SEGAL

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December 20, 2012

Board of Trustees
Park Employees' Annuity and Benefit Fund of Chicago
55 East Monroe Street, Suite 2720
Chicago, Illinois 60603

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of June 30, 2012. It summarizes the actuarial data used in the valuation, establishes the funding requirements for the short fiscal year ending December 31, 2012, and analyzes the preceding years' experience.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Park Employees' Annuity and Benefit Fund of Chicago. The census and financial information on which our calculations were based was prepared by the Fund staff. That assistance is gratefully acknowledged. We have not subjected the census data to any auditing procedures, but have examined the data for reasonableness and consistency with the prior year's data.

Since the effective date of the last actuarial valuation, there have not been any changes in benefit provisions that have had an impact on the actuarial liabilities of the Fund.

The actuarial assumptions and methods are set by the Board of Trustees, based upon recommendations made by the Fund's actuary. The assumptions and methods used for the June 30, 2012 actuarial valuation were based on an experience analysis covering the five-year period ending June 30, 2007 and were adopted by the Board, effective for the June 30, 2008 valuation. These actuarial assumptions and methods comply with the parameters for disclosure in Governmental Accounting Standards Board (GASB) Statement No. 25. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of the Fund.

The funding policy of the Fund is to have contributions sufficient to amortize the unfunded liability over a 30-year period. Employer contributions come from a property tax levied by the District equal to the total amount of contributions made by employees in the calendar year two years prior to the year of the levy, multiplied by 1.10. The 1.10 factor is known as the tax multiple. In years prior to Fiscal 2005, employer contributions to the Fund had been sufficient to meet the actuarially determined contribution requirement. In recent years, the employer contribution has not been sufficient to meet the actuarially determined contribution requirement.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law.

The actuarial calculations were directed under our supervision. We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the Fund.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

THE SEGAL COMPANY

*By:*

*Kim Nicholl, FSA, MAAA, EA, FCA*
*Senior Vice President and Actuary*

*Matthew A. Strom, FSA, MAAA, EA*
*Consulting Actuary*

*5307858v1/13806.001*

## Purpose

This report has been prepared by The Segal Company to present a valuation of the Park Employees' Annuity and Benefit Fund of Chicago (PEABF) as of June 30, 2012. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- The benefit provisions of the Fund, as administered by the Board;
- The characteristics of covered active participants, inactive vested participants, and retired participants and beneficiaries as of June 30, 2012, provided by PEABF staff;
- The assets of the Plan as of June 30, 2012, provided by PEABF staff;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions regarding employee terminations, retirement, death, etc.

## Significant Issues in Valuation Year

The following key findings were the result of this actuarial valuation:

1. PEABF has changed its fiscal year end from June 30th to December 31st effective this year. Therefore, this valuation covers the six-month time period from July 1, 2012 to December 31, 2012.
2. Employer contributions to the Fund come from a tax levied upon all taxable property in the City of Chicago. The amount of tax that is levied is 1.10 times the amount of employee contributions made two years prior. The 1.10 factor is known as the tax multiple. As shown in Chart 13, for the short fiscal year beginning July 1, 2012 and ending December 31, 2012, the actuarially determined contribution amount (the Annual Required Contribution, or ARC) is $16,786,671. Based on the 1.10 tax multiple, and using the Fund's assumption of 3% loss on collections, we have estimated the employer contribution for the six-month period beginning July 1, 2012 to be $5,061,120. Compared to the Annual Required Contribution of $16,786,671, the contribution deficiency is $11,725,551 as of July 1, 2012. Each year there is a contribution deficiency leads to an increased deficiency in all future years.
3. The funded ratio based on the actuarial value of assets over the actuarial accrued liability as of June 30, 2012 is 50.9%, compared to 58.0% as of June 30, 2011. This ratio is a measure of funding status, its history is a measure of funding progress, and is the ratio required to be reported under GASB 25.

4. For the year ended June 30, 2012, Segal has determined that the asset return on a market value basis was 0.9%. After gradual recognition of investment gains and losses under the actuarial smoothing method, the actuarial rate of return was -0.6%. This represents an experience loss when compared to the assumed rate of 8%. As of June 30, 2012, the actuarial value of assets ($440.7 million) represented 107.3% of the market value ($410.8 million).
5. The portion of deferred investment gains and losses recognized in the calculation of the June 30, 2012 actuarial value of assets resulted in a loss of $40,119,103. Additionally, the demographic and liability experience resulted in a $6,807,909 loss.
6. The total unrecognized investment loss as of June 30, 2012 is $29,894,418. This investment loss will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years, to the extent it is not offset by recognition of investment gains derived from future experience. This implies that earning the assumed rate of investment return of 8.00% per year (net of expenses) on a **market value** basis will result in investment losses on the actuarial value of assets in the next few years. Therefore, if the actual market return is equal to the assumed 8.00% rate and all other actuarial assumptions are met, the contribution requirements would still increase in each of the next few years.
7. As mentioned above, the current method used to determine the actuarial value of assets yields an amount that is 107.3% of the market value of assets as of June 30, 2012. Guidelines in Actuarial Standard of Practice No. 44 (Selection and Use of Asset Valuation Methods for Pension Valuations) recommend that asset values fall within a reasonable range around the corresponding market value. The actuarial asset method complies with these guidelines.
8. Given the Fund's current (and projected) financial situation, the current 8% investment return assumption appears to be at the high end of the reasonable range. We were unable to definitively judge the reasonableness of this assumption without performing a substantial amount of additional work that is beyond the scope of this report. Therefore, for purposes of this actuarial valuation, the 8% assumed rate was used to discount actuarial liabilities. We plan to work with the Board to study the investment return assumption further at a later date and modify the assumption, if necessary.
9. This actuarial valuation report as of June 30, 2012 is based on financial data as of that date. Changes in the value of assets subsequent to that date are not reflected. Declines in asset values will increase the cost of the plan, while increases in asset values (in excess of expected) will decrease the cost of the plan.

## Summary of Key Valuation Results

| | 2012* | 2011** |
|---|---|---|
| **Contributions for fiscal year beginning July 1:** | | |
| Actuarially determined contribution requirement | $16,786,671 | $28,051,528 |
| Estimated employer contributions provided by the Fund, reflecting 3% loss on collections | $5,061,120 | 10,307,983 |
| Actual employer contribution | -- | 10,868,361 |
| **Funding elements for fiscal year beginning July 1:** | | |
| Normal cost, including administrative expenses | $3,323,370 | $6,832,257 |
| Market value of assets | 410,797,588 | 452,810,488 |
| Actuarial value of assets | 440,692,006 | 489,370,505 |
| Actuarial accrued liability | 866,370,565 | 843,943,240 |
| Unfunded/(overfunded) actuarial accrued liability | 425,678,559 | 354,572,735 |
| **GASB 25 information for fiscal year beginning July 1:** | | |
| Annual Required Contributions (ARC) | $16,786,671 | $28,051,528 |
| Actual employer contributions | -- | 10,868,361 |
| Percentage of ARC contributed | -- | 38.74% |
| Funded ratio | 50.87% | 57.99% |
| Covered payroll | -- | $114,223,909 |
| **Demographic data for plan year beginning July 1:** | | |
| Number of retirees and beneficiaries | 2,921 | 2,913 |
| Number of vested former participants | 153 | 141 |
| Number of active members | 2,977 | 2,795 |
| Total salary supplied by the Fund | $109,798,508 | $107,686,693 |
| Average salary | 36,882 | 38,528 |

* *Short fiscal year beginning July 1, 2012 and ending December 31, 2012.*

*** 2011 results shown here and throughout this report are based on the valuation performed by Goldstein & Associates.*

## A. MEMBER DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, including active members, inactive members, retirees, and beneficiaries.

This section presents a summary of significant statistical data on these participant groups.

More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A, B, and C.

*A historical perspective of how the participant population has changed over the past ten valuations can be seen in this chart.*

**CHART 1**

**Member Population: 2003 – 2012**

| Year Ended June 30 | Active Members | Vested Terminated Members* | Retirees and Beneficiaries | Ratio Actives to Retirees and Beneficiaries |
|---|---|---|---|---|
| 2003 | 3,179 | N/A | 3,074 | 1.03 |
| 2004 | 2,820 | N/A | 3,240 | 0.87 |
| 2005 | 2,881 | 186 | 3,184 | 0.90 |
| 2006 | 3,035 | 167 | 3,115 | 0.97 |
| 2007 | 3,040 | 162 | 3,056 | 0.99 |
| 2008 | 3,031 | 161 | 3,013 | 1.01 |
| 2009 | 2,865 | 159 | 3,013 | 0.95 |
| 2010 | 2,816 | 160 | 2,956 | 0.95 |
| 2011 | 2,795 | 141 | 2,913 | 0.96 |
| 2012 | 2,977 | 153 | 2,921 | 1.02 |

**Excludes terminated members due a refund of employee contributions*

**Active Members**
Plan costs are affected by the age, years of service and payroll of active members. In this year's valuation, there were 2,977 active participants with an average age of 42.1, average years of service of 10.1 years and average salary of $36,882. The 2,795 active participants in the prior valuation had an average age of 42.6, average service of 10.6 years and average salary of $38,528.

**Inactive Participants**
In this year's valuation, there were 153 members with a vested right to a deferred or immediate vested benefit.

In addition, there were 3,740 members entitled to a return of their employee contributions.

*These graphs show a distribution of active members by age and by years of service.*

**CHART 2**

**Distribution of Active Members by Age as of June 30, 2012**

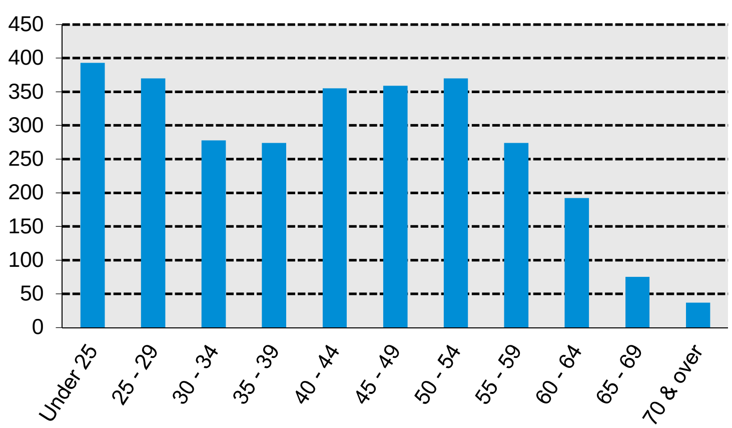
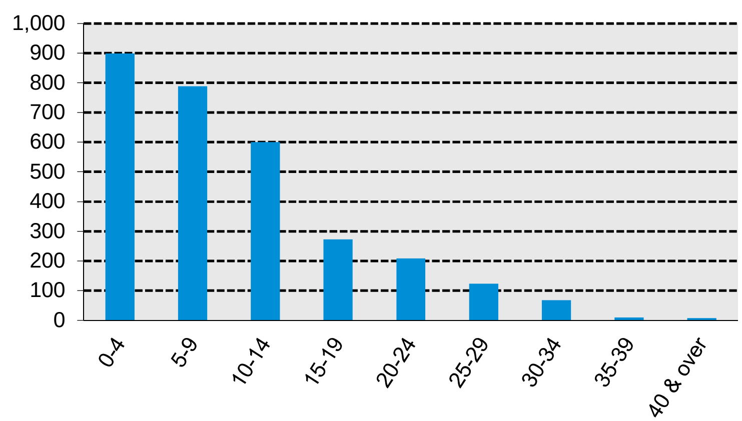



**CHART 3**

**Distribution of Active Members by Years of Service as of June 30, 2012**



**Retirees and Beneficiaries**
As of June 30, 2012, 2,104 retirees, 804 beneficiaries, and 13 dependent children were receiving total monthly benefits of $5,332,972. For comparison, in the previous valuation there were 2,096 retirees, 803 beneficiaries, and 14 dependent children receiving total monthly benefits of $5,175,983.

*These graphs show a distribution of the current retirees and beneficiaries based on their monthly amount and age, by type of pension.*

**CHART 4**

**Distribution of Retirees by Monthly Amount as of June 30, 2012**

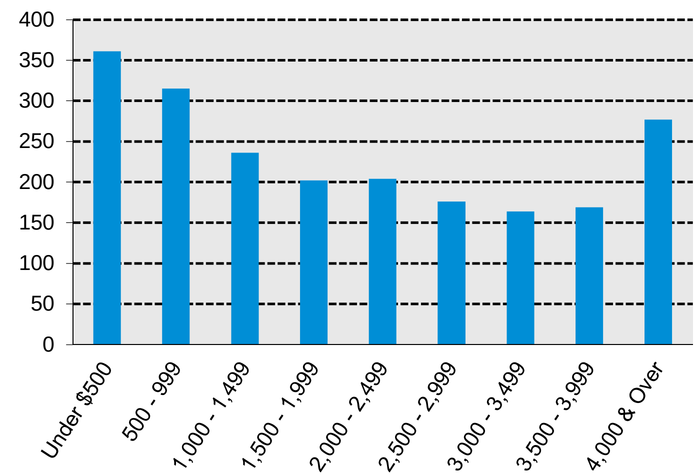
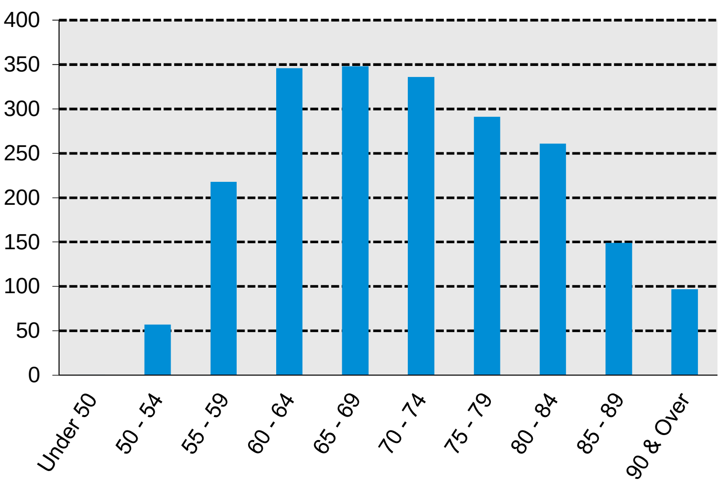



**CHART 5**

**Distribution of Retirees by Age as of June 30, 2012**



## B. FINANCIAL INFORMATION

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable.

The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

*The chart shows the determination of the actuarial value of assets as of the valuation date.*

### CHART 6

**Determination of Actuarial Value of Assets for Years Ended June 30, 2012 and June 30, 2011**

| | | | | 2012 | | 2011 |
|---|---|---|---|---|---|---|
| 1. | Actuarial value of assets as of prior June 30 | | | $489,370,505 | | $518,582,601 |
| 2. | Employer and employee contributions | | | 21,273,188 | | 20,773,069 |
| 3. | Benefits and expenses | | | 67,147,261 | | 65,203,795 |
| 4. | Expected investment income | | | 37,314,677 | | 39,743,569 |
| 5. | Total investment income, including income for securities lending | | | 3,861,173 | | 84,867,859 |
| 6. | Investment gain/(loss) for the year ended June 30: (5) – (4) | | | -33,453,504 | | 45,124,290 |
| 7. | Expected actuarial value of assets: (1) + (2) - (3) + (4) | | | 480,811,109 | | $513,895,444 |
| 8. | Calculation of unrecognized return | Original Amount* | % Recognized | | % Recognized | |
| | (a) Year ended June 30, 2012 | -$33,453,504 | 20% | -$6,690,701 | | -- |
| | (b) Year ended June 30, 2011 | 45,124,290 | 20% | 9,024,858 | 20% | $9,024,858 |
| | (c) Year ended June 30, 2010 | -1,179,100 | 20% | -235,820 | 20% | -235,820 |
| | (d) Year ended June 30, 2009 | -148,678,220 | 20% | -29,735,644 | 20% | -29,735,644 |
| | (e) Year ended June 30, 2008 | -62,408,980 | 20% | -12,481,796 | 20% | -12,481,796 |
| | (f) Year ended June 30, 2007 | 44,517,315 | | | 20% | 8,903,463 |
| | (g) Total recognized return | | | -40,119,103 | | -24,524,939 |
| 9. | Actuarial value of assets as of June 30: (7) + (8g) | | | $440,692,006 | | $489,370,505 |

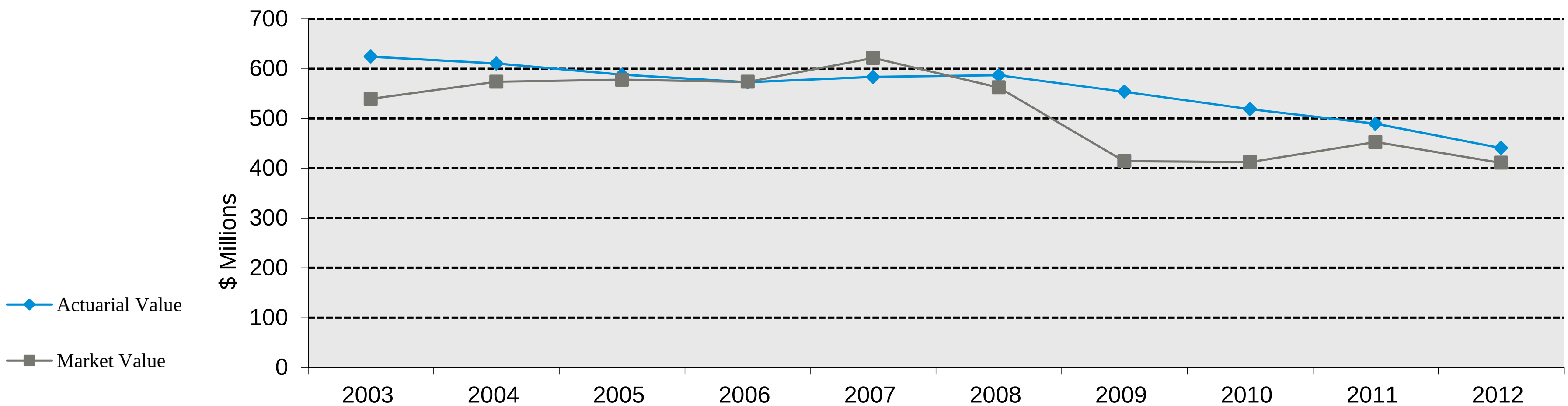
** Total return minus expected return on actuarial value*

Both the actuarial value and market value of assets are representations of the Fund's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets. The actuarial asset value is significant because the Fund's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

*This chart shows the change in the actuarial value of assets versus the market value over the past ten years.*

**CHART 7**

**Actuarial Value of Assets vs. Market Value of Assets as of June 30, 2003 – 2012**



## C. ACTUARIAL EXPERIENCE

To calculate the actuarially required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The total loss is $46,936,388, $40,119,103 from investment losses and $6,817,285 in losses from all other sources. The net experience variation from individual sources other than investments was less than 1% of the actuarial accrued liability. A discussion of the major components of the actuarial experience is on the following pages.

*This chart provides a summary of the actuarial experience during the past year.*

**CHART 8**

**Actuarial Experience for Year Ended June 30, 2012**

| | | |
|---|---|---|
| 1. | Net gain/(loss) from investments* | -$40,119,103 |
| 2. | Net gain/(loss) from administrative expenses | -9,376 |
| 3. | Net gain/(loss) from other experience** | -6,807,909 |
| 4. | Net experience gain/(loss): (1) + (2) + (3) | -$46,936,388 |

** Details in Chart 9*

*** Details in Chart 12*

**Investment Rate of Return**
A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the PEABF's investment policy. For valuation purposes, the assumed rate of return on the actuarial value of assets is 8.00%. The actual rate of return on an actuarial basis for the 2012 plan year was -0.60%.

Since the actual return for the year was less than the assumed return, the PEABF experienced an actuarial loss during the year ended June 30, 2012 with regard to its investments.

*This chart shows the gain/(loss) due to investment experience.*

**CHART 9**

**Actuarial Value Investment Experience for Year Ended June 30, 2012**

| | |
|---|---|
| 1. Actual return | -$2,804,426 |
| 2. Average value of actuarial assets | 466,433,469 |
| 3. Actual rate of return: (1) ÷ (2) | -0.60% |
| 4. Assumed rate of return | 8.00% |
| 5. Expected return: (2) x (4) | $37,314,677 |
| 6. Actuarial gain/(loss): (1) – (5) | -$40,119,103 |

Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The chart below shows the rate of return on an actuarial basis compared to the market value investment return for the last ten years, including five-year and ten-year averages.

**Chart 10**
**Investment Return**

| Year Ended June 30 | Market Value | Actuarial Value |
|---|---|---|
| 2003 | 4.3% | 3.0% |
| 2004 | 13.4% | 3.6% |
| 2005 | 8.9% | 4.0% |
| 2006 | 7.4% | 5.3% |
| 2007 | 16.2% | 9.3% |
| 2008 | -3.0% | 8.1% |
| 2009 | -18.6% | 2.0% |
| 2010 | 11.3% | 1.5% |
| 2011 | 21.0% | 3.1% |
| 2012 | 0.9%* | -0.6% |
| Average Returns | | |
| Last 5 years: | 1.4% | 2.8% |
| Last 10 years: | 5.6% | 3.9% |

** As determined by Segal*

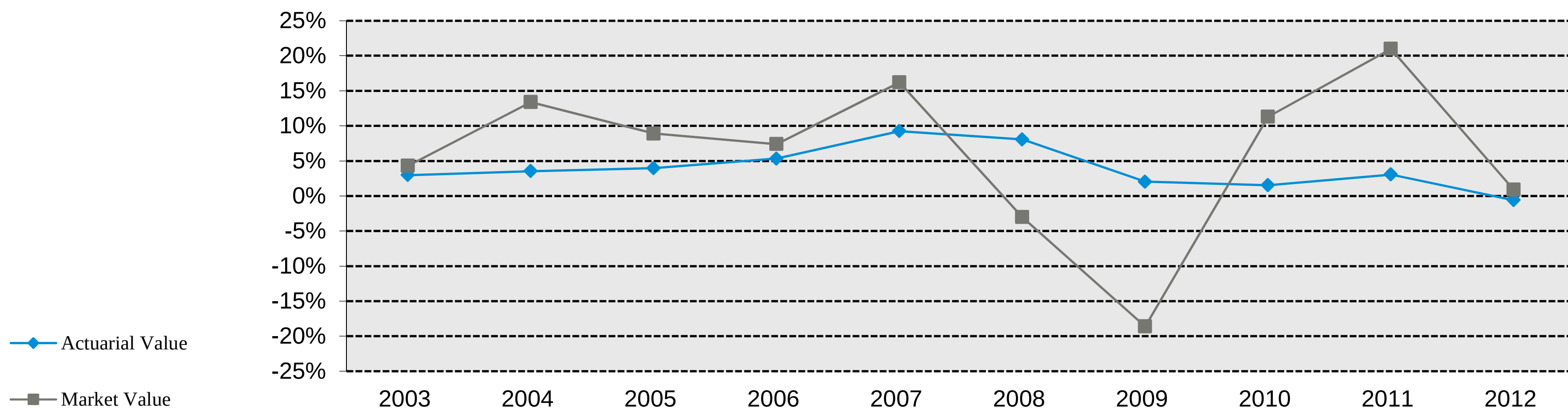
Subsection B described the actuarial asset valuation method that gradually takes into account fluctuations in the market value rate of return. The effect of this is to stabilize the actuarial rate of return, which contributes to leveling the actuarially required contribution.

**Administrative Expenses**
Administrative expenses for the year ended June 30, 2012 totaled $1,644,603 compared to the assumption of $1,573,850. This resulted in a loss of $9,376 for the year.

*This chart illustrates how this leveling effect has actually worked over the years 2003 - 2012.*

**CHART 11**

**Market and Actuarial Rates of Return for Years Ended June 30, 2003 - 2012**



### Other Experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- the extent of turnover among the participants,
- retirement experience (earlier or later than expected),
- mortality (more or fewer deaths than expected),
- the number of disability retirements, and
- salary increases different than assumed.

The net loss from this other experience for the year ended June 30, 2012 amounted to $6,807,909, which is approximately 0.8% of the actuarial accrued liability.

A brief summary of the demographic gain/(loss) experience of the PEABF for the year ended June 30, 2012 is shown in the chart below.

*The chart shows elements of the experience gain/(loss) for the most recent year.*

**CHART 12**

**Experience Due to Changes in Demographics for Year Ended June 30, 2012**

| | | |
|---|---|---|
| 1. | Turnover | -$2,388,968 |
| 2. | Retirement | -3,644,905 |
| 3. | Deaths among retired members and beneficiaries | 1,425,361 |
| 4. | Salary/service increase for continuing actives | 1,665,539 |
| 5. | Other decrements | -2,262,791 |
| 6. | Miscellaneous | -1,602,145 |
| 7. | Total | -$6,807,909 |

## D. DEVELOPMENT OF EMPLOYER COSTS

The amount of Annual Required Contribution as defined by the Governmental Accounting Standards Board (GASB) is comprised of an employer normal cost payment and a payment on the unfunded actuarial accrued liability. This total amount is then divided by the projected payroll for active members to determine the Annual Required Contribution of 29.14% of payroll.

GASB allows that the unfunded actuarial accrued liability be amortized over 30 years. This period is reset to 30 each year.

*The chart compares this valuation's actuarially determined contribution with the prior valuation.*

**CHART 13**

**Annual Required Contribution**

| | Year Beginning June 30 | | | |
|---|---|---|---|---|
| | 2012* | | 2011** | |
| | Amount | % of Payroll | Amount | % of Payroll |
| 1. Total normal cost | $7,623,150 | 13.29% | $14,950,209 | 13.88% |
| 2. Administrative expenses | 863,417 | 1.50% | 1,573,850 | 1.46% |
| 3. Expected employee contributions | -5,163,197 | -9.00% | -9,691,802 | -9.00% |
| 4. Employer normal cost: (1) + (2) + (3) | $3,323,370 | 5.79% | $6,832,257 | 6.34% |
| 5. Employer normal cost, adjusted for timing*** | 3,452,901 | 6.02% | 6,832,257 | 6.34% |
| 6. Actuarial accrued liability | 866,370,565 | | 843,943,240 | |
| 7. Actuarial value of assets | 440,692,006 | | 489,370,505 | |
| 8. Unfunded actuarial accrued liability: (6) – (7) | $425,678,559 | | $354,572,735 | |
| 9. Payment on unfunded actuarial accrued liability | 13,333,770 | 23.24% | 21,219,271 | 19.71% |
| 10. Annual Required Contribution, adjusted for timing***: (5) + (9) | $16,786,671 | 29.26% | $28,051,528 | 26.05% |
| 11. Projected payroll | $57,368,854 | | $107,686,693 | |

* *Short fiscal year beginning July 1, 2012 and ending December 31, 2012.*

** *Calculated by Goldstein & Associates in the June 30, 2011 actuarial valuation.*

*** *Recommended contributions are assumed to be paid at the middle of every month.*

The Annual Required Contribution as of July 1, 2012 is based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

**Reconciliation of Annual Required Contribution**
The chart below details the changes in the Annual Required Contribution from the prior valuation to the current year's valuation.

*The chart reconciles the Annual Required Contribution from the prior valuation to the amount determined in this valuation.*

**CHART 14**

**Reconciliation of GASB Annual Required Contribution from July 1, 2011 to July 1, 2012**

| | |
|---|---|
| **Annual Required Contribution as of July 1, 2011** | $28,051,528 |
| Effect of plan amendment(s) | 0 |
| Effect of expected change in amortization payment due to payroll growth | 771,620 |
| Effect of rolling amortization period | -437,179 |
| Effect of change in administrative expense assumption | 158,946 |
| Effect of change in other actuarial assumptions | 0 |
| Effect of contributions (more)/less than recommended contribution | 1,150,878 |
| Effect of investment (gain)/loss | 2,449,827 |
| Effect of other gains and losses on accrued liability | 408,553 |
| Effect of net other changes | 1,019,169 |
| Effect of short fiscal year | -16,786,671 |
| **Total change** | -$11,264,857 |
| **Annual Required Contribution as of July 1, 2012** | $16,786,671 |

## E. INFORMATION REQUIRED BY THE GASB

Governmental Accounting Standards Board (GASB) reporting information provides standardized information for comparative purposes of governmental pension plans. This information allows a reader of the financial statements to compare the funding status of one governmental plan to another on relatively equal terms.

Critical information to the GASB is the historical comparison of the GASB required contribution to the actual contributions. This comparison demonstrates whether a plan is being funded within the range of the GASB reporting requirements. Chart 15 below presents a graphical representation of this information for the Fund.

The other critical piece of information regarding the PEABF's financial status is the funded ratio. This ratio compares the actuarial value of assets to the actuarial accrued liabilities of the Fund as calculated under the GASB standards. High ratios indicate a well-funded plan with assets sufficient to cover the plan's actuarial accrued liabilities. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other factors.

Although the GASB requires that the actuarial value of assets be used to determine the funded ratio, Chart 16 shows the funded ratio calculated using both the actuarial value of assets and the market value of assets.

The details regarding the calculations of these values and other GASB numbers may be found in Section 4, Exhibits II, III, and IV.

*These graphs show key GASB factors.*

**CHART 15**

**Required Versus Actual Employer Contributions, Years Ended June 30**

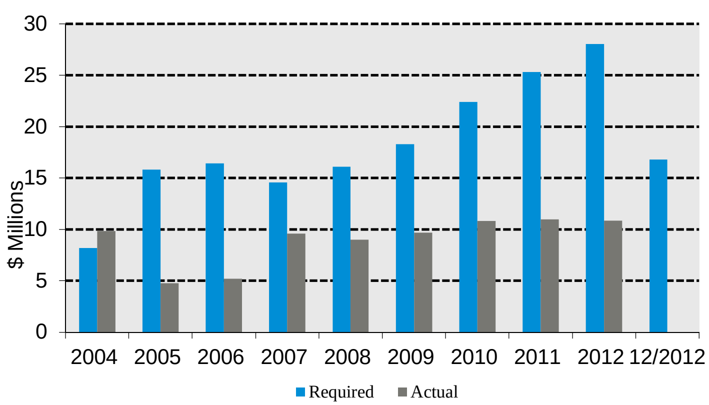
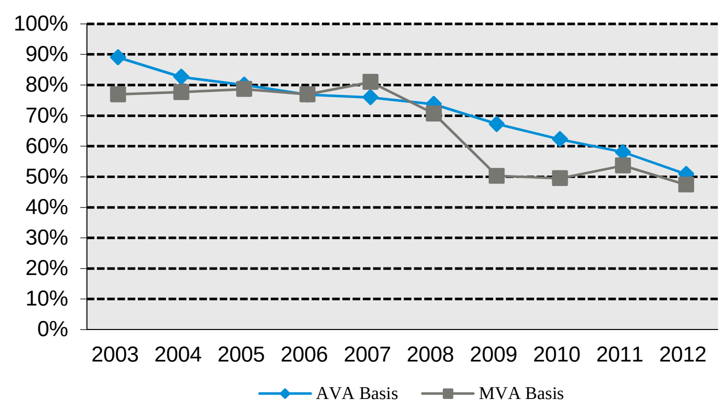



**CHART 16**

**Funded Ratio, Years Ended June 30**

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## EXHIBIT A

### Table of Plan Coverage

| Category | Year Ended June 30 2012 | Year Ended June 30 2011 | Change From Prior Year |
|---|---|---|---|
| **Active members in valuation:** | | | |
| Number | 2,977 | 2,795 | 6.5% |
| Average age | 42.1 | 42.6 | -1.2% |
| Average years of service | 10.1 | 10.6 | -4.7% |
| Total salary supplied by the Fund | $109,798,508 | $107,686,693 | 2.0% |
| Average salary | 36,882 | 38,528 | -4.3% |
| Total active vested participants with at least 10 years of service | 1,260 | 1,323 | -4.8% |
| **Vested terminated members** | 153 | 141 | 8.5% |
| **Non-vested terminated members eligible for a return of contributions** | 3,740 | 3,735 | 0.1% |
| **Service retirees:** | | | |
| Number in pay status | 2,104 | 2,096 | 0.4% |
| Average age | 71.4 | 71.5 | -0.1% |
| Average monthly benefit | $2,103 | $2,056 | 2.3% |
| **Beneficiaries (including children) in pay status:** | | | |
| Number in pay status | 817 | 817 | 0.0% |
| Average age | 77.0 | 77.4 | -0.5% |
| Average monthly benefit | $1,113 | $1,061 | 4.9% |
| **Total number of members** | 9,791 | 9,584 | 2.1% |

## EXHIBIT B

### Participants in Active Service as of June 30, 2012
### By Age, Years of Service, and Average Salary

| | | Years of Service | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | Total | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | Over 40 |
| Under 25 | 393 | 329 | 64 | - - | - - | - - | - - | - - | - - | - - |
| | $18,741 | $18,172 | $21,667 | - - | - - | - - | - - | - - | - - | - - |
| 25-29 | 370 | 171 | 174 | 25 | - - | - - | - - | - - | - - | - - |
| | 25,741 | 24,289 | 25,765 | $35,497 | - - | - - | - - | - - | - - | - - |
| 30-34 | 278 | 113 | 87 | 72 | 6 | - - | - - | - - | - - | - - |
| | 33,867 | 28,886 | 36,530 | 37,672 | $43,382 | - - | - - | - - | - - | - - |
| 35-39 | 274 | 86 | 83 | 72 | 29 | 4 | - - | - - | - - | - - |
| | 38,193 | 26,393 | 42,531 | 45,673 | 40,071 | $53,592 | - - | - - | - - | - - |
| 40-44 | 355 | 64 | 117 | 99 | 52 | 22 | 1 | - - | - - | - - |
| | 41,318 | 38,646 | 37,986 | 41,765 | 45,860 | 52,623 | $73,158 | - - | - - | - - |
| 45-49 | 359 | 46 | 90 | 96 | 60 | 39 | 27 | 1 | - - | - - |
| | 42,444 | 30,333 | 29,747 | 44,852 | 53,708 | 51,984 | 58,233 | $36,948 | - - | - - |
| 50-54 | 370 | 38 | 69 | 102 | 48 | 50 | 38 | 25 | - - | - - |
| | 46,125 | 25,230 | 35,818 | 46,967 | 48,836 | 55,465 | 56,290 | 63,560 | - - | - - |
| 55-59 | 274 | 30 | 48 | 68 | 36 | 35 | 28 | 23 | 5 | 1 |
| | 46,474 | 33,814 | 38,145 | 46,804 | 41,066 | 54,365 | 57,402 | 58,411 | $61,156 | $68,140 |
| 60-64 | 192 | 14 | 35 | 42 | 32 | 33 | 18 | 13 | 2 | 3 |
| | 45,061 | 21,245 | 34,546 | 47,723 | 38,878 | 58,541 | 54,033 | 60,044 | 52,976 | 35,283 |
| 65-69 | 75 | 5 | 17 | 14 | 6 | 18 | 9 | 3 | 2 | 1 |
| | 42,908 | 18,357 | 45,239 | 28,421 | 57,122 | 47,269 | 51,794 | 48,041 | 58,902 | 37,708 |
| Over 70 | 37 | 3 | 4 | 10 | 4 | 7 | 2 | 3 | 1 | 3 |
| | 39,298 | 46,882 | 27,563 | 36,625 | 41,590 | 32,256 | 67,055 | 52,554 | 39,215 | 37,907 |
| Total | 2,977 | 899 | 788 | 600 | 273 | 208 | 123 | 68 | 10 | 8 |
| | $36,882 | $24,514 | $33,110 | $43,451 | $46,173 | $53,288 | $56,622 | $59,585 | $56,875 | $40,677 |

## EXHIBIT C

### Reconciliation of Participant Data

| | Active Members | Inactive Members | Retirees | Beneficiaries | Total |
|---|---|---|---|---|---|
| Number as of June 30, 2011 | 2,795 | 3,876 | 2,096 | 817 | 9,584 |
| New participants | 417 | N/A | N/A | N/A | 417 |
| Terminations | (83) | 83 | 0 | 0 | 0 |
| Retirements | (55) | (35) | 90 | N/A | 0 |
| New disabilities | 0 | 0 | N/A | N/A | 0 |
| Died with beneficiary | (2) | 0 | (47) | 63 | 14 |
| Died without beneficiary | 0 | (1) | (61) | (48) | (110) |
| Refunds | (101) | (36) | 0 | 0 | (137) |
| Rehire | 6 | (6) | 0 | N/A | 0 |
| Certain period expired | N/A | N/A | (1) | (1) | (2) |
| Data adjustments | 0 | 12 | 27 | (14) | 25 |
| Number as of June 30, 2012 | 2,977 | 3,893 | 2,104 | 817 | 9,791 |

## EXHIBIT D

## Schedule of Pensioners and Beneficiaries Added to and Removed from Rolls

| | Added to Rolls | | Removed from Rolls | | Rolls – End of Year | | % Increase in | Average |
|---|---|---|---|---|---|---|---|---|
| Fiscal Year | Number | Annual Allowances | Number | Annual Allowances | Number* | Annual Allowances | Avg. Annual Allowances | Annual Allowances |
| 2002 | 132 | 2,907,468 | 193 | 1,771,252 | 3,095 | 46,549,896 | 4.5 | 15,040 |
| 2003 | 131 | 2,946,242 | 186 | 2,418,091 | 3,040 | 47,078,047 | 3.0 | 15,486 |
| 2004 | 351 | 9,796,355 | 176 | 2,020,035 | 3,215 | 54,854,367 | 10.2 | 17,062 |
| 2005 | 118 | 2,771,265 | 174 | 2,211,151 | 3,159 | 55,414,481 | 2.8 | 17,542 |
| 2006 | 117 | 3,304,140 | 184 | 2,631,780 | 3,092 | 56,086,841 | 3.4 | 18,139 |
| 2007 | 112 | 3,487,985 | 159 | 1,927,814 | 3,045 | 56,974,652 | 3.2 | 18,711 |
| 2008 | 127 | 3,714,283 | 177 | 2,321,096 | 2,995 | 58,367,839 | 4.2 | 19,488 |
| 2009 | 137 | 4,920,931 | 136 | 2,637,590 | 2,996 | 60,651,180 | 3.9 | 20,244 |
| 2010 | 113 | 3,442,389 | 167 | 2,903,979 | 2,942 | 61,189,590 | 2.7 | 20,799 |
| 2011 | 124 | 3,735,377 | 167 | 2,828,495 | 2,899 | 62,096,472 | 3.0 | 21,420 |
| 2012 | 167 | 4,681,195 | 158 | 2,797,326 | 2,908 | 63,980,341 | 2.7 | 22,001 |

** Does not include child beneficiaries receiving a pension.*

## EXHIBIT E

### Summary Statement of Income and Expenses on a Market Value Basis

| | Year Ended June 30, 2012 | | Year Ended June 30, 2011 | |
|---|---|---|---|---|
| **Net assets at market value at the beginning of the year** | | $452,810,488 | | $412,373,355 |
| **Contribution income:** | | | | |
| Employer contributions | $10,868,361 | | $10,981,419 | |
| Employee contributions | 10,404,827 | | 9,791,650 | |
| Administrative expenses | -1,644,603 | | -1,498,905 | |
| Net contribution income | | 19,628,585 | | $19,274,164 |
| **Securities lending income** | | 65,231 | | 62,021 |
| **Investment income:** | | | | |
| Interest, dividends and other income | $6,344,103 | | $7,855,042 | |
| Asset appreciation | 78,361 | | 79,741,346 | |
| Less investment and administrative fees | -2,626,522 | | -2,790,550 | |
| Net investment income | | 3,795,942 | | 84,805,838 |
| **Total income available for benefits** | | $23,489,758 | | $104,142,023 |
| **Less benefit payments:** | | | | |
| Annuity Payments | -$62,868,556 | | -$61,344,041 | |
| Disability & Death | -645,949 | | -698,491 | |
| Refund of Contributions | -1,988,153 | | -1,662,358 | |
| Net benefit payments | | -$65,502,658 | | -$63,704,890 |
| **Change in reserve for future benefits** | | -$42,012,900 | | $40,437,133 |
| **Net assets at market value at the end of the year** | | $410,797,588 | | $452,810,488 |

## EXHIBIT F

## Summary Statement of Plan Assets

| | Year Ended June 30, 2012 | | Year Ended June 30, 2011 | |
|---|---|---|---|---|
| **Cash** | | $0 | | $64,527 |
| **Accounts receivable** | | 1,233,026 | | 1,652,972 |
| **Investments, at fair value:** | | | | |
| Short-term investments | $9,311,424 | | $12,474,656 | |
| Bonds | 65,824,474 | | 81,736,788 | |
| Common and preferred stocks | 55,138,935 | | 64,193,591 | |
| Collective investment funds | 95,983,701 | | 133,104,264 | |
| Mutual funds | 14,575,794 | | 0 | |
| Pooled separate real estate accounts | 10,868,246 | | 10,485,505 | |
| Private equity partnerships | 155,691,096 | | 150,622,560 | |
| Total investments at market value | | 407,393,670 | | 452,617,364 |
| **Invested securities lending collateral** | | 40,244,278 | | 41,247,636 |
| **Prepaid annuity benefits** | | 3,785,303 | | |
| **Furniture and fixtures, net** | | 50,520 | | 62,949 |
| **Prepaid expenses** | | 43,324 | | 36,614 |
| **Total assets** | | $452,750,121 | | $495,682,062 |
| **Less accounts payable:** | | | | |
| Accounts payable | -$398,409 | | -$424,804 | |
| Deferred rent | -106,951 | | -12,179 | |
| Accrued benefits payable | -267,407 | | -201,750 | |
| Securities lending collateral | -40,244,278 | | -41,247,636 | |
| Due to broker for securities purchased | -935,488 | | -985,205 | |
| Total accounts payable | | -$41,952,533 | | -$42,871,574 |
| **Net assets at market value** | | $410,797,588 | | $452,810,488 |
| **Net assets at actuarial value** | | $440,692,006 | | $489,370,505 |

## EXHIBIT G

### Development of the Fund Through June 30, 2012

| Year Ended June 30 | Employer Contributions | Employee Contributions | Net Investment Return* | Administrative Expenses | Benefit Payments | Actuarial Value of Assets at End of Year |
|---|---|---|---|---|---|---|
| 2003 | $9,842,559 | $9,533,018 | $18,488,940 | $1,169,531 | $50,235,186 | $624,209,658 |
| 2004 | 9,840,681 | 10,593,581 | 21,513,929 | 1,199,194 | 54,664,806 | 610,293,849 |
| 2005 | 4,768,605 | 8,515,799 | 23,243,252 | 1,185,866 | 57,861,496 | 587,774,143 |
| 2006 | 5,173,860 | 9,117,032 | 30,196,992 | 1,231,485 | 58,371,413 | 572,659,129 |
| 2007 | 9,594,593 | 9,719,082 | 51,140,015 | 1,237,899 | 58,578,971 | 583,295,949 |
| 2008 | 8,998,687 | 10,264,805 | 45,344,625 | 1,289,579 | 59,938,455 | 586,676,032 |
| 2009 | 9,677,765 | 10,141,146 | 11,539,827 | 1,335,180 | 62,945,073 | 553,754,517 |
| 2010 | 10,829,339 | 9,829,998 | 8,194,551 | 1,465,562 | 62,560,242 | 518,582,601 |
| 2011 | 10,981,419 | 9,791,650 | 15,218,630 | 1,498,905 | 63,704,890 | 489,370,505 |
| 2012 | 10,868,361 | 10,404,827 | -2,804,426 | 1,644,603 | 65,502,658 | 440,692,006 |

** Net of investment fees*

## EXHIBIT H

### Development of Unfunded Actuarial Accrued Liability

| | Year Ending June 30 | | | |
|---|---|---|---|---|
| | 2012 | | 2011 | |
| 1. Unfunded actuarial accrued liability at beginning of year | | $354,572,735 | | $314,443,347 |
| 2. Normal cost at beginning of year | | 16,524,059 | | 16,163,894 |
| 3. Total contributions | | -21,273,188 | | -20,773,069 |
| 4. Interest | | | | |
| (a) Unfunded actuarial accrued liability and normal cost | $29,687,744 | | $26,448,579 | |
| (b) Total contributions | -769,179 | | -751,096 | |
| (c) Total interest: (4a) – (4b) | | 28,918,565 | | 25,697,483 |
| 5. Expected unfunded actuarial accrued liability: (1) + (2) – (3) + (4c) | | $378,742,171 | | $335,531,655 |
| 6. Changes due to (gain)/loss from: | | | | |
| (a) Investments | $40,119,103 | | $24,490,749 | |
| (b) Demographics and other | 6,817,285 | | -5,449,669 | |
| (c) Total changes due to (gain)/loss: (6a) + (6b) | | $46,936,388 | | $19,041,080 |
| 7. Change to due plan amendments | | 0 | | 0 |
| 8. Change in actuarial assumptions | | 0 | | 0 |
| 9. Unfunded accrued liability at end of year: (5) + (6c) + (7) + (8) | | $425,678,559 | | $354,572,735 |

**EXHIBIT I**

**Definitions of Pension Terms**

The following list defines certain technical terms for the convenience of the reader:

| | |
|---|---|
| **Actuarial Accrued Liability For Actives:** | The equivalent of the accumulated normal costs allocated to the years before the valuation date. |
| **Actuarial Accrued Liability For Pensioners:** | The single-sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits. |
| **Actuarial Cost Method:** | A procedure allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability that are used to determine the Annual Required Contribution. |
| **Actuarial Gain or Actuarial Loss:** | A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., PEABF's assets earn more than projected, salary increases are less than assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results yield in actuarial liabilities that are larger than projected. Actuarial gains will shorten the time required for funding of the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period. |

**Actuarially Equivalent:** Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.

**Actuarial Present Value (APV):** The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. Each such amount or series of amounts is:

a. Adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.)
b. Multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned, and
c. Discounted according to an assumed rate (or rates) of return to reflect the time value of money.

**Actuarial Present Value of Future Plan Benefits:** The Actuarial Present Value of benefit amounts expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age, anticipated future compensation, and future service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would be provide sufficient assets to pay all projected benefits and expenses when due.

**Actuarial Valuation:** The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB Statement No. 25, such as the funded ratio and the ARC.

**Actuarial Value of Assets:** The value of the Fund's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly plans use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ARC.

**Actuarially Determined:** Values that have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.

**Amortization Method:** A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.

**Amortization Payment:** The portion of the pension plan contribution, or ARC, that is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

**Annual Required Contribution (ARC):** The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under GASB Statement No. 25. The ARC consists of the Employer Normal Cost and the Amortization Payment.

**Assumptions or Actuarial Assumptions:** The estimates on which the cost of the Fund is calculated including:

(a) Investment return - the rate of investment yield that the Fund will earn over the long-term future;

(b) Mortality rates - the death rates of employees and pensioners; life expectancy is based on these rates;

(c) Retirement rates - the rate or probability of retirement at a given age;

(d) Turnover rates - the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement;

(e) Salary increase rates - the rates of salary increase due to inflation and productivity growth.

| | |
|---|---|
| **Closed Amortization Period:** | A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example, if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Funding Period and Open Amortization Period. |
| **Decrements:** | Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or termination. |
| **Defined Benefit Plan:** | A retirement plan in which benefits are defined by a formula applied to the member's compensation and/or years of service. |
| **Defined Contribution Plan:** | A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance. |
| **Employer Normal Cost:** | The portion of the Normal Cost to be paid by the employers. This is equal to the Normal Cost less expected member contributions. |
| **Experience Study:** | A periodic review and analysis of the actual experience of the Fund that may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary. |
| **Funded Ratio:** | The ratio of the actuarial value of assets (AVA) to the actuarial accrued liability (AAL). Plans sometimes calculate a market funded ratio, using the market value of assets (MVA), rather than the AVA, although GASB 25 reporting requires the use of the AVA. |
| **GASB:** | Governmental Accounting Standards Board. |
| **GASB 25 and GASB 27:** | Governmental Accounting Standards Board Statements No. 25 and No. 27. These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement |

No. 27 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 25 sets the rules for the systems themselves.

**Investment Return:** The rate of earnings of the Fund from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.

**Margin:** The difference, whether positive or negative, between the statutory employer contribution rate and the Annual Required Contribution (ARC) as defined by GASB 25.

**Normal Cost:** That portion of the Actuarial Present Value of pension plan benefits and expenses allocated to a valuation year by the Actuarial Cost Method. Any payment in respect of an Unfunded Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits that are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated.

**Open Amortization Period:** An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. If the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount, or in relation to covered payroll, if the actuarial assumptions are realized.

**Unfunded Actuarial Accrued Liability:** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus.

| | |
|---|---|
| **Valuation Date or Actuarial Valuation Date:** | The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Plan Benefits is determined. The expected benefits to be paid in the future are discounted to this date |

**EXHIBIT I**

**Summary of Actuarial Valuation Results**

The valuation was made with respect to the following data supplied to us:

| | | | |
|---|---|---|---|
| 1. | Pensioners as of the valuation date (including 804 beneficiaries and 13 dependent children) | | 2,921 |
| 2. | Members inactive during year ended June 30, 2012 with vested rights | | 153 |
| 3. | Members active during the year ended June 30, 2012 | | 2,977 |
| | Fully vested | 1,260 | |
| | Not vested | 1,717 | |
| 4. | Other non-vested inactive members as of June 30, 2012 | | 3,740 |

The actuarial factors as of the valuation date are as follows:

| | | | |
|---|---|---|---|
| 1. | Employer normal cost, including administrative expenses | | $3,323,370 |
| 2. | Actuarial accrued liability | | 866,370,565 |
| | Retires and beneficiaries | $599,353,146 | |
| | Inactive participants with vested rights | 22,357,950 | |
| | Active participants | 244,659,469 | |
| 3. | Actuarial value of assets ($410,797,588 at market value) | | 440,692,006 |
| 4. | Unfunded actuarial accrued liability | | $425,678,559 |
| 5. | Funded ratio: (3) ÷ (2) | | 50.9% |

## EXHIBIT I (continued)

## Summary of Actuarial Valuation Results

The determination of the Annual Required Contribution (GASB 25)* is as follows:

| | | |
|---|---|---|
| 1. | Total normal cost | $7,623,150 |
| 2. | Administrative expenses | 863,417 |
| 3. | Expected employee contributions | -5,163,197 |
| 4. | Employer normal cost: (1) + (2) + (3) | $3,323,370 |
| 5. | Employer normal cost projected, adjusted for timing | 3,452,901 |
| 6. | Payment on projected unfunded/(overfunded) actuarial accrued liability | 13,333,770 |
| 7. | Total Annual Required Contribution: (5) + (6), adjusted for timing | $16,786,671 |
| 8. | Estimated employer contributions provided by the Fund, reflecting 3% loss on collections | $5,061,120 |
| 9. | Projected payroll | $57,368,854 |
| 10. | Total Annual Required Contribution as a percentage of projected payroll: (7) ÷ (9) | 29.26% |

** Short fiscal year beginning July 1, 2012 and ending December 31, 2012.*

## EXHIBIT II

### Schedule of Employer Contributions

| Plan Year Ended June 30 | Annual Required Contributions | Actual Contributions | Percentage Contributed |
|---|---|---|---|
| 2003 | $7,546,740 | $9,842,559 | 130.4% |
| 2004 | 8,203,656 | 9,840,681 | 120.0% |
| 2005 | 15,812,224 | 4,768,605 | 30.2% |
| 2006 | 16,436,993 | 5,173,860 | 31.5% |
| 2007 | 14,571,540 | 9,594,593 | 65.8% |
| 2008 | 16,073,257 | 8,998,687 | 56.0% |
| 2009 | 18,285,474 | 9,667,765 | 52.9% |
| 2010 | 22,399,740 | 10,829,339 | 48.3% |
| 2011 | 25,319,145 | 10,981,419 | 43.4% |
| 2012 | 28,051,528 | 10,868,361 | 38.7% |

**EXHIBIT III**

**Schedule of Funding Progress**

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded/ (Overfunded) AAL (UAAL) (b) - (a) | Funded Ratio (a) / (b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll* [(b) - (a)] / (c) |
|---|---|---|---|---|---|---|
| 06/30/2003 | $624,209,658 | $701,208,927 | $76,999,269 | 89.02% | $102,329,721 | 75.25% |
| 06/30/2004 | 610,293,849 | 738,578,830 | 128,284,981 | 82.63% | 87,840,802 | 146.04% |
| 06/30/2005 | 587,774,143 | 734,360,705 | 146,586,562 | 80.04% | 95,707,132 | 153.16% |
| 06/30/2006 | 572,659,129 | 745,244,239 | 172,585,110 | 76.84% | 101,058,024 | 170.78% |
| 06/30/2007 | 583,295,949 | 767,930,632 | 184,634,683 | 75.96% | 106,601,982 | 173.20% |
| 06/30/2008 | 586,676,032 | 795,379,129 | 208,703,097 | 73.76% | 111,698,366 | 186.85% |
| 06/30/2009 | 553,754,517 | 823,896,936 | 270,142,419 | 67.21% | 108,882,742 | 248.10% |
| 06/30/2010 | 518,582,601 | 833,025,948 | 314,443,347 | 62.25% | 107,361,021 | 292.88% |
| 06/30/2011 | 489,370,505 | 843,943,240 | 354,572,735 | 57.99% | 107,686,693 | 329.26% |
| 06/30/2012 | 440,692,006 | 866,370,565 | 425,678,559 | 50.87% | 114,223,909 | 372.67% |

** Not less than zero*

## EXHIBIT IV
### Solvency Test

| | June 30, 2012 | June 30, 2011 |
|---|---|---|
| 1. Actuarial accrued liability (AAL) | | |
| a. Active member contributions | $158,144,793 | $151,828,106 |
| b. Retirees and beneficiaries | 599,353,146 | 583,999,785 |
| c. Active and inactive members (employer financed) | 108,872,626 | 108,115,349 |
| d. Total | $866,370,565 | $843,943,240 |
| 2. Actuarial value of assets | 440,692,006 | 489,370,505 |
| 3. Cumulative portion of AAL covered | | |
| a. Active member contribution | 100.0% | 100.0% |
| b. Retirees and beneficiaries | 47.1% | 57.8% |
| c. Active and inactive members (employer financed) | 0.0% | 0.0% |

## EXHIBIT V

## Supplementary Information Required by the GASB

| | |
|---|---|
| **Valuation date** | June 30, 2012 |
| **Actuarial cost method** | Projected unit credit cost method |
| **Amortization method** | Level percent of payroll |
| **Amortization period** | 30 years (open period) |
| **Asset valuation method** | 5-year smoothed market value |
| **Actuarial assumptions**: | |
| Investment rate of return | 8.00% |
| Inflation rate | 3.00% |
| Payroll growth | 3.50% |
| Projected salary increases | 4.50% |
| Cost of living adjustments | 3% simple for Tier 1 retirees; the lesser of 3% or one-half CPI, compounded, for Tier 2 retirees |
| **Plan membership:** | |
| Retirees and beneficiaries receiving benefits | 2,921 |
| Terminated members entitled to, but not yet receiving benefits | 3,893 |
| Active members | 2,977 |
| Total | 9,791 |

## EXHIBIT VI

### Actuarial Assumptions and Actuarial Cost Method

**Mortality Rates:**

The UP-1994 Mortality Table for Males, set forward 1 year for male participants, and the UP-1994 Mortality Table for Females, set forward 1 year for female participants (adopted June 30, 2005).

The mortality table specified above was determined to contain provision appropriate to reasonably reflect future mortality improvement, based on a review of mortality experience as of the measurement date.

**Termination Rates:**

Termination rates are based on recent experience of the Fund were used (adopted June 30, 2008). Sample rates are shown below.

| | Rate (%) | | |
|---|---|---|---|
| Age | 0-4 Years of Service | 4-10 Years of Service | 10+ Years of Service |
| 20 | 28.1 | | |
| 25 | 26.0 | 16.2 | |
| 30 | 17.9 | 9.2 | 6.6 |
| 35 | 16.7 | 9.0 | 5.7 |
| 40 | 15.6 | 6.8 | 4.9 |
| 45 | 11.3 | 6.5 | 4.0 |
| 50 | 11.0 | 6.3 | |
| 55 | 10.7 | 6.0 | |

**Retirement Rates:**

For employees first hired prior to January 1, 2011, rates of retirement for each age from 50 to 75 based on the recent experience of the Fund were used (adopted June 30, 2008). Sample rates are shown below.

| | Rate (%) | |
|---|---|---|
| **Age** | **<30 Years of Service** | **30+ Years of Service** |
| 50 | 5.0 | 40.0 |
| 55 | 5.5 | 20.0 |
| 60 | 8.0 | 8.0 |
| 65 | 12.0 | 12.0 |
| 70 | 14.0 | 14.0 |
| 75 | 100.0 | 100.0 |

For employees first hired on or after January 1, 2011, rates of retirement for each age from 62 to 75 were used (adopted June 30, 2011). Sample rates are shown below.

| Age | Rate (%) |
|---|---|
| 62 | 5.0 |
| 65 | 2.0 |
| 67 | 5.0 |
| 70 | 2.0 |
| 75 | 100.0 |

| | |
|---|---|
| **Valuation of Inactive Vested Participants:** | The liability for an inactive member is equal to his or her existing account balance, or twice the existing account balance, if the participant has at least 10 years of service. |
| **Unknown Data for Participants:** | Same as those exhibited by Participants with similar known characteristics. If not specified, Participants are assumed to be male. |
| **Spouses:** | 75% of participants were assumed to be married and females are assumed to be 2 years younger than males. |
| **Disability Benefit Valuation:** | Disability benefits are valued in normal cost by annualizing the actual monthly disability payment amounts for the month prior to the valuation date. |
| **Net Investment Return:** | 8.00% per year |
| **Salary Increases:** | 4.50% per year |
| **Payroll Growth:** | 3.50% per year |
| **Administrative Expenses:** | Equal to actual expenses for the prior year, increased by 5%. |
| **Actuarial Value of Assets:** | The actuarial value of assets was determined by smoothing unexpected gains and losses over a period of 5 years. The gain or loss for a year is calculated as the total investment income on the market value of assets, minus expected investment return on the prior actuarial value of assets. The final actuarial value is equal to the expected actuarial value plus (or minus) 20% of the calculated gain (or loss) in the prior 5 years. |
| **Actuarial Cost Method:** | Projected Unit Credit (adopted June 30, 2005). Under this method, the projected benefits of each individual included in the valuation are allocated by a consistent formula to valuation years. The actuarial present value of benefits allocated to a valuation year is called the normal cost. The actuarial present value of benefits allocated to all periods prior to a valuation year is called the accrued liability. |
| **Changes in Assumptions:** | There have been no changes in actuarial assumptions since the last valuation. |

## EXHIBIT VII
### Summary of Plan Provisions

This exhibit summarizes the major provisions of the PEABF included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

| | |
|---|---|
| **Membership:** | Any person employed by the Chicago Park District in a position requiring service for 6 months or more in a calendar year is required to become a member of the Fund as a condition of employment. |
| **Employee Contributions:** | All members of the Fund are required to contribute 9% of salary to the Fund as follows: 7% for the retirement pension, 1% for the spouse's pension, and 1% for the automatic increases in the retirement pension. In addition, employees are required to contribute $3.60 per month toward the cost of the single sum death benefit. |
| **Retirement Pension:** | a. Eligibility – An employee may retire at age 50 with at least 10 years of service or at age 60 with 4 years of service. If retirement occurs before age 60, the retirement pension is reduced ¼ of 1% of each month that the age of the member is below 60. However, there is no reduction if the employee has at least 30 years of service.<br><br>b. Amount – The retirement pension is based on the average of the 4 highest consecutive years of salary within the last 10 years. For an employee who withdraws from service on or after December 31, 2003, the amount of the retirement pension is 2.4% of highest average salary for each year of service.<br><br>The maximum pension payable is 80% of the highest annual salary.<br><br>An employee who was a participant before July 1, 1971 is entitled to the pension provided under the money purchase formula if it provides a greater pension than that provided under the above fixed benefit formula. |

| | |
|---|---|
| | An employee who first becomes a participant on or after January 1, 2011 is subject to the following provisions:<br><br>1. The highest salary for annuity purposes is equal to the average monthly salary obtained by dividing the participant's total salary during the 96 consecutive months of service within the last 120 months of service in which the total compensation was the highest by the number of months in that period.<br><br>2. For 2011, the final average salary is limited to the Social Security wage base of $106,800. Limitations for future years shall automatically be increased by the lesser of 3% or one-half the percentage change in the Consumer Price Index-U during the preceding calendar year.<br><br>3. A participant is eligible to retire with unreduced benefits after attainment of age 67 with at least 10 years of service credit. However, a participant may elect to retire at age 62 with at least 10 years of service credit and receive a retirement annuity reduced by ½ of 1% for each month that the age of the member is below 67. |
| **Post-Retirement Increase:** | An employee retiring at age 60 or over, or an employee with 30 or more years of service, is entitled to automatic annual increases of 3% of the originally granted pension following one year's receipt of pension payments. In the case of an employee with less than 30 years of service who retires before age 60, the increases begin following the later of attainment of age 60 and receipt of one year's pension payments.<br><br>Automatic annual increases in the retirement annuity for employees who first become a participant on or after January 1, 2011 is equal to the lesser of 3% or one-half the annual change in the Consumer Price Index-U, whichever is less, based on the originally granted retirement annuity. |
| **Surviving Spouse's Pension:** | A surviving spouse is entitled to a pension upon the death of an employee while in service or on retirement. If the surviving spouse is age 60 or over and the employee or retiree had at least 20 years of service, the minimum surviving spouse's pension is 50% of the deceased employee's or retired employee's pension at the date of death. If the age of the surviving spouse is less than 60, the pension is reduced ½ of 1% for |

| | |
|---|---|
| | each month the surviving spouse is under age 60. If the employee had less than 20 years or service, the surviving spouse is entitled to a pension under the money purchase formula, taking into account employee and employer contribution toward the surviving spouse's pension.<br><br>Surviving spouse's pensions are subject to annual increases of 3% per year based on the current amount of pension.<br><br>For employees who first become a participant on or after January 1, 2011, the initial survivor's annuity is equal to 66 2/3% of the participant's earned retirement annuity at the date of death, subject to automatic annual increases of the lesser of 3% or one-half of the increase in the Consumer Price Index-U during the preceding calendar year, based on the originally granted survivor's annuity. |
| **Children's Pension:** | Unmarried children of a deceased employee under the age of 18 are entitled to a children's pension. If either parent is living, the pension is $100.00 per month. If no parent survives, the pension for each child is $150.00 per month. The total amount payable to a spouse or children may not exceed 60% of the employee's final salary. |
| **Single Sum Death Benefit:** | A death benefit is payable upon the death of an employee in service in addition to any other benefits payable to the surviving spouse or minor children. The death benefit payable is as follows:<br><br>$3,000 benefit during the first year of service,<br>$4,000 benefit during the second year of service,<br>$5,000 benefit during the third year of service,<br>$6,000 benefit during the fourth through tenth year of service,<br>$10,000 benefit If death occurs after ten or more years of service.<br><br>Upon the death of a retired member with ten or more years of service, the $10,000 maximum benefit is reduced to $6,000 if death occurs during the first year of retirement. Thereafter, it is reduced by $1,500 for each year or fraction of a year while on retirement, but shall not be less than $3,000. |

| | |
|---|---|
| **Ordinary Disability Benefit:** | An ordinary disability benefit is payable after eight consecutive days of absence for illness without pay. The amount of the benefit is 45% of salary. The benefit is payable for a period not to exceed ¼ of the length of service or five years, whichever is less. |
| **Occupational Disability Benefit:** | Upon disability resulting from an injury incurred while on duty, an employee is entitled to a disability benefit of 75% of salary from the first day of absence without pay. The benefit is payable during the period of disability until the employee attains age 65, if disability is incurred before age 60, or for a period of five years if disability is incurred after age 60. |
| **Occupational Death Benefit:** | Upon the death of an employee resulting from an accident incurred in the performance of duty, the surviving spouse is entitled to an occupational death benefit of 50% of salary. Each unmarried child under the age of 18 is entitled to a benefit of $100 per month. The combined payments to a family may not exceed 75% of the employee's final salary. The total payments are reduced by Workmen's Compensation benefits. |
| **Refunds:** | An employee who terminates employment before qualifying for a pension is entitled to a refund of employee contributions. The refund is payable to any employee who withdraws before age 55, regardless of the length of service. It is also payable to an employee who withdraws between age 55 and 60 with less than 10 years of service, and to an employee who withdraws after age 60 with less than 5 years of service.<br><br>An employee who is unmarried at date of retirement is entitled to a refund of the full amount contributed for the spouse's pension, without interest. |
| **Plan Year:** | July 1 through June 30 |
| **Changes in Plan Provisions:** | There have been no changes in plan provisions since the last valuation. |

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