www.pwc.com

# *Indiana Public Retirement System*

## State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation Enforcement Officers' Retirement Plan

## Actuarial Valuation as of June 30, 2015

pwc

October 29, 2015

Board of Trustees
Indiana Public Retirement System
1 North Capitol, Suite 001
Indianapolis, IN 46204

**Re: Certification of the Actuarial Valuations of the Indiana Public Retirement System as of June 30, 2015**

Dear Board of Trustees:

Actuarial valuations are performed annually for the Indiana Public Retirement System ("INPRS") defined benefit pension plans ("Plans"). The results of the June 30, 2015 actuarial valuations for all plans other than the Teachers' Retirement Fund are presented in individual valuation reports pursuant to the engagement letter between INPRS and PricewaterhouseCoopers LLP ("PwC"), originally executed on June 7, 2010, as amended through the date of this report. The reports are intended to provide the Board of Trustees ("Board") with information on the funded status of the Plans, development of the contribution rates, and certain financial statement disclosure information.

Under Indiana statutes, employer contribution rates and amounts, as applicable, are adopted annually for each Plan by the Board. The contributions are actuarially determined based on the funding policy, actuarial assumptions, and actuarial methods adopted by the Board. Contributions determined by the actuarial valuation become effective either twelve or eighteen months after the valuation date, depending on the applicable employer. Therefore, contribution rates and amounts determined by the June 30, 2015 actuarial valuation and adopted by the Board will become effective on either July 1, 2016 or January 1, 2017. If new legislation is enacted between the valuation date and the date the contributions become effective, the Board may adjust the recommended contributions before adopting them, in order to reflect this new legislation. Such adjustments are based on information supplied by the actuary.

**Financing Objectives and Funding Policy**

In setting contribution levels, the Board's principal objectives have been:

- To set contributions such that the unfunded actuarial accrued liability ("UAAL") will be amortized over a period not greater than 30 years.
- To set contributions such that they remain relatively level over time.

To accomplish this, the Board's funding policy requires that employer contributions be equal to the sum of the employer normal cost (which pays the current year cost of benefits accruing) and an amortization of the UAAL in equal installments.

**Progress Toward Realization of Financing Objectives**

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a Plan's funded status. In the absence of benefit improvements it should increase over time, until it reaches 100% if contributions equal or exceed the actuarially determined amount. The combined funded ratio for all Plans (excluding the Teachers' Retirement Fund) decreased by 2.7% from the preceding year to 84.3%, primarily due to changes in the actuarial assumptions pursuant to the experience study completed in April 2015, investment returns being less than the 6.75% assumed, and other adverse member experience.

**Benefit Provisions**

The benefit provisions reflected in the valuation reports are those which were in effect at June 30, 2015, as set forth in the related Indiana statutes. There were no material changes in benefit provisions since the 2014 valuations.

**Assets and Member Data**

The valuations were based on asset values of the trust funds as of June 30, 2015 and member census data as of June 30, 2014, adjusted for certain activity during fiscal year 2015. All asset information and member data were provided by INPRS. While certain checks for reasonableness were performed, the data was used unaudited. The accuracy of the results presented in the reports is dependent upon the accuracy and completeness of the underlying asset and census information.

**Actuarial Assumptions and Methods**
The actuarial assumptions used in the June 30, 2015 valuations were adopted by the Board pursuant to the experience studies completed in April 2015, which reflected the experience period from July 1, 2010 through June 30, 2014. The June 30, 2015 valuations incorporate member census data as of June 30, 2014, adjusted for certain activity during fiscal year 2015. Standard actuarial techniques were used to roll forward valuation results over one year.

The actuarial assumptions and methods are summarized in the Actuarial Assumptions and Methods section of each valuation report. We believe the actuarial assumptions and methods are reasonable for the purposes of the valuation reports and comply with the parameters set forth in Statements No. 67 and No. 68 of the Governmental Accounting Standards Board ("GASB"). Different assumptions and methods may be reasonable for other purposes. As such, the results presented in the valuation reports should only be relied upon for the intended purpose.

**Certification**
We certify that the information presented herein is accurate and fairly portrays the actuarial position of each Plan administered by INPRS (other than the Teachers' Retirement Fund) as of June 30, 2015, based on the underlying census data, asset information and selected assumptions and methods. This information is presented in several schedules and exhibits in this report, including the following:

Financial Section:
- Note 1 - Tables of Plan Membership (Included in the Historical Summary)
- Note 8 - Net Pension Liability and Actuarial Information - Defined Benefit Plans (Included in the Accounting Section)
- Schedule of Changes in Net Pension Liability and Plan Fiduciary Net Position
- Schedule of Contributions (Actuarially Determined Contribution)
- Schedule of Notes to Required Supplementary Information

Actuarial Section:
- Summary of INPRS Funded Status (Included in the Historical Summary)
- Historical Summary of Actuarial Valuation Results by Retirement Plan (Schedule of Funding Progress Included in the Historical Summary)
- Summary of Actuarial Assumptions, Methods and Plan Provisions
- Analysis of Financial Experience (Included in the Unfunded Actuarial Accrued Liability Reconciliation)
- Solvency Test (Included in the Historical Summary)
- Schedule of Active Member Valuation Data
- Schedule of Retirants and Beneficiaries

Statistical Section:
- Membership Data Summary (Included in the Historical Summary)
- Ratio of Active Members to Annuitants (Census Counts Included in the Historical Summary)
- Schedule of Benefit Recipients by Type of Benefit Option
- Schedule of Average Benefit Payments

This report contains certain accounting information required to be included in the System's Comprehensive Annual Financial Report. This information for the system has been prepared in accordance with our understanding of GASB No.67. This report also contains employer accounting information prepared in accordance with our understanding of GASB No. 68.

To the best of our knowledge this actuarial statement is complete and accurate and has been prepared in accordance with generally accepted actuarial principles and practice and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with our understanding of the requirements of Indiana state law. The undersigned actuaries are members of the Society of Actuaries and other professional organizations, including the American Academy of Actuaries, and meet the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States relating to pension plans. There is no relationship between the PwC practitioners involved in this engagement and INPRS that may impair our objectivity.

This document has been prepared pursuant to an engagement letter between INPRS and PwC, and is intended solely for the use and benefits of INPRS and not for reliance by any other person.

Respectfully submitted,


Ms. Cindy Fraterrigo
Member, American Academy of Actuaries
Fellow of the Society of Actuaries
Enrolled Actuary (No. 14-06229)

Mr. Brandon Robertson
Member, American Academy of Actuaries
Associate of the Society of Actuaries
Enrolled Actuary (No. 14-07568)


The content of this document is limited to the matters specifically addressed herein and does not address any other potential tax consequences, or the potential application of tax penalties, to any matter other than as set forth herein. Our conclusions are not binding upon any taxing authority or the courts and there is no assurance that any relevant taxing authority will not successfully assert a contrary position. In addition, no exceptions (including the reasonable cause exception) are available for any federal or state penalties imposed if any portion of a transaction is determined to lack economic substance or fails to satisfy any similar rule of law, and our advice will not protect you from any such penalties. This document supersedes all prior written or oral advice with respect to the issues addressed in this document and all such prior communications should not be relied upon by any person for any purpose.

TABLE OF CONTENTS

## HIGHLIGHTS OF THE ACTUARY'S REPORT

This report presents the results of the actuarial valuation of the State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation Enforcement Officers' Retirement Plan ("EG&C Fund") and has been prepared to present the current funded status of the Plan, contribution requirements for calendar year 2017 (January 1, 2017 through December 31, 2017), and certain financial statement disclosure information. The valuation was performed using census data for plan members as of June 30, 2014, adjusted for certain activity during fiscal year 2015, as provided by INPRS and summarized in Section IV, asset information as of June 30, 2015 provided by INPRS, the actuarial assumptions and methods approved by the Board and summarized in Section V, and the plan provisions effective June 30, 2015 summarized in Section VI.

### Contribution Rate

The Board sets, at its discretion, the applicable contribution rate upon considering the results of the actuarial valuation and other analysis as appropriate. The Board has approved an employer contribution rate of 20.75% for calendar year 2017. The contribution rate becomes effective on January 1, 2017. Therefore, the actual dollar amount of employer cost will depend on the actual payroll during calendar year 2017. The approved rate exceeds the actuarially determined contribution rate for calendar year 2017 of 13.93%.

Members of the EG&C Fund contribute 4% of their compensation to the Plan. If a member terminates employment with less than 15 years of service, the accumulated contributions with interest can be withdrawn as a lump sum or the member may direct the EG&C Fund to make a direct rollover of the distribution amount. When a member becomes vested with at least 15 years of service, the member's account balance may not be refunded and is instead combined with the employer contributions in order to fund the member's future retirement annuity benefit.

### Funded Status

The funded status of the EG&C Fund is measured by the funded ratio, which is the ratio of the assets available for benefits to a benefit liability measure for the EG&C Fund. While there are several such measures that could be appropriately used, the benefit liability measure that ties most closely to INPRS's funding strategy is the Actuarial Accrued Liability (“AAL”).

Using the Actuarial Value of Assets ("AVA"), an asset value that smoothes the market gains and losses over four (4) years, the EG&C Fund AAL funded ratio decreased from 87.0% at June 30, 2014 to 84.9% at June 30, 2015. The decrease is primarily due to changes in the actuarial assumptions pursuant to the experience study completed in April 2015, investment returns being less than the 6.75% assumed, and census experience losses.

### Investment Experience

For the fiscal year ending June 30, 2015, the INPRS actual time-weighted return net of fees was 0.0%. Based on the value of assets allocated to the EG&C Fund as of the prior valuation date and contribution and benefit payment activity during the year, the allocation of returns to the EG&C Fund represent a return of approximately (0.2%) on market value and 5.2% on actuarial value. The return on actuarial value is different due to the smoothing of returns greater or less than expected returns over four years.

## HIGHLIGHTS OF THE ACTUARY'S REPORT (CONTINUED)

### Cost-of-Living Adjustment

Cost-of-living increases for retired members have historically been granted on an "ad hoc" basis. INPRS has confirmed that no increase in monthly benefits will be provided to retired members, disabled members, or beneficiaries as of January 1, 2016. Instead a "13th check" is required to be paid to each member (or survivor or beneficiary) in pay status by October 2015. The amount of the 13th check varied based on the years of creditable service the member earned prior to retirement.

### Changes in Actuarial Assumptions

For the June 30, 2015 valuation, the following assumptions were changed:

The **inflation assumption** decreased from 3.00% to 2.25% per year.

The **future salary increase assumption** decreased from 3.25% to 2.50% per year.

The **mortality assumption** changed from the 2013 IRS Static Mortality projected five (5) years with Scale AA to the RP-2014 (with MP-2014 improvement removed) Blue Collar mortality tables, with future mortality improvement projected generationally using future mortality improvement inherent in the Social Security Administration's 2014 Trustee report.

The **retirement assumption** changed to reflect higher likelihood of retirement at certain ages.

The **termination assumption** changed from an age-based table to a service-based table.

The **dependent assumption** was adjusted to reflect recent experience.

### Changes in Plan Provisions

It is our understanding that there were no changes to the Plan that impacted the pension benefits during the fiscal year.

### Changes in Actuarial Methods

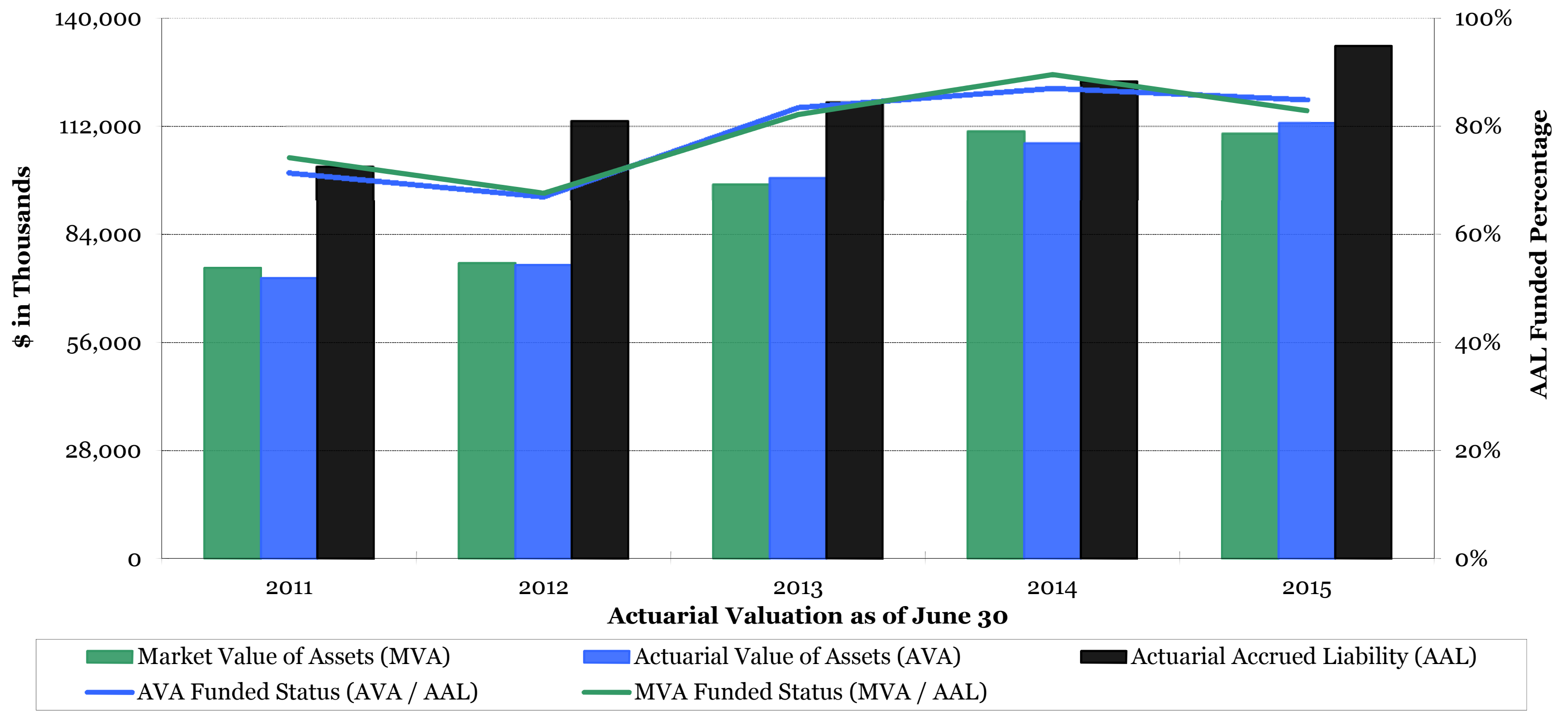
There were no method changes for the June 30, 2015 valuation.

### Governmental Accounting Standards

This report contains certain financial statement information, including notes and required supplemental information, prepared in accordance with our understanding of Governmental Accounting Standards No. 67 and No. 68 ("GASB 67" and "GASB 68") to assist INPRS with the implementation of the new standards. GASB 67 is effective for fiscal years beginning after June 15, 2013. GASB 68 is effective for employers sponsoring and/or participating in public pension plans for fiscal years beginning after June 15, 2014.

## HISTORICAL SUMMARY

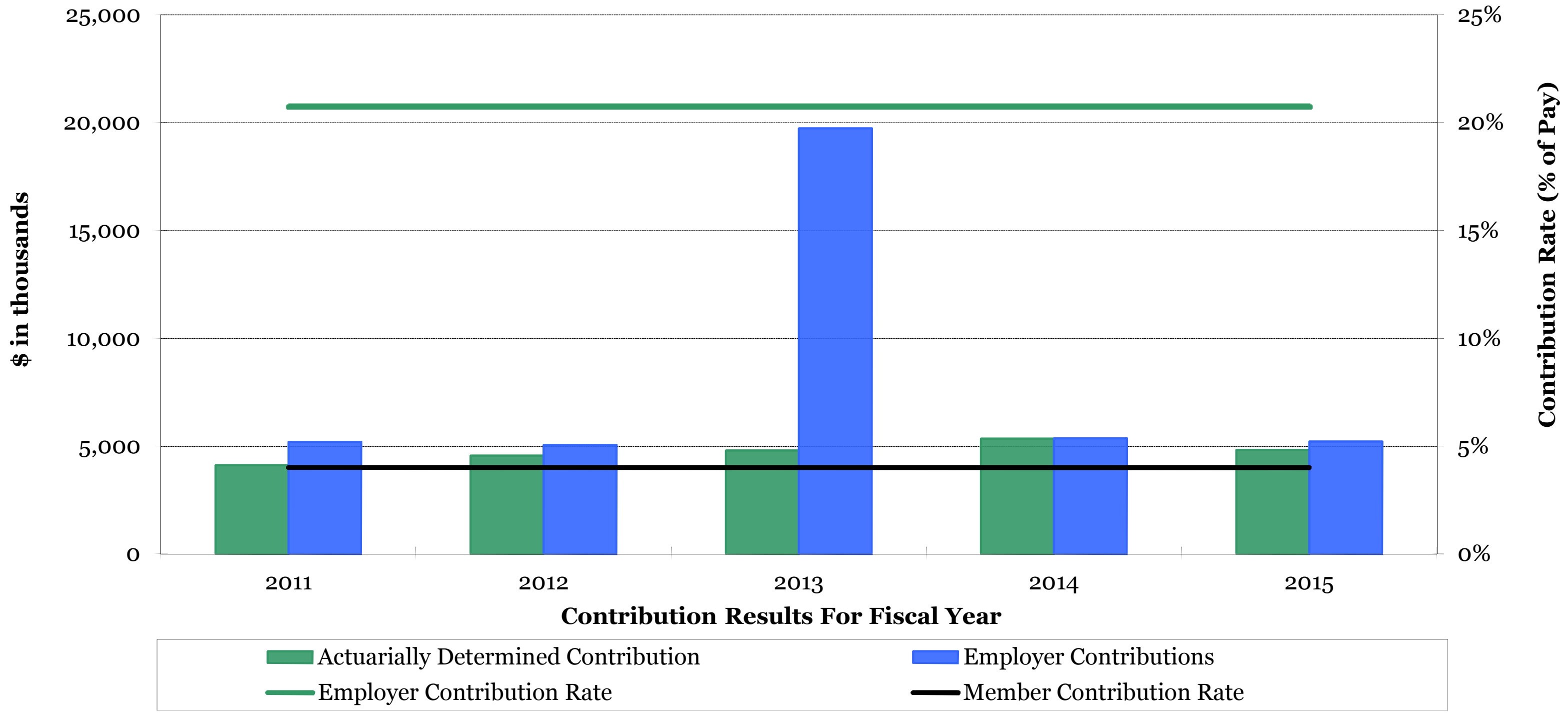
### EG&C Fund – 5 Year History of Funded Status




| **Actuarial Valuation as of June 30:** | **2011** | **2012** | **2013** | **2014** | **2015** |
|---|---|---|---|---|---|
| Actuarial Accrued Liability (AAL) | $101,533.8 | $113,282.6 | $118,097.2 | $123,600.7 | $132,795.5 |
| Actuarial Value of Assets (AVA) | 72,599.4 | 76,007.0 | 98,608.5 | 107,563.3 | 112,764.9 |
| Market Value of Assets (MVA) | 75,305.7 | 76,543.3 | 97,018.8 | 110,656.5 | 110,037.2 |
| Unfunded Liability (AAL - AVA) | 28,934.4 | 37,275.6 | 19,488.7 | 16,037.4 | 20,030.6 |
| AVA Funded Status (AVA / AAL) | 71.5% | 67.1% | 83.5% | 87.0% | 84.9% |
| MVA Funded Status (MVA / AAL) | 74.2% | 67.6% | 82.2% | 89.5% | 82.9% |

**HISTORICAL SUMMARY (CONTINUED)**

**EG&C Fund – 5 Year History of Contributions**




| Contribution Results For Fiscal Year: | 2011 | 2012 | 2013 [1] | 2014 | 2015 |
|---|---|---|---|---|---|
| Actuarially Determined Contribution [2] | $4,112.5 | $4,556.3 | $4,794.4 | $5,340.5 | $4,820.4 |
| Employer Contributions | $5,196.6 | $5,053.1 | $19,740.0 | $5,358.6 | $5,215.0 |
| ADC % Contributed | 126.4% | 110.9% | 411.7% | 100.3% | 108.2% |
| Employer Contribution Rate [3] | 20.75% | 20.75% | 20.75% | 20.75% | 20.75% |
| Member Contribution Rate | 4.0% | 4.0% | 4.0% | 4.0% | 4.00% |

[1] Includes $14.6 million of additional contributions due to 2012 HB 1376 during fiscal 2013.
[2] Starting with fiscal year 2013, the ADC amount is based on the ADC Rates in effect during the fiscal year, multiplied by actual (rather than anticipated) payroll for the fiscal year.
[3] Rates shown are those in effect on January 1 during the fiscal year. Contribution dollar amounts are for the fiscal year.

## HISTORICAL SUMMARY (CONTINUED)

### Summary of Valuation Results [1]

| Valuation Date | June 30, 2011 | June 30, 2012 | June 30, 2013 | June 30, 2014 | June 30, 2015 |
|---|---|---|---|---|---|
| Development of Actuarially Determined Contribution Rate: | | | | | |
| 1. Anticipated Payroll | $ 24,028,462 | $ 25,752,100 | $ 26,200,542 | $ 26,663,926 | $ 25,760,873 |
| 2. Normal Cost (Beginning of Year) | | | | | |
| a. Amount | $ 3,377,658 | $ 3,810,650 | $ 3,841,382 | $ 3,904,932 | $ 3,011,127 |
| b. Percentage of Payroll | 14.06% | 14.80% | 14.66% | 14.64% | 11.69% |
| 3. Unfunded Actuarial Accrued Liability Annual Amortizations | | | | | |
| a. Amount | $ 2,260,987 | $ 2,857,333 | $ 1,522,377 | $ 1,291,138 | $ 1,606,821 |
| b. Percentage of Payroll | 9.41% | 11.09% | 5.81% | 4.84% | 6.24% |
| 4. Expected Employee Contributions | | | | | |
| a. Amount | $ 961,138 | $ 1,030,084 | $ 1,048,022 | $ 1,066,557 | $ 1,030,435 |
| b. Percentage of Payroll | 4.00% | 4.00% | 4.00% | 4.00% | 4.00% |
| 5. Actuarially Determined Contribution Rate: | | | | | |
| a. Percentage of Payroll: (2)(b) + (3)(b) - 4(b) | **19.47%** | **21.89%** | **16.47%** | **15.48%** | **13.93%** |
| b. Effective Date | January 1, 2013 | January 1, 2014 | January 1, 2015 | January 1, 2016 | January 1, 2017 |

| Calendar Year | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| Approved Funding Rate | **20.75%** | **20.75%** | **20.75%** | **20.75%** | **20.75%** |

[1] The contribution rates shown were developed on a funding basis only and do not reflect accounting requirements.

## HISTORICAL SUMMARY (CONTINUED)

### Summary of Valuation Results (Continued) [1]

| | June 30, 2011 | June 30, 2012 | June 30, 2013 | June 30, 2014 | June 30, 2015 |
|---|---|---|---|---|---|
| Census Information | | | | | |
| Active | | | | | |
| Number | 440 | 468 | 473 | 473 | 448 |
| Average Age | 41.5 | 40.9 | 41.0 | 41.0 | 41.4 |
| Average Years of Service | 10.9 | 10.2 | 10.4 | 10.4 | 10.8 |
| Anticipated Payroll of Actives [2] | $ 24,028,462 | $ 25,752,100 | $ 26,200,542 | $ 26,663,926 | $ 25,760,873 |
| Inactive- Vested | | | | | |
| Number | 5 | 4 | 4 | 4 | 3 |
| Average Age | 48.2 | 50.0 | 50.8 | 50.8 | 51.0 |
| Average Years of Service | 20.5 | 19.9 | 19.6 | 19.6 | 20.8 |
| Inactive - Non-Vested [3] | | | | | |
| Number | 59 | 61 | 87 | 87 | 101 |
| Retiree/Beneficiary/Disabled | | | | | |
| Number | 176 | 187 | 193 | 193 | 207 |
| Average Age | 68.4 | 68.2 | 68.3 | 68.3 | 68.4 |
| Annual Benefits Payable [4] | $ 3,978,369 | $ 4,452,452 | $ 4,666,134 | $ 4,666,134 | $ 5,210,101 |

[1] The valuation results beginning as of June 30, 2014 were calculated using census data as of the prior year end, adjusted for certain activity during the current fiscal year.

[2] Figures shown are the anticipated pay for the one-year period following the valuation date.

[3] As of June 30, 2014, inactive non-vested members entitled to a refund of their member contribution had balances totaling $283,199.

[4] Figures shown reflect cost-of-living increases effective January 1 following the date of the census data, if provided, but do not reflect one-time 13th check amounts provided.

## HISTORICAL SUMMARY (CONTINUED)

### Summary of Valuation Results (Continued)

| | June 30, 2011 | June 30, 2012 | June 30, 2013 | June 30, 2014 | June 30, 2015 |
|---|---|---|---|---|---|
| **Actuarial Accrued Liability (AAL)** | | | | | |
| Member Contribution Balance | $ 6,270,943 | $ 6,531,863 0 | $ 7,494,370 | $ 8,041,582 | $ 8,456,123 |
| Retiree/Beneficiary/Disabled | 46,695,123 | 53,928,711 0 | 56,027,923 | 54,625,687 | 61,502,320 |
| Active and Inactive | 48,567,782 | 52,822,070 0 | 54,574,934 | 60,933,435 | 62,837,061 |
| Total | $ 101,533,848 | $ 113,282,644 0 | $ 118,097,227 | $ 123,600,704 | $ 132,795,504 |
| **Actuarial Value of Assets (AVA)** | | | | | |
| Member Contribution Balance | $ 6,270,943 | $ 6,531,863 | $ 7,494,370 | $ 8,041,582 | $ 8,456,123 |
| Retiree/Beneficiary/Disabled | 46,695,123 | 53,928,711 | 56,027,923 | 54,625,687 | 61,502,320 |
| Active and Inactive | 19,633,383 | 15,546,429 | 35,086,227 | 44,896,045 | 42,806,499 |
| Total | $ 72,599,449 | $ 76,007,003 | $ 98,608,520 | $ 107,563,314 | $ 112,764,942 |
| **Market Value of Assets (MVA)** | | | | | |
| Member Contribution Balance | $ 6,270,943 | $ 6,531,863 | $ 7,494,370 | $ 8,041,582 | $ 8,456,123 |
| Retiree/Beneficiary/Disabled | 46,695,123 | 53,928,711 | 56,027,923 | 54,625,687 | 61,502,320 |
| Active and Inactive | 22,339,674 | 16,082,686 | 33,496,499 | 47,989,233 | 40,078,772 |
| Total | 75,305,740 | $ 76,543,260 | $ 97,018,792 | $ 110,656,502 | $ 110,037,215 |
| **Unfunded Actuarial Accrued Liability: AAL - AVA [1]** | | | | | |
| Member Contribution Balance | $ - | $ - | $ - | $ - | $ - |
| Retiree/Beneficiary/Disabled | - | - | - | - | - |
| Active and Inactive | 28,934,399 | 37,275,641 | 19,488,707 | 16,037,390 | 20,030,562 |
| Total | $ 28,934,399 | $ 37,275,641 0 | $ 19,488,707 | $ 16,037,390 | $ 20,030,562 |
| **Funded Percentage: AVA / AAL [1]** | | | | | |
| Member Contribution Balance | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Retiree/Beneficiary/Disabled | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Active and Inactive | 40.4% | 29.4% | 64.3% | 73.7% | 68.1% |
| Total | 71.5% | 67.1% | 83.5% | 87.0% | 84.9% |
| **Summary of Assumptions** | | | | | |
| Valuation Interest Rate | 7.0% | 6.8% | 6.75% | 6.75% | 6.75% |
| Salary Scale | 3.25% | 3.25% | 3.25% | 3.25% | 2.50% |
| Cost-of-Living Assumption | 1.0% | 1.00% | 1.00% | 1.00% | 1.00% |

[1] In determining the unfunded actuarial accrued liability and funded percentage, the assets are allocated first to member contribution balances, then to the retiree/beneficiary/disabled liability, and then to the active/inactive liability.

## FUNDING

## A. Development of Funded Status

| | | June 30, 2014 | June 30, 2015 |
|---|---|---|---|
| 1. | Actuarial Accrued Liability | | |
| a. | Member Contribution Account | $ 8,041,582 | $ 8,456,123 |
| b. | Retirees, Beneficiaries, and Disableds | 54,625,687 | 61,502,320 |
| c. | Actives and Inactives | 60,933,435 | 62,837,061 |
| d. | Total: (1)(a) + (1)(b) + (1)(c) | $ 123,600,704 | $ 132,795,504 |
| 2. | Actuarial Value of Assets [1] | | |
| a. | Member Contribution Account | $ 8,041,582 | $ 8,456,123 |
| b. | Retirees, Beneficiaries, and Disableds | 54,625,687 | 61,502,320 |
| c. | Actives and Inactives | 44,896,045 | 42,806,499 |
| d. | Total: (2)(a) + (2)(b) + (2)(c) | $ 107,563,314 | $ 112,764,942 |
| 3. | Unfunded Actuarial Accrued Liability [1] | | |
| a. | Member Contribution Account: (1)(a) - (2)(a) | $ - | $ - |
| b. | Retirees, Beneficiaries, and Disableds: (1)(b) - (2)(b) | - | - |
| c. | Actives and Inactives: (1)(c) - (2)(c) | 16,037,390 | 20,030,562 |
| d. | Total: (1)(d) - (2)(d) | $ 16,037,390 | $ 20,030,562 |
| 4. | Funded Percentage [1] | | |
| a. | Member Contribution Account: (2)(a) / (1)(a) | 100.0% | 100.0% |
| b. | Retirees, Beneficiaries, and Disableds: (2)(b) / (1)(b) | 100.0% | 100.0% |
| c. | Actives and Inactives: (2)(c) / (1)(c) | 73.7% | 68.1% |
| d. | Total: (2)(d) / (1)(d) | 87.0% | 84.9% |

[1] In determining the unfunded actuarial accrued liability and funded percentage, the assets are allocated first to member contribution balances, then to the retiree/beneficiary/disabled liability, and then to the active/inactive liability.

## B. Unfunded Actuarial Accrued Liability Reconciliation

| | | | June 30, 2014 | | June 30, 2015 |
|---|---|---|---|---|---|
| 1. | Unfunded Actuarial Accrued Liability, Prior Year | $ | 19,488,707 | $ | 16,037,390 |
| | | | | | |
| 2. | Unfunded Actuarial Accrued Liability (Gain) / Loss | | | | |
| | a. Actuarial Value of Assets Experience | $ | (2,712,041) | $ | 774,307 |
| | b. Actuarial Accrued Liability Experience | | - | | 1,442,198 |
| | c. Additional Liability Due to Cost-of-Living Adjustments | | (429,626) [1] | | (596,700) [2] |
| | d. Additional Liability Due to Changes in Actuarial Assumptions | | - | | 2,669,133 [3] |
| | e. Additional Liability Due to Changes in Plan Provisions | | - | | - |
| | f. Total New Amortization Bases: (2)(a) + (2)(b) + (2)(c) + (2)(d) + (2)(e) | $ | (3,141,667) | $ | 4,288,938 |
| | g. Reduction in UAAL Due to Prior Year Contributions, Net of Interest | | (309,650) | | (295,766) |
| | h. Change in Unfunded Actuarial Accrued Liability: (2)(f) + (2)(g) | $ | (3,451,317) | $ | 3,993,172 |
| | | | | | |
| 3. | Unfunded Actuarial Accrued Liability, Current Year: (1) + (2)(h) | $ | 16,037,390 | $ | 20,030,562 |

[1] Retired members were provided a 13th check by October 1, 2014, rather than the assumed 1.0% COLA on January 1, 2015.

[2] Retired members will be provided a 13th check by October 1, 2015, rather than the assumed 1.0% COLA on January 1, 2016.

[3] The mortality, retirement, termination, dependent, and salary scale assumptions were updated pursuant to an experience study completed in April 2015.

## C. Actuarial Accrued Liability Reconciliation

| | | | | |
|---|---|---|---|---|
| 1. | June 30, 2014 Actuarial Accrued Liability | $ | 123,600,704 | |
| 2. | Normal Cost | | 3,904,932 | |
| 3. | Actual Benefit Payments [1] | | 6,608,361 | |
| 4. | Employer Service Purchases | | - | |
| 5. | Interest of 6.75% on (1) + (2) - (3)/2 + (4)/2 | | 8,383,598 | |
| 6. | Expected June 30, 2015 Actuarial Accrued Liability<br>(1) + (2) - (3) + (4) + (5) | $ | 129,280,873 | |
| | | | **Dollar Change in Liability** | **Percent Change in Liability** |
| 7. | (Gain)/Loss Components | | | |
| | a. Census | $ | 1,442,198 | 1.1% |
| | b. 13th Check vs. COLA [2] | | (596,700) | (0.5%) |
| | c. Assumption Changes [3] | | 2,669,133 | 2.1% |
| | d. Plan Changes | | - | 0.0% |
| | e. Total: (7)(a) + (7)(b) + (7)(c) + (7)(d) | $ | 3,514,631 | 2.7% |
| 8. | Actual June 30, 2015 Actuarial Accrued Liability: (6) + (7)(e) | **$** | **132,795,504** | |

[1] Includes refunds of accumulated member contributions and net interfund transfers.

[2] Retired members will be provided a 13th check by October 1, 2015 rather than a 1.0% COLA on January 1, 2016.

[3] The mortality, retirement, termination, dependent, and salary scale assumptions were updated pursuant to an experience study completed in April 2015.

## D. Reconciliation of Market Value of Assets

| | | June 30, 2014 | June 30, 2015 |
|---|---|---|---|
| 1. | Market Value of Assets, Prior June 30 | $ 97,018,792 | $ 110,656,502 |
| 2. | Receipts | | |
| a. | Employer Contributions | $ 5,358,617 | $ 5,215,010 |
| b. | Member Contributions | 1,019,371 | 1,003,661 |
| c. | Investment Income and Dividends Net of Fees | 13,323,046 | (87,238) |
| d. | Security Lending Income Net of Fees | 15,734 | 15,679 |
| e. | Member Reassignments | - | - |
| f. | Miscellaneous Income | - | - |
| g. | Total Receipts: (2)(a) + (2)(b) + (2)(c) + (2)(d) + (2)(e) + (2)(f) | $ 19,716,768 | $ 6,147,112 |
| 3. | Disbursements | | |
| a. | Benefits Paid During the Year | $ 5,838,289 | $ 6,523,776 |
| b. | Refund of Contributions and Interest | 100,415 | 84,585 |
| c. | Administrative and Project Expenses | 140,354 | 158,038 |
| d. | Member Reassignments | - | - |
| e. | Miscellaneous Disbursements | - | - |
| f. | Total Disbursements: (3)(a) + (3)(b) + (3)(c) + (3)(d) + (3)(e) | $ 6,079,058 | $ 6,766,399 |
| 4. | Market Value of Assets, Current June 30: (1) + (2)(g) - (3)(f) | **$ 110,656,502** | **$ 110,037,215** |
| 5. | Market Value of Assets Approximate Annual Rate of Return [1] | 13.6% | (0.2%) |

[1] Based on individual fund experience. Net of expenses and assuming cash flows occur at mid-year.

## E. Reconciliation of Actuarial Value of Assets

| | | | | | |
|---|---|---|---|---|---|
| 1. | Market Value of Assets, June 30, 2014 | | | $ | 110,656,502 |
| 2. | Market Value of Assets, June 30, 2015 | | | | 110,037,215 |
| 3. | Expected Earnings/Expenses | | | | |
| | a. Expected Investment Earnings at 6.75% on June 30, 2014 Market Value | | | | 7,469,314 |
| | b. Receipts with Expected Investment Earnings at 6.75%[1] | | | | 6,428,551 |
| | c. Disbursements with Expected Investment Earnings at 6.75%[1] | | | | 6,831,393 |
| 4. | Expected Assets, June 30, 2015: (1) + (3)(a) + (3)(b) - (3)(c) | | | $ | 117,722,974 |
| 5. | 2014-2015 Gain/(Loss): (2) - (4) | | | | (7,685,759) |
| 6. | Smoothing of Gain/(Loss) | | | | |
| | Year | Gain/(Loss) | % Unrecognized | | |
| | a. 2014-2015 | $ (7,685,759) | 75% | | (5,764,319) |
| | b. 2013-2014 | $ 6,634,832 | 50% | | 3,317,416 |
| | c. 2012-2013 | $ (1,123,295) | 25% | | (280,824) |
| 7. | Preliminary Actuarial Value of Assets, June 30, 2015: (2) - (6)(a) - (6)(b) - (6)(c) | | | $ | 112,764,942 |
| 8. | Corridor | | | | |
| | a. 120% of Market Value: 1.2 x (2) | | | | 132,044,658 |
| | b. 80% of Market Value: 0.8 x (2) | | | | 88,029,772 |
| 9. | Actuarial Value of Assets, June 30, 2015: (7), but not greater than (8)(a) or less than (8)(b) | | | **$** | **112,764,942** |
| 10. | Actuarial Value of Assets as a Percent of Market Value: (9) / (2) | | | | 102.5% |
| 11. | Actuarial Value of Assets Approximate Annual Rate of Investment Return[1] | | | | 5.2% |

[1] Assumes cash flows occur at mid-year.

## F. Contribution Rate

| | | June 30, 2014 | June 30, 2015 |
|---|---|---|---|
| **Development of Actuarially Determined Contribution Rate:** | | | |
| 1. | Anticipated Payroll | $ 26,663,926 | $ 25,760,873 |
| 2. | Normal Cost (Beginning of Year) | | |
| | a. Amount | $ 3,904,932 | $ 3,011,127 |
| | b. Percentage of Payroll | 14.64% | 11.69% |
| 3. | Unfunded Actuarial Accrued Liability (UAAL) Annual Amortizations | | |
| | a. Amount | $ 1,291,138 | $ 1,606,821 |
| | b. Percentage of Payroll | 4.84% | 6.24% |
| 4. | Expected Employee Contributions | | |
| | a. Amount | $ 1,066,557 | $ 1,030,435 |
| | b. Percentage of Payroll | 4.00% | 4.00% |
| 5. | Actuarially Determined Contribution Rate | | |
| | a. Percentage of Payroll: (2)(b) + (3)(b) - (4)(b) | **15.48%** | **13.93%** |
| | b. Effective Date | January 1, 2016 | January 1, 2017 |
| **Approved Funding Rate:** | | **20.75%** | **20.75%** |
| **Expected Percentage of Actuarially Determined Contribution Contributed:** | | | |
| 6. | Fiscal Year Beginning | July 1, 2015 | July 1, 2016 |
| 7. | Actuarially Determined Contribution Rates for: | | |
| | a. July 1 - December 31 | 16.47% | 15.48% |
| | b. January 1 - June 30 | 15.48% | 13.93% |
| 8. | Approved Funding Rates for: | | |
| | a. July 1 - December 31 | 20.75% | 20.75% |
| | b. January 1 - June 30 | 20.75% | 20.75% |
| 9. | Expected Percentage of Actuarially Determined Contribution Contributed: {[(8)(a) + (8)(b)] / 2} / {[(7)(a) + (7)(b)] / 2} | 129.89% | 141.11% |

## G. Unfunded Actuarial Accrued Liability Amortization Schedule [1]

| | Date Base Established | Reason | | Remaining Unfunded | Remaining Period | | Amortization Amount |
|---|---|---|---|---|---|---|---|
| 1. | 6/30/2009 | Actuarial Experience | $ | 11,043,768 | 22 | $ | 915,986 |
| 2. | 6/30/2010 | Actuarial Experience and Changes in Actuarial Assumptions | | 3,596,041 | 25 | | 282,586 |
| 3. | 6/30/2011 | Actuarial Experience and Changes in Actuarial Assumptions | | 959,700 | 26 | | 74,276 |
| 4. | 6/30/2012 | Actuarial Experience and Changes in Actuarial Assumptions | | 4,858,230 | 27 | | 370,750 |
| 5. | 6/30/2013 | Actuarial Experience and Changes in Actuarial Assumptions | | (1,609,233) | 28 | | (121,221) |
| 6. | 6/30/2014 | Actuarial Experience | | (3,106,882) | 29 | | (231,239) |
| 7. | 6/30/2015 | Actuarial Experience and Changes in Actuarial Assumptions | | 4,288,938 | 30 | | 315,683 |
| | Total | | $ | 20,030,562 | 24.0 [2] | $ | 1,606,821 |

[1] Valuation results prior to June 30, 2010 were calculated by the prior actuary.
[2] The weighted average remaining UAAL amortization period is calculated by weighting the remaining amortization period of each base by the amortization amount of each base.

## H. History of Employer Contribution Rates [1, 2]

| Valuation Date | Effective Date | Contribution Rate |
|---|---|---|
| June 30, 2001 | January 1, 2003 | 16.00% |
| June 30, 2002 | January 1, 2004 | 16.00% |
| June 30, 2003 | January 1, 2005 | 16.00% |
| June 30, 2004 | January 1, 2006 | 16.00% |
| June 30, 2005 | January 1, 2007 | 16.00% |
| June 30, 2006 | January 1, 2008 | 20.50% |
| June 30, 2007 | January 1, 2009 | 20.75% |
| June 30, 2008 | January 1, 2010 | 20.75% |
| June 30, 2009 | January 1, 2011 | 20.75% |
| June 30, 2010 | January 1, 2012 | 20.75% |
| June 30, 2011 | January 1, 2013 | 20.75% |
| June 30, 2012 | January 1, 2014 | 20.75% |
| June 30, 2013 | January 1, 2015 | 20.75% |
| June 30, 2014 | January 1, 2016 | 20.75% |
| June 30, 2015 | January 1, 2017 | 20.75% |

[1] Valuation results prior to June 30, 2010 were calculated by the prior actuary.

[2] Prior to the June 30, 2011 valuation date, rates shown reflect application of contribution rate smoothing rules.

## I. Approximate Annual Rate of Return for Year Ending June 30, 2015 [1]

| | | Market Value of Assets | Actuarial Value of Assets |
|---|---|---|---|
| 1. | Balance, beginning of year | $ 110,656,502 | $ 107,563,314 |
| 2. | Balance, end of year | 110,037,215 | 112,764,942 |
| 3. | Total increase: (2) - (1) | (619,287) | 5,201,628 |
| 4. | Contributions | 6,218,671 | 6,218,671 |
| 5. | Benefit payments [2] | 6,608,361 | 6,608,361 |
| 6. | Net additions: (4) - (5) | (389,690) | (389,690) |
| 7. | Net investment increase: (3) - (6) | (229,597) | 5,591,318 |
| 8. | Average assets: [(1) + (2) - (7)] / 2 | 110,461,657 | 107,368,469 |
| 9. | Approximate rate of return: (7) / (8) [1] | (0.2%) | 5.2% |

## J. Historical Investment Experience

| | Actual Rate of Investment Return | | Actuarial Assumed |
|---|---|---|---|
| Year Ending June 30 | Market Basis [3] | Actuarial Basis [1] | Interest Rate |
| 2006 | 10.7% | 15.2% | 7.25% |
| 2007 | 18.2% | 15.9% | 7.25% |
| 2008 | (7.6%) | 8.2% | 7.25% |
| 2009 | (20.6%) | (0.9%) | 7.25% |
| 2010 | 13.9% | (1.3%) | 7.25% |
| 2011 | 20.1% | 0.1% | 7.0% |
| 2012 | 0.7% | 3.0% | 7.0% |
| 2013 | 6.0% | 8.0% | 6.75% |
| 2014 | 13.7% | 8.6% | 6.75% |
| 2015 | 0.0% | 5.2% | 6.75% |

[1] Based on individual fund experience. Net of expenses and assuming cash flows occur at mid-year.

[2] Includes refunds of accumulated member contributions and net interfund transfers.

[3] INPRS actual time-weighted rate of return net of fees for 2012-2015. PERF Consolidated Defined Benefit time-weighted rate of return reported as gross of fees for 2006-20

## K. Interest Rate Sensitivity

The investment return assumption (discount rate) should be based on an estimated long-term investment yield for the plan, with consideration given to the nature and mix of current and expected plan investments. Management and the Board continually monitor the investment rate of return assumption and the Board formally reviews the assumption and makes changes as appropriate. The Board last changed the assumption for the June 30, 2012 valuation from 7.0% to 6.75%.

To illustrate the importance of the investment rate of return, which is used to discount the actuarial liabilities of the Plan, the Funded Ratio and Actuarially Determined Contribution Rate (for the calendar year beginning January 1, 2017) are shown below and on the following page at interest rates from 5.75% to 8.00%, in 0.25% increments.

| | 1.00% Decrease: (5.75%) | 0.75% Decrease: (6.0%) | 0.50% Decrease: (6.25%) | 0.25% Decrease: (6.5%) | Current Assumption: (6.75%) |
|---|---|---|---|---|---|
| **Funded Status** | | | | | |
| Actuarial Accrued Liability | $ 151,048,935 | $ 146,129,588 | $ 141,457,579 | $ 137,017,619 | $ 132,795,504 |
| Actuarial Value of Assets | 112,764,942 | 112,764,942 | 112,764,942 | 112,764,942 | 112,764,942 |
| Unfunded Actuarial Accrued Liability | $ 38,283,993 | $ 33,364,646 | $ 28,692,637 | $ 24,252,677 | $ 20,030,562 |
| Funded Ratio | 74.7% | 77.2% | 79.7% | 82.3% | 84.9% |
| **Actuarially Determined Contribution Rate** | | | | | |
| Normal Cost Rate | 14.79% | 13.93% | 13.13% | 12.38% | 11.69% |
| UAAL Amortization Rate | 10.49% | 9.42% | 8.35% | 7.29% | 6.24% |
| Expected Employee Contribution Rate | 4.00% | 4.00% | 4.00% | 4.00% | 4.00% |
| Actuarially Determined Contribution Rate | 21.28% | 19.35% | 17.48% | 15.67% | 13.93% |

## K. Interest Rate Sensitivity (Continued)

| | 0.25% Increase: (7.0%) | 0.50% Increase: (7.25%) | 0.75% Increase: (7.5%) | 1.00% Increase: (7.75%) | 1.25% Increase: (8.0%) |
|---|---|---|---|---|---|
| **Funded Status** | | | | | |
| Actuarial Accrued Liability | $ 128,778,029 | $ 124,952,910 | $ 121,308,711 | $ 117,834,784 | $ 114,521,206 |
| Actuarial Value of Assets | 112,764,942 | 112,764,942 | 112,764,942 | 112,764,942 | 112,764,942 |
| Unfunded Actuarial Accrued Liability | $ 16,013,087 | $ 12,187,968 | $ 8,543,769 | $ 5,069,842 | $ 1,756,264 |
| Funded Ratio | 87.6% | 90.2% | 93.0% | 95.7% | 98.5% |
| **Actuarially Determined Contribution Rate** | | | | | |
| Normal Cost Rate | 11.04% | 10.44% | 9.88% | 9.36% | 8.87% |
| UAAL Amortization Rate | 5.19% | 4.14% | 3.10% | 2.06% | 1.03% |
| Expected Employee Contribution Rate | 4.00% | 4.00% | 4.00% | 4.00% | 4.00% |
| Actuarially Determined Contribution Rate | 12.23% | 10.58% | 8.98% | 7.42% | 5.90% |

# SECTION III - ACCOUNTING

## ACCOUNTING

## PLAN FINANCIAL STATEMENTS UNDER GASB #67

### A. Statement of Fiduciary Net Position under GASB #67 as of June 30, 2015

| | | | | |
|---|---|---|---|---|
| 1. | Assets | | | |
| | a. | Cash | $ | 3,619 |
| | b. | Receivables | | |
| | | i. Contributions Receivable | $ | - |
| | | ii. Miscellaneous Receivables | | - |
| | | iii. Investments Receivable | | 1,733,342 |
| | | iv. Foreign Exchange Contract Receivable | | 25,343,285 |
| | | v. Interest and Dividends | | 283,088 |
| | | vi. Due From Other Funds | | - |
| | | vii. Total Receivables | $ | 27,359,715 |
| | c. | Total Investments | | |
| | | i. Short-Term Investments | $ | - |
| | | ii. Pooled Short-Term Investments | | 5,108,731 |
| | | iii. Pooled Fixed Income | | 37,746,415 |
| | | iv. Pooled Equity | | 24,397,455 |
| | | v. Pooled Alternative Investments | | 43,009,081 |
| | | vi. Pooled Derivatives | | 4,162 |
| | | vii. Securities Lending Collateral | | 5,517,875 |
| | | viii. Total Investments | $ | 115,783,719 |
| | d. | Net Capital Assets | | 7,131 |
| | e. | Prepaid Expenses | | - |
| | f. | Total Assets: (1)(a) + (1)(b)(vii) + (1)(c)(viii) + (1)(d) + (1)(e) | $ | 143,154,184 |
| 2. | Liabilities | | | |
| | a. | Accounts Payable | $ | 29,973 |
| | b. | Retirement Benefits Payable | | 24,663 |
| | c. | Salaries and Benefits Payable | | - |
| | d. | Investments Payable | | 1,255,406 |
| | e. | Foreign Exchange Contracts Payable | | 25,443,036 |
| | f. | Securities Lending Obligations | | 5,517,875 |
| | g. | Securities Sold Under Agreement to Repurchase | | 838,793 |
| | h. | Due To Other Funds | | 7,223 |
| | i. | Due To Other Governments | | - |
| | j. | Total Liabilities: (2)(a) + (2)(b) + (2)(c) + (2)(d) + (2)(e) + (2)(f) + (2)(g) + (2)(h) + (2)(i) | $ | 33,116,969 |
| 3. | Fiduciary Net Position Restricted for Pensions: (1)(f) - (2)(j) | | **$** | **110,037,215** |

## PLAN FINANCIAL STATEMENTS UNDER GASB #67

### B. Statement of Changes in Fiduciary Net Position under GASB #67 for the Year Ended June 30, 2015

| | | | | | |
|---|---|---|---|---|---|
| 1. | Fiduciary Net Position as of June 30, 2014 | | | $ | 110,656,502 |
| 2. | Additions | | | | |
| | a. | Contributions | | | |
| | | i. | Member Contributions | $ | 1,003,661 |
| | | ii. | Employer Contributions | | 5,215,010 |
| | | iii. | Employer Service Purchases | | - |
| | | iv. | Non-Employer Contributing Entity Contributions | | - |
| | | v. | Total Contributions | $ | 6,218,671 |
| | b. | Investment Income/(Loss) | | | |
| | | i. | Net Appreciation/(Depreciation) [1, 2] | $ | (766,101) |
| | | ii. | Net Interest and Dividend Income | | 1,480,716 |
| | | iii. | Securities Lending Income | | 18,699 |
| | | iv. | Other Net Investment Income | | 12,722 |
| | | v. | Investment Expenses | | (814,575) |
| | | vi. | Securities Lending Expenses | | (3,020) |
| | | vii. | Total Investment Income/(Loss) | $ | (71,559) |
| | c. | Other Additions | | | |
| | | i. | Member Reassignments | $ | - |
| | | ii. | Miscellaneous Receipts | | - |
| | | iii. | Total Other Additions | $ | - |
| | d. | Total Revenue (Additions): (2)(a)(v) + (2)(b)(vii) + (2)(c)(iii) | | $ | 6,147,112 |
| 3. | Deductions | | | | |
| | a. | Pension and Disability Benefits | | $ | 6,523,776 |
| | b. | Death, Survivor, and Funeral Benefits | | | - |
| | c. | Distributions of Contributions and Interest | | | 84,585 |
| | d. | Member Reassignments | | | - |
| | e. | Administrative and Project Expenses | | | 158,038 |
| | f. | Total Expenses (Deductions): (3)(a) + (3)(b) + (3)(c) + (3)(d) + (3)(e) | | $ | 6,766,399 |
| 4. | Net Increase (Decrease) in Fiduciary Net Position: (2)(d) - (3)(f) | | | $ | (619,287) |
| 5. | Fiduciary Net Position as of June 30, 2015: (1) + (4) | | | **$** | **110,037,215** |

[1] The calculation of realized gains and losses is independent of the calculation of the net change in the fair value of pension plan investments.

[2] Realized gains and losses on investments that had been held in more than one reporting period and sold in the current period were included as a change in the fair value reported in the prior period(s) and the current period.

## EMPLOYER FINANCIAL STATEMENTS UNDER GASB #68

### C. Net Pension Liability under GASB #68 for the Year Ended June 30, 2015

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. | Total Pension Liability | | | | | |
| | a. | Total Pension Liability - Beginning of year | | | $ | 123,600,704 |
| | b. | Service cost [1] | | | | 3,904,932 |
| | c. | Interest cost [2] | | | | 8,383,598 |
| | d. | Experience (gains)/losses | | | | 845,498 |
| | e. | Assumption changes | | | | 2,669,133 |
| | f. | Plan amendments | | | | - |
| | g. | Benefit payments [3] | | | | (6,608,361) |
| | h. | Member reassignments [4] | | | | - |
| | i. | Total Pension Liability - End of year | | | $ | 132,795,504 |
| 2. | Plan Fiduciary Net Position | | | | | |
| | a. | Plan Fiduciary Net Position - Beginning of year | | | $ | 110,656,502 |
| | b. | Employer contributions | | | | 5,215,010 |
| | c. | Member contributions | | | | 1,003,661 |
| | d. | Non-employer contributing entity contributions | | | | - |
| | e. | Investment return | | | | |
| | | i. Expected investment return [5] | $ | 8,268,423 | | |
| | | ii. Investment gain/(loss) | | (7,522,387) | | |
| | | iii. Total investment return | $ | 746,036 | | |
| | | iv. Investment Expenses | | (817,595) | | |
| | | v. Net investment return | | | | (71,559) |
| | f. | Benefit payments | | | | (6,608,361) |
| | g. | Member reassignments [4] | | | | - |
| | h. | Administrative and Project Expenses | | | | (158,038) |
| | i. | Plan Fiduciary Net Position - End of year | | | $ | 110,037,215 |
| 3. | Net Pension Liability | | | | | |
| | a. | Net Pension Liability: (1)(i) - (2)(i) | | | **$** | **22,758,289** |
| | b. | Plan Fiduciary Net Position as a Percentage of the Total Pension Liability : (2)(i) / (1)(i) | | | | 82.9% |

[1] As of the beginning of the year.
[2] Includes interest of 6.75% on the beginning-of-year service cost.
[3] Includes refunds of accumulated member contributions.
[4] Includes net interfund transfers
[5] 6.75%, net of investment expenses and assuming cash flows occur at mid-year.

## EMPLOYER FINANCIAL STATEMENTS UNDER GASB #68

### D. Deferred Inflows and Outflows of Resources under GASB #68 for the Year Ended June 30, 2015 [1]

| Fiscal Year Established | Reason | Remaining Balance At Beginning of Year | Remaining Period [2] | Annual Recognition | Remaining Balance At End of Year |
|---|---|---|---|---|---|
| 1. Liability experience | | | | | |
| a. Inflows | | | | | |
| 2014 | Experience gain | $ 380,129 | 7.68 | $ 49,497 | $ 330,632 |
| b. Outflows | | | | | |
| 2015 | Experience loss | $ (845,498) | 6.81 | $ (124,156) | $ (721,342) |
| 2. Assumption changes | | | | | |
| a. Inflows | | | | | |
| None | | | | | |
| b. Outflows | | | | | |
| 2015 | Assumption change loss | $ (2,669,133) | 6.81 | $ (391,944) | $ (2,277,189) |
| 3. Investment experience [3] | | | | | |
| a. Inflows | | | | | |
| 2014 | Investment gain | $ 4,788,727 | 4.00 | $ 1,197,183 | $ 3,591,544 |
| b. Outflows | | | | | |
| 2015 | Investment loss | $ (8,339,982) | 5.00 | $ (1,667,997) | $ (6,671,985) |
| 4. Total deferred inflows / outflows: (1) + (2) + (3) | | | | | |
| a. Inflows | | | | | |
| | Total | **$ 5,168,856** | | **$ 1,246,680** | **$ 3,922,176** |
| b. Outflows | | | | | |
| | Total | **$ (11,854,613)** | | **$ (2,184,097)** | **$ (9,670,516)** |

[1] The effort and cost to re-create financial statement information for 10 years was not practical. Information was prepared prospectively from June 30, 2013 for GASB #68 purposes.

[2] The initial amortization period for liability experience gains / losses and assumption change gains / losses is equal to the expected future working lifetime of all members, active and inactive. The initial amortization period for investment gains / losses is five years.

[3] Net of investment expenses.

**EMPLOYER FINANCIAL STATEMENTS UNDER GASB #68**

**D. Deferred Inflows and Outflows of Resources under GASB #68 for the Year Ended June 30, 2015 (Continued) [1]**

Amounts reported as deferred inflows / (outflows) of resources to be recognized in pension expense:

Year Ending June 30:

| | | |
|---|---|---|
| 2015 | $ | (937,417) |
| 2016 | $ | (937,417) |
| 2017 | $ | (937,417) |
| 2018 | $ | (937,422) |
| 2019 | $ | (2,134,597) |
| 2020 | $ | (466,603) |
| Thereafter | $ | (334,884) |

[1] The effort and cost to re-create financial statement information for 10 years was not practical. Information was prepared prospectively from June 30, 2013 for GASB #68 purposes.

**EMPLOYER FINANCIAL STATEMENTS UNDER GASB #68**

## E. Pension Expense under GASB #68 for the Year Ended June 30, 2015

| | | | |
|---|---|---|---|
| 1. | Service cost | | |
| a. | Total service cost [1] | $ | 3,904,932 |
| b. | Member contributions | | (1,003,661) |
| c. | Administrative and Project Expenses | | 158,038 |
| d. | Net employer service cost: (1)(a) + (1)(b) + (1)(c) | | 3,059,309 |
| 2. | Interest cost [2] | | 8,383,598 |
| 3. | Expected return on assets [3] | | (8,268,423) |
| 4. | Plan amendments | | - |
| 5. | Recognition of deferred (inflows) / outflows of resources related to: | | |
| a. | Liability experience (gains) / losses | | 74,659 |
| b. | Assumption changes (gains) / losses | | 391,944 |
| c. | Investment (gains) / losses | | 470,814 |
| d. | Total: (5)(a) + (5)(b) + (5)(c) | | 937,417 |
| 6. | Preliminary pension expense: (1)(d) + (2) + (3) +(4) + (5)(d) | $ | 4,111,901 |
| 7. | Employer Service Purchases | | - |
| 8. | Total Pension Expense: (6) + (7) | **$** | **4,111,901** |

[1] As of the beginning of the year.
[2] Includes interest of 6.75% on the beginning-of-year service cost.
[3] 6.75% net of investment expenses and assuming cash flows occur at mid-year. Includes a half year of interest on employee contributions and administrative expenses.

SECTION III - ACCOUNTING

**NOTES TO THE FINANCIAL STATEMENTS UNDER GASB #67 AND #68**

**F. Selected Notes to the Financial Statements under GASB #67 and #68**

1. EG&C Fund is a single-employer plan for GASB accounting purposes.

2. Significant actuarial assumptions and other inputs used to measure the total pension liability:

- Measurement Date: June 30, 2015

- Valuation Date
  - Assets: June 30, 2015
  - Liabilities: June 30, 2014 - Member census data as of June 30, 2014 was used in the valuation and adjusted, where appropriate, to reflect changes between June 30, 2014 and June 30, 2015. Standard actuarial roll forward techniques were then used to project the total pension liability computed as of June 30, 2014 to the June 30, 2015 measurement date.

- Inflation: 2.25%

- Future Salary Increases: 2.50%

- Cost-of-Living Increases: 1.0% compounded annually, beginning July 1, 2016. Retired members were provided a 13th check by October 1, 2014, and will be provided a 13th check by October 1, 2015, which is reflected in the valuation.

- Mortality Assumption: RP-2014 Mortality Blue Collar Set Mortality Table with mortality improvement since 2006 using scale MP-2014 removed and projected on a fully generational basis using the future mortality improvement scale inherent in the mortality projection shown in the Social Security Administration's 2014 Trustee report.

- Experience Study: The most recent comprehensive experience study was completed in 2015 and was based on member experience between June 30, 2010 and June 30, 2014. The demographic assumptions were updated as needed for the June 30, 2015 actuarial valuation based on the results of the study.

- Discount Rate: The discount rate used to measure the total pension liability was 6.75% as of June, 30, 2015, and is equal to the long-term expected return on plan investments. The projection of cash flows used to determine the discount rate assumed that employer contributions would be made at the actuarially calculated amount computed in accordance with the current funding policy adopted by the Board, which requires payment of the normal cost and amortization of the unfunded actuarially accrued liability in level dollar installments over 30 years utilizing a closed period approach. Since the current funding policy was adopted, the state's contributions have been consistent with the amounts required by the Board utilizing this policy. Based on this assumption, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members.

- Discount Rate Sensitivity

| | 1% Decrease (5.75%) | Current Rate (6.75%) | 1% Increase (7.75%) |
|---|---|---|---|
| Net Pension Liability | $ 41,011,720 | $ 22,758,289 | $ 7,797,569 |

## NOTES TO THE FINANCIAL STATEMENTS UNDER GASB #67 AND #68

### F. Selected Notes to the Financial Statements under GASB #67 and #68 (Continued)

3. Classes of plan members covered: [1]

| | |
|---|---|
| - Retired members, beneficiaries and disabled members receiving benefits: | 207 |
| - Terminated vested plan members entitled to but not yet receiving benefits: | 3 |
| - Terminated non-vested plan members entitled to a distribution of contributions: | 101 |
| - Active Plan Members: | 448 |
| - Total membership: | 759 |

4. Money-weighted rate of return:
The money-weighted rate of return equals investment performance, net of pension plan investment expense, adjusted for the changing amounts actually invested. For the fiscal year ending June 30, 2015, the money-weighted return on the plan assets is (0.1%).

5. The components of the Net Pension Liability for the EG&C Fund plan as of June 30, 2015, are as follows:

| | | |
|---|---|---|
| - Total Pension Liability | $ | 132,795,504 |
| - Plan Fiduciary Net Position | | 110,037,215 |
| - Net Pension Liability | $ | 22,758,289 |
| - Plan Fiduciary Net Position as a Percentage of the Total Pension Liability | | 82.9% |

[1] The valuation results as of June 30, 2015 were calculated using June 30, 2014 census data, adjusted for certain activity during fiscal year 2015.

## REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #67 AND #68

### G. Schedule of Changes in the Net Pension Liability and Plan Fiduciary Net Position under GASB #67 and #68 [1]

| Year Ending June 30: | 2013 | 2014 | 2015 |
|---|---|---|---|
| 1. Total Pension Liability | | | |
| a. Total Pension Liability - Beginning of year | $ 113,282,644 | $ 118,097,227 | $ 123,600,704 |
| b. Service cost [2] | 3,810,650 | 3,841,382 | 3,904,932 |
| c. Interest cost [3] | 7,740,113 | 8,030,425 | 8,383,598 |
| d. Experience (gains)/losses | (1,845,309) | (429,626) | 845,498 |
| e. Assumption changes | (40,954) | - | 2,669,133 |
| f. Plan amendments | - | - | - |
| g. Benefit payments [4] | (4,835,348) | (5,938,704) | (6,608,361) |
| h. Member reassignments [5] | (14,569) | - | - |
| i. Total Pension Liability - End of year | $ 118,097,227 | $ 123,600,704 | $ 132,795,504 |
| 2. Plan Fiduciary Net Position | | | |
| a. Plan Fiduciary Net Position - Beginning of year | $ 76,543,260 | $ 97,018,792 | $ 110,656,502 |
| b. Employer contributions | 19,740,031 | 5,358,617 | 5,215,010 |
| c. Member contributions | 1,005,564 | 1,019,371 | 1,003,661 |
| d. Non-employer contributing entity contributions | - | - | - |
| e. Net investment return | 4,700,988 | 13,338,780 | (71,559) |
| f. Benefit payments [4] | (4,835,348) | (5,938,704) | (6,608,361) |
| g. Member reassignments [5] | (14,569) | - | - |
| h. Administrative and Project Expenses | (121,134) | (140,354) | (158,038) |
| i. Plan Fiduciary Net Position - End of year | $ 97,018,792 | $ 110,656,502 | $ 110,037,215 |

[1] The effort and cost to re-create financial statement information for 10-years was not practical. Information was prepared prospectively from June 30, 2012 for GASB #67 purposes and prospectively from June 30, 2013 for GASB #68 purposes.

[2] As of the beginning of the year.

[3] Includes interest of 6.75% on the beginning-of-year service cost.

[4] Includes refunds of accumulated member contributions and other interfund transfers.

[5] Includes net interfund transfers.

**REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #67 AND #68**

**H. Schedule of Net Pension Liability and Related Ratios under GASB #67 and #68 [1]**

| 1. Year Ending | 2. Total Pension Liability | 3. Plan Fiduciary Net Position | 4. Net Pension Liability (2) - (3) | 5. Fiduciary Net Position as a Percentage of Total Pension Liability (3) / (2) | 6. Actual Covered Employee Payroll [2] | 7. Net Pension Liability as a Percentage of Covered Payroll (4) / (6) |
|---|---|---|---|---|---|---|
| 6/30/2013 | $ 118,097,227 | $ 97,018,792 | $ 21,078,435 | 82.2% | $ 24,675,000 | 85.4% |
| 6/30/2014 | $ 123,600,704 | $ 110,656,502 | $ 12,944,202 | 89.5% | $ 25,824,626 | 50.1% |
| 6/30/2015 | $ 132,795,504 | $ 110,037,215 | $ 22,758,289 | 82.9% | $ 25,132,559 | 90.6% |

[1] The effort and cost to re-create financial statement information for 10-years was not practical. Information was prepared prospectively from June 30, 2012 for GASB #67 purposes and prospectively from June 30, 2013 for GASB #68 purposes.

[2] Pensionable pay as provided by INPRS. Gross member compensation, which may include components of compensation that are not included in pensionable pay, was not made available to PwC.

## REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #67 AND #68

### I. Schedule of Contributions under GASB #67 and #68 [1]

| 1. Year Ending | 2. Actuarially Determined Contribution [2] | 3. Actual Employer Contributions [3] | 4. Contribution Excess / (Deficiency) (Deficiency) (3) - (2) | 5. Actual Covered Employee Payroll [4] | 6. Contributions as a Percentage of Covered Payroll (3) / (5) |
|---|---|---|---|---|---|
| 6/30/2013 | $ 4,794,353 | $ 19,740,031 [5] | $ 14,945,679 | $ 24,675,000 | 80.0% |
| 6/30/2014 | $ 5,340,533 | $ 5,358,617 | $ 18,084 | $ 25,824,626 | 20.8% |
| 6/30/2015 | $ 4,820,425 | $ 5,215,010 | $ 394,585 | $ 25,132,559 | 20.8% |

[1] The effort and cost to re-create financial statement information for 10-years was not practical. Information was prepared prospectively from June 30, 2012 for GASB #67 purposes and prospectively from June 30, 2013 for GASB #68 purposes.

[2] The actuarially determined contribution amounts are based on the average of the actuarially determined contribution rates developed in the actuarial valuations completed one year and two years prior to the beginning of the fiscal year, multiplied by actual payroll during the fiscal year.

[3] Excludes employer service purchases.

[4] Pensionable pay as provided by INPRS. Gross member compensation, which may include components of compensation that are not included in pensionable pay, was not made available to PwC.

[5] Includes a contribution of $14,619,112 made to the Plan pursuant to 2012 HB 1376.

**REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB #67 AND #68**

**J. Schedule of Money-Weighted Returns under GASB #67 and #68 [1]**

| 1.<br>Year Ending | 2.<br>Money-Weighted Rate of Return |
|---|---|
| 6/30/2013 | 5.5% |
| 6/30/2014 | 13.7% |
| 6/30/2015 | (0.1%) |

[1] The effort and cost to re-create financial statement information for 10-years was not practical. Information was prepared prospectively from June 30, 2012 for GASB #67 purposes and prospectively from June 30, 2013 for GASB #68 purposes.

## CENSUS DATA

## A. Reconciliation of Participant Data [1]

| | Actives | Inactive Non-Vested With Member Contribution Balance | Inactive Vested | Disabled | Retired | Beneficiary | Total |
|---|---|---|---|---|---|---|---|
| Total as of June 30, 2013 | 473 | 87 | 4 | 3 | 149 | 41 | 757 |
| Data Adjustments for Activity During Fiscal Year 2014 | - | - | - | - | - | - | - |
| Adjusted Total as of June 30, 2013 | 473 | 87 | 4 | 3 | 149 | 41 | 757 |
| New Entrants | 11 | 5 | - | - | - | - | 16 |
| Rehires | - | - | - | - | - | - | - |
| Non-Vested Terminations | (14) | 14 | - | - | - | - | - |
| Vested Terminations | - | - | - | - | - | - | - |
| Retirements | (13) | - | (1) | - | 14 | - | - |
| Disablements | (1) | - | - | 1 | - | - | - |
| Death with Beneficiary | - | - | - | - | (1) | 1 | - |
| Death without Beneficiary | - | - | - | - | - | (1) | (1) |
| Refunds | (8) | (5) | - | - | - | - | (13) |
| Data Adjustments | - | - | - | - | - | - | - |
| Total as of June 30, 2014 | 448 | 101 | 3 | 4 | 162 | 41 | 759 |
| Data Adjustments for Activity During Fiscal Year 2015 | - | - | - | - | - | - | - |
| Adjusted Total as of June 30, 2014 | 448 | 101 | 3 | 4 | 162 | 41 | 759 |

[1] The valuation results as of June 30, 2015 were calculated using June 30, 2014 census data, adjusted for certain activity during fiscal year 2015.

## B. Census Information as of June 30, 2014 [1]

| | | Male | Female | Total |
|---|---|---|---|---|
| 1. | **Active** | | | |
| | a. Number | 403 | 45 | 448 |
| | b. Average Age | 41.6 | 39.5 | 41.4 |
| | c. Average Years of Service | 11.0 | 9.3 | 10.8 |
| | d. Anticipated Payroll of Actives [2] | $ 23,231,452 | $ 2,529,421 | $ 25,760,873 |
| 2. | **Inactive - Vested** | | | |
| | a. Number | 3 | - | 3 |
| | b Average Age | 51.0 | - | 51.0 |
| | c. Average Years of Service | 20.8 | - | 20.8 |
| 3. | **Inactive - Non-Vested** [3] | | | |
| | a. Number | 85 | 16 | 101 |
| 4. | **Retiree/Beneficiary/Disabled** | | | |
| | a. Number | 160 | 47 | 207 |
| | b. Average Age | 66.0 | 76.5 | 68.4 |
| | c. Annual Benefits Payable [4] | $ 4,720,722 | $ 489,379 | $ 5,210,101 |

[1] The valuation results as of June 30, 2015 were calculated using June 30, 2014 census data, adjusted for certain activity during fiscal year 2015.

[2] Figures shown are the anticipated pay for the one-year period following June 30, 2015.

[3] As of June 30, 2014, inactive non-vested members entitled to a refund of their member contribution had balances totaling $283,199.

[4] Annual allowances reflect cost-of-living increases effective January 1 following the date of the census data, if provided, but do not reflect one-time 13th check amounts.

## C. Schedule of Active Member Valuation Data [1, 2]

| 1.<br>Valuation Date | 2.<br>Active Members | 3.<br>Anticipated Payroll ($ in Thousands) [3] | 4.<br>Average Pay<br>(3) / (2) | 5.<br>Annual Percent Change |
|---|---|---|---|---|
| 6/30/2005 | 262 | $ 13,223 | $ 50,469 | 24.1% |
| 6/30/2006 | 310 | 14,892 | 48,038 | (4.8%) |
| 6/30/2007 | 344 | 17,715 | 51,497 | 7.2% |
| 6/30/2008 | 410 | 21,333 | 52,033 | 1.0% |
| 6/30/2009 | 443 | 25,238 | 56,971 | 9.5% |
| 6/30/2010 | 471 | 26,709 | 56,707 | (0.5%) |
| 6/30/2011 | 440 | 24,028 | 54,609 | (3.7%) |
| 6/30/2012 | 468 | 25,752 | 55,026 | 0.8% |
| 6/30/2013 | 473 | 26,201 | 55,393 | 0.7% |
| 6/30/2014 | 473 | 26,664 | 56,372 | 1.8% |
| 6/30/2015 | 448 | 25,761 | 57,502 | 2.0% |

[1] Valuation results prior to June 30, 2010 were calculated by the prior actuary.

[2] The valuation results beginning as of June 30, 2014 were calculated using census data as of the prior year end, adjusted for certain activity during the current fiscal year.

[3] Figures shown are the anticipated pay for the one-year period following the valuation date.

**D. Schedule of Retirees, Beneficiaries, and Disabled Members [1, 2]**

| 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. |
|---|---|---|---|---|---|---|---|---|
| | Added | | Removed | | End of Year [3] | | | |
| Valuation Date | Number | Annual Allowances ($ in Thousands) [4] | Number | Annual Allowances ($ in Thousands) [4] | Number | Annual Allowances ($ in Thousands) [4] | % Increase in Annual Allowances [4] | Average Annual Allowances [4] |
| 6/30/2005 | 4 | $ 114 | 4 | $ 65 | 128 | $ 1,787 | 2.8% | $ 13,962 |
| 6/30/2006 | 5 | 127 | 1 | 26 | 132 | 1,888 | 5.6% | 14,304 |
| 6/30/2007 | 13 | 359 | 5 | 74 | 140 | 2,176 | 15.2% | 15,539 |
| 6/30/2008 | 9 | 302 | 12 | 119 | 137 | 2,518 | 15.8% | 18,382 |
| 6/30/2009 | 59 | 748 | 39 | 258 | 157 | 3,056 | 21.3% | 19,465 |
| 6/30/2010 | 6 | 136 | 6 | 49 | 157 | 3,134 | 2.6% | 19,962 |
| 6/30/2011 | 22 | 902 | 3 | 23 | 176 | 3,978 | 26.9% | 22,602 |
| 6/30/2012 | 14 | 495 | 3 | 14 | 187 | 4,452 | 11.9% | 23,810 |
| 6/30/2013 | 8 | 253 | 2 | 9 | 193 | 4,666 | 4.8% | 24,177 |
| 6/30/2014 | - | - | - | - | 193 | 4,666 | 0.0% | 24,177 |
| 6/30/2015 | 15 | 556 | 1 | 5 | 207 | 5,210 | 11.7% | 25,170 |

[1] Valuation results prior to June 30, 2010 were calculated by the prior actuary.

[2] The valuation results beginning as of June 30, 2014 were calculated using census data as of the prior year end, adjusted for certain activity during the current fiscal year.

[3] End of year annual allowances are not equal to the prior end of year annual allowances plus additions and less removals because of reductions for beneficiary benefits, data changes, and cost-of-living increases.

[4] Annual allowances reflect cost-of-living increases effective January 1 following the date of the census data, if provided, but do not reflect one-time 13th check amounts.

## E. Distribution of Active Members by Age and Service [1]

| Attained Age | Distribution of Active Members by Age and Service as of June 30, 2014 [1] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Under 10 years | 10 to 14 years | 15 to 19 years | 20 to 24 years | 25 to 29 years | 30 to 34 years | 35 to 39 years | Over 40 years | Total |
| <25 | 16 | | | | | | | | 16 |
| 25-29 | 47 | | | | | | | | 47 |
| 30-34 | 64 | 11 | | | | | | | 75 |
| 35-39 | 47 | 15 | 7 | | | | | | 69 |
| 40-44 | 33 | 10 | 23 | 3 | | | | | 69 |
| 45-49 | 24 | 4 | 13 | 16 | 4 | | | | 61 |
| 50-54 | 19 | | | 6 | 18 | 5 | | | 48 |
| 55-59 | 23 | 1 | 1 | | 3 | 13 | 1 | | 42 |
| 60-64 | 16 | | | | | 3 | 1 | | 20 |
| 65-69 | 1 | | | | | | | | 1 |
| 70&Up | | | | | | | | | |
| Total | 290 | 41 | 44 | 25 | 25 | 21 | 2 | | 448 |

[1] The valuation results as of June 30, 2015 were calculated using June 30, 2014 census data, adjusted for certain activity during fiscal year 2015.

**F. Distribution of Inactive Vested Members by Age and Service [1]**

| Attained Age | Distribution of Inactive Vested Members by Age and Service as of June 30, 2014 [1] | | | | | |
|---|---|---|---|---|---|---|
| | Under 15 years | 15 to 19 years | 20 to 24 years | 25 to 29 years | Over 30 years | Total |
| <25 | | | | | | |
| 25-29 | | | | | | |
| 30-34 | | | | | | |
| 35-39 | | | | | | |
| 40-44 | | 1 | | | | 1 |
| 45-49 | | 1 | | | | 1 |
| 50-54 | | | | | | |
| 55-59 | | | | | | |
| 60-64 | | | | | 1 | 1 |
| 65-69 | | | | | | |
| 70&Up | | | | | | |
| Total | | 2 | | | 1 | 3 |

[1] The valuation results as of June 30, 2015 were calculated using June 30, 2014 census data, adjusted for certain activity during fiscal year 2015.

## G. Distribution of Retired Members, Beneficiaries, and Disabled Members by Age and Number of Years Retired [1]

| Attained Age | Distribution of Retired Members, Beneficiaries, and Disabled Members by Age and Number of Years Retired as of June 30, 2014 [1] | | | | | | |
|---|---|---|---|---|---|---|---|
| | Under 10 years | 10 to 14 years | 15 to 19 years | 20 to 24 years | 25 to 29 years | Over 30 years | Total |
| <40 | 1 | | | | | | 1 |
| 40-44 | | | | | | | |
| 45-49 | 1 | | | | | | 1 |
| 50-54 | 9 | | | | | | 9 |
| 55-59 | 35 | 2 | | | | | 37 |
| 60-64 | 37 | 3 | 1 | | | | 41 |
| 65-69 | 25 | 5 | 2 | 4 | | | 36 |
| 70-74 | | 16 | 8 | 4 | 2 | | 30 |
| 75-79 | | | 9 | 4 | 1 | | 14 |
| 80-84 | | | 1 | 6 | 1 | 2 | 10 |
| 85-89 | | | | | 9 | 6 | 15 |
| 90&Up | | | | | 1 | 12 | 13 |
| Total | 108 | 26 | 21 | 18 | 14 | 20 | 207 |

[1] The valuation results as of June 30, 2015 were calculated using June 30, 2014 census data, adjusted for certain activity during fiscal year 2015.

SECTION IV - CENSUS DATA

## H. Schedule of Benefit Recipients by Type of Benefit Option [1]

Number of Benefit Recipients by Benefit Option as of June 30, 2014

| Amount of Monthly Benefit | Retiree Single Life Annuity | Retiree 50% Joint and Survivor Annuity | Survivors | Disability | Total |
|---|---|---|---|---|---|
| $ 1 - 500 | 0 | 2 | 14 | 1 | 17 |
| 501 - 1,000 | 1 | 10 | 19 | 1 | 31 |
| 1,001 - 1,500 | 4 | 11 | 7 | 1 | 23 |
| 1,501 - 2,000 | 2 | 12 | 1 | 0 | 15 |
| 2,001 - 3,000 | 4 | 71 | 0 | 1 | 76 |
| over 3,000 | 4 | 41 | 0 | 0 | 45 |
| Total | 15 | 147 | 41 | 4 | 207 |

## I. Schedule of Average Benefit Payments as of June 30, 2014 [1,2]

| | Years of Credited Service | | | | | | |
|---|---|---|---|---|---|---|---|
| | <10 | 10-14 | 15-19 | 20-24 | 25-29 | 30+ | Total |
| Average Monthly Defined Benefit | $ 504 | $ - | $ 562 | $ 983 | $ 2,031 | $ 2,729 | $ 2,097 |
| Average Final Average Salary | $ 33,205 | $ - | $ 26,025 | $ 37,093 | $ 48,424 | $ 54,007 | $ 49,010 |
| Number of Benefit Recipients | 15 | 0 | 9 | 21 | 59 | 103 | 207 |

[1] The valuation results beginning as of June 30, 2014 were calculated using census data as of the prior year end, adjusted for certain activity during the current fiscal year. Monthly benefits do not reflect 13th check payments made in October 2014 and October 2015. No cost-of-living increases were approved for January 1, 2015 or January 1, 2016.

[2] For some members, average salary at retirement and years of credited service was not available. The average salary for each group excluded these members.

## ACTUARIAL ASSUMPTIONS AND METHODS

# SECTION V - ACTUARIAL ASSUMPTIONS AND METHODS

## A. Actuarial Assumptions

The assumptions used in the valuation were selected and approved by the INPRS Board of Trustees. The demographic assumptions are reviewed at least every five years through a study of actual experience. The last study was completed in April 2015. In this way, the actuary provides guidance to the Board in selecting the assumptions. The actuary and other economic and investment professionals also provide advice to the Board for selecting the economic assumptions. In our opinion, the assumptions are reasonable for purposes of this valuation.

| | |
|---|---|
| Interest Rate / Investment Return | |
| Funding | 6.75% (net of administrative and investment expenses) |
| Accounting | 6.75% (net of investment expenses) |
| Interest on Member Balances | 3.5% per year |
| Future Salary Increases | 2.50% per year |
| Inflation | 2.25% per year |
| Cost of Living Increases | 1.0% per year in retirement beginning January 1, 2017. 13th checks were provided to members in pay status in lieu of a permanent cost-of-living increase in fiscal 2015 and 2016. The fiscal 2016 13th check, payable to members in October 2015, is included in the liability valuation at June 30, 2015. |
| Mortality (Healthy and Disabled) | RP-2014 Blue Collar Set Mortality Table with mortality improvement since 2006 using scale MP-2014 removed and projected on a fully generational basis using the future mortality improvement scale inherent in the mortality projection included in the Social Security Administration's 2014 Trustee report. |
| Disability | 150% of 1964 OASDI Table. Illustrative rates shown below: |

| Age | Rate |
|---|---|
| 20 | 0.0900% |
| 25 | 0.1275% |
| 30 | 0.1650% |
| 35 | 0.2205% |
| 40 | 0.3300% |
| 45 | 0.5400% |
| 50 | 0.9090% |
| 55 | 1.5135% |
| 60 | 2.4405% |
| 65+ | 0.0000% |

## A. Actuarial Assumptions (Continued)

Termination

Based on 2010-2014 experience. Rates shown below:

| Service | Rate | Service | Rate |
|---|---|---|---|
| 0-1 | 10% | 7 | 4% |
| 2 | 9% | 8 | 3% |
| 3 | 8% | 9 | 2% |
| 4 | 7% | >=10 | 1% |
| 5 | 6% | | |
| 6 | 5% | | |

Retirement

Based on 2010-2014 experience. Rates shown below:

| Age | Rate |
|---|---|
| <=44 | 0% |
| 45 | 3% |
| 46 - 49 | 2% |
| 50 | 3% |
| 51 - 59 | 15% |
| 60-64 | 40% |
| >=65 | 100% |

Decrement Timing

Decrements are assumed to occur at the beginning of the year.

Active Members in DROP

Members who are participating in the DROP are assumed to receive an annuity benefit commencing at the end of their DROP period as well as a lump sum payment equal to the number of years they were in the DROP times their annual annuity benefit. The annuity benefit is estimated based on salary and service at the time the member entered the DROP.

Spouse/Beneficiary

90% of members are assumed to be married or to have a dependent beneficiary. Males are assumed to be three (3) years older than females.

## A. Actuarial Assumptions (Continued)

| | |
|---|---|
| Data Assumptions | Actives and inactives with either no date of birth and/or no gender are assumed to be age 41 and/or male. Spouse gender is assumed to be the opposite gender of the member. Additionally, payroll for new hires is annualized.<br><br>Retirees and disabled members that are not married and do not have a retirement option listed are assumed to elect a single life annuity. Retirees and disabled members that are married and do not have a retirement option listed are assumed to be receiving a 50% joint and survivor annuity. Beneficiaries that do not have a retirement option listed are assumed to receive monthly payments for life. |
| Changes in Assumptions | An assumption study was performed in April of 2015 resulting in an update to the following assumptions:<br><br>The inflation assumption decreased from 3.00% to 2.25% per year.<br><br>The future salary increase rate assumption decreased from 3.25% to 2.50% per year.<br><br>The mortality assumption changed from the 2013 IRS Static Mortality projected five (5) years with Scale AA to the RP-2014 (with MP-2014 improvement removed) Blue Collar mortality tables, with future mortality improvement projected generationally using future mortality improvement inherent in the Social Security Administration's 2014 Trustee report.<br><br>The retirement assumption changed to reflect higher likelihood of retirement at certain ages.<br><br>The termination assumption changed from an age-based table to a service-based table.<br><br>The dependent assumption was adjusted to reflect recent experience. |

## B. Actuarial Methods

The actuarial methods used in this valuation were selected and approved by the Board. In general, the methods provide orderly funding of all benefits being accrued, as well as unfunded past-service benefit liabilities, over a period of thirty years. However, the smoothing methods employed in determining the Actuarial Value of Assets may accelerate or lengthen the effective funding period, depending on whether gains or losses are experienced. In our opinion, the actuarial methods are reasonable for the purposes of this valuation.

1. Actuarial Cost Method

The actuarial cost method is Entry Age Normal - Level Percent of Payroll.

The normal cost is calculated separately for each active member 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 actuarial accrued liability on any valuation date is the accumulated value of such normal costs from entry age to the valuation date.

For funding, gains and losses occurring from census experience different than assumed, assumption changes, and benefit changes are amortized over a 30-year period with level payments each year. A new gain or loss base is established each year based on the additional gain or loss during that year and that base is amortized over a new 30-year period. However, when the plan is at or above 100% funded (based on Actuarial Value of Assets), the past amortization bases are considered fully amortized and a single amortization base equal to the surplus is amortized over a 30-year period with level payments each year. 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.

For accounting, gains and losses occurring from census experience different than assumed and assumption changes are amortized into expense over the average expected future service of all plan participants (active and inactive). Gains and losses occurring from investment experience different than assumed are amotized into expense over a 5-year period. The effect of plan changes on the plan liability are fully recognized in expense in the year in which they occur.

Member census data as of June 30, 2014 was used in the valuation and adjusted, where appropriate, to reflect changes between June 30, 2014 and June 30, 2015. Standard actuarial roll forward techniques were then used to project the liabilities computed as of June 30, 2014 to the June 30, 2015 measurement date.

2. Asset Valuation Method

The Actuarial Value of Assets smoothes the recognition of gains and losses on the Market Value of Assets over four years, subject to a 20% corridor.

## B. Actuarial Methods (Continued)

3. Employer Contribution Rate

   Based on the assumptions and methods previously described, an actuarially determined contribution rate is computed. The Board considers this information, but has ultimate authority in setting the employer contribution rate.

4. Anticipated Payroll

   The Anticipated Payroll of $25,760,873 for the fiscal year beginning July 1, 2015 is equal to the actual payroll during the year ending June 30, 2015, increased with one year of salary scale, but does not include amounts for members who have reached the age at which retirement is assumed to occur immediately.

5. Changes in Actuarial Methods

   There were no method changes for the June 30, 2015 valuation.

## SUMMARY OF PLAN PROVISIONS

# SECTION VI - SUMMARY OF PLAN PROVISIONS

## A. Summary of Plan Provisions

The benefit provisions for the EG&C Fund are set forth in IC 5-10-5.5. A summary of those defined pension benefit provisions is presented below:

| | |
|---|---|
| Participation | All Indiana State Excise Police Officers, all Indiana State Conservation Enforcement officers, all Indiana Gaming Agents, and all Indiana Gaming Control Officers must become members as a condition of employment. |

Eligibility for Defined Pension Benefits

| | | |
|---|---|---|
| a. | Normal Retirement | Earliest of:<br>- Age 65 (mandatory retirement)<br>- 15 or more years of creditable service for members hired on or after age 50<br>- Age 55 with sum of age and creditable service equal to 85 or more<br>- Age 50 with 25 or more years of creditable service |
| b. | Early Retirement | Age 45 with 15 or more years of creditable service |
| c. | Late Retirement | Subject to continued employment after normal retirement |
| d. | Disability Retirement | As determined by a disability medical panel |
| e. | Termination | 15 or more years of creditable service and no longer active (i.e. vested inactive) |
| f. | Pre-Retirement Death | 15 or more years of creditable service |

## A. Summary of Plan Provisions (Continued)

Amount of Benefits

| | | |
|---|---|---|
| a. | Normal Retirement | The normal retirement benefit is a monthly annuity payable in a Joint and 50% Surviving Beneficiary form and is equal to 25% of average monthly earnings[1], plus 1-2/3% of average monthly earnings for years of creditable service more than 10 years. |
| b. | Early Retirement | 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 1/4% for each month that the benefit commencement date precedes age 60. |
| c. | Late Retirement | The late retirement benefit is calculated in the same manner as the normal retirement benefit. Creditable service and earnings earned after normal retirement are included in the computation. |
| d. | Disability Retirement | If disability occurs in the line of duty, the disability retirement benefit is the member's monthly salary multiplied by the degree of impairment and is payable commencing the month following disability date without reduction for early commencement. The benefit shall not be less than 20% of the member's salary if the member has more than 5 years of service, or 10% if 5 or less years of service.<br><br>If disability does not occur in the line of duty, the disability retirement benefit is equal to 50% of the member's monthly salary multiplied by the degree of impairment and is payable commencing the month following disability date without reduction for early commencement. The benefit shall not be less that 10% of the member's salary if the member has more than 5 years of service, or 5% if 5 or less years of service. |

[1] Average monthly earnings is the monthly average of earnings during the 5 years within the 10 years preceding retirement that produce the highest such average.

## A. Summary of Plan Provisions (Continued)

Amount of Benefits (continued)

| | | |
|---|---|---|
| e. | Termination | If termination is prior to earning 15 years of service, the member shall be entitled to a lump sum refund of employee contributions plus accumulated interest.<br><br>If termination is after earning 15 years of service, the termination benefit is the accrued retirement benefit determined as of the termination date and payable commencing as of the normal retirement date. The member may elect to receive a reduced early retirement benefit beginning at age 45. |
| f. | Pre-Retirement Death | If death is prior to earning 15 years of service, the member's beneficiary or estate shall receive employee contributions plus accumulated interest.<br><br>If death is after earning 15 years of service, the spouse or dependent beneficiary is entitled to receive the monthly survivor annuity under the assumption that the member retired on the day before the date of death. |

Member Contributions — Each member is required to contribute at the rate of 4% of pay. These contributions are kept on deposit and credited with interest until such time as they are refunded or used to provide benefits at retirement.

Forms of Payment

| | | |
|---|---|---|
| a. | Single Life Annuity | Member will receive a monthly benefit for life, but there are no monthly payments to anyone after death. |
| b. | Joint with One-Half Survivor Benefits | Member will be paid a monthly benefit for life. After death, one-half (1/2) of the benefit will be paid to the spouse or parent for their lifetime or the dependent until age 18. If the spouse's age is more than 5 years younger than the member, the benefit is actuarially adjusted. |

## A. Summary of Plan Provisions (Continued)

| | |
|---|---|
| Withdrawal from Fund | If a member's employment is terminated prior to eligibility for a retirement annuity, the member may withdraw their contributions from the Fund. |
| Deferred Retirement Option Plan (DROP) | Effective July 1, 2008, a DROP is established for all plan participants. |

An employee may make a DROP election as provided in this chapter only if, immediately upon termination, he/she is eligible to receive an unreduced annual retirement allowance under the provisions of the EG&C Fund on his/her entry date into the DROP.

The DROP retirement benefit will be based on average annual salary and years of creditable service on the date the member enters the DROP.

Any member who chooses the DROP shall agree to the following:

- The member shall execute an irrevocable election to retire on the DROP retirement date and shall remain in active service until that date.
- While in the DROP, the member shall continue to make contributions to the EG&C Fund under the provisions of that fund.
- The member shall elect a DROP retirement date not less than 12 months and not more than 36 months after the member's DROP entry date.
- The member may not remain in the DROP after the date the member reaches any mandatory retirement age as set forth in the EG&C Fund.
- The member may make an election to enter the DROP only once in the member's lifetime.
- A member who retires on his/her DROP retirement date may elect to receive an annual retirement allowance.

## A. Summary of Plan Provisions (Continued)

| | |
|---|---|
| Deferred Retirement Option Plan (DROP) (continued) | Any member who chooses the DROP shall agree to the following (continued):<br><br>- Computed as if the member had never entered the DROP; or<br><br>- Consisting of the DROP frozen benefit, plus an additional amount paid as the member elects, determined by multiplying the DROP frozen benefit by the number of months the member was in DROP.<br><br>No cost of living increase is applied to a DROP frozen benefit while the participant is in the DROP. After the participant's DROP retirement date, cost of living increases determined under the EG&C Fund apply to the participant's annual retirement allowance. |
| Cost-of-Living Adjustments | The monthly annuity benefits for members in pay status are increased periodically to preserve purchasing power that is diminished due to inflation. Such increases are not guaranteed by Statute and have historically been provided on an "ad hoc" basis.<br><br>A "13th check" will be paid to each member (or survivor or beneficiary) in pay status during September 2015. The amount of the 13th check varied based on the years of creditable service the member earned prior to retirement. |
| Changes in Provisions | No changes since prior valuation. |

## Definitions of Technical Terms

## SECTION VII - DEFINITIONS OF TECHNICAL TERMS

### A. Definitions of Technical Terms

| | |
|---|---|
| Actuarial Accrued Liability (AAL) | That portion, as determined by a particular Actuarial Cost Method, of the Present Value of Future Benefits (PVFB) and expenses which is not provided for by future Normal Costs. Generally, the portion of the PVFB attributable to past service. |
| Actuarial Assumptions | Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; changes in compensation and Government provided pension benefits; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; characteristics of future entrants for Open Group Actuarial Cost Methods; and other relevant items. |
| Actuarial Cost Method | A mathematical procedure for allocating the Present Value of Future Benefits to service periods, usually in the form of a Normal Cost and an Actuarial Accrued Liability. |
| Actuarial Gain/(Loss) | The difference between actual Unfunded Actuarial Accrued Liability and anticipated Unfunded Actuarial Accrued Liability resulting from differences between actual and expected plan experience between two valuation dates. |
| Actuarial Present Value | The single amount that is equal to a payment or series of payments in the future. It is determined by discounting future payments using predetermined Actuarial Assumptions for interest and by probabilities of payment. |
| Actuarial Valuation | The determination, as of an Actuarial Valuation Date, of the Present Value of Future Benefits, Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values. |
| Actuarial Valuation Date | The date as of which an Actuarial Valuation is performed. |
| Actuarially Determined Contribution | The precise actuarial contribution rate (expressed as a percentage of covered payroll) or amount determined in accordance with a Funding policy, which generally reflects the Normal Cost and amortization of any Unfunded Actuarial Accrued Liability |
| Actuarially Equivalent | Having the same Actuarial Present Value, based on a set of Actuarial Assumptions. |

## A. Definitions of Technical Terms (Continued)

| | |
|---|---|
| Amortization | The payment of a present value financial obligation on an installment basis over a future period. |
| Creditable Service | Service credited under the system that was rendered before the date of the actuarial valuation. |
| Funding Policy | A set of principles, often including a prescribed Actuarial Cost Method, Actuarial Assumptions, and/or Unfunded Actuarial Accrued Liability Amortization Method, that guide the calculation of the Actuarially Determined Contribution and management decisions regarding funding. |
| Level Dollar Amortization | Amortization where the installments are equal dollar amounts during each period. |
| Level Percent Amortization | Amortization where the installments are an equal percent of employee payroll during each period. |
| Normal Cost (NC) | That portion of the Present Value of Future Benefits which is allocated to the year following the Actuarial Valuation Date by the Actuarial Cost Method. The normal cost is specific to the cost method used. |
| Plan Assets | Resources, usually in the form of stocks, bonds, and other classes of investments, that have been segregated and restricted in a trust, or equivalent arrangement, in which (a) employer contributions to the plan are irrevocable, (b) assets are dedicated to providing benefits to retirees and their beneficiaries, and (c) assets are legally protected from creditors of the employer(s) or plan administrator, for the payment of benefits in accordance with the terms of the plan. |
| Plan Members | The individuals covered by the terms of a pension plan. The plan membership generally includes employees in active service, terminated employees who have accumulated benefits but are not yet receiving them, and retired employees and beneficiaries currently receiving benefits. |

## A. Definitions of Technical Terms (Continued)

| | |
|---|---|
| Present Value of Future Benefits (PVFB) | Projected benefits estimated to be payable to plan members (retirees and beneficiaries, terminated employees entitled to benefits but not yet receiving them, and current active members upon retirement) as a result of their service through the valuation date and their expected future service. The actuarial present value of projected future benefits as of the valuation date is the present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment (taking into account mortality, turnover, probability of participating in plan retirement, etc.). Alternatively, it is the amount that would have to be invested on the valuation date so that the amount invested plus investment earnings will provide sufficient assets to pay the projected benefits when due. |
| Unfunded Actuarial Accrued Liability (UAAL) | The difference between the Actuarial Accrued Liability and Plan Assets as of a particular date. Plan assets may be market value or a smoothed value. |
| Unfunded Actuarial Accrued Liability Amortization Method | A predetermined process by which any Unfunded Actuarial Accrued Liability will be amortized for calculating the Actuarially Determined Contribution. |