Segal Consulting

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

Insured Lives Death Benefit Fund for Noncontributing Members

Governmental Accounting Standards (GAS) 67 Actuarial Valuation as of June 30, 2015

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September 17, 2015

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

Dear Board Members:

We are pleased to submit this Governmental Accounting Standards (GAS) 67 Actuarial Valuation of the Insured Lives Death Benefit Fund for Noncontributing Members as of June 30, 2015. It contains various information that will need to be disclosed in order to comply with GAS 67.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Retirement Plan. The census and financial information on which our calculations were based was prepared by the Retirement Office. That assistance is gratefully acknowledged.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and changes in plan provisions or applicable law.

The actuarial calculations were completed under the supervision of John Monroe, ASA, MAAA, Enrolled Actuary. We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in the 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 expectations for the Plan.

We look forward to reviewing this report with you and to answering any questions.

Sincerely,

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

By:

Paul Angelo, FSA, MAAA, FCA, EA	*John Monroe, ASA, MAAA, FCA, EA*
Senior Vice President and Actuary	*Vice President and Actuary*

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SECTION 1
VALUATION SUMMARY

SECTION 2
GASB 67 INFORMATION

Purpose

This report has been prepared by Segal Consulting to present certain disclosure information required by Governmental Accounting Standards (GAS) 67 for the Insured Lives Death Benefit Fund for Noncontributing Members (Plan) of The Water and Power Employees' Retirement Plan of the City of Los Angeles as of June 30, 2015. This valuation is based on:

- The benefit provisions of the Plan, as administered by the Board;
- The characteristics of covered active members, inactive vested members, and retired and disabled members as of March 31, 2015, provided by the Retirement Office;
- The assets of the Plan as of June 30, 2015, 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

The following key findings were the result of this actuarial valuation:

- Governmental Accounting Standards Board Statement 67 and Statement 68 only redefine pension liability and expense for financial reporting purposes, and do not apply to contribution amounts for pension funding purposes. Employers and plans can still develop and adopt funding policies under current practices.
- For the June 30, 2014 and June 30, 2015 measurements, we used assumptions and methods consistent with those used by the Retirement Plan, with the exception that we are using a 4.00% discount rate. The 4.00% discount rate is based on the death benefit fund's current target asset allocation that is virtually all fixed income investments. It reflects expected real returns for that asset class as well as the 3.25% inflation assumption.
- When measuring pension liability GASB requires the use of the Entry Age actuarial cost method. The Entry Age actuarial cost method is different from the modified "pay as you go" method used for funding purposes. The Total Pension Liability (TPL) measure for financial reporting shown in this report has no analog for purposes of funding because the pay as you go method does not determine an "Actuarial Accrued Liabilty". We note that the same is true for the Service Cost component shown in this report for financial reporting, because there is no "Normal Cost" under pay as you go funding.

- The Net Pension Liability (NPL) is equal to the difference between the TPL and the Plan's Fiduciary Net Position. The Plan's Fiduciary Net Position is equal to the market value of assets and therefore, the NPL measure is very similar to an Unfunded Actuarial Accrued Liability (UAAL) calculated on a market value basis. The NPL increased from $95.5 million as of June 30, 2014 to $97.5 million as of June 30, 2015, primarily due to actuarial experience losses and an investment return less than the assumed 4.00%. Changes in these values during the last two fiscal years ending June 30, 2014 and June 30, 2015 can be found in Exhibit 3.
- The NPLs measured as of June 30, 2015 and 2014 have been determined from the actuarial valuations as of July 1, 2015 and July 1, 2014, respectively.
- The discount rates used to determine the TPL and NPL as of June 30, 2015 and 2014 were 4.00%. Details on the derivation of the discount rate as of June 30, 2015 can be found in Exhibit 5 of Section 2. Various other information that is required to be disclosed can be found throughout Exhibits 1 through 4 in Section 2. Exhibit 6 includes the allocation of the assets to the Insured Lives Death Benefit Fund for Noncontributing Members.

Summary of Key Valuation Results

	2015	2014
Disclosure elements for fiscal year ending June 30:		
Service cost[1]	$2,004,375	$1,584,909
Total Pension Liability	109,531,351	107,730,290
Plan's Fiduciary Net Position[2]	12,007,902	12,211,148
Net Pension Liability	97,523,449	95,519,142
Schedule of contributions for fiscal year ending June 30:		
Actuarially determined contributions	$4,935,211	$4,993,032
Actual contributions	4,935,211	4,993,032
Contribution deficiency (excess)	0	0
Demographic data for plan year ending June 30:		
Number of retired members	6,709	6,600
Number of vested terminated members[3]	732	718
Number of active members	9,205	8,960
Key assumptions as of June 30:		
Investment rate of return	4.00%	4.00%
Inflation rate	3.25%	3.25%
Projected salary increases[4]	4.75% to 10.00%	4.75% to 10.00%

(1) *The service cost is always based on the previous year's assumptions, meaning both values are based on those assumptions shown as of June 30, 2014.*
(2) *Based on preliminary unaudited financial statements as of June 30, 2015.*
(3) *Includes members receiving PTD benefits and excludes terminated members with less than five years of service.*
(4) *Includes inflation at 3.25% plus real across-the-board salary increases of 0.75% plus merit and promotional increases.*

Important Information about Actuarial Valuations

In order to prepare an actuarial valuation, Segal Consulting ("Segal") relies on a number of input items. These include:

- **Plan of benefits** Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan description in this report (as well as the plan summary included in our funding valuation report) to confirm that Segal has correctly interpreted the plan of benefits.
- **Participant data** An actuarial valuation for a plan is based on data provided to the actuary by the Retirement Office. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
- **Assets** This valuation is based on the market value of assets as of the valuation date, as provided by the Retirement Office.
- **Actuarial assumptions** In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The projected benefits are then discounted to a present value, based on the assumed rate of return that is expected to be achieved on the plan's assets. There is a reasonable range for each assumption used in the projection and the results may vary materially based on which assumptions are selected. It is important for any user of an actuarial valuation to understand this concept. Actuarial assumptions are periodically reviewed to ensure that future valuations reflect emerging plan experience. While future changes in actuarial assumptions may have a significant impact on the reported results, that does not mean that the previous assumptions were unreasonable.

The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

- The valuation is prepared at the request of the WPERP to assist the Plan in preparing their financial reports. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- An actuarial valuation is a measurement of the plan's assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.
- If WPERP is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.

- Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The WPERP should look to their other advisors for expertise in these areas.

As Segal Consulting has no discretionary authority with respect to the management or assets of WPERP, it is not a fiduciary in its capacity as actuaries and consultants with respect to WPERP.

EXHIBIT 1

General Information – "Financial Statements", Note Disclosures and Required Supplementary Information for a Single-Employer Pension Plan

Plan Description

Plan administration. The Water and Power Employees' Retirement Plan of the City of Los Angeles (WPERP) was established by the Los Angeles Department of Water and Power in 1938. WPERP is a single employer public employee retirement system whose main function is to provide retirement benefits to employees of the Los Angeles Department of Water and Power.

Under the provisions of the City Charter, the Board of Administration (the "Board") has the responsibility and authority to administer the Plan and to invest its assets. The Board members serve as trustees and must act in the exclusive interest of the Plan's members and beneficiaries. The Board has seven members: one member of the Board of Water and Power Commissioners, the General Manager, the Chief Accounting Employee, three employee members who are elected for three-year terms by active members of the Plan, and one retiree who is appointed by the Board of Water and Power Commissioners for a three-year term.

Plan membership. At June 30, 2015, the membership of the Insured Lives Death Benefit Fund for Noncontributing Members consisted of the following:

Retired members currently receiving benefits	6,709
Vested terminated members entitled to, but not yet receiving benefits[(1)]	732
Active members	9,205
Total	16,646

[(1)] *Includes members receiving PTD benefits and excludes terminated members with less than five years of service.*

Benefits provided. The Insured Lives Death Benefit Fund for Noncontributing Members provides death benefits to eligible employees. An employee is eligible to receive a death benefit provided they were employed by the Department for at least five years and death occurred after retirement. The death benefit is paid in a single sum that is equal to the lesser of 14 times the member's Full Retirement Allowance or $20,000.

The LADWP contributes based upon actuarially determined contribution rates adopted by the Board of Administration. Employer contribution rates are adopted annually based upon recommendations received from WPERP's actuary after the completion of the review of the death benefit fund. The employer contribution rate as of June 30, 2015 (based on the July 1, 2014 review) was $1.19 per $100 of monthly retirement benefit. Members do not contribute towards this benefit.

EXHIBIT 2

Net Pension Liability

The components of the Net Pension Liability are as follows:

	June 30, 2015	June 30, 2014
Total Pension Liability	$109,531,351	$107,730,290
Plan's Fiduciary Net Position	-12,007,902	-12,211,148
Net Pension Liability	$97,523,449	$95,519,142
Plan's Fiduciary Net Position as a percentage of the Total Pension Liability	10.96%	11.33%

The Net Pension Liability was measured as of June 30, 2015 and 2014 and determined based upon the Plan's Fiduciary Net Position (plan assets) and Total Pension Liability from actuarial valuations as of July 1, 2015 and 2014, respectively.

Plan provisions. The plan provisions used in the measurement of the net pension liability are the same as those described on the previous page.

Actuarial assumptions. The Total Pension Liabilities as of June 30, 2015 and June 30, 2014 were determined by actuarial valuations as of July 1, 2015 and July 1, 2014, respectively. The actuarial assumptions used in the June 30, 2015 and June 30, 2014 valuations were based on the results of an experience study for the period from July 1, 2009 through June 30, 2012. They are the same as the assumptions used in the July 1, 2015 funding actuarial valuation for the WPERP, with the exception of a 4.00% investment return assumption. In particular, the following assumptions were applied to all periods included in the measurement:

Inflation	3.25%
Salary increases	4.75% to 10.00%, vary by service, including inflation
Investment rate of return	4.00%, net of pension plan investment expense, including inflation

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. This information is combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before deducting investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Fixed Income	96%	0.85%
Cash and Cash Equivalents	4%	-0.13%
Total	100%	

Discount rate: The discount rate used to measure the Total Pension Liability was 4.00% as of June 30, 2015 and June 30, 2014. The projection of cash flows used to determine the discount rate assumed employer contributions will be made at rates equal to the actuarially determined contribution rates based on the Plan's funding policy. For this purpose, only employer contributions that are intended to fund benefits for current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future plan members and their beneficiaries, are not included. Based on those assumptions, the pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability as of both June 30, 2015 and June 30, 2014.

Sensitivity of the Net Pension Liability to changes in the discount rate. The following presents the Net Pension Liability of the Plan as of June 30, 2015, calculated using the discount rate of 4.00%, as well as what the Plan Net Pension Liability would be if it were calculated using a discount rate that is 1-percentage-point lower (3.00%) or 1-percentage-point higher (5.00%) than the current rate:

	1% Decrease (3.00%)	Current Discount Rate (4.00%)	1% Increase (5.00%)
Net Pension Liability as of June 30, 2015	$114,871,970	$97,523,449	$83,443,950

EXHIBIT 3

Schedule of Changes in Net Pension Liability – Last Two Fiscal Years

	2015	2014
Total Pension Liability		
Service cost	$2,004,375	$1,584,909
Interest	4,281,000	4,812,858
Change of benefit terms	0	0
Differences between expected and actual experience	935,033	-879,072
Changes of assumptions	0	9,676,044
Benefit payments, including refunds of member contributions	-5,419,347	-4,273,388
Net change in Total Pension Liability	$1,801,061	$10,921,351
Total Pension Liability – beginning	107,730,290	96,808,939
Total Pension Liability – ending (a)	$109,531,351	$107,730,290
Plan's Fiduciary Net Position		
Contributions – employer (including those for administrative expenses)	$5,374,020	$5,362,342
Contributions – employee	0	0
Net investment income	279,954	1,045,534
Benefit payments, including refunds of member contributions	-5,419,347	-4,273,388
Administrative expense	-437,873	-370,083
Other	0	0
Net change in Plan's Fiduciary Net Position	-$203,246	$1,764,405
Plan's Fiduciary Net Position – beginning	12,211,148	10,446,743
Plan's Fiduciary Net Position – ending (b)	$12,007,902	$12,211,148
Net Pension Liability – ending (a) – (b)	$97,523,449	$95,519,142
Plan's Fiduciary Net Position as a percentage of the Total Pension Liability	10.96%	11.33%
Covered employee payroll	$839,213,254	$819,923,866
Plan Net Pension Liability as percentage of covered employee payroll	11.62%	11.65%

Notes to Schedule:

Administrative expense: Employer contributions toward the administrative expense and the administrative expense itself have been allocated to the Insured Lives Death Benefit Fund for Noncontributing Members. This allocation is based on the proportion of the Plan's Fiduciary Net Position shown above as compared to the total Plan's Fiduciary Net Position of the death benefit fund, both as of the beginning of the plan year.

EXHIBIT 4

Schedule of Employer Contributions – Last Ten Fiscal Years

Year Ended June 30	Actuarially Determined Contributions	Contributions in Relation to the Actuarially Determined Contributions*	Contribution Deficiency (Excess)	Covered-Employee Payroll	Contributions as a Percentage of Covered Employee Payroll
2006	$3,537,698	$3,537,698	$0	$574,315,572	0.62%
2007	3,671,046	3,671,046	0	604,514,525	0.61%
2008	3,825,394	3,825,394	0	623,674,973	0.61%
2009	4,445,208	4,445,208	0	696,704,083	0.64%
2010	5,133,632	5,133,632	0	767,912,436	0.67%
2011	5,552,771	5,552,771	0	791,760,493	0.70%
2012	5,001,416	5,001,416	0	805,607,436	0.62%
2013	5,021,181	5,021,181	0	817,421,028	0.61%
2014	4,993,032	4,993,032	0	819,923,866	0.61%
2015	4,935,211	4,935,211	0	839,213,254	0.59%

** Excludes employer contributions towards administrative expenses.*

See accompanying notes to this schedule on next page.

Notes to EXHIBIT 4

Methods and assumptions used to establish "actuarially determined contribution" rates:

Valuation date	Actuarially determined contribution rates are calculated as of June 30, one year prior to the end of the fiscal year in which contributions are reported
Actuarial cost method	Pay as you go, subject to modifications by the Board's funding policy
Funding Policy	Recommend a contribution rate that maintains the general reserve at a target level of the average of the benefits paid for the last five years
Asset valuation method	Total market value of the Death Benefit Fund at valuation date, less the following: • Reserves for Benefits Granted and Contribution Accounts for the Family Death Benefit and Supplemental Family Death Benefit; and • Insured Lives General Reserve for Contributing Members (Mean Funds).
Other information:	All members hired on or after January 1, 2014 enter Tier 2.

	June 30, 2014	June 30, 2015
Actuarial assumptions:		
Investment rate of return	4.00%, net of investment expenses	4.00%, net of investment expenses
Inflation rate	3.25%	3.25%
Real across-the-board salary increase	0.75%	0.75%
Projected salary increases*	4.75% to 10.00%	4.75% to 10.00%
Mortality	Healthy: RP-2000 Combined Healthy Mortality Table with ages set back one year projected to 2030 with Scale AA	Healthy: RP-2000 Combined Healthy Mortality Table with ages set back one year projected to 2030 with Scale AA
Other assumptions	Same as those used in the July 1, 2014 WPERP funding actuarial valuation	Same as those used in the July 1, 2015 WPERP funding actuarial valuation

EXHIBIT 5

Projection of Pension Plan's Fiduciary Net Position for Use in Calculation of Discount Rate as of June 30, 2015 ($ in thousands)

Year Beginning July 1,	Projected Beginning Plan Fiduciary Net Position (a)	Projected Total Contributions (b)	Projected Benefit Payments (c)	Projected Investment Earnings (d)	Projected Ending Plan Fiduciary Net Position (e) = (a) + (b) - (c) + (d)
2015	$12,008	$6,155	$4,722	$509	$13,950
2016	13,950	6,071	4,776	584	15,828
2017	15,828	5,890	4,834	654	17,539
2018	17,539	5,698	4,891	718	19,063
2019	19,063	5,538	4,950	774	20,425
2020	20,425	5,443	5,017	826	21,676
2021	21,676	5,296	5,091	871	22,752
2022	22,752	5,171	5,172	910	23,661
2023	23,661	5,101	5,262	943	24,443
2024	24,443	5,059	5,362	972	25,112
2040	26,243	6,265	7,116	1,033	26,425
2041	26,425	6,309	7,142	1,040	26,632
2042	26,632	6,327	7,148	1,049	26,860
2043	26,860	6,325	7,135	1,058	27,108
2044	27,108	6,306	7,104	1,068	27,379
2089	79,075	0	62	3,162	82,175
2090	82,175	0	45	3,286	85,416
2091	85,416	0	32	3,416	88,799
2092	88,799	0	23	3,552	92,328
2093	92,328	0	16	3,693	96,005
2111	186,950	0	0	7,478	194,428
2112	194,428				
2112	Discounted Value: 4,330 *				

* *$194,428 when discounted with interest at the rate of 4.00% per annum has a value of $4,330 as of June 30, 2015, both also in thousands.*

EXHIBIT 5

Projection of Pension Plan's Fiduciary Net Position for Use in Calculation of Discount Rate as of June 30, 2015 ($ in thousands) - continued

Notes:

(1) Amounts may not total exactly due to rounding.

(2) Years 2025-2039, 2045-2088, and 2094-2110 have been omitted from this table.

(3) Column (a): Except for the "discounted value" shown for 2112, none of the projected beginning Plan's Fiduciary Net Position amounts shown have been adjusted for the time value of money.

(4) Column (b): Projected total contributions include employer contribution rates applied to projected retirement benefits (based on all members as of June 30, 2015). Employer contributions are assumed such that they maintain the general reserve at a target level of the average retirement benefits over the last five years. Contributions are assumed to occur halfway through the year, on average.

(5) Column (c): Projected benefit payments have been determined in accordance with Paragraph 39 of GASB Statement No. 67, and are based on the closed group of active, inactive vested, retired members, and beneficiaries as of June 30, 2015. The projected benefit payments are assumed to occur halfway through the year, on average.

(6) Column (d): Projected investment earnings are based on the assumed investment rate of return of 4.00% per annum.

(7) Throughout the projection, administrative expenses are not shown as they are expected to be offset by additional employer contributions above those shown in this projection.

(8) As illustrated in this Exhibit, the Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments for current Plan members. In other words, there is no projected "cross-over date" when projected benefits are not covered by projected assets. Therefore, the long-term expected rate of return on Plan investments of 4.00% per annum was applied to all periods of projected benefit payments to determine the Total Pension Liability as of June 30, 2015 shown earlier in this report, pursuant to Paragraph 44 of GASB Statement No. 67.

EXHIBIT 6

Table of Financial Information

Statement of Death Benefit Fund Assets	Year Ended June 30, 2015	Year Ended June 30, 2014
Cash	$726,261	$501,792
Accounts receivable	1,006,171	1,038,042
Investment in bonds and mortgage-backed securities at fair value	27,203,872	26,574,545
Short-term commercial paper, amortized cost which approximates market	721,814	1,218,119
Total Assets	$29,658,118	$29,332,498
Accounts payable	-404,908	-416,593
Death claims in process-insured lives	-2,646,111	-2,845,447
Net Assets at Market Value	$26,607,099	$26,070,458
Less: Unrealized Appreciation/(Depreciation), included in the above	2,947,761	2,712,887
Total Reserves and Designated Balances	$23,659,338	$23,357,571
Allocation of Net Assets to Insured Lives Death Benefit Fund for Noncontributing Members	**Year Ended June 30, 2015**	**Year Ended June 30, 2014**
1. Net Assets at Market Value	$26,607,099	$26,070,458
2. General Reserves		
a. Reserve for Benefits Granted:		
i. Family Death Benefits	$3,468,949	$3,701,426
ii. Supplemental Family Death Benefits	817,368	697,003
iii. Total for Benefits Granted	$4,286,317	$4,398,429
b. Contribution Accounts:		
i. Family Death Benefits	$926,564	$1,155,665
ii. Supplemental Family Death Benefits	5,457,092	5,377,291
iii. Total for Contribution Accounts	$6,383,656	$6,532,956
c. Total General Reserve for Family and Supplemental Family Death Benefits	$10,669,973	$10,931,385
3. Insured Lives General Reserve for Contributing Members (Mean Funds)	3,929,224	2,927,925
4. Net Assets for Insured Lives Death Benefit Fund for Noncontributing Members = (1) – (2c) – (3)*	$12,007,902	$12,211,148

* *General Reserve for Noncontributing Members is $9,060,142 at June 30, 2015 and $9,498,259 at June 30, 2014.*