

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

*Review of the Disability Fund
as of July 1, 2009*

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November 25, 2009

*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 Disability Fund as of July 1, 2009. It establishes the funding requirements for fiscal 2009-2010 and analyzes the preceding year's experience.

The census and financial information on which our calculations were based was prepared by the Retirement Office. That assistance is gratefully acknowledged. The actuarial calculations were completed under the supervision of John Monroe, ASA, MAAA, Enrolled Actuary.

This review has been completed in accordance with generally accepted actuarial principles and practices. 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 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.

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

Sincerely,

THE SEGAL COMPANY

By:

*Paul Angelo, FSA, MAAA, EA
Senior Vice President and Actuary*

KR/bqb

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Vice President and Associate Actuary*

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SECTION 1: Review Summary

Significant Issues in Review Year:

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➤ 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.
- Ref: Pg. 3
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➤ The total reserve for the disability benefits has increased from \$39.6 million on June 30, 2008 to \$44.9 million on June 30, 2009. Member contributions amounted to about \$425,000 for the 2007-2008 fiscal year and about \$435,000 for the 2008-2009 fiscal year. Department contributions amounted to about \$14.2 million for 2007-2008 fiscal year and about \$14.8 million for the 2008-2009 fiscal year.
- Ref: Pg. 8*

➤ Until the 2007-2008 fiscal year, contributions to the Temporary Disability Benefit Fund have been substantially less than the outgoing benefit payments. This has resulted in the General Reserve for this fund going from a positive balance of \$6.0 million as of June 30, 2004 to a negative balance of \$1.1 million as of June 30, 2008. The balance has now returned to a positive balance of about \$2.7 million as of June 30, 2009. See Section 2.C for details.
- Ref: Pg. 5*

➤ The recommended Department contribution rate for the Temporary Disability Benefit Fund has decreased from \$1.70 per \$100 of compensation to \$1.06 per \$100 of compensation. This is primarily due to the increase in the balance of the General Reserve from June 30, 2007 to June 30, 2009, which resulted from the increased Department contribution rates for the last few years and less benefits paid during 2008-2009 as compared to those expected to be paid. See Section 2.B for details.
- Ref: Pg. 10*

➤ For purposes of determining the recommended contribution rate for the Temporary Disability Benefit Fund, we have assumed that there is one year remaining on the funding period to reach the target reserve level, even though that period expired at June 30, 2008. Extending this funding period even further would spread out the recognition of the positive fund balance, and so produce a smaller decrease in the rate. For example, if this period was extended an additional nine years (for a total of ten years), the recommended Department contribution rate would be \$1.34 per \$100 of compensation.

➤ The recommended Department contribution rate for the Permanent Total Disability Fund remains at \$0 per \$100 of compensation.

➤ 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.

SECTION 2: Disability Fund

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.

SECTION 2: Disability Fund

CHART 1

Consolidated Summary Statement of Income and Expenses

| | Year Ended June 30, 2009 | Year Ended June 30, 2008 |
|---|-------------------------------------|-------------------------------------|
| Contribution income: | | |
| Employer contributions – temporary disability benefit | \$12,838,282 | \$12,618,600 |
| Employer contributions – permanent total disability benefit | 0 | 0 |
| Employer contributions – supplemental disability benefit | 1,328,063 | 1,109,605 |
| Employer contributions - administrative expenses | <u>659,547</u> | <u>491,208</u> |
| Total employer contribution income | \$14,825,892 | \$14,219,413 |
| Employee contributions – temporary disability benefit | \$218,252 | \$213,483 |
| Employee contributions – permanent total disability benefit | <u>216,681</u> | <u>211,810</u> |
| Total employee contribution income | \$434,933 | \$425,293 |
| Investment income: | | |
| Investment income | \$1,892,106 | \$1,655,676 |
| Net appreciation (depreciation) in market value | 568,552 | 551,605 |
| Less investment fees | <u>-30,123</u> | <u>-33,459</u> |
| Net investment income | <u>\$2,430,535</u> | <u>\$2,173,822</u> |
| Total income available for benefits | \$17,691,360 | \$16,818,528 |
| Less benefit payments: | | |
| Distributions – temporary disability benefit | \$8,297,701 | \$8,854,767 |
| Distributions – extended temporary disability benefit | 592,237 | 723,525 |
| Distributions – permanent total disability benefit | 1,577,666 | 1,542,574 |
| Distributions – supplemental disability benefit | <u>1,332,925</u> | <u>1,105,279</u> |
| Total distributions | \$11,800,529 | \$12,226,145 |
| Administrative expenses | <u>655,428</u> | <u>481,650</u> |
| Total deductions | \$12,455,957 | \$12,707,795 |
| Net increase (decrease) in reserve | \$5,235,403 | \$4,110,733 |

SECTION 2: Disability Fund

CHART 2

Consolidated Summary Statement of Plan Assets

| | Year Ended June 30, 2009 | Year Ended June 30, 2008 |
|---------------------------------------|-----------------------------|-----------------------------|
| Cash equivalents | \$324,552 | \$163,305 |
| Accounts receivable: | | |
| Employer contributions | \$2,583,878 | \$2,679,652 |
| Accrued investment income | 161,029 | 138,066 |
| Other | 482,530 | 402,321 |
| Contingent disability benefit advance | <u>3,310,339</u> | <u>3,310,339</u> |
| Total accounts receivable | \$6,537,776 | \$6,530,378 |
| Investments: | | |
| Bonds | \$33,748,542 | \$30,324,247 |
| Short-term investments | <u>4,458,187</u> | <u>2,774,162</u> |
| Total investments at market value | <u>\$38,206,729</u> | <u>\$33,098,409</u> |
| Total assets | \$45,069,057 | \$39,792,092 |
| Less accounts payable: | | |
| Total accounts payable | -\$197,521 | -\$155,959 |
| Net assets at market value | <u>\$44,871,536</u> | <u>\$39,636,133</u> |

SECTION 2: Disability Fund

B. TEMPORARY AND EXTENDED TEMPORARY DISABILITY BENEFITS

The Temporary Disability Benefits referred to in this section normally commence on the fifteenth calendar 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, 2009.

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 - 1987 | * | * | .75 |
| 1987 - 1992 | * | * | .61 |
| 1993 | * | * | .45 |
| 1994 - 1995 | * | * | .35 |
| 1996 | * | * | .30 |
| 1997 - 1998 | * | * | .25 |
| 1999 - 2000 | * | * | .35 |
| 2001 - 2003 | * | * | .68 |
| 2004 - 2005 | * | * | .74 |
| 2006 | * | * | 1.55 |
| 2007 | * | * | 2.18 |
| 2008 | * | * | 1.73 |

* 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.

SECTION 2: Disability Fund

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 (\$1,661,921 as of June 30, 2009). Thus, the “target” is equal to \$332,384 (20% x \$1,661,921), as opposed to the actual general reserve of \$2,719,985 as of June 30, 2009. The current policy was to fund so as to reach this goal by June 30, 2008 (i.e., 10 years from June 30, 1998). The Board extended the policy by one year, so as to reach this goal by June 30, 2009. Therefore, as of June 30, 2009, the current reserve exceeds the funding target by \$2,387,601. The Board may wish to consider lowering the Department’s contribution rate to an amount that would be projected to meet (not exceed) the funding target at June 30, 2010 or at some date years later.

In 2000, \$11 million was transferred over from the Permanent Total Disability Fund and the entire Temporary and Extended Temporary Disability Benefit became payable from this Fund. The Temporary Disability Experience Table indicates that, since 2000, the average cost per \$100 of covered payroll is \$1.32 before taking into account interest on the general reserve.

Based on reserves as of June 30, 2009, 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 \$1.30. From 2000 through 2007, the general reserve followed a decreasing trend due to the contribution rates being lower than the increased claim rates. However, this trend has reversed itself during the last two years.

As noted above, the total contribution rate needed to pay for expected claims is \$1.32 per \$100 of covered payroll. In order to decrease the general reserve to the target level under a funding policy that extends the current policy for one more year, we recommend a total contribution of \$1.09 per \$100 of covered payroll. After taking into account the employee contribution of \$1 per biweekly payroll period (which amounts to approximately \$0.03 per \$100 of covered payroll), the net recommended Department rate is \$1.06. This is a decrease from the current rate, which is \$1.70. If the Board wants to consider extending the funding period even further, this would spread out the recognition of the positive fund balance, and so produce a smaller decrease in rate. For example, if the funding period was extended an additional nine years (for a total of ten years), the recommended Department contribution rate would be \$1.34 per \$100 of compensation.

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 \$4,500 for 2008, and \$4,800 for 2009. This is an increase from the \$4,200 for 2006 and \$4,368 for 2007. The current reserve factor of \$4,800 was provided by the Retirement Office, and accepted by The Segal Company without audit.

SECTION 2: Disability Fund

C. TEMPORARY DISABILITY EXPERIENCE TABLE

| Year Ending June 30 | Covered Payroll | Claims and Expenses Paid | Claims and Expenses Incurred | Annual Rate of Incurred Claims and Expenses Per \$100 of Covered Payroll | Cumulative Rate of Incurred Claims and Expenses Per \$100 of Covered Payroll | General 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 |

SECTION 2: Disability Fund

C. TEMPORARY DISABILITY EXPERIENCE TABLE (continued)

| Year Ending June 30 | Covered Payroll | Claims and Expenses Paid | Claims and Expenses Incurred | Annual Rate of Incurred Claims and Expenses Per \$100 of Covered Payroll | Cumulative Rate of Incurred Claims and Expenses Per \$100 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 |

SECTION 2: Disability Fund

C. TEMPORARY DISABILITY EXPERIENCE TABLE (continued)

| Year Ending June 30 | Covered Payroll | Claims and Expenses Paid | Claims and Expenses Incurred | Annual Rate of Incurred Claims and Expenses Per \$100 of Covered Payroll | Cumulative Rate of Incurred Claims and Expenses Per \$100 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) |
| 2007 | 604,514,525 | 9,502,988 | 9,556,168 | 1.58 | 1.29** | (4,328,285) |
| 2008 | 623,634,208 | 9,578,292 | 9,540,484 | 1.53 | 1.31** | (1,103,230) |
| 2009 | 696,704,083 | 8,889,938 | 9,337,463 | 1.34 | 1.32** | 2,719,985 |

* Average of ten most recent rates prior to the addition of the entire Temporary and Extended Temporary Disability Benefit.

** Average of rates after addition of the entire Temporary and Extended Temporary Disability Benefits.

*** 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.

Note: Starting in 1987, expenses are not included.

SECTION 2: Disability 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, 2009.

CHART 4

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

| Rates Per \$100 of Compensation | | | |
|--|------------------|----------------------|--------------|
| As of 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 – 2009 | * | .00 | * |

* 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.

SECTION 2: Disability Fund

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 Board 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. The 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 the Fund has reached a somewhat stable cumulative rate of claim costs, although year-by-year costs are fluctuating.

As of June 30, 2009, the general reserve for Permanent Total Disability is \$24,646,906. This is much larger than the amount needed to meet the 2009 goal for the reserve, which is \$2,826,903. Also, it should be noted that expected interest on the general reserve (which amounts to \$1,232,345, or \$0.18 per \$100 of covered payroll, based on the reserve as of June 30, 2009 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 \$0.29 per \$100 of covered payroll over the last 20 years, and the annual rate of contribution as of June 30, 2009 would have been \$0.38 per \$100 of covered payroll. The expected interest on the reserves (\$0.18 per \$100 of covered payroll) would reduce the \$0.29 per \$100 of payroll and \$0.38 per \$100 of payroll contribution rates to \$0.11 and \$0.20, 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 Board maintain the Department contribution of zero cents per \$100 of covered compensation so that the general reserve can be reduced to its target level.

SECTION 2: Disability Fund

E. PERMANENT TOTAL DISABILITY EXPERIENCE TABLE

| Year Ending June 30 | Covered Payroll | Claims and Expenses Paid | Claims and Expenses Incurred* | Annual Rate of Incurred Claims and Expenses Per \$100 of Covered Payroll* | Cumulative Rate of Incurred Claims and Expenses Per \$100 of Covered Payroll | General 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 |

SECTION 2: Disability Fund

E. PERMANENT TOTAL DISABILITY EXPERIENCE TABLE (continued)

| Year Ending June 30 | Covered Payroll | Claims and Expenses Paid | Claims and Expenses Incurred* | Annual Rate of Incurred Claims and Expenses Per \$100 of Covered Payroll* | Cumulative Rate of Incurred Claims and Expenses Per \$100 of Covered Payroll | General 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 |

SECTION 2: Disability Fund

E. PERMANENT TOTAL DISABILITY EXPERIENCE TABLE (continued)

| Year Ending June 30 | Covered Payroll | Claims and Expenses Paid | Claims and Expenses Incurred* | Annual Rate of Incurred Claims and Expenses Per \$100 of Covered Payroll* | Cumulative Rate of Incurred Claims and Expenses Per \$100 of Covered Payroll | General Reserve |
|--------------------------------|----------------------------|-------------------------------------|--|--|---|----------------------------|
| 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 |
| 2007 | 604,514,525 | 1,493,732 | 2,624,785 | .43 | .28*** | 25,697,531 |
| 2008 | 623,634,208 | 1,542,574 | 2,366,329 | .38 | .29*** | 25,256,078 |
| 2009 | 696,704,083 | 1,577,666 | 2,613,748 | .38 | .29*** | 24,646,906 |

* Reflects credit of interest earnings on Claim Reserves but not on the General Reserve.

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

*** Average of rates for last 20 years

Note: Starting in 1987, expenses are not included.

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 |
| Definition of Active Member: | First day of biweekly payroll period following employment for new Department employees or immediately following transfer from other City departments. |
| Projected Covered Payroll: | \$805,137,795 for 2009-2010 plan year. |
| Projected First Year Distributions: | \$11,261,864 (payroll times two-year average of actual distributions as a percent of actual payroll) |
| Net Investment Return: | 5.00% |
| Consumer Price Index (CPI): | Increase of 3.75% 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. |
| Department Contribution Rate: | 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 an adjustment for interest credited to the reserves. Subject to modification by the Board'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. Starting July 1, 2008, we have assumed that there is one year remaining on the policy. |
| 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 2008 to \$4,500 and to \$4,800 in 2009. 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 Continuous Service | | Maximum Period Payable at Percentage of Compensation | | | |
|-------------------------------------|------------------|---|------------|------------|------------|
| 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 | -- |

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 (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.

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

EXHIBIT III

Actuarial Assumptions and Actuarial Cost Method Used for Permanent Total 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. |
| Projected Covered Payroll: | \$805,137,795 for 2009-2010 plan year. |
| Net Investment Return: | 5.00% |
| Consumer Price Index (CPI): | Increase of 3.75% per year; benefit increases due to CPI subject to 3.0% maximum. |
| Mortality: | Based on Plan experience |
| 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. |
| Department Contribution Rate: | 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 Board'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. |
| Open Claim Reserve: | The present value of future disability benefits for open claims. |
| Pending Claim Reserve: | Contributions made during the 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 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. |

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

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. |
| Projected Covered Payroll: | \$805,137,795 for 2009-2010 plan year. |
| 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 |

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

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. |

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