



## **The Water and Power Employees' Retirement Disability and Death Benefit Insurance Plan**

### **Review of the Death Benefit Fund as of July 1, 2014**

- Family Death Benefit Allowance Fund
- Supplemental Family Death Benefit Allowance Fund
- Insured Lives Portion of the Death Benefit Fund

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*December 3, 2014*

*Board of Administration  
The Water and Power Employees' Retirement Plan of the City of Los Angeles  
111 North Hope Street, Room 357  
Los Angeles, California 90012*

*Dear Board Members:*

*We are pleased to submit this review of the Family Death Benefit Allowance Fund, the Supplemental Family Death Benefit Allowance Fund, and the Insured Lives Portion of the Death Benefit Fund as of July 1, 2014. It establishes the funding requirements for fiscal 2014-2015 and analyzes the preceding year's experience.*

*This review has been completed in accordance with generally accepted actuarial principles and practices. The census and financial information on which our calculations were based was prepared by the Retirement Office. That assistance is gratefully acknowledged.*

*The measurements shown in this review 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 (such as the end of an amortization period); and changes in plan provisions or applicable law.*


*The actuarial calculations were completed under the supervision of John Monroe, ASA, MAAA, Enrolled Actuary. 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 this review 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 Funds.*

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

*Sincerely,*

*Segal Consulting, a Member of The Segal Group, Inc.*

By:   
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Senior Vice President and Actuary*

  
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**SECTION 1: Review Summary for the Water and Power Employees' Death Benefit Fund**

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**CONTRIBUTION RECOMMENDATIONS**

- The following table summarizes the contribution recommendations for the Department and the members for the various Funds. We recommend maintaining the Department contribution rate at \$0.25 per \$100 of payroll for the Insured Lives Death Benefit Fund for Contributing Members. In addition, we are recommending a decrease in the Department contribution rate from \$1.27 to \$1.19 per \$100 of monthly retirement benefit for the Insured Lives Death Benefit Fund for Noncontributing Members.

|                                   | Department                                     | Members         |                      |
|-----------------------------------|--|-----------------|----------------------|
|                                   |  | Active          | Retired and Disabled |
| Family Death Benefit              | Suspended                                      | N/A             | N/A                  |
| Supplemental Family Death Benefit | N/A  | \$2.25 biweekly | \$4.90 monthly       |
| Insured Lives:                    |  |                 |                      |
| Contributing                      | \$0.25 per \$100 of payroll                    | \$1.00 biweekly | N/A                  |
| Noncontributing                   | \$1.19 per \$100 of monthly retirement benefit | N/A             | N/A                  |

- The results of this valuation reflect a change in the investment return assumption from 5% to 4% per annum as recommended by Segal and adopted by the Board for the July 1, 2014 valuation. This change increased the recommended Department contribution rate for the Insured Lives Death Benefit Fund for Noncontributing members by \$0.02 per \$100 of monthly retirement benefits or about \$90,000 a year.
- The Board may want to authorize a review of the funding methods and reserving policies for this Fund. In particular, the Board may wish to consider a level cost funding approach consistent with that used by the Retirement Plan.

## SECTION 2: Family Death Benefit Allowance Fund and Supplemental Family Death Benefit Allowance Fund

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### A. INTRODUCTION

The Family Death Benefit Allowance program was adopted under Resolution No. 470 dated December 19, 1963. The initial benefit was a monthly allowance payable to the surviving spouse of a member with minor children and was equal to \$95 plus \$96 for each minor child up to a maximum monthly allowance of \$254. The individual's benefit was increased to \$120 and the family maximum was increased to \$340 as of July 1, 1969. After 1989, these benefit levels were increased to \$160 and \$450 respectively. On February 18, 2003, the individual's benefit was raised from \$160 to \$416 and the family maximum was raised from \$450 to \$1,170. The increases were applied retroactively to July 1, 2001.

The Department pays the entire cost of the Family Death Benefit Allowance program. Due to the size of the general reserve, contributions have been temporarily suspended since January 1, 1993. A history of contribution rates for this Fund is displayed in Section 4, Exhibit I.

The Supplemental Family Death Benefit Allowance plan was adopted effective September 7, 1981. A monthly allowance of \$200 was provided to each surviving spouse or child, subject to a maximum of \$410 per family. On February 18, 2003, the monthly allowance was raised to \$520 for each surviving spouse or child, in addition to the amounts payable from the Family Death Benefit Allowance Fund, subject to a maximum of \$1,066 for the total of additional allowances. The increases were also applied retroactively to July 1, 2001.

Participation in the supplemental plan is optional and subject to member contributions. Please see Section 4, Exhibit I for a history of contribution rates. The Department will only contribute as necessary to fund the benefit.

Under the funding method for the Family Death Benefit Allowance program and the Supplemental Family Death Benefit Allowance program, the total annual contribution is equal to the expected incurred claims for the coming year. This is the same method used for disability benefits and for the other death benefits. Under the funding method, no additional contributions are expected to accumulate to help cover future claims beyond those incurred during the forthcoming year.

**SECTION 2: Family Death Benefit Allowance Fund and Supplemental Family Death Benefit Allowance Fund**

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**B. REVIEW OF EXPERIENCE AND RECOMMENDATIONS**

The charts that follow show a summary of the cost of the Family Death Benefit Allowance Fund and the Supplemental Family Death Benefit Allowance Fund from the inception of the plans to June 30, 2014.

In the early years of the operation of the Family Death Benefit Allowance, the Department contribution rate was somewhat low. For this reason, a deficit in the contribution account gradually accumulated. Also, the extension of the \$120 benefit level in 1969 to current recipients temporarily compounded the deficit and produced abnormally high costs per member. To reverse these trends, a \$3.00 contribution rate was adopted in 1973 but was decreased to \$2.50 in 1981. Substantial reserves have been built up so that contributions were suspended in 1993.

The experience table on pages 4 and 5 shows the cumulative monthly cost per active covered member since 1970. In years 1970 through 1989 the Family Death Benefit level was \$120. After 1989, the benefit level increased to \$160. On February 18, 2003, the benefit level was increased to \$416 per person, subject to a maximum of \$1,170 per family. The increase was retroactive to July 1, 2001. The current cumulative experience in the table has been adjusted as if the benefit had always been \$416. The cumulative cost since 1970 of a \$416 benefit level is now \$4.82.

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**CHART 1**

**Family Death Benefit and Supplemental Family Death Benefit Allowance Fund**

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|   | <u>June 30, 2014</u> | <u>June 30, 2013</u> |
|---|----------------------|----------------------|
| <u>Family Death Benefit</u>                                       |                      |                      |
| Reserve for benefits granted                                      | \$3,701,426          | \$3,852,072          |
| Contribution account  | <u>1,155,665</u>     | <u>1,429,131</u>     |
| Subtotal  | \$4,857,091          | \$5,281,203          |
| <u>Supplemental Family Death Benefit</u>                          |                      |                      |
| Reserve for benefits granted                                      | \$697,003            | \$450,959            |
| Contribution account  | <u>5,377,291</u>     | <u>5,387,702</u>     |
| Subtotal  | \$6,074,294          | \$5,838,661          |
| <u>Family Death Benefit and Supplemental Family Death Benefit</u> |                      |                      |
| Reserve for benefits granted                                      | \$4,398,429          | \$4,303,031          |
| Contribution account  | <u>6,532,956</u>     | <u>6,816,833</u>     |
| Grand Total   | \$10,931,385         | \$11,119,864         |

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## SECTION 2: Family Death Benefit Allowance Fund and Supplemental Family Death Benefit Allowance Fund

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For the Family Death Benefit Allowance program, the Plan's funding goal is to have 20% of the reserve for benefits granted, or \$740,285 (20% of \$3,701,426), in the contribution account. The actual contribution account of \$1,155,665 is more than the target, however this surplus may decrease in future years because the Department contribution has been suspended.

This review also shows the experience for the Supplemental Family Death Benefit Allowance Fund. A stable long-term cost of this benefit is starting to emerge. On the basis of the experience of the fund, the contribution rate for the Supplemental Family Death Benefit Allowance Fund does appear to be approximately equal to the cost of the benefit (after adjusting earlier years to reflect the current benefit level payable). We will continue to monitor this in future valuations.

Thus, we recommend that the Board do the following:

1. We recommend that the total Department contribution to the Family Death Benefit Allowance Fund continue to be suspended until the actual contribution account is reduced to an amount that is closer to the target level. This event will likely occur next year, at which point we would recommend that Department contributions be resumed. The recommended contributions would total approximately \$300,000 on an annual basis.
2. Maintain the employee contribution rate to the Supplemental Family Death Benefit Allowance Fund. No Department contribution is necessary at this time.

**SECTION 2: Family Death Benefit Allowance Fund and Supplemental Family Death Benefit Allowance Fund**

**CHART 2**  
**Family Death Benefit Allowance Fund Costs Since 1970**

| <b>Year Ending<br/>June 30</b> | <b>Department<br/>Contribution<sup>(1)</sup></b> | <b>Benefits<br/>Paid<sup>(1)</sup></b> | <b>Incurred<br/>Claims<sup>(1)</sup></b> | <b>Monthly Cost Per<br/>Active Covered<br/>Member</b> | <b>Cumulative Monthly<br/>Cost Per Active<br/>Covered Member<br/>Since 1970<sup>(2)</sup></b> | <b>Contribution<br/>Account<sup>(1)</sup></b> |
|--------------------------------|--|--|--|---|---|---|
| 1970                           | \$363,096  | \$217,040                              | \$571,988                                | \$3.94  | \$3.94  | \$ (668,804)                                  |
| 1971                           | 374,304  | 257,643                                | 505,849                                  | 3.38  | 3.65  | (796,683)                                     |
| 1972                           | 374,796  | 687,680                                | 378,207                                  | 2.52  | 3.27  | (793,744)                                     |
| 1973                           | 364,716  | 311,080                                | 429,984                                  | 2.95  | 3.19  | (857,180)                                     |
| 1974                           | 396,721  | 334,840                                | 352,399                                  | 2.66  | 3.10  | (810,500)                                     |
| 1975                           | 414,036  | 358,395                                | 144,020                                  | 1.04  | 2.77  | (527,656)                                     |
| 1976                           | 396,216  | 349,267                                | 275,033                                  | 2.08  | 2.68  | (389,944)                                     |
| 1977                           | 386,173  | 321,168                                | 259,379                                  | 2.01  | 2.49  | 143,731                                       |
| 1978                           | 386,172  | 305,318                                | 196,128                                  | 1.52  | 2.49  | 349,389                                       |
| 1979                           | 357,948  | 309,497                                | 285,996                                  | 2.40  | 2.48  | 425,441                                       |
| 1980                           | 348,545  | 304,798                                | 284,255                                  | 2.45  | 2.48  | 481,694                                       |
| 1981                           | 341,964  | 283,053                                | 49,077                                   | 0.43  | 2.31  | 643,080                                       |
| 1982                           | 294,180  | 267,499                                | 85,774                                   | 0.73  | 2.19  | 868,296                                       |
| 1983                           | 350,000  | 274,048                                | 326,799                                  | 2.33  | 2.20  | 910,910                                       |
| 1984                           | 350,000  | 257,921                                | 110,795                                  | 0.79  | 2.10  | 1,087,934                                     |
| 1985                           | 363,125  | 238,901                                | (25,809)                                 | (0.18)  | 1.96  | 1,311,244                                     |
| 1986                           | 370,348  | 234,734                                | 41,907                                   | 0.28  | 1.86  | 1,716,681                                     |
| 1987                           | 308,185  | 256,954                                | 158,680                                  | 1.29  | 1.77  | 2,095,779                                     |
| 1988                           | 315,468  | 240,469                                | 208,955                                  | 1.66  | 1.76  | 2,453,938                                     |
| 1989                           | 314,648  | 237,469                                | 37,952                                   | 0.30  | 2.25  | 3,026,436                                     |
| 1990                           | 310,323  | 319,285                                | 226,394                                  | 1.82  | 2.23  | 3,444,701                                     |
| 1991                           | 303,370  | 307,277                                | 144,080                                  | 1.19  | 2.19  | 3,942,195                                     |
| 1992                           | 314,800  | 327,945                                | 213,107                                  | 1.69  | 2.17  | 4,450,836                                     |
| 1993                           | 138,610  | 305,640                                | 247,740                                  | 2.23  | 2.17  | 4,781,241                                     |
| 1994                           | 0  | 303,760                                | 249,738                                  | 2.03  | 2.17  | 4,943,478                                     |
| 1995                           | 0  | 289,345                                | 172,190                                  | 1.57  | 2.15  | 5,193,160                                     |
| 1996                           | 0  | 275,635                                | 87,162                                   | 0.80  | 2.12  | 5,484,570                                     |
| 1997                           | 0  | 270,250                                | 174,119                                  | 1.67  | 2.10  | 5,749,544                                     |
| 1998                           | 0  | 255,710                                | 144,186                                  | 1.44  | 2.13  | 5,173,823                                     |
| 1999                           | 0  | 240,510                                | 81,436                                   | 1.04  | 2.11  | 5,477,863                                     |



**SECTION 2: Family Death Benefit Allowance Fund and Supplemental Family Death Benefit Allowance Fund**

**CHART 2 (continued)**

**Family Death Benefit Allowance Fund Costs Since 1970**

| <b>Year Ending<br/>June 30</b> | <b>Department<br/>Contribution<sup>(1)</sup></b> | <b>Benefits<br/>Paid<sup>(1)</sup></b> | <b>Incurred<br/>Claims<sup>(1)</sup></b> | <b>Monthly Cost Per<br/>Active Covered<br/>Member</b> | <b>Cumulative Monthly<br/>Cost Per Active<br/>Covered Member<br/>Since 1970<sup>(2)</sup></b> | <b>Contribution<br/>Account<sup>(1)</sup></b> |
|--------------------------------|--|--|--|---|---|---|
| 2000                           | \$0  | \$ 251,304                             | \$232,032                                | \$2.84  | \$2.13  | \$5,609,914                                   |
| 2001                           | 0  | 252,315                                | 108,792                                  | 1.25  | 2.11  | 5,910,787                                     |
| 2002                           | 0  | 271,890                                | 235,495                                  | 2.65  | 2.12  | 6,052,048                                     |
| 2003                           | 0  | 1,081,801                              | 62,037                                   | 0.67  | 5.40  | 6,423,011                                     |
| 2004                           | 0  | 672,819                                | 385,532                                  | 4.07  | 5.37  | 6,359,890                                     |
| 2005                           | 0  | 669,108                                | 356,271                                  | 3.73  | 5.33  | 6,368,082                                     |
| 2006                           | 0  | 626,379                                | 399,459                                  | 4.20  | 5.31  | 6,052,843                                     |
| 2007                           | 0  | 609,538                                | 346,865                                  | 3.62  | 5.27  | 5,947,619                                     |
| 2008                           | 0  | 628,434                                | 261,430                                  | 2.67  | 5.22  | 5,794,022                                     |
| 2009                           | 0  | 564,364                                | 86,070                                   | 0.81  | 5.12  | 5,996,936                                     |
| 2010                           | 0  | 578,479                                | 428,575                                  | 3.84  | 5.09  | 5,859,057                                     |
| 2011                           | 0  | 580,313                                | 28,599                                   | 0.26  | 4.98  | 1,904,393                                     |
| 2012                           | 0  | 516,691                                | 208,611                                  | 1.94  | 4.91  | 1,695,783                                     |
| 2013                           | 0  | 457,624                                | 266,651                                  | 2.49  | 4.86  | 1,429,131                                     |
| 2014                           | 0  | 424,112                                | 273,466                                  | 2.54  | 4.82  | 1,155,665                                     |

<sup>(1)</sup> Provided by retirement office. Benefits paid in 2003 included retroactive payments.

<sup>(2)</sup> Experience for earlier years has been adjusted to reflect the benefit level payable at the end of the corresponding plan year. For example, the 2002 cumulative monthly cost reflects the 2002 benefit level for all earlier experience, while the 2003 cumulative monthly cost reflects the 2003 benefit level for all earlier experience.

**SECTION 2: Family Death Benefit Allowance Fund and Supplemental Family Death Benefit Allowance Fund**

**CHART 3**

**Supplemental Family Death Benefit Allowance Fund Costs Since 1981**

| <b>Year<br/>Ending<br/>June 30</b> | <b>Member<br/>Contribution<sup>(1)</sup></b> | <b>Department<br/>Contribution<sup>(1)</sup></b> | <b>Benefits<br/>Paid<sup>(1)</sup></b> | <b>Incurred<br/>Claims<sup>(1)</sup></b> | <b>Monthly Cost<br/>Per Active<br/>Covered<br/>Member</b> | <b>Cumulative Monthly<br/>Cost Per Active<br/>Covered Member<br/>Since 1981<sup>(2)</sup></b> | <b>Contribution<br/>Account<sup>(1)</sup></b> |
|------------------------------------|--|--|--|--|---|---|---|
| 1981                               | \$ 0   | \$ 0   | \$ 0                                   | \$ 0                                     | \$0.00  | \$0.00  | \$ 0  |
| 1982                               | 13,671                                       | 5,101  | 0                                      | 0  | 0.00  | 0.00  | 18,772  |
| 1983                               | 21,226                                       | 7,920  | 0                                      | 0  | 0.00  | 0.00  | 50,126  |
| 1984                               | 21,080                                       | 48,410   | 2,000                                  | 24,723                                   | 5.74  | 1.43  | 100,057                                       |
| 1985                               | 28,611                                       | 0  | 4,800                                  | 0  | 0.00  | 1.15  | 137,476                                       |
| 1986                               | 48,404                                       | 0  | 4,800                                  | 0  | 0.00  | 0.96  | 198,659                                       |
| 1987                               | 54,767                                       | 0  | 4,800                                  | 0  | 0.00  | 0.82  | 271,350                                       |
| 1988                               | 64,647                                       | 0  | 7,820                                  | 39,179                                   | 2.97  | 1.09  | 318,969                                       |
| 1989                               | 71,156                                       | 0  | 19,680                                 | 397                                      | 0.00  | 0.97  | 417,710                                       |
| 1990                               | 77,032                                       | 0  | 17,010                                 | 0  | 0.00  | 0.87  | 530,857                                       |
| 1991                               | 82,920                                       | 0  | 14,013                                 | 51,651                                   | 3.05  | 1.07  | 640,671                                       |
| 1992                               | 82,819                                       | 0  | 24,250                                 | 0  | 0.00  | 0.98  | 778,171                                       |
| 1993                               | 86,571                                       | 0  | 27,813                                 | 34,148                                   | 1.93  | 1.05  | 896,213                                       |
| 1994                               | 88,580                                       | 0  | 43,460                                 | 0  | 0.00  | 0.98  | 1,060,428                                     |
| 1995                               | 91,712                                       | 0  | 55,450                                 | 0  | 0.00  | 0.91  | 1,241,074                                     |
| 1996                               | 92,096                                       | 0  | 55,033                                 | 18,189                                   | 0.97  | 0.92  | 1,436,538                                     |
| 1997                               | 97,317                                       | 0  | 60,990                                 | 10,690                                   | 0.54  | 0.89  | 1,653,015                                     |
| 1998                               | 88,986                                       | 0  | 52,870                                 | 13,638                                   | 0.70  | 0.87  | 1,877,926                                     |
| 1999                               | 82,676                                       | 0  | 47,840                                 | 25,523                                   | 1.51  | 0.92  | 2,114,501                                     |
| 2000                               | 81,992                                       | 0  | 49,450                                 | 63,652                                   | 3.66  | 1.11  | 2,369,023                                     |
| 2001                               | 83,148                                       | 0  | 52,590                                 | 33,835                                   | 2.05  | 1.16  | 2,645,265                                     |
| 2002                               | 83,248                                       | 0  | 58,280                                 | 82,257                                   | 4.95  | 1.38  | 2,943,731                                     |
| 2003                               | 84,444                                       | 0  | 271,238                                | 46,674                                   | 2.79  | 3.80  | 3,267,363                                     |
| 2004                               | 82,603                                       | 0  | 165,929                                | 162,149                                  | 9.50  | 4.10  | 3,614,809                                     |
| 2005                               | 88,088                                       | 0  | 170,436                                | 116,371                                  | 6.69  | 4.23  | 3,995,966                                     |

**SECTION 2: Family Death Benefit Allowance Fund and Supplemental Family Death Benefit Allowance Fund**

**CHART 3 (continued)**

**Supplemental Family Death Benefit Allowance Fund Costs Since 1981**

| <b>Year<br/>Ending<br/>June 30</b> | <b>Member<br/>Contribution<sup>(1)</sup></b> | <b>Department<br/>Contribution<sup>(1)</sup></b> | <b>Benefits<br/>Paid<sup>(1)</sup></b> | <b>Incurred<br/>Claims<sup>(1)</sup></b> | <b>Monthly Cost<br/>Per Active<br/>Covered<br/>Member</b> | <b>Cumulative Monthly<br/>Cost Per Active<br/>Covered Member<br/>Since 1981<sup>(2)</sup></b> | <b>Contribution<br/>Account<sup>(1)</sup></b> |
|------------------------------------|--|--|--|--|---|---|---|
| 2006                               | \$88,784                                     | \$0  | \$153,510                              | \$294,903                                | \$16.56   | \$4.85 <sup>(3)</sup>   | \$4,337,758                                   |
| 2007                               | 88,782                                       | 0  | 164,092                                | 51,780                                   | 2.87  | 4.75 <sup>(3)</sup>   | 4,678,699                                     |
| 2008                               | 91,815                                       | 0  | 165,444                                | 176,260                                  | 9.68  | 4.98  | 5,022,667                                     |
| 2009                               | 89,307                                       | 0  | 148,722                                | 0  | 0.00  | 4.76  | 5,365,241                                     |
| 2010                               | 90,804                                       | 0  | 119,620                                | 0  | 0.00  | 4.57  | 5,726,685                                     |
| 2011                               | 95,952                                       | 0  | 107,751                                | 0  | 0.00  | 4.38  | 5,303,305                                     |
| 2012                               | 96,631                                       | 0  | 70,779                                 | 0  | 0.00  | 4.22  | 5,399,935                                     |
| 2013                               | 96,809                                       | 0  | 77,820                                 | 109,043                                  | 5.17  | 4.26  | 5,387,702                                     |
| 2014                               | 98,487                                       | 0  | 78,104                                 | 108,897                                  | 5.84  | 4.32  | 5,377,291                                     |

<sup>(1)</sup> Provided by retirement office. Benefits paid in 2003 included retroactive payments.

<sup>(2)</sup> Experience for earlier years has been adjusted to reflect the benefit level payable at the end of the corresponding plan year. For example, the 2002 cumulative monthly cost reflects the 2002 benefit level for all earlier experience, while the 2003 cumulative monthly cost reflects the 2003 benefit level for all earlier experience.

<sup>(3)</sup> Amount recalculated using a methodology consistent with the July 1, 2005 Review.

### SECTION 3: Insured Lives Portion of the Death Benefit Fund

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#### A. INTRODUCTION

The funding of the Insured Lives Portion of the Death Benefit is similar to that of the Family Death Benefit allowances, with the following two exceptions:

1. Unlike the Family Death Benefit payments, which may extend over future years, lump sum death benefits are settled promptly. Thus for lump sum death benefits there is little need for claim reserves, and the incurred claims for a year are taken to be the amount of paid claims.
2. Only retirees are covered for noncontributing death benefits, so the cost is paid by the Department as a monthly dollar charge per retiree per \$100 of retirement benefits.

As with the Family Death Benefit allowances, costs do not include any amounts to build up reserves for future claims; hence, if contributions were terminated in the future, the fund would not be sufficient to cover all future claims. A small claims reserve has accumulated which can help manage this potential lag time in processing current benefit payouts.

### SECTION 3: Insured Lives Portion of the Death Benefit Fund

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#### **B. INSURED LIVES DEATH BENEFITS FOR CONTRIBUTING ACTIVE MEMBERS**

Upon the death of an active member before retirement, the beneficiary receives any death benefit payable from the Retirement Fund, plus a benefit payable from this Death Benefit Fund in an amount equal to 14 times the member's monthly salary (or \$1,000, if greater).

Currently department contributions are \$0.25 per \$100 of covered compensation. Please see Section 4, Exhibit I for a history of contribution rates.

In Chart 4 that follows, we summarize the cost of the salary related death benefit before retirement for the last ten fiscal years.

The ten-year average annual rate of total cost of \$0.28 per \$100 of covered compensation is shown in Chart 4. We recommend a continuation of the methodology in which the general reserve target is the average of the benefits paid for the last five years, or \$2,100,099. The actual reserve as of June 30, 2014 was \$2,555,247 which is higher than the target.

We recommend that the Department contribution to the Contributory Death Benefit Fund be maintained at \$0.25 per \$100 of payroll. Contributing at this rate is expected to allow the general reserve to be reasonably close to the target level in ten years.

**SECTION 3: Insured Lives Portion of the Death Benefit Fund****CHART 4****Summary of Cost of Insured Lives Death Benefits for Contributing Members, 2005 - 2014**

| <b>Year Ending<br/>June 30</b> | <b>Covered Payroll</b> | <b>Benefits Paid<br/>During Year</b> | <b>Total Cost Per \$100<br/>of Covered Payroll</b> | <b>General Reserve</b> |
|--------------------------------|------------------------|--------------------------------------|--|------------------------|
| 2005                           | \$554,839,816          | \$1,585,477                          | \$0.29   | \$9,126,152            |
| 2006                           | 574,315,572            | 2,053,469                            | 0.36   | 7,545,587              |
| 2007                           | 604,514,525            | 1,658,206                            | 0.27   | 6,436,569              |
| 2008                           | 623,634,208            | 2,199,257                            | 0.35   | 4,774,151              |
| 2009                           | 696,704,083            | 1,512,070                            | 0.22   | 3,708,088              |
| 2010                           | 767,912,436            | 1,777,835                            | 0.23   | 2,335,239              |
| 2011                           | 791,760,493            | 1,785,250                            | 0.23   | 2,191,722              |
| 2012                           | 805,607,436            | 2,091,708                            | 0.26   | 2,647,087              |
| 2013                           | 817,421,028            | 1,977,664                            | 0.24   | 3,013,166              |
| 2014                           | 819,923,866            | 2,868,039                            | 0.35   | 2,555,247              |
| 5-Year Average                 | \$800,525,052          | \$2,100,099                          | \$0.26   | N/A                    |
| 10-Year Average                | \$705,663,346          | \$1,950,898                          | \$0.28   | N/A                    |

### SECTION 3: Insured Lives Portion of the Death Benefit Fund

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#### C. INSURED LIVES DEATH BENEFITS FOR NONCONTRIBUTING (RETIRED AND DISABLED) MEMBERS

In September 26, 1963, the Plan began providing for a benefit payable on the death of a retired member equal to 14 times the retired member's unmodified retirement allowance, with a minimum death benefit of \$2,000 (subsequently changed to \$3,000 if eligible for the minimum pension) and a maximum death benefit of \$10,000. Note that only retired members are covered, not spouses and beneficiaries. Contributions were increased as of July 1, 1973 to cover the cost of the benefits, and \$2,598,912 was transferred from the General Reserve – Contributing Members to the General Reserve – Noncontributing Members. The Plan was amended in December 1980 to provide a maximum death benefit of \$20,000. A history of contribution rates is given in Section 4, Exhibit I.

In Chart 5 that follows, we summarize recent costs of the retirees' death benefit.

The experience rate for 2014 is \$0.93. For this valuation, we continue to recommend basing the Department contribution on the ten-year average annual experience rate, which is \$1.32. We will review this procedure again at the next valuation.

The experience rate does not take into account the amount of interest earned on the Death Benefit fund. Interest expected to be earned on the Noncontributing Members' Reserve for the next year is \$331,571 (assuming a 4% investment return). This is equal to \$0.07 per \$100 of retired member payroll. After taking the interest credit into account, the net rate based on the ten years of experience amounts to \$1.25 per \$100 of retired payroll.

A previous review recommended that the reserve target be equal to the average death benefits for the last five years, currently \$4,733,418. The reserve amount is currently \$8,289,278, resulting in a target surplus of \$3,555,860.

If we further adjust the Department contributions so as to decrease the general reserve to the target level over a period of ten years, then Department contributions to the Noncontributing Death Benefit would need to decrease to \$1.19 per \$100 of retirement benefits actually paid.

We recommend that the Department contributions to the noncontributing Death Benefits be decreased from \$1.27 to \$1.19. This is expected to allow the reserve to reach the target level over a period of ten years.

**SECTION 3: Insured Lives Portion of the Death Benefit Fund**

**CHART 5**

**Summary of Cost of Insured Lives Death Benefits for Noncontributing Members, 2005 - 2014**

| <b>Year Ending<br/>June 30</b> | <b>Retirement Benefits<br/>Paid During Year</b> | <b>Death Benefits Paid<br/>During Year</b> | <b>Cost Per \$100 of<br/>Retirement Benefits</b> | <b>General Reserve</b> |
|--------------------------------|---|--|--|------------------------|
| 2005                           | \$311,551,053                                   | \$5,445,314                                | \$1.75   | \$8,472,423            |
| 2006                           | 325,873,101                                     | 5,322,196                                  | 1.63   | 6,942,267              |
| 2007                           | 338,340,551                                     | 4,828,038                                  | 1.43   | 6,111,622              |
| 2008                           | 353,178,785                                     | 5,635,063                                  | 1.60   | 4,612,965              |
| 2009                           | 363,691,635                                     | 4,650,282                                  | 1.28   | 4,658,213              |
| 2010                           | 377,061,806                                     | 4,811,131                                  | 1.28   | 5,265,931              |
| 2011                           | 396,136,140                                     | 5,360,830                                  | 1.35   | 5,744,571              |
| 2012                           | 410,859,162                                     | 4,555,657                                  | 1.11   | 6,631,921              |
| 2013                           | 432,738,112                                     | 4,666,084                                  | 1.08   | 7,177,683              |
| 2014                           | 457,558,214                                     | 4,273,388                                  | 0.93   | 8,289,278              |
| 5-Year Average                 | \$414,870,687                                   | \$4,733,418                                | \$1.14   | N/A                    |
| 10-Year Average                | \$376,698,856                                   | \$4,954,798                                | \$1.32   | N/A                    |



**SECTION 4: Supplemental Information**

**EXHIBIT I**

**History of Contribution Rates**

| <b>Date</b>             | <b>Department Contribution to Family Death Benefit Allowance Fund</b> | <b>Members' Contribution to Insured Lives Portion of the Death Benefit Fund (Contributing Active Members)</b> | <b>Department Contribution to Insured Lives Portion of the Death Benefit Fund (Contributing Active Members)</b> | <b>Department Contribution to Insured Lives Portion of the Death Benefit Fund (Noncontributing Retired and Disabled Members)</b> |
|-------------------------|---|---|---|--|
| 1942                    |   | \$0.48 / \$100 of compensation  | \$0.32 / \$100 of compensation  |  |
| September 26, 1963      |   |   |   | \$23.88 / retired member each year   |
| December 19, 1963       | \$1.25 / month  |   |   |  |
| July 1, 1969            | \$2.50 / month  | \$0.36 / \$100  | \$0.24 / \$100  |  |
| July 1, 1973            | \$3.00 / month  |   |   |  |
| Fiscal year 1979 - 1980 |   |   |   | \$23.06 / retired member each year   |
| July 1, 1980            |   | \$1.00 / month  | Balance of \$0.60 / \$100   | \$27.39 / retired member each year   |
| September 1, 1981       | \$2.50 / month  |   |   |  |
| January 9, 1984         |   | \$1.00 / pay period   |   |  |
| March 1, 1984           |   |   |   | \$3.36 / \$100 of retired member payroll   |
| July 1, 1988            |   |   | Balance of \$0.50 / \$100   |  |
| July 1, 1993            | Suspended   |   | Balance of \$0.15 / \$100   |  |
| July 1, 1994            |   |   | Balance of \$0.05 / \$100   | \$2.86 / \$100   |
| March 1, 1996           |   |   |   | \$2.35 / \$100   |
| August 1, 1999          |   |   | Suspended   | \$2.00 / \$100   |
| July 1, 2000            |   |   |   | \$1.50 / \$100   |
| July 1, 2001            |   |   |   | \$1.30 / \$100   |
| January 1, 2009         |   |   |   | \$1.64 / \$100   |
| January 1, 2011         |   |   | \$0.29 / \$100  | \$1.48 / \$100   |
| January 1, 2012         |   |   | \$0.25 / \$100  | \$1.44 / \$100   |
| January 1, 2013         |   |   |   | \$1.35 / \$100   |
| January 1, 2014         |   |   |   | \$1.27 / \$100   |

Note: Supplemental Family Death Benefit allowance plan is subject to member contributions. The initial member contribution was \$3.35 per biweekly period or \$7.28 per month if retired. This rate was decreased to \$2.25 per biweekly period or \$4.90 per month if retired.

**SECTION 4: Supplemental Information**

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**EXHIBIT II**

**Combined Assets**

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| <b>Statement of Death Benefit Fund Assets</b>        | <b>Year Ended<br/>June 30, 2014</b> | <b>Year Ended<br/>June 30, 2013</b> |
|--|-------------------------------------|-------------------------------------|
| Cash   | \$501,792                           | \$919,762                           |
| Accounts receivable                                  | 1,038,042                           | 880,475                             |
| Investments in bonds and mortgaged-backed securities | 26,574,545                          | 26,208,830                          |
| Short-term commercial paper                          | <u>1,218,119</u>                    | <u>717,742</u>                      |
| <b>Total Assets</b>                                  | \$29,332,498                        | \$28,726,809                        |
| Accounts payable                                     | (416,593)                           | (797,534)                           |
| Death claims in process-insured lives                | <u>(2,845,447)</u>                  | <u>(2,909,143)</u>                  |
| <b>Net Assets</b>                                    | \$26,070,458                        | \$25,020,132                        |

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**SECTION 4: Supplemental Information**

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**EXHIBIT III**

**Methods, Assumptions and Plan Summary for the Family Death Benefit Fund**

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|                                       |  |
|---------------------------------------|--|
| <b>Plan Year:</b>                     | July 1 through June 30   |
| <b>Definition of Active Employee:</b> | First day of biweekly payroll period following employment for new Department employees. Immediately following transfer from other City departments.  |
| <b>Net Investment Return:</b>         | 4.00%, net of investment expenses.   |
| <b>Member Contribution Rate:</b>      | None   |
| <b>Department Contribution Rate:</b>  | Currently suspended  |
| <b>Funding Method:</b>                | Annual contributions equal the expected incurred claims for the coming year subject to modification by the Board's funding policy.   |
| <b>Funding Policy:</b>                | Recommend a contribution rate to have 20% of the reserve for allowances granted in the contribution account and general reserve.   |
| <b>Incurred Claims:</b>               | Provided by Retirement Office.   |
| <b>Age Requirement:</b>               | Upon the death of an active member at any age  |
| <b>Service Requirement:</b>           | Six months of continuous service.  |
| <b>Other Requirements:</b>            | The plan provides a monthly benefit for each surviving child that is: <ul style="list-style-type: none"><li>• the naturally or legally adopted child of the member</li><li>• is under 18 and unmarried, or</li><li>• disabled and over age 18 (only if the disability occurred before age 18) and unmarried.</li></ul> |

**SECTION 4: Supplemental Information**

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**EXHIBIT III (continued)**

**Methods, Assumptions and Plan Summary for the Family Death Benefit Fund**

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|  |   |
|--|---|
| <b>Monthly Benefit:</b>                  | <p>The monthly benefit is the sum of:</p> <ul style="list-style-type: none"><li>• \$416 per month to each surviving child, plus</li><li>• \$416 per month to spouse (if the member's spouse has care of one or more of the member's eligible children)</li></ul> <p>limited so that the total amount payable cannot exceed \$1,170 per month. In addition, the spouse's portion will not be paid if the spouse is receiving a Survivor's Optional Death Benefit Allowance or an Eligible Spouse Allowance from the Retirement Plan. The benefit is no longer payable when the member's children no longer satisfy the eligibility requirements noted above.</p> |
| <b>Changes in Actuarial Assumptions:</b> | <p>The following assumption has been changed. Previously this assumption was as follows:</p>  |
| <b>Net Investment Return:</b>            | <p>5.00%</p>  |

**SECTION 4: Supplemental Information**

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**EXHIBIT IV**

**Methods, Assumptions and Plan Summary for the Supplemental Family Death Benefit Fund**

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|                                       |  |
|---------------------------------------|--|
| <b>Plan Year:</b>                     | July 1 through June 30   |
| <b>Definition of Active Employee:</b> | First day of biweekly payroll period following employment for new Department employees. Immediately following transfer from other City departments.  |
| <b>Net Investment Return:</b>         | 4.00%, net of investment expenses.   |
| <b>Member Contribution Rate:</b>      | \$2.25 per biweekly period (or \$4.90 per month if retired).   |
| <b>Department Contribution Rate:</b>  | The department will provide any additional funds necessary to fund the benefits.   |
| <b>Funding Method:</b>                | Annual contributions equal the expected incurred claims for the coming year subject to modification by the Board's funding policy.   |
| <b>Funding Policy:</b>                | To be established once stable annual costs are achieved.   |
| <b>Incurred Claims:</b>               | Provided by Retirement Office.   |
| <b>Age Requirement:</b>               | Upon the death of an active member at any age  |
| <b>Service Requirement:</b>           | Must be enrolled and make contributions by payroll deductions for 39 successive biweekly payroll periods (approximately 18 months) before coverage becomes effective.  |
| <b>Other Requirements:</b>            | The plan provides a monthly benefit for each surviving child that is: <ul style="list-style-type: none"><li>• the naturally or legally adopted child of the member</li><li>• is under 18 and unmarried, or</li><li>• disabled and over age 18 (only if the disability occurred before age 18) and unmarried.</li></ul> |

**SECTION 4: Supplemental Information**

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**EXHIBIT IV (continued)**

**Methods, Assumptions and Plan Summary for the Supplemental Family Death Benefit Fund**

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|  |   |
|--|---|
| <b>Monthly Benefit:</b>                  | <p>The monthly benefit is the sum of:</p> <ul style="list-style-type: none"><li>• \$520 per month to each surviving child, plus</li><li>• \$520 per month to spouse (if the member's spouse has care of one or more of the member's eligible children)</li></ul> <p>limited so that the total amount payable cannot exceed \$1,066 per month. In addition, the spouse's portion will not be paid if the spouse is receiving a Survivor's Optional Death Benefit Allowance or an Eligible Spouse Allowance from the Retirement Plan. The benefit is no longer payable when the member's children no longer satisfy the eligibility requirements noted above.</p> |
| <b>Changes in Actuarial Assumptions:</b> | <p>The following assumption has been changed. Previously this assumption was as follows:</p>  |
| <b>Net Investment Return:</b>            | <p>5.00%</p>  |

**SECTION 4: Supplemental Information**

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**EXHIBIT V**

**Methods, Assumptions and Plan Summary for the Insured Lives Death Benefit Fund (Contributing Active Members)**

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|  |   |
|--|---|
| <b>Plan Year:</b>                        | July 1 through June 30  |
| <b>Projected Covered Payroll:</b>        | \$900,126,274 for 2014-2015 plan year   |
| <b>Projected Distributions:</b>          | \$2,520,354 for first year (payroll times ten-year average cost per \$100 of covered payroll) increasing 4.00% per year thereafter  |
| <b>Definition of Active Employee:</b>    | First day of biweekly payroll period following employment for new Department employees. Immediately following transfer from other City departments.   |
| <b>Net Investment Return</b>             | 4.00%, net of investment expenses.  |
| <b>Member Contribution Rate:</b>         | Employees contribute \$1.00 per biweekly payroll period.  |
| <b>Department Contribution Rate:</b>     | Rate recommended by Board's Actuary as an amount per \$100 of covered payroll.  |
| <b>Funding Method:</b>                   | Pay as you go, subject to modification by the Board's funding policy  |
| <b>Funding Policy:</b>                   | Recommend a contribution rate that maintains the general reserve at a target level of the average of the benefits paid for the last five years.   |
| <b>Incurred Claims:</b>                  | Provided by Retirement Office.  |
| <b>Age Requirement:</b>                  | Any age   |
| <b>Service Requirement:</b>              | Six months of continuous service.   |
| <b>Additional Requirements:</b>          | Death must occur while an active member of the Plan.  |
| <b>Benefit:</b>                          | A single sum distribution equal to 14 times monthly salary.<br><br>In addition to this Insured Lives Death Benefit, death benefits payable from the Retirement Plan are payable to the beneficiary. |
| <b>Changes in Actuarial Assumptions:</b> | The following assumptions have been changed. Previously these assumptions were as follows:  |
| <b>Net Investment Return:</b>            | 5.00%   |
| <b>Projected Distributions:</b>          | Used 4.25% increase per year in the prior valuation.  |

**SECTION 4: Supplemental Information**

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**EXHIBIT VI**

**Methods, Assumptions and Plan Summary for the Insured Lives Death Benefit Fund (Noncontributing Retired and Disabled Members)**

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|  |   |
|--|---|
| <b>Plan Year:</b>                        | July 1 through June 30  |
| <b>Definition of Active Employee:</b>    | First day of biweekly payroll period following employment for new Department employees. Immediately following transfer from other City departments.   |
| <b>Net Investment Return</b>             | 4.00%, net of investment expenses.  |
| <b>Member Contribution Rate:</b>         | None  |
| <b>Department Contribution Rate:</b>     | Rate recommended by Board's Actuary as an amount per \$100 of retirement benefits paid during the year.   |
| <b>Funding Method:</b>                   | Pay as you go, subject to modification by the Board's funding policy  |
| <b>Funding Policy:</b>                   | Recommend a contribution rate that maintains the general reserve at a target level of the average of the benefits paid for the last five years.   |
| <b>Incurred Claims:</b>                  | Provided by Retirement Office.  |
| <b>Age Requirement:</b>                  | Any age   |
| <b>Service Requirement:</b>              | None  |
| <b>Additional Requirements:</b>          | Death must occur after retirement.  |
| <b>Benefit:</b>                          | <p>A single sum distribution equal to 14 times the member's Full Retirement Allowance (to a maximum of \$20,000), provided member was employed by the Department for at least five years.</p> <p>In addition to this Insured Lives Death Benefit, death benefits payable from the Retirement Plan include any unpaid Retirement Plan allowances due and the balance of contributions remaining in the Retirement Plan if Option A was the member's selected method of pension payment all of which is payable to beneficiary.</p> |
| <b>Changes in Actuarial Assumptions:</b> | The following assumption has been changed. Previously this assumption was as follows:   |
| <b>Net Investment Return:</b>            | 5.00%   |

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