# THE WATER AND POWER EMPLOYEES' RETIREMENT PLAN OF THE CITY OF LOS ANGELES

Actuarial Valuation and Review as of June 30, 2001

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The Segal Company 120 Montgomery Street San Francisco, CA 94104 (415) 263-8200

November 26, 2001

Board of Administration
Water and Power Employees' Retirement Plan
Los Angeles Department of Water and Power
111 North Hope Street
Los Angeles, California 90012

Dear Members of the Board:

We are pleased to submit the Actuarial Valuation and Review as of June 30, 2001. This valuation 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.

This is to certify that The Segal Company has prepared an Actuarial Valuation of the Plan as of June 30, 2001, in accordance with generally accepted actuarial principles and practices. To the best of my knowledge, the information supplied in this Actuarial Valuation is complete and accurate and in my opinion the assumptions used, (a) are reasonable and (b) represent my best estimate of anticipated experience under the Plan. 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

Bv:

Paul Angelo, F.S.A., M.A.A.A., F.C.A.

Vice President and Actuary

John Monroe, M.A.A.A

Associate Actuary

# **SECTION 1**

### **VALUATION SUMMARY**

Significant Issues
in Valuation Yeari
Summary of Key Valuation
Resultsii

# **SECTION 2**

### **VALUATION RESULTS**

A. Summary of Membership 1	
B. Projected Contribution and	
Reserve Accounts3	,
C. Unfunded Actuarial Accrued	
Liability4	
D. Actuarial Experience5	
E. Investment Experience 6	•

# **SECTION 3**

# SUPPLEMENTARY INFORMATION

EXHIBIT A
The Actuarial Value of Assets 8
EXHIBIT B
Actuarial Balance Sheet9
EXHIBIT C
Recommended Contributions 10
EXHIBIT D
Accounting Pension Cost
- GASB No. 2711
EXHIBIT E
Value of Earned Benefits
- FASB No. 3512
EXHIBIT F
Adjusted Reserves13
EXHIBIT G
Section 415 Limitations 14

# **SECTION 4**

### AMORTIZATION BASES, STATISTICS, ASSUMPTIONS, AND PLAN PROVISIONS

EXHIBIT 1
Maintenance Schedule of
Amortization Bases as of
July 1, 2001 4 - 1
EXHIBIT 2
Pensions in Pay Status on
March 31, 2001 4 - 2
EXHIBIT 3
Participants in Active Service by
Age and by Service 4 - 3
EXHIBIT 4
Reconciliation of Member
data 4 - 4
EXHIBIT 5
Actuarial Assumptions and Actuarial
Cost Method 4 - 5
EXHIBIT 6
Summary of Plan Provisions 4 - 9

# **SECTION 1:**

Valuation Summary for the Water and Power Employees' Retirement Plan of the City of Los Angeles

# SIGNIFICANT ISSUES IN VALUATION YEAR:

- The salaries for continuing actives increased by 7.0% from the rate in effect on March 31, 2000 to the rate in effect on March 31, 2001. Since this increase is larger than the assumed rate of 5.5%, the plan experienced an actuarial loss from salary increases. This loss amounted to \$15.2 million for the current year.
- The actuarial value of assets earned a return of approximately 8.2% for the June 30, 2000 to June 30, 2001 plan year. This resulted in an actuarial gain of \$13 million when measured against the assumed rate of return of 8.0%.
- Once again, the required contribution rate is zero before the mandatory 110% matching of the employee contribution. The required contribution for the 2002-2003 year is estimated to be \$26.3 million or 5.8% of pay. Actual contributions will be calculated as 110% of employee contributions.
- > This report reflects the second year of the new policy for amortizing any surplus or unfunded actuarial accrued liability, as adopted by the Board. This policy is based on 15 year amortization periods and is described in Section 4, Exhibit 3 (page 4-8).

SECTION 1: Valuation Summary for the Water and Power Employees' Retirement Plan of the City of Los Angeles

Summary of Key Valuation Results		
	June 30, 2001	June 30, 2000
Department Contributions:		<u> </u>
Recommended	\$ 26,317,260	\$ 23,087,698
As a percent of pay	5.84%	5.70%
Actual (net of reversions)	<del></del>	25,763,218
Funding Elements:		
Net Normal cost	\$ 47,941,025	\$ 42,910,840
Market value of assets	6,111,875,957*	5,887,764,096
Actuarial value of assets	5,833,274,582	5,605,856,078
Actuarial accrued liability	5,306,262,736	5,082,960,078
Excess of assets over actuarial accrued liability	527,011,846	522,876,000
Present value of accrued benefit – FASB 35	4,448,476,216	4,295,693,183
Demographic Data:		
Number of retired members & beneficiaries	9,576	9,749
Number of vested former members	1,415	1,387
Number of active members	7,250	6,807
Total compensation for upcoming Plan Year	\$450,390,169	\$405,209,934
Average compensation	62,123	59,528
Net Total Employee Contributions*	24,814,812	22,155,177

<sup>\*</sup> Estimated by Retirement Office

# **SECTION 2:**

Valuation Results for the Water and Power Employees' Retirement Plan of the City of Los Angeles

# A. SUMMARY OF MEMBERSHIP

The Actuarial Valuation and Review considers the number and demographics of covered participants, including active participants, inactive vested participants, pensioners and beneficiaries.

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

More detailed information for this valuation year can be found in Section 4, Exhibits 2 and 3.

CHART 1
Summary of Membership

	March 31, 2001	March 31, 2000	Percent Increase
I. Active Members			
1. Number	7,250	6,807	6.5%
2. Monthly salary	\$35,575,845	\$32,007,104	11.1%
3. Average monthly salary	\$4,907	\$4,702	4.4%
4. Average age	45.5	44.8	-
5. Average years of service	15.4	15.4	-
II. Terminated Vested Members			
1. Number	1,415	1,387	2.0%
<ol><li>Average member account bala</li></ol>	nce \$27,222	\$26,637	2.2%
III. Retired Members			
1. Number	9,576	9,749	(1.8)%
<ol><li>Monthly allowances</li></ol>			` ,
(a) basic service benefits and continuance to surviving	[*		
eligible spouse benefits	\$17,036,090	\$16,999,040	0.2%
(b) cost-of-living benefits	5,864,020	<u>5,532,058</u>	6.0%
(c) total	\$22,900,110	\$22,531,098	1.6%
<ol><li>Average total allowance</li></ol>	\$2,391	\$2,311	3.5%

#### **Active Members**

Plan costs are affected by the age, years of service and salary of active members. After adjusting the data to June 30, in this year's valuation, there are 7,250 active members with an average age of 45.8, average years of service of 15.6 years and average salary of \$62,123. The 6,807 active members in the prior valuation after adjusting the data to June 30 had an average age of 45.1, average service of 15.7 years and average salary of \$59,528.

### **Inactive Participants**

In this year's valuation, there were 1,415 members with a vested right to a deferred or immediate vested benefit.

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

CHART 2
Distribution of Active Members by Age as of June 30, 2001

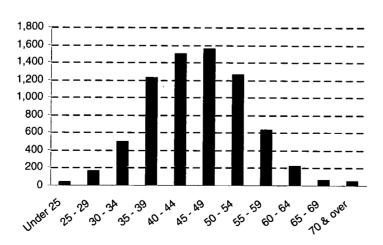
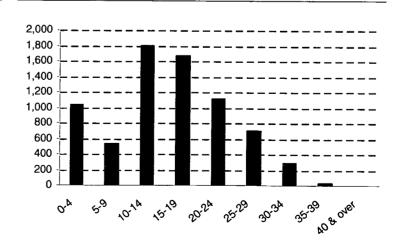


CHART 3

Distribution of Active Members by Years of Service as of June 30, 2001



# B. PROJECTED CONTRIBUTION AND RESERVE ACCOUNTS

The actuarial valuation is based on financial statements that the Retirement Office provided.

# CHART 4 Projected Contribution and Reserve Accounts

	June 30, 2001	June 30, 2000
1. Reserve for retirement allowance for retired members	\$3,445,150,799	\$3,408,139,712
2. Contribution accounts:	, , , :	\$5,100,135,712
(a) members (excluding additional contributions)	443,189,695	392,838,570
(b) Department of Water and Power	(444,629,634)	(403,506,043)
3. Reserve for investment losses	5,541,524	4,565,754
4. General reserve	<u>202,418,917</u>	112,065,935
5. Total	\$3,651,671,301	\$3,514,103,928

# C. UNFUNDED ACTUARIAL ACCRUED LIABILITY

The actuarial value of assets (using the asset smoothing method) has increased from \$5,605,856,078 on June 30, 2000 to \$5,833,274,582 June 30, 2001.

The actuarial accrued liability (using the entry age method) is a measure of the liability for prior service, and includes a projection of salaries. The actuarial accrued liability has increased from \$5,082,960,078 on June 30, 2000 to \$5,306,262,736 on June 30, 2001.

The actuarial accrued liability less the actuarial value of assets is called the unfunded actuarial accrued liability (UAAL). For the last four years this amount has been negative (actuarial value of assets exceed the actuarial accrued liability).

The change in UAAL is analyzed below. The change in UAAL attributable to 2000-2001 experience was measured using the data provided by the Retirement Plan Manager.

The chart shows the development and reconciliation of the UAAL

# CHART 5 Determination of Unfunded Actuarial Accrued Liability; Reconciliation of UAAL

	Determination of UAAL		- N
		June 30, 2001	June 30, 2000
1.	Actuarial accrued liability	\$5,306,262,736	\$5,082,960,078
2.	Actuarial value of assets	5,833,274,582	5,605,856,078
3.	Unfunded actuarial accrued liability (UAAL): (1) – (2)	(527,011,846)	(522,896,000)
4.	Funding Ratio: (2)/(1)	109.9%	110.3%
	Reconciliation of UAAL		
1.	UAAL on June 30, 2000		\$(522,896,000)
2.	Expected decrease, due to normal experience of the plan		(28,410,236)
3.	Decrease due to investment return more than 8%		(13,258,172)
4.	Increase due to salary increases over 5.5%		15,188,067
5.	Increase due to non-investment actuarial experience		22,364,495
6.	UAAL on June 30, 2000: $(1) + (2) + (3) + (4) + (5)$		\$(527,011,846)

# D. ACTUARIAL EXPERIENCE

To calculate the cost requirements of the plan, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions and, to the extent that there are differences in that year, the contribution requirement is adjusted. If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

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

When compared to the expected actuarial accrued liability, the net experience variation was not significant. On the following page is a discussion of the investment component of the actuarial experience.

The chart provides a summary of the prior year's actuarial experience.

# CHART 6 Actuarial Experience for Year Ended June 30, 2001

1. Net gain/(loss) from investments*	\$ 13,258,172
2. Net gain/(loss) from salary increases	(15,188,067)
3. Net gain/(loss) from other Plan experience	(22,364,495)
4. Net experience gain/(loss): $(1) + (2) + (3)$	\$(24,294,380)

<sup>\*</sup> Details in Chart 7

# E. INVESTMENT EXPERIENCE

Because earnings on investments significantly affect the cost of the Plan, an assumption is made about the rate of return on Plan assets. The rate of return is investment income net of investment expenses, expressed as a percentage of the average actuarial value of assets during the year.

Investment income, for the purposes of the actuarial valuation, consists of interest and dividend income, and a four year phase in of realized and unrealized gains and losses.

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

# CHART 7 Investment Experience for Year Ended June 30, 2001

1	Net investment return	\$ 452,714,806
2	Average actuarial value of assets	5,493,207,927
3	Rate of return: $(1) \div (2)$	8.24%
4	Assumed rate of return	8.00%
5	Expected net investment return: (2) x (4)	439,456,634
6	Actuarial gain/(loss): (1) – (5)	\$ 13,258,172

### F. CONTRIBUTION REQUIREMENTS

The recommended Department contribution is made up of (a) normal – the cost of benefits earned this year, and (b) amortization of the UAAL – the portion of liability assigned to actuarial accrued liability that has not yet been funded. The Plan is said to be fully funded when the UAAL is negative or assets exceed actuarial accrued liability. The Department is now funding the normal cost as a percentage of pay and is funding the dollar amount of the amortization payment. The Plan has a surplus as of June 30, 2001 which is amortized over various periods. This produces an amortization credit of \$61,466,921 for actuarial surplus this year. This amortization credit is large enough to fully offset the Department's normal cost. As a minimum, the Department contributes the matching 110% of employee contributions.

Therefore, the total expected contributions to the plan will amount to the expected employee contribution of \$23,924,782 plus the expected matching 110% of employee contributions or \$26,317,260 for a total of \$50,242,042. Additional detail can be found in Section 3, Exhibit F.

The Department's theoretical contribution rate increased as a percentage of pay (i.e., became a smaller negative rate). This was primarily the result of the investment return being greater than assumed offset by some non-investment actuarial losses (mainly salary increases greater than assumed). An analysis of the change from the June 30, 2000 rate to the June 30, 2001 rate is shown below.

The chart summarizes the contribution information for the valuation year.

CHART 8

Contribution Requirements and Reconciliation of Recommended Contribution Rate

Department Contributions	June 30, 2001	June 30, 2000
Normal cost	10.64%	10.59%
Unfunded (surplus) amortization*	(13.65%)	(14.52%)
Total**	0.00%	0.00%
Employer 110% Contribution Rate	5.84%	5.70%
Reconciliation of contribution rate***	•	
June 30, 2000 rate		(3.93%)
Increase due to non-investment actuarial losses		0.87%
Increase due to salary loss		0.38%
Decrease due to investment gain		(0.33%)
June 30, 2001 rate***		(3.01%)

See Section 4, Exhibit 1.

<sup>\*\*</sup> The recommended contribution rate cannot be less than 0.0% of pay.

<sup>\*\*\*</sup> The reconciliation is shown using the underlying negative rates for illustration purposes only.

# **SECTION 3:**

Supplementary Information for the Water and Power Employees' Retirement Plan of the City of Los Angeles

EXHIBIT A
The Actuarial Value of Assets

June 3 Year		Book Value Equities	Unrealized Gains	Change in Unrealized Gains	Book Value Total Fund	Reserve for Investment Losses	General Reserve
2001	\$3,623,361,493	\$1,232,243,186	\$2,391,118,307	\$69,584,484	\$3,641,929,133	\$5,541,524	\$202,418,917
2000	3,490,328,856	1,168,795,033	2,321,533,823	(285,848,808)	3,514,103,929	4,565,754	112,065,935
1999	3,834,125,994	1,226,743,363	2,607,382,631	330,193,832	3,230,951,816	34,289,503	(2,939,439)
1998	3,505,970,723	1,228,781,924	2,277,188,799	649,758,698	3,176,151,852	4,591,642	39,146,448
1997	2,872,657,054	1,245,226,953	1,627,430,101	639,187,772	2,973,400,243	0	29,572,429
(3) (4) (5)	Book value of equities Reserve for investment losses General reserve Actuarial value of assets for nonequities: (1) – (2) – (3) – (4)				_ 2	232,243,186 5,541,524 202,418,917 201,725,506	
6) 7) 8) 9) 10)	7) .75 x 2001 change in unrealized gains 8) .50 x 2000 change in unrealized gains 9) .25 x 1999 change in unrealized gains				(1	23,361,493 52,188,363 42,924,404) 82,548,458 31,549,076	
	Total Actuarial value of assets: (5) + (10)						

#### **EXHIBIT B**

# **Actuarial Balance Sheet**

An overview of your Plan's funding is given by an Actuarial Balance Sheet. In this approach, we first determine the amount and timing of all future payments that will be made by the Plan for current participants. We then discount these payments at the valuation interest rate to the date of the valuation, thereby determining their present value. We refer to this present value as the "liability" of the Plan.

Second, we determine how this liability will be met. These actuarial "assets" include the net amount of assets already accumulated by the Plan, the present value of future member contributions, the present value of future Department normal cost contributions, and the present value of future Department amortization payments.

# Actuarial Balance Sheet Assets

<u>ets</u>	June 30, 2001	June 30, 2000
Total actuarial value of assets	\$5,833,274,582	\$5,605,856,078
Present value of future contribution by members	247,305,813	222,025,060
Present value of future Department contributions for:	, ,	22,020,000
(a) entry age normal cost	478,271,822	437,929,359
(b) unfunded actuarial accrued liability	(527,011,846)	(522,896,000)
Total current and future assets	\$6,031,840,371	\$5,742,914,497
<u>ilities</u>	June 30, 2001	June 30, 2000
Present value of benefits already granted:	\$3,385,192,912	\$3,374,531,483
Present value of benefits to be granted:	\$2,646,647,459	\$2,368,383,014
Total liabilities	\$6,031,840,371	\$5,742,914,497
	Present value of future contribution by members Present value of future Department contributions for: (a) entry age normal cost (b) unfunded actuarial accrued liability Total current and future assets  ilities Present value of benefits already granted: Present value of benefits to be granted:	Total actuarial value of assets  Present value of future contribution by members  Present value of future Department contributions for:  (a) entry age normal cost  (b) unfunded actuarial accrued liability  Total current and future assets  Present value of benefits already granted:  Present value of benefits to be granted:  \$3,385,192,912  \$2,646,647,459

## **EXHIBIT C**

#### **Recommended Contributions**

Department contributions have been determined on the basis of the entry age normal cost funding method. The entry age normal method defines the normal cost as the level percentage of salary necessary to fund the projected future benefit over the period from the date of entry (i.e., employment) to the date of retirement. The normal cost percentage is subdivided into two parts. The first part is the percentage of salary specified as the member contribution; the second part, the Department portion, is the balance after deducting the member contribution percentage from the total normal cost percentage. The actuarial accrued liability is equal to the excess of total

present value of benefits (earned and unearned with respect to all current members) over the present value of future member contributions, and the present value of future Department normal costs with respect to current members. The excess (shortfall) of the actuarial accrued liability over the actuarial value of assets is called the unfunded (surplus) actuarial accrued liability and is amortized over various periods by level contributions.

The recommended contribution rates for the various types of benefits provided by the Plan set forth below are based on salaries as of June 30, 2001.

Recommended Department Contributions		June 3	June 30, 2000	
		Dollar amount	As a percent of pay	As a percent of pay
1.	Total Normal Cost	\$71,865,807	15.96%	15.77%
2.	Expected Member Contribution	23,924,782	<u>5.31</u>	<u>5.18</u>
3.	Net Normal Cost: (1) – (2)	\$47,941,025	10.64	10.59
4.	Amortization of UAAL (surplus)*	(61,456,739)	(13.65)	(14.52)
5.	Required Employer Contribution	0	0.00%	0.00%
6.	Employer Match	26,317,260	5.84%	5.70%
7.	Greater of Required Employer	26,317,260	5.84%	5.70%
	Contribution or Employer Match			

The recommended contribution rate cannot be less than 0.0% of pay. The actual contribution is at least the mandatory 110% of employees contributions.

<sup>\*</sup>See Section 4, Exhibit 1.

### **EXHIBIT D**

# Accounting Pension Cost - GASB No. 27

The Department adopted Government Accounting Standards Board Statement No. 27 (GASB 27) in accounting for costs under the Retirement Plan. This statement requires that the Department expense in each

year the actuarial recommended contribution adjusted for the amortization of any Net Pension Obligation existing at the start of the year. The following table shows the costs for the current and prior fiscal years.

Acco	unting Pension Cost - Estimated	Fiscal Year Ending June 30, 2002	Fiscal Year Ending June 30, 2001	
1.	Actuarial recommended contribution	\$ 0	\$ 0	
2.	Adjustment	6,132,578	5,378,281	
3.	Pension cost	\$6,132,578	\$5,378,281	

#### **EXHIBIT E**

# Value of Earned Benefits - FASB 35

The third view of your Plan is an approach similar to that in Exhibit C. This approach was promulgated by the Financial Accounting Standards Board (FASB) in its Standard No. 35. Under this standard, the plan's financial statement must contain the "present value of accumulated benefits" (the ABO) determined in accordance with FASB No. 35.

FASB No. 35 requires a straightforward determination of the present value of accrued benefits except for one change to the definition used in the traditional view that no projection of future salary increases be made. Using this approach, we determined the following.

Funding Ratio - FASB 35	June 30, 2001	June 30, 2000
1. Present value of benefits earned to date	\$4,448,476,216	\$4,295,693,183
2. Actuarial value of assets	5,833,274,582	5,605,856,078
3. Unfunded present value of benefits: (1) – (2)	(1,384,798,366)	(1,310,162,895)
4. Funding ratio: (2)/(1)	131.1%	130.5%

# **EXHIBIT F**

## **Adjusted Reserves**

Each year the Retirement Board adjusts its retired reserves to agree with the value calculated during the valuation. The following table presents the required transfers.

<u>Ad</u>	justed Reserves	June 30, 2001	June 30, 2000
1.	Retired reserve balance	\$3,445,150,799	\$3,408,139,712
2.	Actuarially computed present value	3,385,192,912	3,374,531,483
3.	Actuarial gain (loss): (1) – (2)	59,957,887	33,608,229
4.	Transfer from (to) DWP contribution accounts from retired reserves:	(59,957,887)	(33,608,229)

#### **EXHIBIT G**

#### Section 415 Limitations

Section 415 of the Internal Revenue Code specifies the maximum benefits that may be paid to an individual from a plan maintained for its employees by any state or political subdivision.

These rules do not apply to "qualified participants". A qualified participant is defined as a participant who first became a participant in the plan maintained by the employer before January 1, 1990.

A qualified pension plan may not pay benefits in excess of the Section 415 limits. The ultimate penalty for noncompliance is participants could be taxed on their vested benefits.

In particular, Section 415(b) of the IRC limits the maximum annual benefit payable at the Social Security Normal Retirement Age to:

A dollar limit of \$90,000 indexed for inflation. The dollar limit (\$90,000, indexed for inflation) is \$135,000 for plan year ending June 30, 2001 and \$140,000 for plan year ending June 30, 2002. This is the limit in simplified terms. It must be adjusted based on each participant's circumstances, for such things as age at retirement and form of benefits chosen.

While the actual determination of the exact limits applicable to each participant's benefit can only be done when the individual retires and applies for benefits, the overall impact of the limits has been reflected in this valuation.

Fund Counsel's review and interpretation of the law and regulations must be sought in this area as well.

# **SECTION 4:**

Amortization Bases, Statistics, Assumptions and Plan Provisions for the Water and Power Employees' Retirement Plan of the City of Los Angeles

## EXHIBIT I

Maintenance Schedule of Amortization Bases as of July 1, 2001

Type of Base	Date Established	Amortization Amount	Years Remaining	Outstanding Balance
Initial Base	07/01/2000	\$(58,827,120)	14	\$(503,637,978)
Experience Gain	07/01/2001	(2,629,619)	15	(303,037,978) (23,373,868)
Total		\$(61,456,739)		\$(527,011,846)

EXHIBIT 2
Pensions in Pay Status on March 31, 2001

		Monthly	
Age	Number	Amount	Number
Under 50	33	Under \$ 500	619
50 – 54	467	\$500 – 999	1,163
55 – 59	978	1,000 – 1,499	1,257
60 – 64	1,115	1,500 - 1,999	1,276
65 – 69	1,214	2,000 – 2,499	1,341
70 – 74	1,454	2,500 – 2,999	1,152
75 – 79	1,689	3,000 – 3,499	863
80 – 84	1,314	3,500 – 3,999	640
85 & Over	1,312	4,000 – 4,499	408
		4,500 & over	857
Total	9,576	Total	9,576

EXHIBIT 3
Participants in Active Service on June 30, 2001 by Age and by Service

	Years of Service									
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & ove
Under 25	42	42								
	43,461	43,461								
25 - 29	170	155	14	1						
	45,382	44,323	56,989	47,113						
30 - 34	505	201	139	158	7					
	55,192	47,044	62,016	59,539	55,543					
35 - 39	1,227	206	156	578	271	15	1			
	60,186	48,770	58,700	62,319	65,629	52,409	52,510			
40 - 44	1,499	163	101	429	548	253	5			
	63,127	50,703	58,104	60,874	67,580	67,279	64,775			
45 - 49	1,563	113	63	303	419	417	233	15		
	64,152	55,364	59,616	60,299	64,813	67,107	67,523	74,193		
50 - 54	1,262	62	37	200	237	257	326	143		
	65,278	56,725	63,422	58,595	63,034	65,044	68,044	76,651		
55 - 59	636	38	20	86	124	124	113	104	25	2
	65,931	54,471	70,366	55,571	62,240	64,079	67,044	77,925	86,765	81,368
60 - 64	225	12	14	35	52	41	27	27	16	1
	63,270	55,434	61,304	54,028	59,875	58,892	63,953	73,957	91,729	102,019
65 - 69	65	9	2	16	14	8	7	6	2	1
	58,138	27,013	52,965	60,915	56,155	64,099	61,975	80,909	77,224	82,606
70 & over	56	41		2	3	2	3	2	1	2
	34,023	22,120		62,327	50,619	50,955	66,370	88,265	55,952	94,172
Total	7,250	1,042	546	1,808	1,675	1,117	715	297	44	6
	62,123	48,100	60,289	60,481	65,119	65,786	67,451	76,892	87,437	89,284

SECTION 4: Amortization Bases, Statistics, Assumptions, and Plan Provisions for the Water and Power Employees' Retirement Plan of the City of Los Angeles

EXHIBIT 4
Reconciliation of Member Data

	Active Members	Vested Former Members	Pensioners	Beneficiaries	Total
Number as of July 1, 2000	6,807	1,387	7,501	2,248	17,943
New Members	641				641
Terminations – with vested rights	-68	68			
Retirements	-51	-19	70		
Return to work	32	-30	-2		
Died with beneficiary	-3	-1	-115	119	
Died without beneficiary			-156	-119	-275
Lump sum payouts	-108	-64			-172
Data adjustments	<u> </u>	<u>74</u>	<u> 17</u>	13	104
Number as of July 1, 2001	7,250	1,415	7,315	2,261	18,241

SECTION 4: Amortization Bases, Statistics, Assumptions, and Plan Provisions for the Water and Power Employees' Retirement Plan of the City of Los Angeles

EXHIBIT 5
Actuarial Assumptions and Actuarial Cost Method

Termination	rates	before	retirement:
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# Rate (%)

### Male

		Ordinary	Vested
Mortality	Disability	Withdrawal	Withdrawal
0.04	0.006	5.728	0.888
0.06	0.012	4.296	0.700
0.10	0.012	2.920	0.563
0.15	0.018	2.000	0.463
0.25	0.030	1.144	0.325
0.43	0.054	0.639	0.188
0.70	0.126	0.360	0.088
1.11	0.240	0.070	0.050
0.00	0.000	0.070	0.000
	0.04 0.06 0.10 0.15 0.25 0.43 0.70	0.04     0.006       0.06     0.012       0.10     0.012       0.15     0.018       0.25     0.030       0.43     0.054       0.70     0.126       1.11     0.240	Mortality         Disability         Withdrawal           0.04         0.006         5.728           0.06         0.012         4.296           0.10         0.012         2.920           0.15         0.018         2.000           0.25         0.030         1.144           0.43         0.054         0.639           0.70         0.126         0.360           1.11         0.240         0.070

### Female

			Ordinary	Vested
Age	Mortality	Disability	Withdrawal	Withdrawal
25	0.03	0.000	8.416	1.338
30	. 0.05	0.006	6.224	1.050
35	0.08	0.036	4.576	0.838
40	0.11	0.072	3.048	0.700
45	0.15	0.102	2.080	0.488
50	0.19	0.138	1.233	0.275
55	0.29	0.168	0.690	0.138
60	0.45	0.000	0.150	0.075
65	0.00	0.000	0.080	0.000

SECTION 4: Amortization Bases, Statistics, Assumptions, and Plan Provisions for the Water and Power Employees' Retirement Plan of the City of Los Angeles

EXHIBIT 5 – Continued

Actuarial Assumptions and Actuarial Cost Method

Retirement Rates:		Retirement Probability	Retirement Probability	
	Age	Male	Female	
	50	0.51	0.36	
	51	0.73	1.08	
	52	1.24	0.72	
	53	1.39	0.72	
	54	4.02	3.25	
	55	9.14	7.22	
	56	7.68	3.60	
	57	8.40	5.77	
	58	8.78	7.22	
	59	9.87	8.66	
	60	18.28	11.54	
	61	16.44	10.82	
	62	17.54	17.31	
	63	18.28	14.43	
	64	25.58	21.64	
	65	38.38	36.07	
	66	31.07	25.25	
	67	31.07	36.07	
	68	31.07	36.07	
	69	38.38	36.07	
	70	100.00	100.00	

EXHIBIT 5 – Continued  Actuarial Assumptions and Actuaria	al Cost	Method	
50/30 Open Window:	During the window period, retirement rates increased to 20% per year between ages 50 and 55.		
Retirement Age and Benefit for Inactive Vested Participants:	Assu:	me an immediate refund of employee normal contribution account plus the three	
Post Retirement Mortality Rates:	Healt	hy: 1983 GAM Set back one year	
	Disat	oled: Based on Plan experience	
Future Benefit Accruals:	1.0 ye	ear of service per year	
Other Government Service:	(a)	30% of the employees with less than 10 years of service will purchase an average of four years of service.	
	(b)	41.25% of the employees with 10 years or more of service will purchase ar average of four years of service.	
Unknown Data for Participants:	Same as those exhibited by participants with similar known characteristics. If not specified, participants are assumed to be male.		
Definition of Active Participants:	First day of biweekly payroll period following employment for new Department employees. Immediately following transfer from other City departments.		
Exclusion of Inactive Vesteds:	All inactive participants are included in the valuation.		
Percent Married/Domestic Partner:	85% (	or male participants; 60% of female participants.	
Age of Spouse/Domestic Partner:		le spouses are 4 years younger than their spouses.	

#### **EXHIBIT 5 - Continued**

# **Actuarial Assumptions and Actuarial Cost Method**

**Net Investment Return:** 

8.00%

**Employee Contribution and** 

**Matching Account Crediting Rate:** 

8.00%

**Salary Scale:** 

5.50%

**Consumer Price Index:** 

Increase of 4.0% per year; benefit increases due to CPI subject to 3.0% maximum.

**Actuarial Value of Assets:** 

The actuarial value of assets is determined by phasing in equity unrealized capital

gains and losses over a four-year period.

**Actuarial Cost Method:** 

Entry Age Normal Actuarial Cost Method. Entry Age is the age at the time the participant would have commenced participation if the plan had always been in

existence. Normal Cost and Actuarial Accrued Liability are calculated on an

individual basis and are allocated by salary.

**Funding Policy:** 

The Department of Water and Power makes contributions equal to the Normal Cost adjusted by amounts to amortize any Surplus or Unfunded Actuarial Accrued

Liability. Both the Normal Cost and the Actuarial Accrued Liability are determined under the Entry Age Normal cost method. The June 30, 2000 Surplus Actuarial

Accrued Liability is amortized over the fifteen year period commencing July 1, 2000. Any subsequent changes in Surplus or Unfunded Actuarial Accrued Liability are

amortized over separate fifteen year periods. All amortization amounts are

determined in equal dollar amounts over the amortization period. The Board may, by resolution, adopt a separate period of not more than thirty years to amortize the change in Surplus or Unfunded Actuarial Accrued Liability resulting from an unusual

event, plan amendment or change in assumptions or methods.

Finally, the Department of Water and Power contribution is not less than the matching

contribution of 110% of member contributions.

#### **EXHIBIT 6**

#### **Summary of Plan Provisions**

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

Pl	an	Year	r

July 1 through June 30

Formula Retir	ement Benefit:
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Age & Service Requirement

Age 60 with 5 years of service

Age 55 with 10 years of service in the last 12 years

Any age with 30 year of service; or

Receiving permanent total disability benefits from the Plan.

Note: To be eligible, the employee must have worked or been paid disability four of

the last five years immediately preceding eligibility to retire, or while eligible

to retire.

Amount

The greater of 2.1% of the Monthly Salary Base or \$9.50 per year of service.

Monthly Salary Base

Equivalent of monthly average salary of highest continuous 26 biweekly payroll

periods (one year).

Cost of Living benefit

Based on changes to Los Angeles area consumer price index to a maximum of 3% per

year.

Death after retirement

50% of retiree's unmodifed allowance continued to eligible spouse or domestic

partner (reduced if difference in ages is greater than five years).

Defined benefit paid monthly for life. If the money purchase annuity amount exceeds the monthly amount of the formula retirement benefit and the retiree meets the eligibility requirements for the formula retirement benefit, the amount of the money purchase annuity is paid and the cost-of-living and death after retirement continuance features of the formula retirement benefit are also paid.

#### **EXHIBIT 6 Continued**

#### **Summary of Plan Provisions**

#### **Member Normal Contributions:**

If an employee became a plan member after June 1, 1984, the member normal contribution rate is 6%.

If an employee became a plan member before June 1, 1984 or transferred from CERS with an entry age contribution rate, sample rates by entry age are as follows:

Entry Age	Rate	
20	2.601%	
25	3.102%	
30	3.611%	
35	4.161%	
40	4.742%	
45	5.381%	
50	6.042%	
55	6.762%	
59	7.332%	

## **Department Current Service Contributions:**

The Department of Water and Power makes contributions that match employee contributions at the rate of 110%.

## Disability:

Disability benefits are paid from the Disability Fund. However, if a member is receiving permanent and total disability benefits, he may elect to retire. Other than a nominal amount, no service credit during disability is earned for the 2.1% formula; however, credit is earned during disability toward the \$9.50 minimum formula.

#### **EXHIBIT 6- Continued**

#### **Summary of Plan Provisions**

# Deferred Withdrawal Retirement Benefit (Vested):

Age & Service Requirement

Age 60 with one-year contributing membership; or

Age 55 with 10-years of contributing membership in the 12 years prior to separation

from service.

**Amount** 

Value of employee normal contribution account plus Department matching contribution (called current service contribution) account at retirement date

#### **Death Before Retirement:**

Refund of employee contributions with interest. On the death of a member who is eligible for service retirement but who has not yet retired or who has 25 years of service, the member's spouse may elect a monthly allowance payable during the spouse's lifetime in lieu of return of the member's total accumulated contributions. The monthly allowance payable to the surviving spouse is the amount the spouse would have received had the member retired on the day before the member's death and elected a full joint and survivor allowance.

## Withdrawal of Contributions Benefit (Ordinary Withdrawal):

Refund of employee contributions with interest.

# **Money Purchase Annuity:**

Value of employee normal contribution account plus Department matching contribution (called current service contribution) account at retirement date.

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