 |
|  | 886,017,731 |  | 926,558,414 |
|  | 16,662,018 |  | 17,629,565 |
| \$ | 1,362,321,618 | \$ | 1,430,520,800 |
| \$ | 501,636,888 | \$ | 536,783,325 |
|  | 45,610,365 |  | 36,098,593 |
|  | 488,405 |  | 5,132,542 |
|  | 19,855,418 |  | 20,953,024 |
| \$ | 567,591,076 | \$ | 598,967,484 |
| \$ | 13,015,664,756 | \$ | 13,611,669,368 |
| \$ | 12,073,469,938 | \$ | 9,442,335,540 |
| \$ | 12,780,116,052 | \$ | 12,569,335,911 |

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## ALLOCATION OF ASSETS

|  | July 1, 2008 |  |  | July 1, 2009 |
| :---: | :---: | :---: | :---: | :---: |
| Total Assets Available for Benefits |  |  |  |  |
| - Market Value | \$ | 12,073,469,938 | \$ | 9,442,335,540 |
| - Actuarial Value | \$ | 12,780,116,052 | \$ | 12,569,335,911 |
| Less: Annuity Savings Accounts | \$ | 2,694,331,410 | \$ | 2,669,318,240 |
| Less: Retired, Beneficiaries, and Disabled | \$ | 4,227,365,567 | \$ | 4,611,256,619 |
| Equals: Total Non-Retired Assets |  |  |  |  |
| - Market Value | \$ | 5,151,772,961 | \$ | 2,161,760,681 |
| - Actuarial Value |  | 5,858,419,075 |  | 5,288,761,052 |
| Total Ledger Assets | \$ | 5,205,044,878 | \$ | 2,353,380,818 |
| - State Share of Total | \$ | 2,194,022,337 | \$ | 944,042,551 |
| - State Percent of Total |  | 42.151843\% |  | 40.114313\% |
| - Political Subdivisions Share of Total | \$ | 3,011,022,542 | \$ | 1,409,338,267 |
| - Political Subdivisions Percent of Total |  | 57.848157\% |  | 59.885687\% |
| State Portion (Based on Ledger Share) |  |  |  |  |
| - Market Value | \$ | 2,171,567,250 | \$ | 867,175,446 |
| - Actuarial Value |  | 2,469,431,611 |  | 2,121,550,162 |
| Political Subdivisions Portion (Based on Ledger Share) |  |  |  |  |
| - Market Value | \$ | 2,980,205,711 | \$ | 1,294,585,235 |
| - Actuarial Value |  | 3,388,987,464 |  | 3,167,210,890 |

Each year the assets of the plan are allocated first to the Annuity Savings Account and second to retired and disabled lives. Residual assets are then allocated to non-retired members to determine necessary contribution levels for non-retired members.

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REQUIRED PENSION DISCLOSURE UNDER GASB \#25 AND \#27
(State Members Only)
Schedule of Employer Contributions
(Dollar Amounts in Thousands)

| Plan Year <br> Ending <br> June 30 | Annual Required Contribution (ARC) |  | Actual (Cash asis) Employer Contribution |  | $\begin{gathered} \% \text { of } \\ \text { ARC } \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2004 | \$ | 54,579 | \$ | 90,709 | 166.2\% |
| 2005 |  | 69,647 |  | 62,760 | 90.1\% |
| 2006 |  | 87,947 |  | 72,890 | 82.9\% |
| 2007 |  | 96,430 |  | 89,801 | 93.1\% |
| 2008 |  | 99,135 |  | 106,867 | 107.8\% |
| 2009 |  | 107,981 |  | 111,214 | 103.0\% |

Three-Year Trend Information
(Dollar Amounts in Thousands)

| Plan Year Ending June 30 | Actual (Cash |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Net Pension Cost (NPC) |  | Basis) Employer Contribution |  | $\%$ of NPC |
| 2007 | \$ | 97,043 | \$ | 89,801 | 92.5\% |
| 2008 |  | 99,675 |  | 106,867 | 107.2\% |
| 2009 |  | 108,594 |  | 111,214 | 102.4\% |

## REQUIRED PENSION DISCLOSURE UNDER GASB \#25 AND \#27

(State Members Only)

## Schedule of Funding Progress

| Actuarial <br> Valuation Date July 1 | (a) <br> Non-Retired Actuarial Value of Assets |  | $\begin{array}{r} \text { (b) } \\ \text { Actuarial } \\ \text { Accrued } \\ \text { Liability (AAL) } \\ \hline \end{array}$ |  | (c) |  |  | (d) | UAAL (Excess |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unfunded AAL | Funded |  | Annual | Assets) as a |
|  |  |  | (UAAL) | Ratio |  | Anticipated | \% of Payroll |
|  |  |  | (b) - (a) | (a)/(b) |  | Payroll | (c)/(d) |
| 2000 | \$ | 1,960,018,018 |  |  | \$ | 1,701,091,436 | \$ (258,926,582) | 115.2\% | \$ | 1,371,496,425 | (18.9\%) |
| 2001 |  | 2,063,626,964 |  |  |  | 1,896,505,744 | $(167,121,220)$ | 108.8\% |  | 1,429,768,169 | (11.7\%) |
| 2002 |  | 2,061,789,940 |  |  |  | 2,010,177,846 | $(51,612,094)$ | 102.6\% |  | 1,475,076,791 | (3.5\%) |
| 2003 |  | 2,078,952,509 |  | 1,860,101,326 | $(218,851,183)$ | 111.8\% |  | 1,491,661,265 | (14.7\%) |
| 2004 |  | 2,138,655,367 |  | 2,019,492,456 | $(119,162,911)$ | 105.9\% |  | 1,612,048,954 | (7.4\%) |
| 2005 |  | 2,145,805,051 |  | 2,189,336,721 | 43,531,670 | 98.0\% |  | 1,645,247,889 | 2.6\% |
| 2006 |  | 2,169,619,411 |  | 2,210,376,679 | 40,757,268 | 98.2\% |  | 1,592,207,236 | 2.6\% |
| 2007 |  | 2,350,652,206 |  | 2,335,081,836 | (15,570,370) | 100.7\% |  | 1,573,566,285 | (1.0\%) |
| 2008 |  | 2,469,431,611 |  | 2,513,791,279 | 44,359,668 | 98.2\% |  | 1,661,248,319 | 2.7\% |
| 2009 |  | 2,121,550,162 |  | 2,443,039,325 | 321,489,163 | 86.8\% |  | 1,749,780,803 | 18.4\% |

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# REQUIRED PENSION DISCLOSURE UNDER GASB \#25 AND \#27 <br> (State Members Only) 

Development of Net Pension Obligation (NPO)
(Dollar Amounts in Thousands)

| Plan Year <br> Ending <br> June 30 | (1) <br> Annual Required Contrib. | (2) <br> Interest on NPO <br> @ $7.25 \%$ | (3) <br> ARC Adjust. <br> (8) / (4) | (4) <br> Amort. <br> Factor | (5) <br> Net Pens Cost $(1)+(2)-(3)$ | (6) <br> Actual <br> Employer Contrib. | (7) <br> Change <br> in NPO $(5)-(6)$ | (8) | $\begin{aligned} & (9) \\ & \text { NPO } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | NPO | @ EOY |
|  |  |  |  |  |  |  |  | @ BOY | (7) $+(8)$ |
| 1997 | \$ 79,101 | \$ | \$ | 12.9541 | \$ 79,101 | 81,585 | $(2,484)$ | \$ - | 4) |
| 1998 | 81,546 | (180) | (192) | 12.9541 | 81,558 | 80,146 | 1,412 | $(2,484)$ | $(1,072)$ |
| 1999 | 67,481 | (78) | (83) | 12.8933 | 67,486 | 77,821 | $(10,335)$ | $(1,072)$ | $(11,407)$ |
| 2000 | 61,762 | (827) | (889) | 12.8280 | 61,824 | 84,354 | $(22,530)$ | $(11,407)$ | $(33,937)$ |
| 2001 | 66,559 | $(2,460)$ | $(2,660)$ | 12.7581 | 66,759 | 76,219 | $(9,460)$ | $(33,937)$ | $(43,397)$ |
| 2002 | 72,333 | $(3,146)$ | $(3,422)$ | 12.6830 | 72,609 | 76,304 | $(3,695)$ | $(43,397)$ | $(47,092)$ |
| 2003 | 79,641 | $(3,414)$ | $(3,891)$ | 12.1037 | 80,118 | 80,796 | (678) | $(47,092)$ | $(47,770)$ |
| 2004 | 54,579 | $(3,463)$ | $(3,947)$ | 12.1037 | 55,063 | 90,709 | $(35,646)$ | $(47,770)$ | $(83,416)$ |
| 2005 | 69,647 | $(6,102)$ | $(6,953)$ | 12.1037 | 70,498 | 62,760 | 7,738 | $(84,159)$ | $(76,421)$ |
| 2006 | 87,947 | $(5,541)$ | $(6,314)$ | 12.1037 | 88,720 | 72,890 | 15,830 | $(76,421)$ | $(60,591)$ |
| 2007 | 96,430 | $(4,393)$ | $(5,006)$ | 12.1037 | 97,043 | 89,801 | 7,242 | $(60,591)$ | $(53,349)$ |
| 2008 | 99,135 | $(3,868)$ | $(4,408)$ | 12.1037 | 99,675 | 106,867 | $(7,192)$ | $(53,349)$ | $(60,541)$ |
| 2009 | 107,981 | $(4,389)$ | $(5,002)$ | 12.1037 | 108,594 | 111,214 | $(2,620)$ | $(60,541)$ | $(63,161)$ |

* A negative $\$ 743$ thousand was included to represent the addition of the Toll Road Commission to the State account

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## REQUIRED PENSION DISCLOSURE UNDER GASB \#25 AND \#27

(All PERF)

## Schedule of Funding Progress



## SUMMARY OF EMPLOYEE DATA

|  | July 1, 2008 |  | July 1, 2009 |  |
| :---: | :---: | :---: | :---: | :---: |
| Active Members |  |  |  |  |
| State |  | 45,713 |  | 46,749 |
| Political Subdivisions |  | 94,433 |  | 101,043 |
| Total |  | 140,146 |  | 147,792 |
| Retired Members and Beneficiaries Receiving Benefits |  | 57,971 |  | 60,740 |
| Annual Benefits Payable from Trust | \$ | 413,098,677 | \$ | 453,741,633 |
| Average Annual Benefit | \$ | 7,126 | \$ | 7,470 |
| Disabled Members Receiving Benefits |  | 4,453 |  | 4,359 |
| Annual Benefits Payable from Trust | \$ | 23,650,317 | \$ | 23,810,874 |
| Average Annual Benefit | \$ | 5,311 | \$ | 5,462 |
| Terminated Members Entitled to Future Benefits |  |  |  |  |
| STATE |  | 7,259 |  | 4,481 |
| Deferred Annual Benefits | \$ | 55,300,438 | \$ | 28,475,342 |
| Average Annual Beenfit | \$ | 7,618 | \$ | 6,355 |
| POLITICAL SUBDIVISIONS |  | 8,191 |  | 6,189 |
| Deferred Annual Benefits | \$ | 44,708,334 | \$ | 29,280,317 |
| Average Annual Beenfit | \$ | 5,458 | \$ | 4,731 |

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| Date Base <br> Established | Reason | STATE PORTION |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Years Remaining at July 1, 2009 |  | Amortization Amount | Outstanding Balance at July 1, 2009 |  |
| 7/1/2008 | Fresh Start | 29 | \$ | 3,417,230 | \$ | 43,910,765 |
| 7/1/2009 | Actuarial <br> Experience Loss | 30 |  | 21,383,144 |  | 277,578,398 |
|  |  | Total | \$ | 24,800,374 | \$ | 321,489,163 |

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POLITICAL SUBDIVISION PORTION

| Date Base <br> Established | Reason | Years Remaining at July 1, 2009 |  | Amortization Amount | Outstanding Balanceat July 1, 2009 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7/1/2006 | Fresh Start | 27 | \$ | 17,887,408 | \$ | 224,626,885 |
| 7/1/2007 | Actuarial Experience Gain | 28 |  | $(7,231,867)$ |  | $(91,909,258)$ |
| 7/1/2007 | Change in Actuarial Assumptions | 28 |  | 7,585,031 |  | 96,397,591 |
| 7/1/2008 | Actuarial Experience Loss | 29 |  | 3,611,201 |  | 46,403,258 |
| 7/1/2009 | Actuarial Experience Loss | 30 |  | 26,186,899 |  | 339,936,801 |
| Total |  |  | \$ | 48,038,672 | \$ | 615,455,277 |

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## TEN YEAR HISTORY OF EMPLOYER CONTRIBUTION RATES

| Valuation Date | State | Political Subdivisions | Total |
| :---: | :---: | :---: | :---: |
| July 1, 2000 | 5.0\% | 5.0\% | 5.0\% |
| July 1, 2001 * | 5.2\% | 5.0\% | 5.1\% |
| July 1, 2002 * | 5.6\% | 6.2\% | 5.9\% |
| July 1, 2003 * | 3.8\% | 4.7\% | 4.4\% |
| July 1, 2004 * | 4.5\% | 5.3\% | 5.0\% |
| July 1, 2005 * | 5.5\% | 6.3\% | 6.0\% |
| July 1, 2006 * | 6.3\% | 6.9\% | 6.7\% |
| July 1, 2007 * | 6.3\% | 6.9\% | 6.6\% |
| July 1, 2008 * | 6.50\% ** | 7.14\% | 6.75\% |
| July 1, 2009 | 7.00\% ** | 7.88\% | 7.57\% |

* Plan changes and/or changes in actuarial assumptions
** After application of smoothing parameters

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## TEN YEAR HISTORICAL INVESTMENT EXPERIENCE

| Year Ending June 30 | Estimated Annual Rate of Investment Return |  | Actuarial <br> Assumed <br> Interest Rate |
| :---: | :---: | :---: | :---: |
|  | Actuarial Basis | Market Basis |  |
| 2000 | 8.53\% | 5.80\% | 7.25\% |
| 2001 | 5.77\% | (2.14\%) | 7.25\% |
| 2002 | 3.08\% | (4.85\%) | 7.25\% |
| 2003 | 4.20\% | 3.48\% | 7.25\% |
| 2004 | 6.29\% | 16.19\% | 7.25\% |
| 2005 | 7.00\% | 9.23\% | 7.25\% |
| 2006 | 7.85\% | 10.44\% | 7.25\% |
| 2007 | 10.37\% | 17.74\% | 7.25\% |
| 2008 | 5.32\% | (8.33\%) | 7.25\% |
| 2009 | (0.94\%) | (21.11\%) | 7.25\% |

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## SCHEDULE OF ACTIVE MEMBER VALUATION DATA

| As of July 1 | Active <br> Members | Active Members |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Annual |  | Average | Percent |
|  |  | Payroll |  | Pay | Increase |
| (in 000's) |  |  |  |  |  |
| 2004 | 142,913 | \$ 4,198,942 | \$ | 29,489 | 4.5\% |
| 2005 | 141,428 | 4,318,450 |  | 30,535 | 3.5\% |
| 2006 | 140,563 | 4,322,180 |  | 30,749 | 4.3\% |
| 2007 | 138,863 | 4,385,676 |  | 31,583 | 2.7\% |
| 2008 | 140,146 | 4,600,354 |  | 32,825 | 3.9\% |
| 2009 | 147,792 | 4,931,423 |  | 33,367 | 1.7\% |

## SCHEDULE OF RETIREES AND BENEFICIARIES

| Year | Added to Rolls |  |  | Removed from Rolls |  |  | Rolls - End of Year |  |  | \% Increase <br> in Annual <br> Allowances | Average Annual Allowances |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { Beginning } \\ \text { July } 1 \end{gathered}$ | Number |  | Annual wances | Number | Allowances | Annual wances | Number | Annual <br> Allowances |  |  |  |  |
|  |  |  | 000's) |  |  | 000's) |  |  | (in 000's) |  |  |  |
| 2003 | 3,975 | \$ | 34,244 | 2,577 | \$ | 12,511 | 54,354 | \$ | 325,711 | 12.4\% | \$ | 5,992 |
| 2004 | 4,499 |  | 35,845 | 1,732 |  | 8,358 | 57,121 |  | 354,285 | 8.8\% |  | 6,202 |
| 2005 | 3,403 |  | 29,572 | 2,241 |  | 14,440 | 58,283 |  | 377,611 | 6.6\% |  | 6,479 |
| 2006 | 4,633 |  | 42,653 | 2,584 |  | 15,229 | 60,332 |  | 412,745 | 9.3\% |  | 6,841 |
| 2007 | 5,376 |  | 43,915 | 3,284 |  | 18,022 | 62,424 |  | 436,749 | 5.8\% |  | 6,996 |
| 2008 | 6,047 |  | 55,726 | 3,372 |  | 19,103 | 65,099 |  | 477,553 | 9.3\% |  | 7,336 |

$\qquad$

## SOLVENCY TEST

## Portion of Actuarial Liability Provided by Assets

(In thousands of Dollars)

| As of July 1 | Accumulated Employee Contributions |  | Retired and Beneficiaries |  |  | Non-Retired <br> Members Er Financed Portion) |  | Total <br> Actuarial <br> Accrued <br> Liabilites |  | Actuarial Value of Assets |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2004 * | \$ | $\begin{array}{r} 2,211,326 \\ 100.0 \% \end{array}$ | \$ | $\begin{array}{r} 2,927,884 \\ 100.0 \% \end{array}$ | \$ | $\begin{array}{r} 4,705,143 \\ 100.0 \% \end{array}$ | \$ | $\begin{gathered} 9,844,353 \\ 100.1 \% \end{gathered}$ | \$ | 9,853,976 |
| 2005 * |  | $\begin{array}{r} 2,382,280 \\ 100.0 \% \end{array}$ |  | $\begin{array}{r} 3,301,265 \\ 100.0 \% \end{array}$ |  | $\begin{array}{r} 5,174,777 \\ 92.5 \% \end{array}$ |  | $\begin{array}{r} 10,858,322 \\ 96.4 \% \end{array}$ |  | 10,471,937 |
| 2006 * |  | $\begin{array}{r} 2,515,984 \\ 100.0 \% \end{array}$ |  | $\begin{array}{r} 3,648,764 \\ 100.0 \% \end{array}$ |  | $\begin{array}{r} 5,286,181 \\ 94.8 \% \end{array}$ |  | $\begin{array}{r} 11,450,929 \\ 97.6 \% \end{array}$ |  | 11,177,971 |
| 2007 * |  | $\begin{array}{r} 2,707,176 \\ 100.0 \% \end{array}$ |  | $\begin{array}{r} 4,007,389 \\ 100.0 \% \end{array}$ |  | $\begin{array}{r} 5,725,233 \\ 96.2 \% \end{array}$ |  | $\begin{array}{r} 12,439,798 \\ 98.2 \% \end{array}$ |  | 12,220,934 |
| 2008 * |  | $\begin{array}{r} 2,694,331 \\ 100.0 \% \end{array}$ |  | $\begin{array}{r} 4,227,366 \\ 100.0 \% \end{array}$ |  | $\begin{array}{r} 6,181,524 \\ 94.8 \% \end{array}$ |  | $\begin{array}{r} 13,103,221 \\ 97.5 \% \end{array}$ |  | 12,780,116 |
| 2009 |  | $\begin{array}{r} 2,669,318 \\ 100.0 \% \end{array}$ |  | $\begin{array}{r} 4,611,257 \\ 100.0 \% \end{array}$ |  | $\begin{array}{r} 6,225,705 \\ 85.0 \% \end{array}$ |  | $\begin{array}{r} 13,506,280 \\ 93.1 \% \end{array}$ |  | 12,569,336 |

* Actuarial assumptions and/or method changed


## ACTUARIAL METHODS

| Actuarial <br> Funding | Present Value <br> of Accumulated <br> Plan Benefits |
| :---: | :---: |
| Entry Age Normal Cost |  |
| Accrued Benefit (Unit Credit) |  |
| $75 \%$ of Expected Actuarial Value <br> Plus $25 \%$ of Market Value | $75 \%$ of Expected Actuarial Value <br> Plus $25 \%$ of Market Value |

## Entry Age Normal Cost

The normal cost is calculated separately for each active participant and is equal to the level percentage of payroll needed as an annual contribution from entry age to retirement age to fund projected benefits. The unfunded actuarial accrued liabilities on any valuation date is the accumulated value of such normal costs from entry age to the valuation date less the actuarial value of assets.

The effect of this valuation method is to spread all actuarial gains and losses, resulting from experience different from that anticipated in our assumptions, over a fixed period. The purpose of the method is to give a smooth progression of the costs from year to year and, at the same time, provide for an orderly funding of the unfunded liabilities.

## Accrued Benefit (Unit Credit)

The accrued liability is equal to the sum of the individual accrued liabilities for all participants. The individual's accrued liability is the present value of the benefit accrued in prior plan years. The normal cost is the present value of benefits accruing in the plan year.

## ACTUARIAL ASSUMPTIONS

| Interest (Net of Administrative Expenses) | 7.25\% |
| :---: | :---: |
| Future Salary Increases (Based on PERF experience 2000-2005)* | 4.00\% |
| Inflation Component | 3.00\% |
| Merit/Seniority Component | 1.00\% |
| Post-Retirement Ad Hoc Benefit Increases | $1.50 \%$ annually applied to the employer pension. No increase is assumed to be applied to the PERF annuity benefit. |
| Mortality - Pre-Retirement | Based on PERF experience 1995-2000 |
| Mortality - Post-Retirement | UP-1994 |
| Disability | Based on PERF experience 1995-2000 |
| Termination | Select and ultimate tables based on PERF experience 2000-2005. Separate tables are used for state employees and political subdivision employees, |
| Retirement Age | Based on PERF experience 2000-2005. Revised effective July 1, 2007. |
| Spouse's Benefit | $90 \%$ of members are assumed either to be married or to have a dependent beneficiary. |
| Age Difference in Participant and Spouse | Males three years older than females |
| Administrative Expense | Netted against investment earnings. |

* No salary increases are assumed for determining the Present Value of Accumulated Plan Benefits (PVAB).

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## SUMMARY OF PLAN PROVISIONS

## PARTICIPATION

## ELIGIBILITY FOR BENEFITS:

| Normal Retirement | Earliest of: <br> (1) Age 65 with 10 years of creditable service; <br> (2) Age 60 with 15 years of creditable service; <br> (3) Sum of age and creditable service equal to 85 (but not earlier than age 55). |
| :--- | :--- |
| Early Retirement | Age 50 and 15 years of Vesting Service |
| Late Retirement | Subject to continued employment after the Normal Retirement Date |
| Disability Retirement | 5 years of creditable service and qualified for Social Security disability benefits or federal <br> Civil Service disability benefits. |
| Termination Benefit | 10 years of creditable service and election not to take lump sum payment of employee account <br> balance with interest. |
| Pre-Retirement Death Benefit | If death occurs in service, 15 years of creditable service. If death occurs after separating from <br> service, age 50 with 15 years of creditable service. |

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## AMOUNT OF BENEFITS:

# Normal Retirement Benefit 

Early Retirement Benefit

Late Retirement Benefit

Disability Retirement Benefit

Termination Benefit

The normal retirement benefit is an annuity payable for life with 60 months guaranteed and is equal to $1.1 \%$ of average monthly earnings* times years and months of creditable service earned.

The early retirement benefit is the accrued retirement benefit determined as of the early retirement date and payable commencing at the normal retirement date. A member may elect to have the benefit commence prior to normal retirement provided the benefit is reduced by $1 / 10 \%$ for each of the first 60 months and by $5 / 12 \%$ for each of the next 120 months that the benefit commencement date precedes the normal retirement date.

The late retirement benefit is calculated in the same manner as the normal retirement benefit. Creditable service and earnings earned after normal retirement is included in the computation.

The disability retirement benefit is the accrued retirement benefit determined as of the disability date and payable commencing the month following disability date without reduction for early commencement.

The termination benefit is the accrued retirement benefit determined as of the termination date and payable commencing at 65 . If the member has 15 or more years of creditable service, then the member may elect to receive a reduced early retirement benefit.

* Average monthly earnings is the monthly average of earnings during the 20 quarters (in groups of 4 consecutive quarters) preceding retirement that produce the highest such average. Earnings include basic salary, the member's $3 \%$ mandatory contribution paid by the employer, the member's salary reduction agreement under Section 125, 403(b) or 457 of the Internal Revenue Code, and up to $\$ 2,000$ of additional compensation received from the employer in anticipation of the member's termination or retirement.


## SUMMARY OF PLAN PROVISIONS

## AMOUNT OF BENEFITS:

continued

Pre-Retirement Death Benefit The spouse or dependent beneficiary is entitled to receive the monthly life annuity under the assumption that the member retired on the later of age 50 or the day before the date of death and elected the joint and full survivor option.

Employee Contributions
Each member is required to contribute to an employee annuity at the rate of $3 \%$ of pay (unless the employer has opted to make all or a portion of the contribution for the employee). These contributions are kept on deposit and credited with interest until such time as they are refunded or used to provide the annuity benefit at retirement.

The benefits provided by employee contributions are in addition to the benefits provided by employer contributions. The monthly annuity provided at a normal retirement age of 65 is equal to $\$ 1.00$ for each $\$ 108.79$ of accumulated employee contributions plus interest.

NOTE: If information given in this Summary disagrees or appears to disagree with statutory provisions, the statutory provisions prevail.


[^0]:    * Actuarial assumptions and/or method changed

