# The Water and Power Employees' Retirement Plan of the City of Los Angeles

Review of the Disability Fund as of July 1, 2006

Copyright © 2006

THE SEGAL GROUP, INC.
THE PARENT OF THE SEGAL COMPANY
ALL RIGHTS RESERVED



THE SEGAL COMPANY
120 Montgomery Street, Suite 500, San Francisco, CA 94104
T 415.263.8200 F 415.263.8200 www.segalco.com

October 25, 2006

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 our biennial review of the Disability Fund as of July 1, 2006. This review is based on financial statements and employee data furnished by the Retirement Office. We would like to take this opportunity to express our appreciation for the courtesy and cooperation accorded to us by the Retirement Office during the course of our work.

The actuarial calculations were completed under the supervision of Andy Yeung, MAAA, Enrolled Actuary. We look forward to reviewing this report with you at your next meeting and to answering any questions you may have.

Sincerely,

THE SEGAL COMPANY

*By*:

cc:

Paul Angelo, FSA, MAAA Senior Vice President and Actuary

Sul Crylo

Sangeeta Bhatia Manoj B. Desai, CPA Donna Weisz Jones, Esq. Paul C. Poon, ASA, MAAA Associate Actuary

Paul C. Poo Arely Yeung

Alan L. Manning, Esq. Robert K. Rozanski Michael R. Wilkinson, Esq. Andy Yeung, ASA, MAAA Associate Actuary

PXP/gxk

# **SECTION 1**

# **REVIEW SUMMARY**

A. Significant Issues in Review Year .....i

# **SECTION 2**

# **DISABILITY FUND**

| A. | Introduction and Consolidated Financial Information 1 |
|----|---|
| В. | Temporary and Extended Temporary Disability Benefits  |
| C. | Temporary Disability Experience Table                 |
| D. | Permanent Total Disability Benefits                   |
| E. | Permanent Total Disability Experience Table           |

# **SECTION 3**

# EXHIBIT I

| Actuarial Assumptions and     |
|-------------------------------|
| Actuarial Cost Method         |
| Used for Temporary and        |
| Extended Temporary Disability |
| Benefit                       |

# **EXHIBIT II**

| Summary of Temporary and |    |
|--------------------------|----|
| Extended Temporary       |    |
| Disability Benefit       | 14 |

# EXHIBIT III

| Actuarial Assumptions and      |   |
|--------------------------------|---|
| Actuarial Cost Method Used     |   |
| for Permanent Total Disability |   |
| Benefit                        | 1 |

# EXHIBIT IV

| Summary of Permanent Total |   |
|----------------------------|---|
| Disability Benefit         | 1 |

## EXHIBIT V

| Actuarial Assumptions and   |
|-----------------------------|
| Actuarial Cost Method Used  |
| for Supplemental Industrial |
| Disability Benefit          |

# EXHIBIT VI

| Summary of Supplemental          |
|----------------------------------|
| Industrial Disability Benefit 19 |

#### SIGNIFICANT ISSUES IN REVIEW YEAR:

- > The Temporary Disability benefits and Permanent Total Disability benefits are included in this review. The funding for the Temporary Disability Benefit includes both the entire Temporary Disability Benefit plus the Extended Temporary Disability Benefit. Only the Supplemental Industrial Disability benefit is funded by the Department on a cash basis. All the disability benefits are summarized in Section 3 of this report.
- > The total reserve for the disability benefits has decreased from \$45.7 million on June 30, 2004 to \$37.0 million on June 30, 2006. Member contributions amounted to about \$400,000 for both the 2004-2005 and 2005-2006 fiscal years. Department contributions amounted to about \$5.1 million for both the 2004-2005 and 2005-2006 fiscal years.
- > Contributions to the Temporary Disability Benefit Fund have been substantially less that the outgoing benefit payments. This has resulted in the General Reserve for this fund going from a positive balance of \$6 million as of June 30, 2004 to a negative balance of \$2 million as of June 30, 2006. See Section 2.C for details.
- > The recommended Department contribution rate for the Temporary Disability Benefit Fund has increased from \$0.74 per \$100 of compensation to \$1.55 per \$100 of compensation. This is primarily due to (1) the increase in the annual rate of incurred claims per \$100 of covered payroll during the past two years and (2) going from an excess positive balance to a negative balance in the General Reserve. See Section 2.B for details.
- > Another reason for the increase in the contribution rate is the shorter period (2 years) to reach the target reserve level. For example, if this period remained at 4 years (as in our previous valuation), the recommended contribution rate would have been \$1.45 per \$100 of compensation.
- > The recommended Department contribution rate for the Permanent Total Disability Fund remains at \$0 per \$100 of compensation.
- > The annual interest rate assumption for this valuation remains at 5%, as adopted by the Board following the July 1, 2002 valuation. The Board may want us to review all the assumptions, methods and reserving policies for this Fund. In particular, the Board may wish to increase the target reserve level of the Temporary Disability Benefit Fund to reflect a greater level of distribution variance for these benefits.

#### A. INTRODUCTION AND CONSOLIDATED FINANCIAL INFORMATION

In this section, we give a general description of the method used to fund the various disability benefits of the Department of Water and Power. Under the funding method used, the total annual contribution to the Disability Fund equals the present value of all future payments for those expected to become disabled during the year, with a further adjustment for any interest credited to the reserves. The present value referred to is for disabilities that "accrue" in a given year and is called the "incurred claims" for the year.

Under this funding method no reserves are expected to accumulate to help cover future claims beyond those incurred during the forthcoming year.

The incurred claims for a year normally are estimated as the paid claims for the year plus the increase in claim reserves from one fiscal year-end to another. The claim reserve as of any year-end is the present value of all future disability payments on all claims that remains "open" (i.e., still disabled).

Amounts of paid claims, open claims (number and amount), and the general reserves are provided by the Retirement Office, and accepted by The Segal Company without audit.

The total annual contribution to the Disability Fund is levied as a dollar rate per \$100 of covered compensation. There are separate rates for Temporary Disability and Permanent Total Disability; these rates in turn are split between employees and the Department of Water and Power. Currently, employees pay \$1.00 each biweekly payroll period for both Temporary and Permanent Disability benefits.

In subsequent pages we recommend contribution rates for the various benefits based on a review of the past experience of the funds. We present tables that show the actual annual rate per \$100 of covered payroll. However, there has been substantial fluctuation in these rates over the years. Accordingly, we recommend the rate that, in our judgment, best reflects a balance of recent experience and probable future trends.

Our recommended contribution rates also are designed to maintain a general reserve for each fund. The general reserve is maintained primarily to provide funds in the event of substantial adverse experience. In subsequent pages, we state a desirable level for each general reserve. However, the general reserve is actually any balance of funds available over claim reserves. Thus, it is unlikely that the general reserve will be exactly at recommended levels at any given time. Rather, the recommended level should be regarded as a long-term goal for the general reserve.

Following our July 1, 2002 valuation, a resolution was adopted to lower the annual interest rate assumption to 5%. That 5% interest rate assumption is continued in this valuation.

In the following sections, we discuss Temporary Disability Benefits and Permanent Total Disability Benefits.

CHART 1

Consolidated Summary Statement of Income and Expenses

|   | Year En<br>June 30, |                   | Year Ended<br>June 30, 2005 |              |
|---|---------------------|-------------------|-----------------------------|--------------|
| Contribution income:  |                     |                   |                             |              |
| Employer contributions - temporary disability benefit       | \$4,043,308         |                   | \$3,556,885                 |              |
| Employer contributions - permanent total disability benefit | 0                   |                   | 0                           |              |
| Employer contributions - supplemental disability benefit    | 607,639             |                   | 1,041,440                   |              |
| Employer contributions - administrative expenses            | 457,218             |                   | 474,488                     |              |
| Total employer contribution income                          |                     | \$5,108,165       |                             | \$5,072,813  |
| Employee contributions - temporary disability benefit       | \$ 199,445          |                   | \$ 200,561                  |              |
| Employee contributions - permanent total disability benefit | 197,458             |                   | 198,562                     |              |
| Total employee contribution income                          |                     | \$ 396,903        |                             | \$ 399,123   |
| Investment income:  |                     |                   |                             |              |
| Investment Income   | \$1,708,578         |                   | \$ 1,442,362                |              |
| Net appreciation (depreciation) in market value             | -1,843,292          |                   | 635,103                     |              |
| Less investment fees  | -17,098             |                   | -3,092                      |              |
| Net investment income                                       |                     | <u>-\$151,812</u> |                             | \$2,074,373  |
| Total income available for benefits                         |                     | \$5,353,256       |                             | \$7,546,309  |
| Less benefit payments:                                      |                     |                   |                             |              |
| Distributions – temporary disability benefit                | \$8,577,782         |                   | \$7,298,197                 |              |
| Distributions – extended temporary disability benefit       | 320,038             |                   | 0                           |              |
| Distributions – permanent total disability benefit          | 1,416,598           |                   | 1,344,393                   |              |
| Distributions – supplemental disability benefit             | 605,622             |                   | 1,039,157                   |              |
| Total distributions   |                     | \$10,920,040      |                             | \$9,681,747  |
| Administrative expenses                                     |                     | 450,721           |                             | 480,426      |
| <b>Total deductions</b>                                     |                     | \$11,370,761      |                             | \$10,162,173 |
| Net increase (decrease) in reserve                          |                     | -\$6,017,505      |                             | -\$2,615,864 |

CHART 2
Consolidated Summary Statement of Plan Assets

|                                       | Year Ended<br>June 30, 2006 |                     | Year Ended<br>June 30, 2005 |              |
|---------------------------------------|-----------------------------|---------------------|-----------------------------|--------------|
| Cash equivalents                      |                             | \$ 229,688          |                             | \$ 83,241    |
| Accounts receivable:                  |                             |                     |                             |              |
| Employer contributions                | \$ 573,979                  |                     | \$ 739,701                  |              |
| Accrued investment income             | 151,557                     |                     | 146,376                     |              |
| Other                                 | 830,648                     |                     | 205,674                     |              |
| Contingent disability benefit advance | 3,310,339                   |                     | 3,310,339                   |              |
| Total accounts receivable             |                             | \$4,866,523         |                             | \$4,402,090  |
| Investments:                          |                             |                     |                             |              |
| Bonds                                 | \$30,668,609                |                     | \$37,999,033                |              |
| Short-term investments                | 1,444,825                   |                     | 614,307                     |              |
| Total investments at market value     |                             | \$32,113,434        |                             | \$38,613,340 |
| Total assets                          |                             | \$37,209,645        |                             | \$43,098,671 |
| Less accounts payable:                |                             |                     |                             |              |
| Total accounts payable                |                             | -\$192,000          |                             | -\$63,521    |
| Net assets at market value            |                             | <u>\$37,017,645</u> |                             | \$43,035,150 |

#### B. TEMPORARY AND EXTENDED TEMPORARY DISABILITY BENEFITS

The Temporary Disability Benefits referred to in this section normally commence on the fifteenth day of disability and terminate at the end of the twelfth month of disability. The monthly benefit is 40% to 85% of compensation, depending on length of service and disability.

In the attached exhibit, we set forth a summary of the cost of the Temporary Disability Benefits from inception of the Plan to June 30, 2006.

CHART 3

Rates of Contribution per \$100 of Compensation for Temporary and Extended Temporary Disability Benefits

|               | Rates Per \$100 of Compensation |               |        |  |  |  |
|---------------|---------------------------------|---------------|--------|--|--|--|
| As of June 30 | By Member                       | By Department | Total  |  |  |  |
| 1938 - 1939   | \$ .36                          | \$ .24        | \$ .60 |  |  |  |
| 1940 - 1942   | .47                             | .31           | .78    |  |  |  |
| 1942 - 1947   | .39                             | .26           | .65    |  |  |  |
| 1947 - 1953   | .59                             | .39           | .98    |  |  |  |
| 1953 - 1956   | .47                             | .31           | .78    |  |  |  |
| 1957 - 1958   | .36                             | .24           | .60    |  |  |  |
| 1959 - 1973   | .27                             | .18           | .45    |  |  |  |
| 1974 - 1975   | .39                             | .26           | .65    |  |  |  |
| 1975 - 1980   | .45                             | .30           | .75    |  |  |  |
| 1980 - 1985   | *                               | *             | .75    |  |  |  |
| 1985 - 1987   | *                               | *             | .75    |  |  |  |
| 1987 - 1992   | *                               | *             | .61    |  |  |  |
| 1993          | *                               | *             | .45    |  |  |  |
| 1994          | *                               | *             | .35    |  |  |  |
| 1995          | *                               | *             | .35    |  |  |  |
| 1996          | *                               | *             | .30    |  |  |  |
| 1997          | *                               | *             | .25    |  |  |  |
| 1998          | *                               | *             | .25    |  |  |  |
| 1999          | *                               | *             | .35    |  |  |  |
| 2000          | *                               | *             | .35    |  |  |  |
| 2001 - 2004   | *                               | *             | .68    |  |  |  |
| 2005 - 2006   | *                               | *             | .74    |  |  |  |

<sup>\*</sup> From January 1980 to January 1984, employees paid \$1 per month and the Department paid the balance of the total rate. As of January 1984, the employee amount was increased to \$1 per biweekly payroll period.

For Temporary and Extended Temporary Disability, the claim reserve is calculated as the sum of:

- 1. The open claim reserve, which is the number of open claims times the reserve factor specified in Section III D (2) of the Plan, and
- 2. The pending claim reserve, which is 1/26 of the benefits paid during the preceding fiscal year.

Incurred claims at an annual rate per \$100 of covered payroll are calculated as described in Section 2.A. and Section 3, Exhibit I. Since 1980, the goal for the general reserve has been to maintain it at approximately 20% of the claim reserve (\$1,199,024 as of June 30, 2006). Thus, the "target" is equal to \$239,805 (20% x \$1,199,024), as opposed to the actual general reserve of -\$2,009,091 as of June 30, 2006. The current policy is to fund so as to reach this goal by a fixed date of June 30, 2008 (i.e., 10 years from June 30, 1998).

The Temporary Disability Experience Table indicates that the average cost for the last five years per \$100 of covered payroll is \$1.24 before taking into account interest on the general reserve. This average cost includes the entire Temporary Disability and Extended Temporary Disability Benefits.

Based on reserves as of June 30, 2006, the expected interest credit for the next year is -\$0.02 per \$100 (assuming a 5% investment return). Thus, the net average rate per \$100 of covered payroll is about \$1.26.

The general reserve continues to decrease due to contribution rates being lower than the increased claim rates.

As noted above, the total contribution rate needed to pay for expected claims is \$1.24 per \$100 of covered payroll. In order to increase the general reserve to the target level in the next 2 years, we recommend a total contribution of \$1.55 per \$100 of covered payroll. This is an increase over the current rate, which is \$0.74.

Pursuant to Section III D (2) of the Plan, the Temporary Disability claim reserve at the end of each year is determined by multiplying the number of open claims at the end of the year by a reserve factor of \$4,000 for 2005, and \$4,200 for 2006. This is an increase from the \$3,800 for 2003 and \$3,900 for 2004. The current reserve factor of \$4,200 was provided by the Retirement office, and accepted by The Segal Company without audit.

# C. TEMPORARY DISABILITY EXPERIENCE TABLE

| Year Ending<br>June 30 | Estimated<br>Covered<br>Payroll | Claims and<br>Expenses Paid | Claims and<br>Expenses<br>Incurred | Annual Rate of<br>Incurred Claims and<br>Expenses Per \$100<br>of Covered Payroll | Cumulative Rate of<br>Incurred Claims and<br>Expenses Per \$100<br>of Covered Payroll | General<br>Reserve |
|------------------------|---------------------------------|-----------------------------|------------------------------------|---|---|--------------------|
| 1939                   | \$ 9,705,000                    | \$ 33,138                   | \$ 44,138                          | \$ .45  | \$ .45  | \$ 14,090          |
| 1940                   | 14,015,000                      | 60,138                      | 65,797                             | .47   | .46   | 45,061             |
| 1941                   | 13,350,000                      | 73,867                      | 78,867                             | .59   | .51   | 70,323             |
| 1942                   | 13,415,000                      | 79,870                      | 79,870                             | .60   | .53   | 95,090             |
| 1943                   | 12,645,000                      | 87,933                      | 87,933                             | .70   | .56   | 89,351             |
| 1944                   | 12,400,000                      | 108,197                     | 113,197                            | .91   | .62   | 56,753             |
| 1945                   | 12,396,000                      | 98,138                      | 104,138                            | .84   | .65   | 33,189             |
| 1946                   | 15,293,000                      | 123,539                     | 123,539                            | .81   | .68   | 9,056              |
| 1947                   | 20,027,000                      | 156,483                     | 165,483                            | .83   | .70   | (8,741)            |
| 1948                   | 23,316,000                      | 161,558                     | 158,558                            | .68   | .70   | 61,194             |
| 1949                   | 27,386,000                      | 157,975                     | 155,975                            | .57   | .68   | 173,506            |
| 1950                   | 30,105,000                      | 163,475                     | 175,476                            | .58   | .66   | 293,063            |
| 1951                   | 30,130,000                      | 180,286                     | 177,286                            | .59   | .65   | 411,057            |
| 1952                   | 37,792,000                      | 204,381                     | 208,381                            | .55   | .64   | 573,038            |
| 1953                   | 40,678,000                      | 228,354                     | 262,354                            | .64   | .64   | 757,895            |
| 1954                   | 44,915,000                      | 255,289                     | 244,289                            | .54   | .63   | 892,666            |
| 1955                   | 50,632,000                      | 241,898                     | 215,898                            | .43   | .60   | 1,102,717          |
| 1956                   | 53,988,000                      | 244,824                     | 242,824                            | .45   | .59   | 1,317,674          |
| 1957                   | 56,225,000                      | 268,883                     | 280,883                            | .50   | .58   | 1,419,437          |
| 1958                   | 63,087,000                      | 286,924                     | 291,924                            | .46   | .56   | 1,557,783          |
| 1959                   | 65,930,000                      | 368,644                     | 414,644                            | .63   | .57   | 1,578,671          |
| 1960                   | 65,993,000                      | 388,060                     | 305,260                            | .46   | .56   | 1,628,091          |
| 1961                   | 68,055,000                      | 381,033                     | 380,833                            | .56   | .56   | 1,611,264          |
| 1962                   | 73,192,000                      | 393,013                     | 404,413                            | .55   | .56   | 1,593,485          |
| 1963                   | 78,546,000                      | 500,671                     | 512,371                            | .65   | .57   | 1,491,219          |
| 1964                   | 83,672,000                      | 562,565                     | 518,765                            | .62   | .57   | 1,401,956          |
| 1965                   | 87,976,000                      | 536,280                     | 543,480                            | .62   | .58   | 1,304,304          |
| 1966                   | 92,885,000                      | 554,020                     | 548,920                            | .59   | .58   | 1,220,641          |
| 1967                   | 98,253,000                      | 566,985                     | 580,185                            | .59   | .58   | 1,127,344          |
| 1968                   | 103,283,000                     | 634,571                     | 633,871                            | .61   | .58   | 999,592            |

# C. TEMPORARY DISABILITY EXPERIENCE TABLE (continued)

| Year Ending<br>June 30 | Estimated<br>Covered<br>Payroll | Claims and<br>Expenses Paid | Claims and<br>Expenses<br>Incurred | Annual Rate of<br>Incurred Claims and<br>Expenses Per \$100<br>of Covered Payroll | Cumulative Rate of<br>Incurred Claims and<br>Expenses Per \$100<br>of Covered Payroll | General Reserve |
|------------------------|---------------------------------|-----------------------------|------------------------------------|---|---|-----------------|
| 1969                   | \$111,396,000                   | \$ 704,242                  | \$ 703,542                         | \$ .63  | \$.58   | \$ 833,701      |
| 1970                   | 121,866,000                     | 767,820                     | 775,170                            | .64   | .59   | 637,461         |
| 1971                   | 131,730,000                     | 889,228                     | 897,478                            | .68   | .59   | 354,292         |
| 1972                   | 140,154,000                     | 859,374                     | 864,575                            | .62   | .60   | 132,771         |
| 1973                   | 143,834,000                     | 1,011,796                   | 1,034,196                          | .72   | .61   | (253,712)       |
| 1974                   | 146,962,000                     | 1,140,512                   | 1,175,512                          | .80   | .62   | (483,644)       |
| 1975                   | 156,628,000                     | 1,190,786                   | 1,206,236                          | .77   | .63   | (702,745)       |
| 1976                   | 163,951,000                     | 1,304,122                   | 1,325,572                          | .81   | .64   | (852,027)       |
| 1977                   | 165,258,000                     | 1,300,411                   | 1,312,161                          | .79   | .65   | (959,819)       |
| 1978                   | 172,256,000                     | 1,404,379                   | 1,393,979                          | .81   | .66   | (1,103,713)     |
| 1979                   | 177,648,000                     | 1,378,601                   | 1,410,042                          | .79   | .67   | (107,066)       |
| 1980                   | 175,962,000                     | 1,400,805                   | 1,350,503                          | .77   | .67   | (132,312)       |
| 1981                   | 202,902,000                     | 1,496,480                   | 1,514,388                          | .75   | .68   | 64,895          |
| 1982                   | 245,734,000                     | 1,394,848                   | 1,438,322                          | .59   | .67   | 505,214         |
| 1983                   | 274,644,000                     | 1,687,704                   | 1,678,899                          | .61   | .67   | 957,656         |
| 1984                   | 288,311,000                     | 1,789,909                   | 1,864,263                          | .65   | .67   | 1,370,865       |
| 1985                   | 310,359,000                     | 1,975,135                   | 1,977,432                          | .64   | .66   | 1,875,475       |
| 1986                   | 327,365,000                     | 2,210,661                   | 2,251,124                          | .69   | .67   | 2,157,948       |
| 1987                   | 360,065,000                     | 1,969,935                   | 2,005,236                          | .56   | .66   | 2,728,701       |
| 1988                   | 400,537,000                     | 2,290,491                   | 2,260,068                          | .56   | .65   | 3,348,749       |
| 1989                   | 394,086,000                     | 2,261,337                   | 2,248,205                          | .57   | .64*  | 3,849,928       |
| 1990                   | 411,248,000                     | 2,171,299                   | 2,160,636                          | .53   | .62*  | 4,580,470       |
| 1991                   | 402,648,000                     | 2,233,586                   | 2,194,051                          | .54   | .59*  | 5,286,005       |
| 1992                   | 475,252,000                     | 2,354,177                   | 2,375,545                          | .50   | .59*  | 6,298,902       |
| 1993                   | 464,000,000                     | 2,348,727                   | 2,373,719                          | .51   | .58*  | 6,888,804       |
| 1994                   | 470,000,000                     | 2,516,640                   | 2,567,498                          | .55   | .57*  | 6,709,671       |
| 1995                   | 450,713,000                     | 2,964,258                   | 2,933,789                          | .65   | .57*  | 5,845,370       |
| 1996                   | 441,956,000                     | 2,225,030                   | 2,076,306                          | .47   | .54*  | 5,593,988       |
| 1997                   | 472,678,000                     | 2,019,565                   | 2,016,440                          | .43   | .53*  | 5,286,560       |
| 1998                   | 417,262,000                     | 2,416,341                   | 2,473,601                          | .59   | .53*  | 4,210,250       |

# C. TEMPORARY DISABILITY EXPERIENCE TABLE (continued)

| Year Ending June 30 | Estimated<br>Covered<br>Payroll | Claims and<br>Expenses Paid | Claims and<br>Expenses<br>Incurred | Annual Rate of<br>Incurred Claims and<br>Expenses Per \$100<br>of Covered Payroll | Cumulative Rate of<br>Incurred Claims and<br>Expenses Per \$100<br>of Covered Payroll | General Reserve |
|---------------------|---------------------------------|-----------------------------|------------------------------------|---|---|-----------------|
| 1999                | \$355,148,948                   | \$1,858,677                 | \$2,016,329                        | \$ .57  | \$ .53*   | \$ 3,371,035    |
| 2000                | 369,509,233                     | 4,682,621                   | 4,809,494                          | 1.30  | 1.30**  | 13,339,138***   |
| 2001                | 403,265,472                     | 4,211,036                   | 4,426,638                          | 1.10  | 1.20**  | 11,141,509      |
| 2002                | 430,397,884                     | 4,584,284                   | 4,528,640                          | 1.05  | 1.15**  | 9,999,795       |
| 2003                | 472,432,303                     | 5,306,242                   | 5,388,510                          | 1.14  | 1.15**  | 8,353,541       |
| 2004                | 522,227,280                     | 6,210,253                   | 6,246,423                          | 1.20  | 1.16**  | 5,966,023       |
| 2005                | 554,839,816                     | 7,298,197                   | 7,480,641                          | 1.35  | 1.19**  | 2,715,895       |
| 2006                | 574,315,572                     | 8,897,820                   | 9,028,144                          | 1.57  | 1.24**  | (2,009,091)     |

<sup>\*</sup> Average of ten most recent rates prior to the addition of the entire Temporary and Extended Temporary Disability Benefit.

Note: Starting in 1987, expenses are not included.

<sup>\*\*</sup> Average of rates after addition of the entire Temporary and Extended Temporary Disability Benefits.

<sup>\*\*\*</sup> In 2000, \$11 million was transferred from the Permanent Total Disability Fund. Starting in 2000, the entire Temporary and Extended Temporary Disability Benefit became payable from this Fund.

#### D. PERMANENT TOTAL DISABILITY BENEFITS

Permanent Total Disability Benefits may commence as early as the thirteenth month of disability or as late as the twenty-fifth month, depending on the member's condition and Extended Temporary Disability Coverage. The monthly benefit is an amount equal to 40% of the member's compensation. Cost-of-living benefits, with a

3% maximum increase per year (similar to those provided to service retirees), were adopted as of April 1, 1970.

The attached exhibit summarizes the cost of Permanent Total Disability Benefits from inception of the Plan to June 30, 2006.

CHART 4

Rates of Contribution per \$100 of Compensation for Permanent Total Disability Benefits

|                  | Rates Per \$100 of Compensation |               |         |  |  |
|------------------|---------------------------------|---------------|---------|--|--|
| As of<br>June 30 | By Member                       | By Department | Total   |  |  |
| 1938 – 1942      | \$ .62                          | \$ .41        | \$ 1.03 |  |  |
| 1942 – 1947      | .52                             | .34           | .86     |  |  |
| 1947 – 1953      | .62                             | .41           | 1.03    |  |  |
| 1953 – 1956      | .52                             | .34           | .86     |  |  |
| 1956 – 1959      | .36                             | .24           | .60     |  |  |
| 1959 – 1969      | .21                             | .14           | .35     |  |  |
| 1969 – 1973      | .12                             | .08           | .20     |  |  |
| 1973 – 1975      | .24                             | .16           | .40     |  |  |
| 1975 - 1980      | .36                             | .24           | .60     |  |  |
| 1980 - 1981      | *                               | *             | .60     |  |  |
| 1981 – 1987      | *                               | *             | .55     |  |  |
| 1987 – 1992      | *                               | *             | .25     |  |  |
| 1992- 1998       | *                               | *             | .05     |  |  |
| 1998-2006        | *                               | .00           | *       |  |  |

<sup>\*</sup> From January 1980 to January 1984, employees paid \$1 per month and the Department paid the balance of the total rate. As of January 1984, the employee amount was increased to \$1 per biweekly payroll period.

For Permanent Total Disability Benefit, the claim reserve is calculated as the sum of:

- 1. The open (or reported) claim reserve, which is the present value of future disability benefits for open claims, and
- 2. The pending claim reserve, which is the contributions made during the fiscal year.

The rate of interest used by the Department in the present value calculation is 5%. Beginning in 1983, the present value calculation also reflects 3% cost-of-living increases. The incurred claims and the annual experience rate per \$100 of covered payroll were calculated as described in Section 2.A. and Section 3, Exhibit III. Our current goal for the general reserve is that it be maintained at approximately 20% of the claim reserve.

For several years the Permanent Total Disability Experience Table has shown a downward trend in the annual cost per \$100 of covered payroll. In 1983 the claim cost returned to earlier levels, but this was artificially high due to the change in reflecting cost-of-living increases. It appears that we have reached a somewhat stable cumulative rate of claim costs, although year by year costs are fluctuating.

As of June 30, 2006 the general reserve for Permanent Total Disability is \$26,438,032. This is much larger than the amount needed to meet the 2006 goal for the reserve, which is \$2,228,725. Also, it should be noted that expected interest on the general reserve (which amounts to \$1,321,902, or \$0.23 per \$100 of covered payroll, based on the reserve as of June 30, 2006 and 5% interest) is not reflected in the annual rate shown in the experience table.

If no expected interest on the general reserve had been taken into account, the average annual rate of contribution would have been \$0.26 per \$100 of covered payroll over the last 20 years, and the annual rate of contribution as of June 30, 2006 would have been \$0.12 per \$100 of covered payroll. The expected interest on the reserves (\$0.23 per \$100 of covered payroll) would reduce the \$0.26 per \$100 of payroll and \$0.12 per \$100 of payroll contribution rates to \$0.03 and \$0.00, respectively.

The general reserve is so large that interest alone is expected to be enough to pay a significant portion of the claims for many years to come. Thus, we recommend that the Department contribution be zero cents per \$100 of covered compensation so that the general reserve can be reduced to its target level.

# E. PERMANENT TOTAL DISABILITY EXPERIENCE TABLE

| Year Ending<br>June 30 | Estimated<br>Covered<br>Payroll | Claims and<br>Expenses Paid | Claims and<br>Expenses<br>Incurred* | Annual Rate of<br>Incurred Claims and<br>Expenses Per \$100<br>of Covered Payroll* | Cumulative Rate of<br>Incurred Claims and<br>Expenses Per \$100<br>of Covered Payroll | General<br>Reserve |
|------------------------|---------------------------------|-----------------------------|-------------------------------------|--|---|--------------------|
| 1939                   | \$ 9,742,000                    | \$ 3,711                    | \$ 87,711                           | \$ .90   | \$ .90  | \$ 13,604          |
| 1940                   | 13,989,000                      | 21,342                      | 103,588                             | .74  | .81   | 56,344             |
| 1941                   | 13,266,000                      | 24,788                      | 74,936                              | .56  | .72   | 122,383            |
| 1942                   | 13,306,000                      | 32,566                      | 91,896                              | .69  | .71   | 175,539            |
| 1943                   | 12,574,000                      | 43,318                      | 74,067                              | .59  | .69   | 219,667            |
| 1944                   | 12,319,000                      | 58,699                      | 83,340                              | .68  | .69   | 252,063            |
| 1945                   | 12,309,000                      | 85,014                      | 146,059                             | 1.19   | .76   | 218,072            |
| 1946                   | 15,152,000                      | 89,721                      | 241,219                             | 1.59   | .88   | 111,847            |
| 1947                   | 19,836,000                      | 109,058                     | 270,398                             | 1.36   | .96   | 18,764             |
| 1948                   | 23,235,000                      | 120,837                     | 175,320                             | .75  | .93   | 80,980             |
| 1949                   | 27,275,000                      | 136,224                     | 133,200                             | .49  | .86   | 233,675            |
| 1950                   | 29,974,000                      | 138,210                     | 96,082                              | .32  | .78   | 458,989            |
| 1951                   | 29,990,000                      | 135,367                     | 144,943                             | .48  | .74   | 632,438            |
| 1952                   | 37,565,000                      | 134,551                     | 11,043                              | .03  | .64   | 1,044,175          |
| 1953                   | 40,464,000                      | 156,803                     | 403,365                             | 1.00   | .76   | 1,055,235          |
| 1954                   | 44,971,000                      | 184,131                     | 166,033                             | .37  | .64   | 1,316,150          |
| 1955                   | 49,389,000                      | 192,397                     | 234,939                             | .48  | .62   | 1,547,758          |
| 1956                   | 50,836,000                      | 179,587                     | 14,956                              | .03  | .56   | 2,021,772          |
| 1957                   | 52,720,000                      | 180,814                     | 249,641                             | .47  | .55   | 2,157,769          |
| 1958                   | 58,829,000                      | 152,089                     | 33,695                              | .06  | .50   | 2,560,220          |
| 1959                   | 61,495,000                      | 146,785                     | 381,672                             | .62  | .51   | 2,615,720          |
| 1960                   | 64,964,000                      | 187,826                     | 367,442                             | .57  | .52   | 2,572,558          |
| 1961                   | 67,012,000                      | 216,655                     | 509,906                             | .76  | .54   | 2,394,036          |
| 1962                   | 71,708,000                      | 230,601                     | 205,588                             | .29  | .52   | 2,526,768          |
| 1963                   | 77,236,000                      | 227,517                     | 327,404                             | .42  | .51   | 2,560,680          |
| 1964                   | 82,455,000                      | 240,242                     | 319,583                             | .39  | .50   | 2,624,717          |
| 1965                   | 86,833,000                      | 248,687                     | 291,596                             | .34  | .48   | 2,736,710          |
| 1966                   | 91,488,000                      | 277,855                     | 395,424                             | .43  | .48   | 2,763,324          |
| 1967                   | 96,225,000                      | 286,761                     | 202,661                             | .21  | .46   | 3,009,729          |
| 1968                   | 101,556,000                     | 298,893                     | 401,943                             | .40  | .46   | 3,079,294          |

# E. PERMANENT TOTAL DISABILITY EXPERIENCE TABLE (continued)

| Year Ending<br>June 30 | Estimated<br>Covered<br>Payroll | Claims and<br>Expenses Paid | Claims and<br>Expenses<br>Incurred* | Annual Rate of<br>Incurred Claims and<br>Expenses Per \$100<br>of Covered Payroll* | Cumulative Rate of<br>Incurred Claims and<br>Expenses Per \$100<br>of Covered Payroll | General<br>Reserve |
|------------------------|---------------------------------|-----------------------------|-------------------------------------|--|---|--------------------|
| 1969                   | \$109,554,000                   | \$ 334,656                  | \$ 731,158                          | \$ .67   | \$ .47  | \$2,840,069        |
| 1970                   | 120,246,000                     | 374,358                     | 729,926                             | .61  | .48   | 2,446,761          |
| 1971                   | 130,096,000                     | 376,744                     | 245,854                             | .19  | .46   | 2,561,379          |
| 1972                   | 138,857,000                     | 446,816                     | 1,012,405                           | .73  | .48   | 1,902,860          |
| 1973                   | 143,308,000                     | 502,274                     | 930,350                             | .65  | .49   | 1,283,193          |
| 1974                   | 146,886,000                     | 582,628                     | 1,244,725                           | .85  | .52   | 651,223            |
| 1975                   | 156,760,000                     | 682,830                     | 1,483,906                           | .95  | .54   | (214,183)          |
| 1976                   | 164,183,000                     | 761,200                     | 1,332,986                           | .81  | .56   | (644,432)          |
| 1977                   | 165,224,000                     | 867,586                     | 1,629,326                           | .99  | .59   | (1,348,628)        |
| 1978                   | 171,767,000                     | 920,799                     | 1,042,386                           | .61  | .59   | (1,432,449)        |
| 1979                   | 176,576,000                     | 907,163                     | 972,121                             | .55  | .59   | 1,348,852          |
| 1980                   | 177,340,000                     | 912,703                     | 837,008                             | .47  | .58   | 1,887,689          |
| 1981                   | 202,994,000                     | 1,006,200                   | 369,334                             | .18  | .55   | 2,750,719          |
| 1982                   | 245,580,000                     | 946,778                     | 29,798                              | .01  | .51   | 4,404,597          |
| 1983                   | 274,629,000                     | 978,647                     | 1,755,073                           | .64**  | .52   | 4,534,031          |
| 1984                   | 288,289,000                     | 1,000,319                   | 725,141                             | .21  | .50   | 5,879,532          |
| 1985                   | 310,360,000                     | 1,006,631                   | 591,410                             | .19  | .48   | 7,623,235          |
| 1986                   | 321,523,000                     | 974,376                     | 569,547                             | .18  | .46   | 9,284,884          |
| 1987                   | 360,072,000                     | 901,033                     | 121,268                             | .03  | .45   | 11,090,748         |
| 1988                   | 401,029,000                     | 946,468                     | 840,245                             | .21  | .44   | 13,253,261         |
| 1989                   | 394,084,000                     | 1,024,870                   | 1,563,694                           | .40  | .47***  | 13,929,718         |
| 1990                   | 411,248,000                     | 1,038,907                   | 594,815                             | .14  | .45***  | 15,723,997         |
| 1991                   | 405,132,000                     | 1,046,404                   | 739,845                             | .18  | .45***  | 18,108,405         |
| 1992                   | 472,984,000                     | 1,054,203                   | 989,998                             | .21  | .42***  | 20,483,790         |
| 1993                   | 464,000,000                     | 1,102,722                   | 1,652,617                           | .36  | .41***  | 21,843,275         |
| 1994                   | 470,000,000                     | 1,058,778                   | 320,344                             | .07  | .37***  | 24,150,799         |
| 1995                   | 515,122,000                     | 1,059,537                   | 1,506,726                           | .29  | .34***  | 25,312,906         |
| 1996                   | 456,604,000                     | 1,027,066                   | 1,230,694                           | .27  | .27***  | 26,514,847         |
| 1997                   | 460,540,000                     | 930,321                     | 1,166,197                           | .25  | .27***  | 28,156,245         |
| 1998                   | 432,750,000                     | 1,022,029                   | 839,204                             | .19  | .25***  | 30,206,085         |
| 1999                   | 355,148,948                     | 944,740                     | 1,257,860                           | .35  | .24***  | 32,320,298         |
| 2000                   | 369,509,233                     | 1,023,333                   | 1,336,453                           | .36  | .24***  | 22,231,871         |
| 2001                   | 403,265,472                     | 1,037,601                   | 681,004                             | .17  | .24***  | 24,428,829         |
| 2002                   | 430,397,884                     | 1,107,061                   | 2,760,650                           | .64  | .27***  | 23,552,296         |
| 2003                   | 472,432,303                     | 1,154,061                   | 1,451,604                           | .31  | .25***  | 24,159,068         |
| 2004                   | 522,227,280                     | 1,235,285                   | 2,557,099                           | .49  | .26***  | 23,211,839         |
| 2005                   | 554,839,816                     | 1,344,393                   | 1,237,126                           | .22  | .26***  | 25,396,120         |
| 2006                   | 574,315,572                     | 1,416,598                   | 684,738                             | .12  | .26***  | 26,438,032         |

<sup>\*</sup> Reflects credit of interest earnings on Claim Reserves but not on the General Reserve.

Note: Starting in 1987, expenses are not included.

<sup>\*\*</sup> This rate is artificially high due to the introduction of cost-of-living increases in the Claim Reserve Calculation.

<sup>\*\*\*</sup> Average of rates for last 20 years

SECTION 3: Summary of Assumptions, Funding Methods and Plan Provisions for the Water and Power Employees' Disability Funds

EXHIBIT I
Actuarial Assumptions and Actuarial Cost Method Used for Temporary and Extended Temporary Disability Benefit

| Plan Year:                           | July 1 through June 30  |  |  |  |
|--------------------------------------|---|--|--|--|
| <b>Definition of Active Member:</b>  | First day of biweekly payroll period following employment for new Department employees or immediately following transfer from other City departments.   |  |  |  |
| Covered Payroll:                     | \$574,315,572 for 2005-2006 and \$554,839,816 for 2004-2005 plan years.   |  |  |  |
| <b>Net Investment Return:</b>        | 5.00%   |  |  |  |
| <b>Consumer Price Index:</b>         | Increase of 4.0% per year; benefit increases due to CPI subject to 3.0% maximum.  |  |  |  |
| Member Contribution Rate:            | Employees start contributing on the first day of the payroll period following the completion of 26 continuous weeks of Department and/or City service at the rate of \$1.00 for each biweekly payroll period.   |  |  |  |
| <b>Department Contribution Rate:</b> | Rate recommended by Board's Actuary multiplied by the total monthly equivalent of Compensation.   |  |  |  |
| Funding Method:                      | Annual contributions equal the present value of all future disability payments for those expected to become disabled during the year with a further adjustment for interest credited to the reserves. Subject to modification by the Department's funding policy.                     |  |  |  |
| Funding Policy:                      | Recommend a contribution rate to reach a target general reserve equal to 20% of the claim reserve at the end of ten years from June 30, 1998.   |  |  |  |
| Claim Reserve:                       | The sum of the Open Claim Reserve and the Pending Claim Reserve.  |  |  |  |
| Open Claim Reserve:                  | The number of open claims times the reserve factor specified in Section IIID(2) of the Plan. The reserve factor was increased in 2005 to \$4,000 and to \$4,200 in 2006. These reserve factors are provided by the Retirement office and accepted by The Segal Company without audit. |  |  |  |
| Pending Claim Reserve:               | 1/26 of the total benefits paid during the preceding fiscal year.   |  |  |  |
| Incurred Claims:                     | Paid claims for the year plus the increase in claim reserves.   |  |  |  |

SECTION 3: Summary of Assumptions, Funding Methods and Plan Provisions for the Water and Power Employees' Disability Funds

## **EXHIBIT II**

# Summary of Temporary and Extended Temporary Disability Benefit

**Age Requirement:** Any age

**Service Requirement:** Six months of continuous service.

**Temporary Benefit:** The biweekly benefit is a percentage of the biweekly compensation payable from the

fifteenth day of disability through the end of the twelfth month of disability. The

percentage is based on the following table.

| Period of Conti | nuous Service | <b>Maximum Period Payable at Percentage of Compensation</b> |          |          |          |  |
|-----------------|---------------|---|----------|----------|----------|--|
| Not less than   | Less than     | 85%   | 60%      | 50%      | 40%      |  |
| 6 months        | 3 Years       | 2 Weeks   | 1 Week   | 26 Weeks | 21 Weeks |  |
| 3 Years         | 5 Years       | 4 Weeks   | 2 Weeks  | 26 Weeks | 18 Weeks |  |
| 5 Years         | 10 Years      | 6 Weeks   | 3 Weeks  | 26 Weeks | 15 Weeks |  |
| 10 Years        | 15 Years      | 18 Weeks  | 10 Weeks | 22 Weeks |          |  |
| 15 Years        | 20 Years      | 20 Weeks  | 12 Weeks | 18 Weeks |          |  |
| 20 Years        | 25 Years      | 22 Weeks  | 14 Weeks | 14 Weeks |          |  |
| 25 Years        | 30 Years      | 24 Weeks  | 16 Weeks | 10 Weeks |          |  |
| 30 Years        | 35 Years      | 26 Weeks  | 18 Weeks | 6 Weeks  |          |  |
| 35 Years        |               | 28 Weeks  | 20 Weeks | 2 Weeks  |          |  |

#### **EXHIBIT II**

Summary of Temporary and Extended Temporary Disability Benefit (continued)

**Extended Disability Requirements:** Received 50 weeks of Temporary Disability benefits and is not eligible for Permanent

Total Disability.

**Extended Disability Benefit:** The biweekly benefit is 33 1/3 percent of their biweekly compensation payable from

the end of the twelfth month of disability through the twenty-fourth month of

disability. However, if a member qualifies for Permanent Total Disability while such member is receiving Extended Temporary Disability benefits, such benefits shall be terminated and the member shall receive the Permanent Total Disability benefits to

which they are entitled.

## **EXHIBIT III**

# Actuarial Assumptions and Actuarial Cost Method Used for Permanent Total Disability Benefit

| Plan Year:                           | July 1 through June 30  |  |  |  |
|--------------------------------------|---|--|--|--|
| <b>Definition of Active Member:</b>  | First day of biweekly payroll period following employment for new Department employees or immediately following transfer from other City departments.   |  |  |  |
| Covered Payroll:                     | \$574,315,572 for 2005-2006 and \$554,839,816 for 2004-2005 plan years.   |  |  |  |
| <b>Net Investment Return:</b>        | 5.00%   |  |  |  |
| <b>Consumer Price Index:</b>         | Increase of 4.0% per year, benefit increases due to CPI subject to 3.0% maximum.  |  |  |  |
| Mortality:                           | Based on Plan Experience  |  |  |  |
| <b>Member Contribution Rate:</b>     | Employees start contributing on the first day of the payroll period following the completion of 26 continuous weeks of Department and/or City service at the rate of \$1.00 for each biweekly payroll period.   |  |  |  |
| <b>Department Contribution Rate:</b> | Rate recommended by Board's Actuary multiplied by the total monthly equivalent of Compensation.   |  |  |  |
| Funding Method:                      | Annual contributions equal the present value of all future disability payments for those expected to become disabled during the year with a further adjustment for interest credited to the reserves. Subject to modification by the Department's funding policy. |  |  |  |
| Funding Policy:                      | Recommend a contribution rate to maintain a target general reserve equal to 20% of the claim reserve.   |  |  |  |
| Claim Reserve:                       | The sum of the Open Claim Reserve and the Pending Claim Reserve.  |  |  |  |
| <b>Open Claim Reserve:</b>           | The present value of future disability benefits for open claims.  |  |  |  |
| <b>Pending Claim Reserve:</b>        | Contributions made during the fiscal year.  |  |  |  |
| Incurred Claims:                     | Paid claims for the year plus the increase in claim reserves.   |  |  |  |

#### **EXHIBIT IV**

#### **Summary of Permanent Total Disability Benefit**

**Age Requirement:** Any age

**Service Requirement:** Six months continuous service.

**Other Requirements:** Received 50 weeks of Temporary Disability benefits and satisfies the rules for

Permanent Total Disability.

**Monthly Benefit:** The monthly benefit is 40 percent of the monthly compensation payable from the end

of the twelfth month of disability (or later if benefits are payable under the extended temporary disability benefit) until the first day of the calendar month following the sixty-fifth birthday. If Permanent Total Disability benefits commence after the member's sixtieth birthday, the benefit is payable for 60 months. Permanent and Total Disability benefits are subject to annual cost-of-living adjustments, based on the

CPI up to a maximum of 3% per year.

#### **EXHIBIT V**

### Actuarial Assumptions and Actuarial Cost Method Used for Supplemental Industrial Disability Benefit

Plan Year: July 1 through June 30 **Definition of Active Member:** First day of biweekly payroll period following employment for new Department employees or immediately following transfer from other City departments. **Covered Payroll:** \$574,315,572 for 2005-2006 and \$554,839,816 for 2004-2005 plan years. **Net Investment Return** 5.00% **Member Contribution Rate:** None **Department Contribution Rate:** Funded on a cash basis

**Funding Method:** Pay as you go

**Funding Policy:** Funded on a cash basis

**Claim Reserve:** None **Open Claim Reserve:** None **Pending Claim Reserve:** None

**Incurred Claims:** Paid claims for the year

#### **EXHIBIT VI**

#### **Summary of Supplemental Industrial Disability Benefit**

**Age Requirement:** Any age

**Service Requirement:** Six months of continuous service.

**Additional Requirements:** Injury or disease which arises out of and in the course of

employment in the Department. Receiving workers'

compensation benefits.

**Supplemental Benefit:** For the first ten days the biweekly benefit is their

biweekly compensation offset by the amount received from workers' compensation. Afterwards, the biweekly benefit is the Temporary, Extended Temporary, or Permanent Total Disability benefits offset by the amount

received from workers' compensation.

201157v3/04175.004