

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

*Actuarial Valuation and Review  
as of July 1, 2010*

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*September 14, 2010*

*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 Actuarial Valuation and Review as of July 1, 2010. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2010-2011 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.*

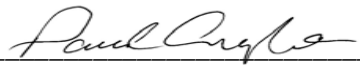
*This actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the Plan.*

*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.*

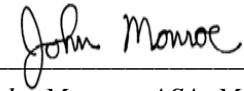
*We look forward to reviewing this report at your next meeting and to answering any questions.*

*Sincerely,*

*THE SEGAL COMPANY*

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

*AB/hy*

  
*John Monroe, ASA, MAAA, EA*  
*Vice President and Associate Actuary*

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

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### Purpose

This report has been prepared by The Segal Company to present a valuation of The Water and Power Employees' Retirement Plan of the City of Los Angeles as of July 1, 2010. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- The benefit provisions of the Pension Plan, as administered by the Board;
- The characteristics of covered active members, inactive vested members, and retired members and beneficiaries as of March 31, 2010, provided by the Retirement Office;
- The assets of the Plan as of June 30, 2010, provided by the Retirement Office;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

### Significant Issues in Valuation Year

*Ref: Pg. 9*

- The market value of assets earned a return of 11.96% for the July 1, 2009 to June 30, 2010 plan year. The actuarial value of assets earned a return of 1.44% for the July 1, 2009 to June 30, 2010 plan year due to the deferral of most of the current year investment gains and the recognition of prior investment losses. This resulted in an actuarial loss of \$472.1 million when measured against the assumed rate of return of 8.00% used in the prior valuation. This actuarial investment loss increased the Plan's required contribution by 6.22% of compensation.

*Ref: Pg. 13*

*Ref: Pg. 35*

- The results of the valuation reflect changes in the actuarial assumptions adopted by the Board for this valuation. These changes were documented in our Actuarial Experience Study and are outlined in Section 4, Exhibit VI of this report. These assumptions changes increased the Plan's unfunded actuarial accrued liability (UAAL) by \$255.9 million and the Plan's required contribution by 5.07% of compensation.

*Ref: Pg. 13*

- The salaries for continuing actives increased by 2.7% from the rates in effect on March 31, 2009 to the rates in effect on March 31, 2010. Since this increase is less than the average assumed rate of approximately 5.4%, the plan experienced an actuarial gain from salary experience. This gain amounted to \$132.4 million for the current year, which decreased the Plan's required contribution by 1.74% of compensation.

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

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*Ref: Pg. 21, 22*

- The actuarial accrued liability exceeds the actuarial value of assets, resulting in a UAAL of \$1,649 million. The Board's funding policy determines the Department's required contribution as the normal cost increased or offset by a UAAL amortization charge or credit. Under this funding policy, the Plan's UAAL is amortized over various 15 year periods, each beginning with the year that each portion or base of the UAAL was first identified and amortized.

*Ref: Pg. 12*

- Under the Plan's funding policy, the required contribution rate continues to be larger than the mandatory 110% matching of the employee contribution. The required contribution increased from 26.12% to 38.45% of pay for the 2010-2011 plan year, which is estimated to be \$329.2 million. This includes amortization of the components of the Plan's UAAL over 15-year fixed periods.

*Ref: Pg. 5*

- The total unrecognized return (i.e., the difference between the market value of assets and the "smoothed" actuarial value of assets) changed by \$566 million during the plan year from a \$1,607 million unrecognized loss in 2009 to a \$1,041 million unrecognized loss in 2010. This investment loss will be recognized in the determination of the actuarial value of assets over the next few years. This means that, if the Plan earns the assumed rate of investment return of 7.75% per year (net of expenses) on a **market value** basis, there will be investment losses on the actuarial value of assets in the next few years.
- The unrecognized investment losses of \$1,041 million represent about 17% of the market value of assets. Unless offset by future investment gains or other favorable experience, the future recognition of the \$1,041 million in past market losses is expected to have a significant impact on the Plan's future funded ratio and required contributions. This potential impact may be illustrated as follows:
  - If the deferred losses were recognized immediately in the actuarial value assets, the funded percentage would decrease from 81% to 70%.
  - If the deferred losses were recognized immediately in the actuarial value of assets, the required contribution would increase from 38.45% of covered payroll to 51.93% of covered payroll.

*Ref: Pg. 13*

- There were refinements to the service credit data provided to us this year that were a result of system conversions currently being undergone by the Retirement Office. These data refinements increased the Plan's required contribution by an estimated 2.08% of compensation. We expect there may be more refinements to occur prior to the next valuation, however, it is unknown whether any further refinements will increase or decrease the liability.

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

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*Ref: Pg. 27*

*Ref: Pg. 5*

- This year, the balance in the General Reserve and the Reserve for Investment Gains and Losses increased from \$1,638 million as of June 30, 2009 to \$1,820 million as of June 30, 2010. These two reserves track changes in the book value of assets. Consistent with prior valuations, this year we have been instructed to include all but \$62.7 million of the end of year General Reserve and Reserve for Investment Gains and Losses as valuation assets. This is approximately 1% of the end of year market value of assets.
- The actuarial valuation report as of July 1, 2010 is based on financial information as of that date. Changes in the value of assets subsequent to that date, to the extent that they exist, are not reflected. Declines in asset values will increase the actuarial cost of the plan, while increases will decrease the actuarial cost of the plan.

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

**Summary of Key Valuation Results**

	<b>2010</b>	<b>2009</b>
<b>Contributions for plan year beginning July 1:</b>		
Required under funding policy	\$329,178,234	\$210,341,349
Percentage of payroll	38.45%	26.12%
<b>Funding elements for plan year beginning July 1:</b>		
Total normal cost	\$179,339,888	\$154,425,889
Market value of assets	6,266,313,282	5,698,877,784
Actuarial value of assets	7,244,429,689	7,248,721,252
Actuarial accrued liability	8,893,618,433	8,057,060,950
Unfunded actuarial accrued liability	1,649,188,744	808,339,698
Funded ratio	81.46%	89.97%
<b>GASB 25/27 for plan year beginning July 1:</b>		
Annual pension cost	\$334,541,036	\$206,025,133
Actual contributions	--	201,034,807
Percentage contributed	--	97.6%
Covered payroll*	\$856,089,559	\$767,912,436
<b>Demographic data for plan year beginning July 1:</b>		
Number of retired members and beneficiaries	8,468	8,505
Number of vested former members**	1,739	1,742
Number of active members	9,295	8,868
Total compensation	\$856,089,559	\$805,137,795
Average compensation	\$92,102	\$90,791

\* For 2009, this represents the actual covered payroll for 2009-2010 as reported by the Retirement Office.

\*\* Includes terminated members due to refund of employee contributions.

**SECTION 2: Valuation Results for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

**A. MEMBER DATA**

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, including active members, vested terminated members, retired members and beneficiaries.

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

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

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

**CHART 1**  
**Member Population: 2001 – 2010**

<b>Year Ended June 30</b>	<b>Active Members</b>	<b>Vested Terminated Members*</b>	<b>Retired Members and Beneficiaries</b>	<b>Ratio of Non-Actives to Actives</b>
2001	7,250	1,415	9,576	1.52
2002	7,403	1,426	9,353	1.46
2003	7,731	1,445	9,161	1.37
2004	7,893	1,525	8,973	1.33
2005	7,967	1,397	8,868	1.29
2006	7,926	1,481	8,817	1.30
2007	7,993	1,535	8,746	1.29
2008	8,164	1,548	8,670	1.25
2009	8,868	1,742	8,505	1.16
2010	9,295	1,739	8,468	1.10

\* Includes terminated members due a refund of employee contributions.



**SECTION 2: Valuation Results for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

**Active Members**

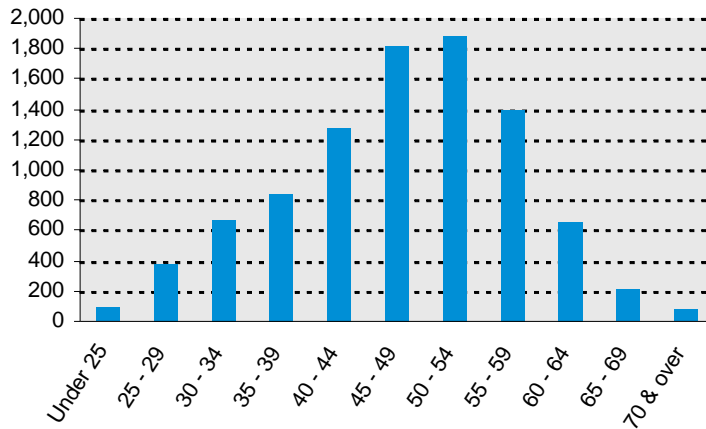
Plan costs are affected by the age, years of service and compensation of active members. In this year's valuation, there were 9,295 active members with an average age of 48.0, average years of service of 17.6 years and average compensation of \$92,102. The 8,868 active members in the prior valuation had an average age of 47.8, average service of 16.8 years and average compensation of \$90,791.

**Inactive Members**

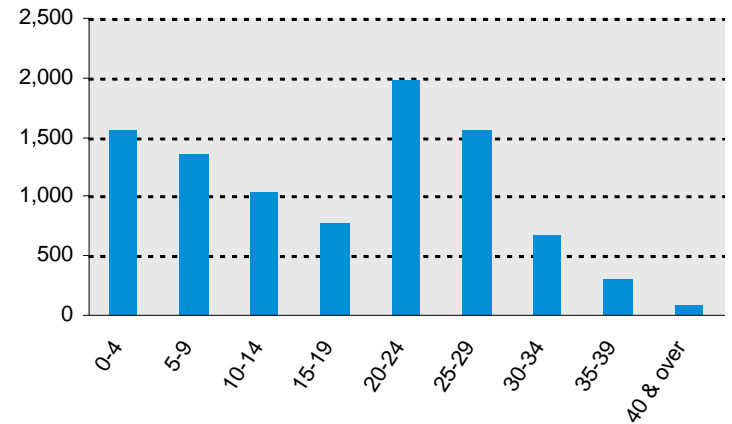
In this year's valuation, there were 1,739 members with a vested right to a deferred or immediate vested benefit, or entitled to a return of their employee contributions.

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

**CHART 2**  
**Distribution of Active Members by Age as of June 30, 2010**



**CHART 3**  
**Distribution of Active Members by Years of Service as of June 30, 2010**



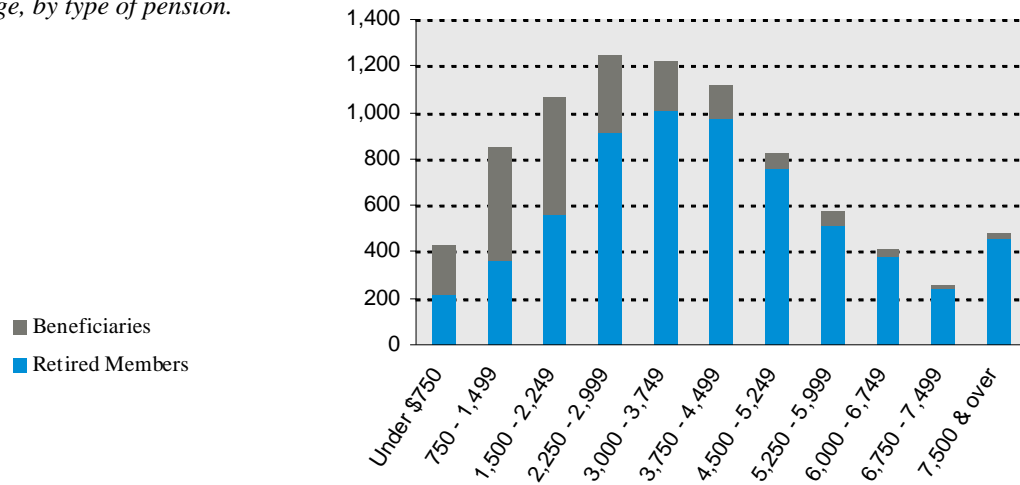
**SECTION 2: Valuation Results for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

**Retired Members and Beneficiaries**

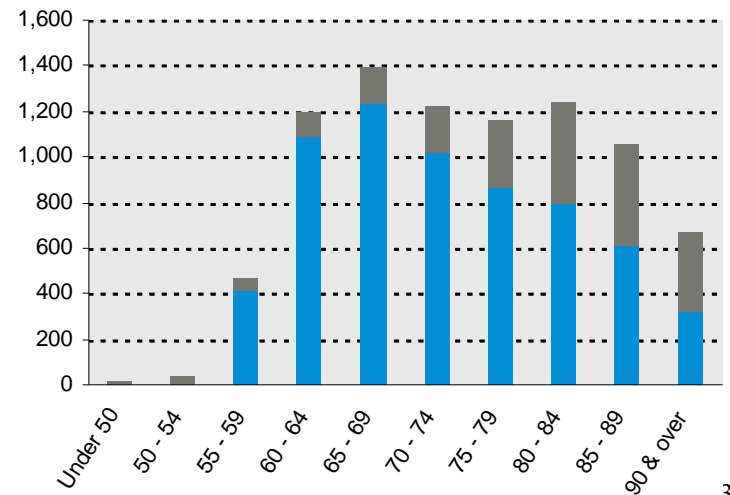
As of June 30, 2010, 6,358 retired members and 2,110 beneficiaries were receiving total monthly benefits of \$32,384,494. For comparison, in the previous valuation, there were 6,366 retired members and 2,139 beneficiaries receiving monthly benefits of \$31,015,343.

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

**CHART 4**  
**Distribution of Retired Members and Beneficiaries by Type and by Monthly Amount as of June 30, 2010**



**CHART 5**  
**Distribution of Retired Members and Beneficiaries by Type and by Age as of June 30, 2010**



**SECTION 2: Valuation Results for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

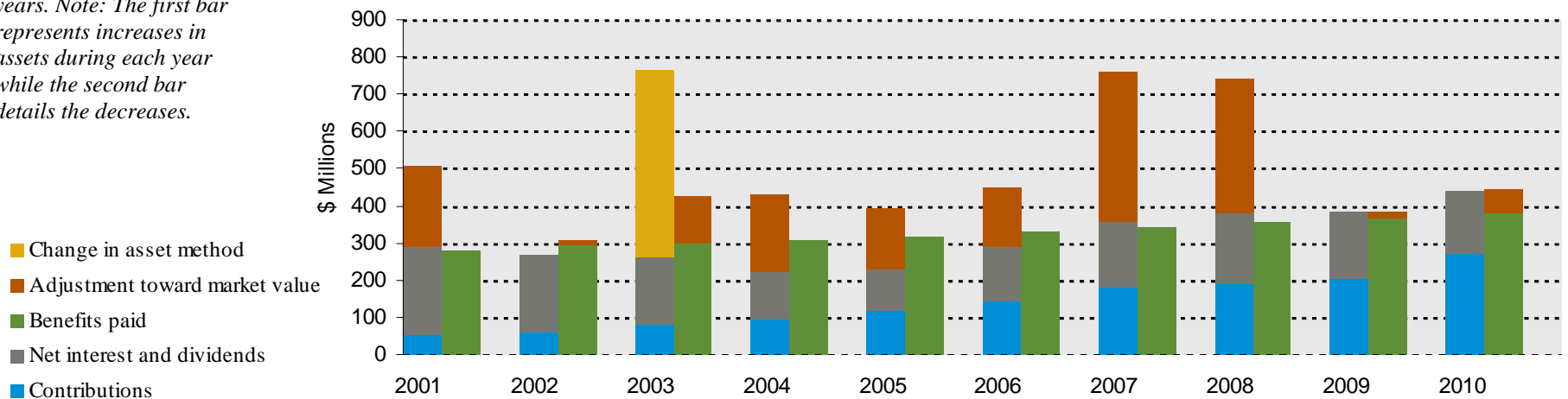
**B. FINANCIAL INFORMATION**

Retirement plan funding anticipates that, over the long term, both contributions and net investment earnings (less investment fees and administrative expenses) will be needed to cover benefit payments.

Retirement plan assets change as a result of the net impact of these income and expense components. Additional financial information, including a summary of these transactions for the valuation year, is presented in Section 3, Exhibits D, E and F.

*The chart depicts the components of changes in the actuarial value of assets over the last ten years. Note: The first bar represents increases in assets during each year while the second bar details the decreases.*

**CHART 6**  
**Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended June 30, 2001 – 2010**



**SECTION 2: Valuation Results for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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

The amount of the adjustment to recognize market value is treated as income, which may be positive or negative.

Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

Please note that as instructed by Plan staff, we have included all but \$62.7 million (approximately 1% of the end of year market value of assets) in the General Reserve and Reserve for Investments Gains and Losses as valuation assets.

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

**CHART 7  
Determination of Actuarial Value of Assets as of June 30, 2010**

1	Market value of assets, June 30, 2010		\$6,266,313,282
2	Calculation of Unrecognized Return	<u>Original Amount*</u>	<u>Unrecognized Return**</u>
	(a) Year ended June 30, 2010	\$223,624,452	\$178,899,562
	(b) Year ended June 30, 2009	- 1,610,405,832	-966,243,499
	(c) Year ended June 30, 2008	-911,502,787	-364,601,115
	(d) Year ended June 30, 2007	555,827,560	111,165,512
	(e) Year ended June 30, 2006	<u>30,315,338</u>	<u>0</u>
	(f) Total Unrecognized Return***		-1,040,779,540
3	Gross actuarial value: (1) - (2f)		7,307,092,822
4	Portion of General Reserve and Reserve for Investment Gains and Losses not included as valuation asset		62,663,133
5	Net actuarial value as of June 30, 2010: (3) – (4)		<u>\$7,244,429,689</u>
6	Net actuarial value as a percentage of market value: (5) / (1)		115.6%

\* Total return minus expected return on a market value basis

\*\* Recognition at 20% per year over 5 years

\*\*\* Deferred return as of June 30, 2010 recognized in each of the next 4 years:

(a)	Amount Recognized during 2010/2011	-\$348,491,321
(b)	Amount Recognized during 2011/2012	-\$459,656,833
(c)	Amount Recognized during 2012/2013	-\$277,356,276
(d)	Amount Recognized during 2013/2014	<u>\$44,724,890</u>
	Subtotal	-\$1,040,779,540

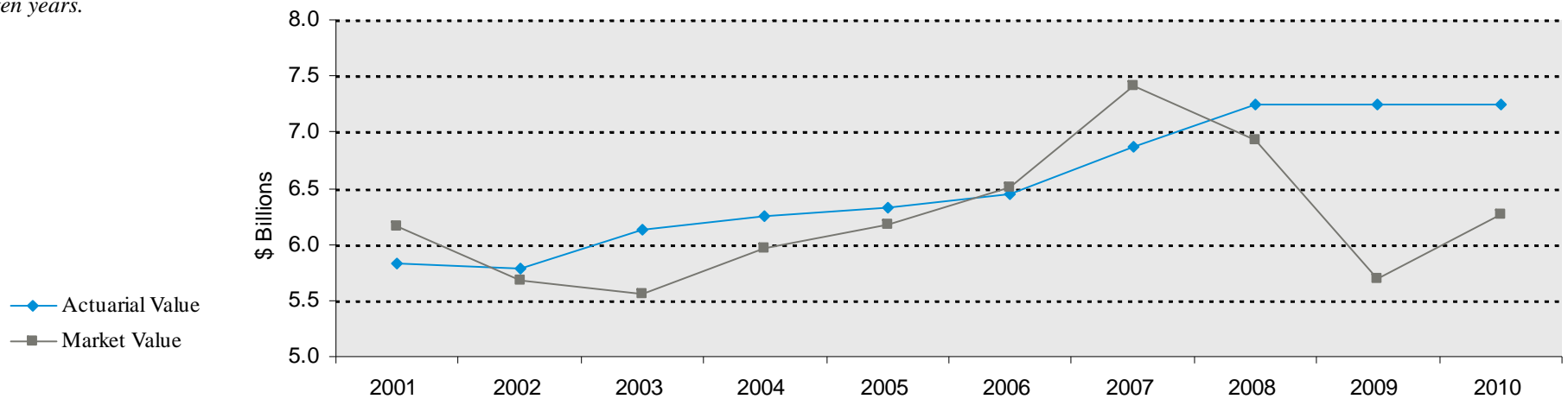
**SECTION 2: Valuation Results for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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

Note that in the chart below, actuarial value of assets are exclusive of a small portion of the General Reserve and Reserve for Investment Gains and Losses while that Reserve is included in the development of the market value of assets.

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

**CHART 8**  
**Actuarial Value of Assets vs. Market Value of Assets as of June 30, 2001 – 2010**



**SECTION 2: Valuation Results for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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**C. ACTUARIAL EXPERIENCE**

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

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term development and that, over the long term, experience will

return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

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

The total loss is \$636,688,406, \$472,090,086 is from investments and \$164,598,320 is from all other sources. The net experience variation from individual sources other than investments was 1.9% of the actuarial accrued liability. A discussion of the major components of the actuarial experience is on the following pages.

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

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**CHART 9**  
**Actuarial Experience for Year Ended June 30, 2010**

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1. Net loss from investments*	-\$472,090,086
2. Net loss from other experience**	<u>-164,598,320</u>
3. Net experience loss: (1) + (2)	-\$636,688,406

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\* Details in Chart 10

\*\* See Section 3, Exhibit G. Does not include the effect of assumption changes.

**SECTION 2: Valuation Results for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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**Investment Rate of Return**

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the LADWP's investment policy. For valuation purposes, the assumed rate of return on the actuarial value of assets was 8.00% for the 2009-2010 plan year. The actual rate of return on an actuarial basis for the 2009-2010 plan year was 1.44%.

Since the actual return for the year was less than the assumed return, the LADWP experienced an actuarial loss during the year ended June 30, 2010 with regard to its investments.

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

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**CHART 10**  
**Actuarial Value Investment Experience for Year Ended June 30, 2010**

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1. Actual return	\$103,496,107
2. Average value of assets	7,194,827,417
3. Actual rate of return: (1) ÷ (2)	1.44%
4. Assumed rate of return for 2009-2010 plan year	8.00%
5. Expected return: (2) x (4)	\$575,586,193
6. Actuarial gain/(loss): (1) – (5)	<u>-\$472,090,086</u>

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**SECTION 2: Valuation Results for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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

Based on the 2006 through 2009 Actuarial Experience Study and as adopted by the Board, the assumed rate of return was changed from 8.00% to 7.75%.

**CHART 11**

**Investment Return – Actuarial Value vs. Market Value: 2001 - 2010**

Year Ended June 30	Net Interest and Dividend Income		Recognition of Capital Appreciation		Change in Asset Method		Actuarial Value Investment Return		Market Value Investment Return	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
2001	\$232,814,492	4.24	\$217,489,958	3.96	--	--	\$450,304,450	8.20	\$492,327,362	8.52
2002	206,326,546	3.61	-14,327,506	-0.25	--	--	191,999,040	3.36	-251,053,638	-4.16
2003	182,004,368	3.20	-127,029,513	-2.24	\$503,018,121	8.86	557,992,976	9.82	107,504,970	1.93
2004	126,468,819	2.10	205,922,559	3.42	--	--	332,391,378	5.52	611,980,245	11.22
2005	114,263,238	1.86	164,012,112	2.66	--	--	278,275,350	4.52	419,463,599	7.16
2006	142,834,044	2.29	157,384,016	2.52	--	--	300,218,060	4.81	514,526,795	8.45
2007	175,884,502	2.76	402,557,938	6.33	--	--	578,442,440	9.09	1,066,710,135	16.58
2008	191,456,313	2.82	361,168,481	5.33	--	--	552,624,794	8.15	-324,830,786	-4.43
2009	178,210,091	2.49	-15,044,818	-0.21	--	--	163,165,273	2.28	-1,062,966,407	-15.53
2010	<u>165,427,697</u>	2.30	<u>-61,931,590</u>	-0.86	--	--	<u>103,496,107</u>	1.44	<u>675,223,168</u>	11.96
Total	\$1,715,690,110		\$1,290,201,637		\$503,018,121		\$3,508,909,868		\$2,248,885,443	
							Five-year average return	5.03%		2.69%
							Ten-year average return	5.59%		3.68%

*Note: Each year's yield is weighted by the average asset value in that year.*

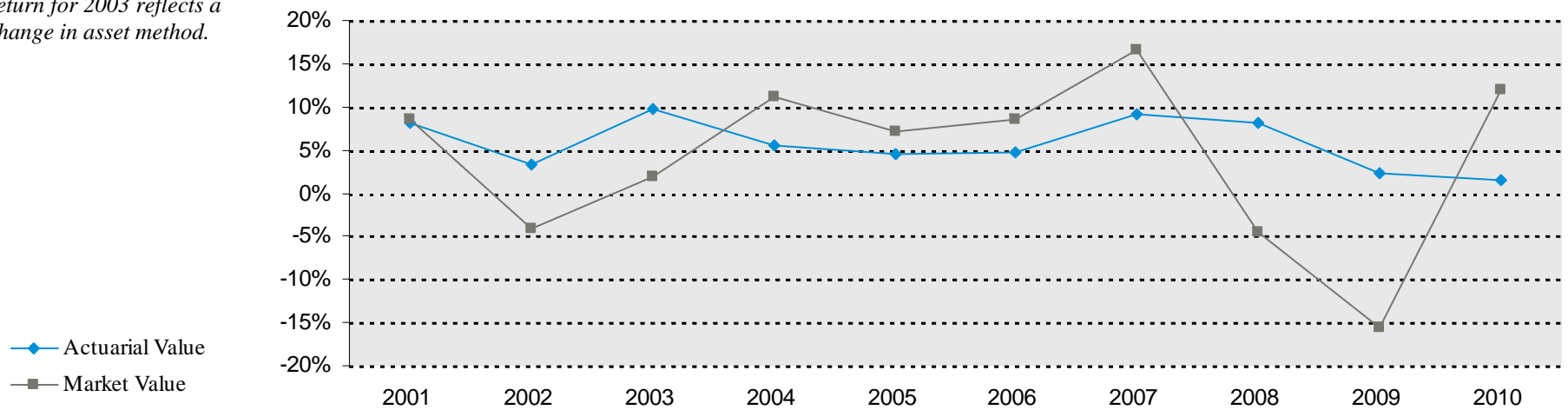


**SECTION 2: Valuation Results for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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

*This chart illustrates how this leveling effect has actually worked over the years 2001 - 2010. The return for 2003 reflects a change in asset method.*

**CHART 12**  
**Market and Actuarial Rates of Return for Years Ended June 30, 2001 - 2010**



## SECTION 2: Valuation Results for The Water and Power Employees' Retirement Plan of the City of Los Angeles

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### **Other Experience**

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

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

The net loss from this other experience for the year ended June 30, 2010 amounted to \$164,598,320 which is 1.9% of the actuarial accrued liability.

This loss is mainly the result of the service refinements in the data for non-retired members and the increase in active members, all offset to some extent by lower salary increases than expected. See Section 3, Exhibit G for a detailed development of the Unfunded Actuarial Accrued Liability.

**SECTION 2: Valuation Results for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

**D. REQUIRED CONTRIBUTION**

The required Department contribution is made up of (a) the normal cost and (b) the amortization of the unfunded or overfunded actuarial accrued liability. For this year, amortization bases are created for the actuarial loss and for the assumption changes during the plan year ending June 30, 2010. This produces a net amortization charge of \$191,228,987.

Under the current funding policy, the Department's required contribution rate increased as a percentage of pay. This was primarily the net result of the "smoothed" investment return being less than assumed, assumption changes and other unfavorable actuarial experience.

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

**CHART 13**  
**Required Contribution**  
**Year Beginning July 1:**

	2010		2009	
	Amount	% of Payroll	Amount	% of Payroll
1. Total normal cost	\$179,339,888	20.95%	\$154,425,889	19.18%
2. Expected employee contributions	<u>-53,670,455</u>	<u>-6.27%</u>	<u>-50,209,794</u>	<u>-6.24%</u>
3. Employer normal cost: (1) + (2)	\$125,669,433	14.68%	\$104,216,095	12.94%
4. Actuarial accrued liability	8,893,618,433		8,057,060,950	
5. Actuarial value of assets	<u>7,244,429,689</u>		<u>7,248,721,252</u>	
6. Unfunded actuarial accrued liability: (4) - (5)	\$1,649,188,744		\$808,339,698	
7. Amortization of unfunded actuarial accrued liability	191,228,987	22.34%	98,035,202	12.18%
8. Total required contribution: (3) + (7), adjusted for timing*	<u>329,178,234</u>	<u>38.45%</u>	<u>210,341,349</u>	<u>26.12%</u>
9. Employer match (110% of (2)), adjusted for timing*	61,325,204	7.16%	57,440,004	7.13%
10. Greater of employer match (9) or total required contribution (8)	<u>\$329,178,234</u>	<u>38.45%</u>	<u>\$210,341,349</u>	<u>26.12%</u>
11. Projected compensation	\$856,089,559		\$805,137,795	

\* Required contributions are assumed to be paid at the middle of every year.

**SECTION 2: Valuation Results for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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The contribution rates as of July 1, 2010 are based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

**Reconciliation of Required Contribution Rate**

The chart below details the changes in the required contribution rate from the prior valuation to the current year's valuation.

*The chart reconciles the contribution rate from the prior valuation to the amount determined in this valuation.*

**CHART 14**  
**Reconciliation of Required Contribution Rate from July 1, 2009 to July 1, 2010**

<b>Required Contribution Rate as of July 1, 2009</b>	26.12%
Effect of actual contributions more than expected contribution	-0.14%
Effect of investment loss	6.22%
Effect of gains on salary experience	-1.74%
Effect of losses due to service refinements	2.08%
Effect of losses due to new entrants	0.67%
Effect of losses on mortality experience	0.24%
Effect of other experience*	-0.07%
Effect of assumption changes	<u>5.07%</u>
<b>Total change</b>	<u>12.33%</u>
<b>Required Contribution Rate as of July 1, 2010</b>	38.45%

\* Includes effect of increase in total payroll, as well as other differences in actual versus expected experience including disability, withdrawal and retirement experience

**SECTION 2: Valuation Results for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

**E. INFORMATION REQUIRED BY THE GASB**

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

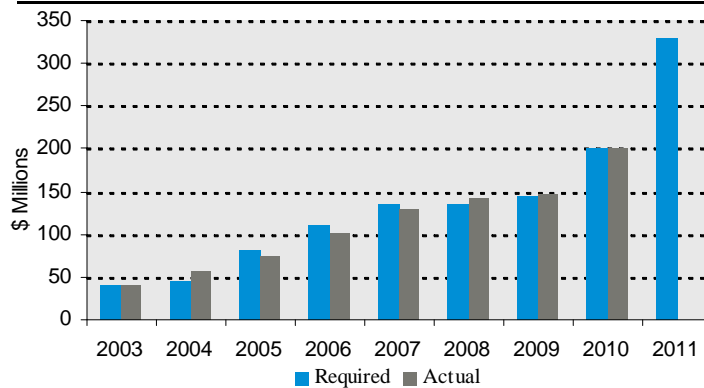
Critical information to GASB is the historical comparison of the GASB required contribution to the actual contributions. This comparison demonstrates whether a plan is being funded within the range of the GASB reporting requirements. Chart 15 below presents a graphical representation of this information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

The other critical piece of information regarding the Plan's financial status is the funded ratio. This ratio compares the actuarial value of assets to the actuarial accrued liabilities of the plan as calculated under GASB Standards. High ratios indicate a well-funded plan with assets sufficient to cover the Plan's accrued liabilities. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other factors. This information is shown in Chart 16.

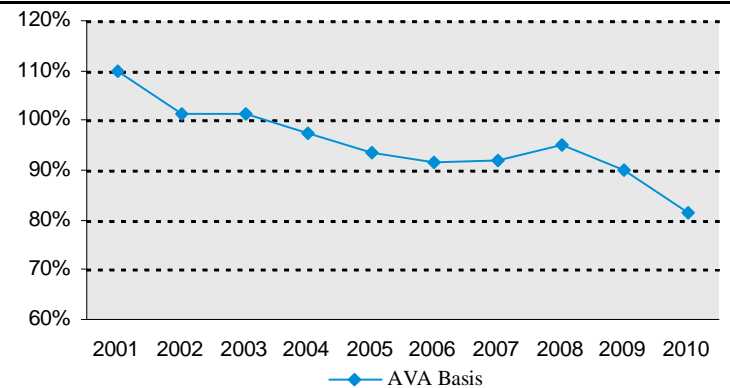
The details regarding the calculations of these values and other GASB numbers may be found in Section 4, Exhibits II, III, and IV.

*These graphs show key GASB factors.*

**CHART 15**  
**Required Versus Actual Contributions**



**CHART 16**  
**Funded Ratio**



**SECTION 3: Supplemental Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

**EXHIBIT A**

**Table of Plan Coverage**

<b>Category</b>	<b>Year Ended June 30</b>		<b>Change From Prior Year</b>
	<b>2010</b>	<b>2009</b>	
<b>Active members in valuation:</b>			
Number	9,295	8,868	4.8%
Average age	48.0	47.8	N/A
Average service	17.6	16.8	N/A
Projected total compensation	\$856,089,559	\$805,137,795	6.3%
Projected average compensation	\$92,102	\$90,791	1.4%
Account balances	\$950,671,521	\$844,870,628	12.5%
<b>Vested terminated members:*</b>			
Number	1,739	1,742	-0.2%
Average age	50.3	50.0	N/A
Average account balances	\$41,507	\$42,287	-1.8%
<b>Retired members:</b>			
Number in pay status	6,358	6,366	-0.1%
Average age	73.2	73.0	N/A
Average monthly benefit	\$4,272	\$4,079	4.7%
<b>Beneficiaries:</b>			
Number in pay status	2,110	2,139	-1.4%
Average age	80.1	79.9	N/A
Average monthly benefit	\$2,476	\$2,360	4.9%

*\*Includes terminated members due a refund of employee contributions.*

**SECTION 3: Supplemental Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

**EXHIBIT B**

**Members in Active Service as of June 30, 2010  
By Age, Years of Service, and Average Compensation**

Age	Years of Service									
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	98	96	2	--	--	--	--	--	--	--
	\$75,866	\$76,023	\$68,356	--	--	--	--	--	--	--
25 - 29	388	299	84	5	--	--	--	--	--	--
	81,421	79,567	87,219	\$94,889	--	--	--	--	--	--
30 - 34	670	305	254	102	9	--	--	--	--	--
	84,631	77,896	92,509	86,398	\$70,540	--	--	--	--	--
35 - 39	839	253	293	231	53	9	--	--	--	--
	84,220	76,525	87,570	85,726	96,403	\$81,115	--	--	--	--
40 - 44	1,273	207	267	241	216	326	14	2	--	--
	89,500	78,748	83,554	84,916	103,647	95,451	\$87,297	\$66,468	--	--
45 - 49	1,815	177	187	187	206	664	370	24	--	--
	94,187	75,859	82,212	84,398	96,596	99,646	102,697	96,039	--	--
50 - 54	1,877	118	133	129	139	464	603	259	32	--
	97,879	76,550	83,113	84,799	95,479	94,360	107,391	106,167	\$105,738	--
55 - 59	1,394	72	85	87	79	323	352	239	143	14
	95,453	81,947	80,263	85,443	91,917	93,202	97,802	104,798	101,497	\$110,908
60 - 64	652	20	39	37	43	139	147	102	90	35
	95,107	92,443	89,222	85,494	91,938	91,604	94,019	100,619	97,206	114,265
65 - 69	211	4	11	11	19	46	52	24	25	19
	91,679	66,292	75,038	117,298	94,979	82,315	91,205	97,182	94,782	101,460
70 & over	78	2	1	3	7	14	20	13	6	12
	85,660	50,715	79,211	75,820	73,872	79,667	91,751	87,504	87,721	95,173
Total	9,295	1,553	1,356	1,033	771	1,985	1,558	663	296	80
	\$92,102	\$77,968	\$85,960	\$85,567	\$97,067	\$95,483	\$101,927	\$103,642	\$99,804	\$107,773

**SECTION 3: Supplemental Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

**EXHIBIT C**

**Reconciliation of Member Data**

	<b>Active Members</b>	<b>Vested Former Members*</b>	<b>Retired Members</b>	<b>Beneficiaries</b>	<b>Total</b>
Number as of July 1, 2009	8,868	1,742	6,366	2,139	19,115
New members	602	N/A	N/A	N/A	602
Terminations – with vested rights	-87	87	N/A	N/A	0
Retirements	-183	-20	203	N/A	0
Died with beneficiary	-3	0	-87	90	0
Died without beneficiary	-8	-1	-125	-152	-286
Rehired	115	-115	0	N/A	0
Data adjustments	0	73	1	33	107
Contribution refunds	-9	-27	<u>N/A</u>	<u>N/A</u>	<u>-36</u>
Number as of July 1, 2010	9,295	1,739	6,358	2,110	19,502

*\*Includes terminated members due a refund of employee contributions.*



**SECTION 3: Supplemental Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

**EXHIBIT D**

**Summary Statement of Income and Expenses on an Actuarial Value Basis**

	Year Ended June 30, 2010	Year Ended June 30, 2009
<b>Contribution income:</b>		
Employer contributions	\$201,034,807	\$145,941,275
Employee contributions	71,246,053	59,405,012
Administrative expense contributions*	<u>4,463,141</u>	<u>4,088,598</u>
Net contribution income	\$276,744,001	\$209,434,885
<b>Investment income:</b>		
Interest, dividends and other income	\$181,755,167	\$191,963,775
Adjustment toward market value	-61,931,590	-15,044,818
Less investment and administrative fees	<u>-20,790,611</u>	<u>-17,842,282</u>
Net investment income	<u>99,032,966</u>	<u>159,076,675</u>
<b>Total income available for benefits</b>	<b>\$375,776,967</b>	<b>\$368,511,560</b>
<b>Less benefit payments:</b>		
Retirement benefits paid	-\$377,061,806	-\$363,691,635
Refund of members' contributions	<u>-3,006,724</u>	<u>-3,951,906</u>
Net benefit payments	-\$380,068,530	-\$367,643,541
<b>Change in reserve for future benefits</b>	<b>-\$4,291,563</b>	<b>\$868,019</b>

*\*Included as investment income in other parts of this report (excluding Exhibit F).*

**SECTION 3: Supplemental Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

**EXHIBIT E**

**Summary Statement of Plan Assets**

	Year Ended June 30, 2010	Year Ended June 30, 2009
<b>Cash equivalents</b>	\$1,983,081	\$4,669,737
<b>Accounts receivable:</b>		
Accrued investment income	\$25,045,490	\$26,091,859
Open investment trades and others	223,415,314	690,488,649
Securities lending - collateral	975,807,835	720,618,144
Department of Water and Power	<u>37,179,178</u>	<u>23,385,426</u>
Total accounts receivable	1,261,447,817	1,460,584,078
<b>Investments:</b>		
Fixed income	\$2,678,046,188	\$2,689,997,609
Equities	3,002,736,601	2,683,145,102
Other assets	<u>687,363,286</u>	<u>625,613,025</u>
Total investments at market value	<u>6,368,146,075</u>	<u>5,998,755,736</u>
<b>Total assets</b>	\$7,631,576,973	\$7,464,009,551
<b>Less accounts payable:</b>		
Accounts payable	-\$389,455,856	-\$1,044,513,623
Security lending - collateral	<u>-975,807,835</u>	<u>-720,618,144</u>
Total accounts payable	-\$1,365,263,691	-\$1,765,131,767
<b>Net assets at market value</b>	<u>\$6,266,313,282</u>	<u>\$5,698,877,784</u>
<b>Net assets at actuarial value</b>	<u>\$7,244,429,689</u>	<u>\$7,248,721,252</u>

**SECTION 3: Supplemental Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

**EXHIBIT F**

**Development of the Fund Through June 30, 2010**

<b>Year Ended June 30</b>	<b>Employer Contributions</b>	<b>Employee Contributions*</b>	<b>Other Contributions</b>	<b>Net Investment Return**</b>	<b>Benefit Payments</b>	<b>Actuarial Value of Assets at End of Year</b>
2001	\$25,763,218	\$27,688,883	\$2,406,582	\$450,304,450	\$278,744,629	\$5,833,274,582
2002	27,241,801	30,002,271	2,214,752	191,999,040	294,469,498	5,790,262,948
2003	40,560,882	36,490,767	2,623,157	557,992,976	299,555,007	6,128,375,723
2004	55,804,924	38,045,999	2,452,293	332,391,378	305,649,192	6,251,421,125
2005	75,490,143	38,855,089	2,534,097	278,275,350	315,528,276	6,331,047,528
2006	101,556,257	41,324,895	2,914,174	300,218,060	329,297,478	6,447,763,436
2007	129,154,539	47,060,446	3,549,724	578,442,440	341,886,580	6,864,084,005
2008	141,862,126	48,694,047	4,195,096	548,429,698	359,411,739	7,247,853,233
2009	145,941,275	59,405,012	4,088,598	159,076,675	367,643,541	7,248,721,252
2010	201,034,807	71,246,053	4,463,141	99,032,966	380,068,530	7,244,429,689

\* Includes member normal contributions, Additional Annuity program contributions and contributions due to open contracts for purchased service.

\*\* Net of investment fees and administrative expenses. Includes a change in asset method of \$503 million for 2003.

**SECTION 3: Supplemental Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

**EXHIBIT G**

**Development of Unfunded Actuarial Accrued Liability for Year Ended June 30, 2010**

1. Unfunded actuarial accrued liability at beginning of year		\$808,339,698
2. Normal cost at beginning of year		154,425,889
3. Total actual contribution (employer and employee)		-272,280,860
4. Interest		
(a) For whole year on (1) + (2)	\$77,021,247	
(b) For half year on (3)	<u>-10,891,234</u>	
(c) Total interest		<u>66,130,013</u>
5. Expected unfunded actuarial accrued liability		\$756,614,740
6. Changes due to:*		
(a) Investment loss	\$472,090,086	
(b) Gains on salary experience	-132,376,970	
(c) Losses due to service refinements	157,814,228	
(d) Losses due to new entrants	50,651,977	
(e) Losses on mortality experience	18,396,483	
(f) Other losses	70,112,602	
(g) Assumption changes	<u>255,885,598</u>	
(h) Total changes		<u>892,574,004</u>
7. Unfunded actuarial accrued liability at end of year		<u>\$1,649,188,744</u>

*\*Does not include a contribution gain of \$10,514,116 during the year from actual contributions greater than expected.*

**SECTION 3: Supplemental Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

**EXHIBIT H**

**Table of Amortization Bases**

Type*	Date Established	Initial Years	Initial Amount	Annual Payment**	Years Remaining	Outstanding Balance
Combined Base	07/01/2004	15	\$170,392,797	\$18,283,483	9.00	\$124,356,255
Actuarial Loss	07/01/2005	15	267,915,003	28,722,368	10.00	210,028,153
Actuarial Loss	07/01/2006	15	183,420,211	19,647,075	11.00	152,980,150
Actuarial Loss	07/01/2007	15	47,238,833	5,055,792	12.00	41,590,795
Assumption Changes	07/01/2007	15	-18,102,738	-1,937,467	12.00	-15,938,312
Actuarial Gain	07/01/2008	15	-204,179,457	-21,835,001	13.00	-188,538,197
Actuarial Loss	07/01/2009	15	457,336,004	48,869,647	14.00	440,492,527
Plan Amendments	07/01/2009	15	2,239,982	239,358	14.00	2,157,485
Actuarial Loss	07/01/2010	15	626,174,290	66,861,029	15.00	626,174,290
Assumption Changes	07/01/2010	15	255,885,598	<u>27,322,703</u>	15.00	<u>255,885,598</u>
Total				\$191,228,987		\$1,649,188,744

\* The outstanding July 1, 2004 amortization bases were combined into a single amortization base and amortized over 15 years.

\*\* Level dollar amount. The July 1, 2010 outstanding balances were reamortized by using the new interest rate assumption.

**SECTION 3: Supplemental Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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**EXHIBIT I**

**Section 415 Limitations**

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Section 415 of the Internal Revenue Code (IRC) specifies the maximum benefits that may be paid to an individual from a defined benefit plan and the maximum amounts that may be allocated each year to an individual's account in a defined contribution plan.

A qualified pension plan may not pay benefits in excess of the Section 415 limits. The ultimate penalty for non-compliance is disqualification: active participants could be taxed on their vested benefits and the IRS may seek to tax the income earned on the plan's assets.

In particular, Section 415(b) of the IRC limits the maximum annual benefit payable at the Normal Retirement Age to a dollar limit of \$160,000 indexed for inflation. That limit is \$195,000 for 2010. Normal Retirement Age for these purposes is age 62. These are the limits in simplified terms. They must be adjusted based on each participant's circumstances, for such things as age at retirement, form of benefits chosen and after tax contributions.

Benefits in excess of the limits may be paid through a qualified governmental excess plan that meets the requirements of Section 415(m).

Legal Counsel's review and interpretation of the law and regulations should be sought on any questions in this regard.

Contribution rates determined in this valuation have not been reduced for the Section 415 limitations. Actual limitations will result in gains as they occur.

**SECTION 3: Supplemental Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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**EXHIBIT J**

**Definitions of Pension Terms**

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

**Assumptions or Actuarial**

**Assumptions:**

The estimates on which the cost of the Plan is calculated including:

- (a) Investment return — the rate of investment yield that the Plan will earn over the long-term future;
- (b) Mortality rates — the death rates of employees and pensioners; life expectancy is based on these rates;
- (c) Retirement rates — the rate or probability of retirement at a given age;
- (d) Turnover rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

**Normal Cost:**

The amount of contributions required to fund the level cost allocated to the current year of service.

**Actuarial Accrued Liability**

**For Actives:**

The equivalent of the accumulated normal costs allocated to the years before the valuation date.

**Actuarial Accrued Liability**

**For Pensioners:**

The single sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.

**Unfunded Actuarial Accrued**

**Liability:**

The extent to which the actuarial accrued liability of the Plan exceeds the assets of the Plan.

**Amortization of the Unfunded**

**Actuarial Accrued Liability:**

Payments made over a period of years equal in value to the Plan's unfunded actuarial accrued liability.

**SECTION 3: Supplemental Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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**Investment Return:**

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



**SECTION 3: Supplemental Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

**EXHIBIT K  
Actuarial Balance Sheet**

An overview of the 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 or credits.

**Actuarial Balance Sheet**

<u>Assets</u>	<u>June 30, 2010</u>	<u>June 30, 2009</u>
1. Total actuarial value of assets	\$7,244,429,689	\$7,248,721,252
2. Present value of future contribution by members	516,624,069	437,346,867
3. Present value of future Department contributions for:		
(a) entry age normal cost	1,223,061,069	912,957,861
(b) unfunded actuarial accrued liability	1,649,188,744	808,339,698
4. Total current and future assets	\$10,633,303,571	\$9,407,365,678
 <u>Liabilities</u>	 <u>June 30, 2010</u>	 <u>June 30, 2009</u>
5. Present value of benefits for retirees and beneficiaries:	\$4,375,920,216	\$4,093,375,132
6. Present value of benefits for terminated vested members:	156,087,180	161,317,313
7. Present value of benefits for active members:	6,101,296,175	5,152,673,233
8. Total liabilities	\$10,633,303,571	\$9,407,365,678

**SECTION 3: Supplemental Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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**EXHIBIT L**

**Reserves and Designated Balances**

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	<u>June 30, 2010</u>	<u>June 30, 2009</u>
1. Reserve for retirement allowance for retired members	\$4,577,003,038	\$4,349,943,957
2. Contribution accounts:		
(a) Members (excluding additional contributions)	1,080,640,262	981,972,302
(b) Department of Water and Power	(1,169,873,656)	(1,081,913,152)
3. General Reserve and Reserve for Investment Gains and Losses*	<u>1,820,273,842</u>	<u>1,638,037,955</u>
4. Total	\$6,308,043,486	\$5,888,041,062

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*\*Out of the total General Reserve and Reserve for Investment Gains and Losses, \$62,663,133 and \$69,241,414 are not included as valuation assets as of June 30, 2010 and June 30, 2009, respectively.*

**SECTION 3: Supplemental Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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**EXHIBIT M**  
**Adjusted Reserves**

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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>Adjusted Reserves</u>	<u>June 30, 2010</u>	<u>June 30, 2009</u>
1. Retired reserve balance	\$4,577,003,038	\$4,349,943,957
2. Actuarially computed present value	4,375,920,216	4,093,375,132
3. Actuarial gain (loss): (1) – (2)	201,082,822	256,568,825
4. Transfer from (to) DWP contribution accounts from retired reserves:	(201,082,822)	(256,568,825)

**SECTION 4: Reporting Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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**EXHIBIT I**

**Summary of Actuarial Valuation Results**

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

1. Retired members as of the valuation date (including 2,110 beneficiaries in pay status)	8,468
2. Members inactive during year ended June 30, 2010 with vested rights*	1,739
3. Members active during the year ended June 30, 2010	9,295

---

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

1. Normal cost		\$179,339,888
2. Present value of future benefits		10,633,303,571
3. Present value of future normal costs		1,739,685,138
4. Actuarial accrued liability		8,893,618,433
Retired members and beneficiaries	\$4,375,920,216	
Inactive members with vested rights*	156,087,180	
Active members	4,361,611,037	
5. Actuarial value of assets (\$6,266,313,282 at market value as reported by Retirement Office)		7,244,429,689
6. Unfunded actuarial accrued liability		\$1,649,188,744

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*\*Includes terminated members due a refund of employee contributions.*

**SECTION 4: Reporting Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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**EXHIBIT I (continued)**

**Summary of Actuarial Valuation Results**

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	<b>Dollar Amount</b>	<b>% of Payroll</b>
The determination of the required contribution is as follows:		
1. Total normal cost	\$179,339,888	20.95%
2. Expected employee contributions	<u>-53,670,455</u>	<u>-6.27%</u>
3. Employer normal cost: (1) + (2)	\$125,669,433	14.68%
4. Amortization of unfunded actuarial accrued liability	<u>191,228,987</u>	<u>22.34%</u>
5. Total required contribution: (3) + (4), adjusted for timing*	\$329,178,234	38.45%
6. Employer match (110% of (2)), adjusted for timing*	61,325,204	7.16%
7. Greater of (6) employer match or (5) total required contribution	\$329,178,234	38.45%
8. Projected payroll	\$856,089,559	

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*\*Required contribution is assumed to be paid at the middle of every year.*

**SECTION 4: Reporting Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

**EXHIBIT II**

**Supplementary Information Required by the GASB – Schedule of Employer Contributions**

<b>Plan Year Ended June 30</b>	<b>Annual Required Contributions</b>	<b>Annual Pension Cost</b>	<b>Actual Contributions</b>	<b>Actual Contributions/ Annual Required Contributions</b>	<b>Actual Contributions/ Annual Pension Cost</b>
2002	\$0	\$6,132,578	\$27,241,801	--	444.2%
2003	40,910,999	47,823,973	40,560,882	99.1%	84.8%
2004	44,128,205	50,773,126	55,804,924	126.5%	109.9%
2005	80,784,677	87,615,788	75,490,143	93.4%	86.2%
2006	110,268,590	116,651,020	101,556,257	92.1%	87.1%
2007	134,504,482	140,328,366	129,154,539	96.0%	92.0%
2008	134,651,427	140,061,851	141,862,126	105.4%	101.3%
2009	141,291,588	146,768,605	145,941,275	103.3%	99.4%
2010	200,578,728	206,025,133	201,034,807	100.2%	97.6%
2011	329,178,234	334,541,036	--	--	--

**SECTION 4: Reporting Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

**EXHIBIT III**

**Supplementary Information Required by the GASB – Schedule of Funding Progress**

<b>Actuarial Valuation Date</b>	<b>Actuarial Value of Assets (a)</b>	<b>Actuarial Accrued Liability (AAL) (b)</b>	<b>Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)</b>	<b>Funded Ratio (a) / (b)</b>	<b>Projected Covered Payroll (c)</b>	<b>UAAL as a Percentage of Covered Payroll* [(b) - (a)] / (c)</b>
07/01/2001	\$5,833,274,582	\$5,306,262,736	-\$527,011,846	109.93%	\$403,265,472	0.00%
07/01/2002	5,790,262,948	5,714,524,649	-75,738,299	101.33%	430,397,884	0.00%
07/01/2003	6,128,375,723	6,042,086,785	-86,288,938	101.43%	527,787,469	0.00%
07/01/2004	6,251,421,125	6,421,813,922	170,392,797	97.35%	581,038,783	29.33%
07/01/2005	6,331,047,528	6,763,079,839	432,032,311	93.61%	616,270,095	70.10%
07/01/2006	6,447,763,436	7,046,571,241	598,807,805	91.50%	635,728,131	94.19%
07/01/2007	6,864,084,006	7,467,285,349	603,201,343	91.92%	670,372,663	89.98%
07/01/2008	7,247,853,233	7,619,102,935	371,249,702	95.13%	708,731,840	52.38%
07/01/2009	7,248,721,252	8,057,060,950	808,339,698	89.97%	805,137,795	100.40%
07/01/2010	7,244,429,689	8,893,618,433	1,649,188,744	81.46%	856,089,559	192.64%

\* *Not less than zero*

**SECTION 4: Reporting Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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**EXHIBIT IV**

**Supplementary Information Required by the GASB**

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<b>Valuation date</b>	July 1, 2010
<b>Actuarial cost method</b>	Entry Age Normal Cost Method
<b>Amortization method</b>	Level dollar amortization
<b>Remaining amortization period</b>	The July 1, 2004 Unfunded Actuarial Accrued Liability is amortized over a 15-year period commencing July 1, 2004. Any subsequent changes in Unfunded Actuarial Accrued Liability are amortized over separate 15-year periods effective with that valuation.
<b>Asset valuation method</b>	The market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market returns and the expected returns on a market value basis, and is recognized over a five-year period.
<b>Actuarial assumptions:</b>	
Investment rate of return	7.75%
Inflation rate	3.50%
Projected salary increases	5.35% to 10.50%*
Cost of living adjustments	3.00% (actual increases are contingent upon CPI increases with a 3.00% maximum)
<b>Plan membership:</b>	
Retired members and beneficiaries receiving benefits	8,468
Terminated members entitled to, but not yet receiving benefits	1,739
Active members	<u>9,295</u>
Total	19,502

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\*Includes inflation at 3.50%, "across the board" increases of 0.75%, plus merit and promotional increases. See Exhibit VI for these increases.



**SECTION 4: Reporting Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

**EXHIBIT V**

**Development of the Net Pension Obligation and the Annual Pension Cost Pursuant to GASB 27**

<b>Plan Year Ended June 30</b>	<b>Employer Annual Required Contribution (a)</b>	<b>Employer Amount Contributed* (b)</b>	<b>Interest on NPO (c)</b>	<b>ARC Adjustment (h) / (e) (d)</b>	<b>Amortization Factor (e)</b>	<b>Pension Cost (a) + (c) - (d) (f)</b>	<b>Change in NPO (f) - (b) (g)</b>	<b>NPO Balance NPO + (g) (h)</b>
2002	\$0	\$27,241,801	-\$12,512,869	-\$18,645,447	8.8887	\$6,132,578	-\$21,109,223	-\$186,842,813
2003	40,910,299	40,560,882	-14,106,614	-21,020,288	8.8887	47,823,973	7,263,091	-179,579,722
2004	44,128,205	55,804,924	-13,558,251	-20,203,172	8.8887	50,773,126	-5,031,798	-184,611,520
2005	80,784,677	75,490,143	-13,938,151	-20,769,262	8.8887	87,615,788	12,125,645	-172,485,874
2006	110,268,590	101,556,257	-13,022,666	-19,405,096	8.8887	116,651,020	15,094,763	-157,391,111
2007	134,504,482	129,154,539	-11,883,013	-17,706,897	8.8887	140,328,366	11,173,827	-146,217,285
2008	134,651,427	141,862,126	-11,039,390	-16,449,814	8.8887	140,061,851	-1,800,275	-148,017,560
2009	141,291,588	145,941,275	-11,175,312	-16,652,329	8.8887	146,768,605	827,330	-147,190,230
2010	200,578,278	201,034,807	-11,112,848	-16,559,253	8.8887	206,025,133	4,990,326	-142,199,904
2011	329,178,234	329,178,234	-10,409,323	-15,772,125	9.0159	334,541,036	5,362,802	-136,837,102

\* The amount indicated for June 30, 2011 assumes the actual employer contribution for the year is equal to the employer annual required contribution.

**SECTION 4: Reporting Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

**EXHIBIT VI**

**Actuarial Assumptions and Actuarial Cost Method**

**Mortality Rates:**

*After Service Retirement  
and Pre-retirement:*

RP-2000 Combined Healthy Mortality Table with ages set back two years for males and one year for females.

*After Disability Retirement*

RP-2000 Combined Healthy Mortality Table with ages set back two years for males and one year for females.

**Termination Rates before Retirement:**

Age	Rate (%)					
	Mortality*		Disability		Total Withdrawal**	
	Male	Female	Male	Female	Male	Female
25	0.037	0.020	0.006	0.000	6.550	9.200
30	0.039	0.025	0.012	0.006	4.350	7.250
35	0.063	0.044	0.012	0.036	3.060	5.550
40	0.096	0.065	0.018	0.072	2.180	4.150
45	0.130	0.103	0.030	0.102	1.660	3.150
50	0.186	0.155	0.054	0.138	1.260	2.450
55	0.292	0.242	0.126	0.168	0.980	2.100
60	0.527	0.444	0.240	0.000	0.720	1.100
65	1.001	0.862	0.000	0.000	0.420	0.350

\* 5% of pre-retirement deaths are assumed to be duty related, with the remaining being non-duty related.

\*\* No withdrawal is assumed after a member is first assumed to retire. Ordinary withdrawal members are assumed to receive their account balance at termination. Vested termination members are assumed to receive a deferred retirement benefit. 45% of terminations are assumed to be ordinary withdrawals, with the remaining being vested terminations.

**SECTION 4: Reporting Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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<b>Retirement Rates:</b>	<b>Age</b>	<b>Under 30 Years of Service</b>	<b>Over 30 Years of Service</b>
	50	0.00%	0.00%
	51	0.00	0.00
	52	0.00	0.00
	53	0.00	0.00
	54	0.00	0.00
	55	4.00	25.00
	56	3.00	15.00
	57	3.00	12.50
	58	3.00	12.50
	59	4.00	12.50
	60	5.00	20.00
	61	5.00	10.00
	62	5.00	10.00
	63	5.00	25.00
	64	5.00	20.00
	65	15.00	25.00
	66	15.00	25.00
	67	15.00	25.00
	68	15.00	25.00
	69	15.00	25.00
	70	100.00	100.00

**Benefit for Inactive Vested Members:**

Inactive vested members are assumed to retire at age 60 with a Money Purchase Annuity.

**Definition of Active Members:**

First day of biweekly payroll following employment for new department employees or immediately following transfer from other city department.

**Unknown Data for Members:**

Same as those exhibited by Members with similar known characteristics. If not specified, Members are assumed to be male.

**SECTION 4: Reporting Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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**Data Adjustments:** Data as of March 31 has been adjusted to June 30 by adding three months of age and, for active employees, three months of service. For members in pay status, we have increased their benefits by the assumed July 1 COLA.

**Percent Married/Domestic Partner:** 85% of male members and 60% of female members are assumed to be married at pre-retirement death or retirement. Spousal gender is assumed to be opposite that of the member.

**Age of Spouse:** Females are 3 years younger than their spouses.

**Future Benefit Accruals:** 1.0 year of service per year.

**Other Government Service:** Members are assumed to purchase an additional 0.15 years of service per year.

**Consumer Price Index:** Increase of 3.50% per year; benefit increases due to CPI subject to 3.00% maximum.

**Employee Contribution and Matching Account Crediting Rate:** 8.00%, based on Plan provisions

**Net Investment Return:** 7.75%, net of administration and investment expenses.

**Salary Increases:** Annual Rate of Compensation Increase  
 Inflation: 3.50% per year, plus “across the board” salary increases of 0.75% per year, plus the following merit and promotional increases.

<u>Years of Service</u>	<u>Increase</u>
0	6.25%
1	5.25%
2	4.75%
3	3.50%
4	2.00%
5 & Over	1.10%

The merit and promotional increases are added to the sum of the inflationary and “across the board” salary increases.

**SECTION 4: Reporting Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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**Actuarial Value of Assets:** The market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual and expected returns on a market value basis and is recognized over a five year period. As directed by the Retirement Office, the actuarial value of assets may be reduced by an amount classified as a non-valuation reserve.

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**Actuarial Cost Method:** Entry Age Normal Actuarial Cost Method. Entry Age equals attained age less years of service. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are based on costs allocated as a level percent of salary, with Normal Cost determined as if the current benefit accrual rate had always been in effect.

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**Funding Policy:** The Department of Water and Power makes contributions equal to the Normal Cost adjusted by an amount 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 July 1, 2004 Unfunded Actuarial Liability is amortized over a fifteen year period commencing July 1, 2004. Any subsequent change 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. The Department of Water and Power contribution is not less than the matching contribution of 110% of member contributions.

**SECTION 4: Reporting Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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**Changes in Actuarial Assumptions:** Based on the Actuarial Experience Study, the following assumptions were changed. Previously, these assumptions were as follows:

**Mortality Rates:**

*After Service Retirement and Pre-retirement:* 1994 Group Annuity Mortality Table.  
*After Disability Retirement* 1994 Group Annuity Mortality Table.

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**Termination Rates before Retirement:**

Age	Rate (%)			
	Mortality*		Total Withdrawal**	
	Male	Female	Male	Female
25	0.066	0.029	6.550	9.250
30	0.080	0.035	4.700	7.550
35	0.085	0.048	3.250	5.850
40	0.107	0.071	2.300	4.650
45	0.158	0.097	1.700	3.410
50	0.258	0.143	1.320	2.640
55	0.443	0.229	1.020	2.200
60	0.798	0.444	0.720	1.100
65	1.454	0.864	0.000	0.000

\* 5% of pre-retirement deaths are assumed to be duty related, with the remaining being non-duty related.

\*\* No withdrawal is assumed after a member is first assumed to retire. Ordinary withdrawal members are assumed to receive their account balance at termination. Vested withdrawal members are assumed to receive a deferred benefit from the plan. 65% of male terminations and 60% of female terminations are assumed to be ordinary withdrawals, with the remaining being vested withdrawals.

**SECTION 4: Reporting Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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**Changes in Assumptions (previous assumptions continued):**

<b>Retirement Rates:</b>	<b>Age</b>	<b>Under 30 Years of Service</b>	<b>Over 30 Years of Service</b>
	50	0.00%	30.00%
	51	0.00	12.50
	52	0.00	12.50
	53	0.00	5.00
	54	0.00	5.00
	55	5.00	25.00
	56	3.00	12.50
	57	3.00	12.50
	58	3.00	12.50
	59	4.00	12.50
	60	4.00	15.00
	61	4.00	10.00
	62	4.00	10.00
	63	5.00	20.00
	64	5.00	20.00
	65	100.00	100.00

**Retirement Age and Benefit for Inactive**

**Vested Participants:**

A liability is determined for (a) an immediate refund of employee normal contribution accounts plus department matching contribution accounts and (b) a deferred benefit at age 60. The plan liability is the greater of these two calculations.

**Percent Married/Domestic Partner:**

90% of male participants and 75% of female participants are assumed to be married at pre-retirement death or retirement. Spousal gender is assumed to be opposite that of the member.

**SECTION 4: Reporting Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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**Changes in Assumptions (previous assumptions continued):**

**Consumer Price Index:** Increase of 3.75% per year; benefit increases due to CPI subject to 3.00% maximum.

**Net Investment Return:** 8.00%, net of administration and investment expenses.

**Salary Increases:** Annual Rate of Compensation Increase  
 Inflation: 3.75% per year, plus “across the board” salary increases of 0.50% per year, plus the following merit and promotional increases.

<u>Years of Service</u>	<u>Increase</u>
0	5.00%
1	4.00%
2	3.00%
3	2.00%
4	1.50%
5 & Over	1.00%

The merit and promotional increases are compounded with the sum of the inflationary and “across the board” salary increases.



**SECTION 4: Reporting Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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**EXHIBIT VII**

**Summary of Plan Provisions**

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

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**Plan Year:** July 1 through June 30

**Census Date:** March 31

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**Formula Retirement Benefit:**

*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 years 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.

*Monthly Amount*

The greater of 2.1% of the Monthly Salary Base or \$9.50 per year of service. For those age 55 or older with 30 or more years of service the factor is 2.3% of the Monthly Salary Base.

*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.

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**Money Purchase Annuity:**

A monthly lifetime benefit equal in value to the employee normal contribution account plus Department matching contribution (current service contribution) account at retirement date.

**SECTION 4: Reporting Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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**Minimum Benefit:**

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.

**Early Retirement Reduction Factors:** The early retirement factor is determined by the attained age on the effective date of retirement. Every three months of attained age will affect the factor

<b>Attained Age at Actual Retirement</b>	<b>Exact Age</b>	<b>+3 Months</b>	<b>+6 Months</b>	<b>+9 Months</b>
48	.7150	.7225	.7300	.7375
49	.7450	.7525	.7600	.7675
50	.7750	.7825	.7900	.7975
51	.8050	.8125	.8200	.8275
52	.8350	.8425	.8500	.8575
53	.8650	.8725	.8800	.8875
54	.8950	.9025	.9100	.9175
55	.9250	.92875	.9325	.93625
56	.9400	.94375	.9475	.95125
57	.9550	.95875	.9625	.96625
58	.9700	.97375	.9775	.98125
59	.9850	.98875	.9925	.99625
60 & Over	1.0000			

The factor is 1.0000 for those retiring at age 55 or later with at least 30 years of service.

**SECTION 4: Reporting Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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**Member Normal Contributions:**

If an employee became a plan member after May 31, 1984, the member normal contribution rate is 6% of pay.

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 actuarially based contributions that are a minimum of 110% of employee contributions.

**Disability:**

Disability benefits are paid from the Disability Fund. However, if a member is receiving permanent and total disability benefits, the member 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.

**Deferred Withdrawal Retirement Benefit (Vested):**

*Age & Service Requirement*

Age 60 with one year of 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

**SECTION 4: Reporting Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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**Death Before Retirement:**

<i>Age and Service Requirement</i>	None
<i>Amount</i>	Refund of member contributions with interest.
<i>Age, Service and Type of Death Requirement</i>	Any death of a member who is eligible for service retirement, but who has not yet retired or attained 25 years of service
<i>Amount</i>	In lieu of the refund of member contributions with interest, the member's spouse may elect an immediate lifetime monthly allowance. The monthly allowance payable to the surviving spouse is the amount the spouse would have received had the member elected a full joint and survivor allowance.
<i>Age, Service and Type of Death Requirement</i>	Duty death with 10 years of service, but prior to service retirement eligibility or attainment of 25 years of service
<i>Amount</i>	In lieu of the refund of member contributions with interest, the member's spouse may elect either: <ul style="list-style-type: none"><li>(a) A deferred lifetime monthly allowance commencing when the member would have been eligible for a service retirement or attained 25 years of service; or</li><li>(b) An immediate lifetime monthly allowance calculated with up to five years added to the member's age or service. This option is only available if the member has attained age 50 or attained 20 years of service.</li></ul> The monthly allowance payable to the surviving spouse is the amount the spouse would have received had the member elected a full joint and survivor allowance.

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**Death After Retirement:** 50% of retiree's unmodified allowance continued to eligible spouse or domestic partner (reduced if difference in ages is greater than five years).

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**Withdrawal of Contributions Benefit (Ordinary Withdrawal):** Refund of employee contributions with interest

**SECTION 4: Reporting Information for The Water and Power Employees' Retirement Plan of the City of Los Angeles**

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**Changes in Plan Provisions:** There have been no changes in Plan provisions since the previous actuarial valuation.

**NOTE:** *The summary of major Plan provisions is designed to outline principle Plan benefits as interpreted for purposes of the actuarial valuation. If the Retirement Office should find the Plan summary not in accordance with the actual provisions, the Retirement Office should alert the actuary so they can both be sure the proper provisions are valued.*

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