

**The Water and Power Employees'
Retirement Plan of the City of Los Angeles
Governmental Accounting Standards (GAS) 74
Actuarial Valuation for the Death Benefit Fund
as of June 30, 2018**

- **Family Death Benefit Allowance Fund**
- **Supplemental Family Death Benefit Allowance Fund**
- **Insured Lives Portion of the Death Benefit Fund**

This report has been prepared at the request of the Board of Administration to assist in administering the Plan. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Board of Administration and may only be provided to other parties in its entirety, unless expressly authorized by Segal. The measurements shown in this actuarial valuation may not be applicable for other purposes.



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September 13, 2018

*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) 74 Actuarial Valuation of the Death Benefit Fund as of June 30, 2018. It contains various information that will need to be disclosed in order to comply with GAS 74.

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.

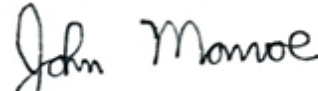
We look forward to reviewing this report with you and to answering any questions.

Sincerely,

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

By: 

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



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

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SECTION 1

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SECTION 1: Valuation Summary for the Water and Power Employees' Death Benefit Fund

Purpose

This report has been prepared by Segal Consulting to present certain disclosure information required by Governmental Accounting Standards (GAS) 74 for the Water and Power Employees' Death Benefit Fund as of June 30, 2018. This valuation is based on:

- The benefit provisions of the Fund, as administered by the Board;
- The characteristics of covered active members, inactive vested members, and retired and disabled members as of March 31, 2018, provided by the Retirement Office;
- The assets of the Fund as of June 30, 2018, provided by the Retirement Office;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

General Observations on GAS 74 Actuarial Valuations

The following points should be considered when reviewing this GAS 74 report:

- The Governmental Accounting Standards Board (GASB) rules only define OPEB liability and expense for financial reporting purposes, and do not apply to contribution amounts for OPEB funding purposes. Employers and plans can still develop and adopt funding policies under current practices.
- The Total OPEB Liability (TOL) is determined using the Entry Age actuarial cost method as specified by GASB and the same 3.50% per year expected return on Fund assets as WPERP uses for funding of the Death Benefit Fund.
- The Net OPEB Liability (NOL) is equal to the difference between the TOL and the Plan's Fiduciary Net Position. The Plan's Fiduciary Net Position is equal to the market value of assets and therefore, the NOL measure is very similar to an Unfunded Actuarial Accrued Liability (UAAL) calculated under the Entry Age actuarial cost method on a market value basis. The NOL reflects all investment gains and losses as of the measurement date.

SECTION 1: Valuation Summary for the Water and Power Employees' Death Benefit Fund

Significant Issues in Valuation Year

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

- For the June 30, 2017 and June 30, 2018 measurements, we used assumptions and methods consistent with those used by the Retirement Plan, with the exception of a 3.50% discount rate assumption and additional assumptions regarding family composition for the Family Death Benefit and Supplemental Family Death Benefit. The 3.50% 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 3.00% inflation assumption.
- The NOL decreased from \$119.2 million as of June 30, 2017 to \$116.7 million as of June 30, 2018, primarily due to an actuarial experience gain during 2017/18. Changes in these values during the last two fiscal years ending June 30, 2017 and June 30, 2018 can be found in Exhibit 3.
- The NOLs measured as of June 30, 2018 and 2017 have been determined from the actuarial valuations as of July 1, 2018 and July 1, 2017, respectively.
- The discount rate used to determine the TOL and NOL as of June 30, 2018 and 2017 was 3.50%. Details on the derivation of the discount rate as of June 30, 2018 can be found in Exhibit 2 of Section 2. Various other information that is required to be disclosed can be found throughout Exhibits 1 through 4 in Section 2. Exhibits 5 through 8 include summaries of the plan provisions and actuarial assumptions.
- The results of this valuation reflect changes in Retirement Plan provisions that were adopted by the Board. The vesting requirement for Tier 2 members was amended to include a reduction in the minimum vesting requirement for Tier 2 members to 5 years.

SECTION 1: Valuation Summary for the Water and Power Employees' Death Benefit Fund

Summary of Key Valuation Results

	2018	2017
Disclosure elements for fiscal year ending June 30:		
Service Cost ⁽¹⁾	\$3,875,903	\$3,656,610
Total OPEB Liability	143,870,026	146,808,572
Plan's Fiduciary Net Position ⁽²⁾	27,210,220	27,584,134
Net OPEB Liability	116,659,806	119,224,438
Schedule of contributions for fiscal year ending June 30:		
Actuarially determined contributions	\$7,137,211	\$7,137,953
Actual contributions	7,137,211	7,137,953
Contribution deficiency (excess)	0	0
Demographic data for plan year ending June 30:		
Number of beneficiaries ⁽³⁾	91	93
Number of retired members	7,199	7,113
Vested terminated members ⁽⁴⁾	656	726
Number of active members ⁽⁵⁾	10,114	9,806
Key assumptions as of June 30:		
Discount rate	3.50%	3.50%
Inflation rate	3.00%	3.00%
Projected salary increases ⁽⁶⁾	4.50% to 10.00%; varying by service, including inflation	4.50% to 10.00%; varying by service, including inflation

⁽¹⁾ The service cost is always based on the previous year's assumptions, meaning that the 2018 and 2017 values are based on those assumptions as of June 30, 2017 and June 30, 2016, respectively.

⁽²⁾ Based on preliminary unaudited financial statements as of June 30, 2018.

⁽³⁾ Receiving Family Death or Supplemental Family Death benefits.

⁽⁴⁾ Includes members receiving Permanent Total Disability (PTD) benefits. Excludes terminated members with less than five years of service who are not eligible for death benefits.

⁽⁵⁾ Includes 1,431 and 1,452 active members who have Supplemental Family Death Benefit coverage for 2018 and 2017, respectively.

⁽⁶⁾ Includes inflation at 3.00% per year plus real across-the-board salary increases of 0.50% plus merit and promotional increases.

SECTION 1: Valuation Summary for the Water and Power Employees' Death Benefit Fund

Important Information about Actuarial Valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of an OPEB plan. It is an estimated forecast – 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.

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. 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

SECTION 1: Valuation Summary for the Water and Power Employees' Death Benefit Fund

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.

SECTION 2: GASB 74 Information for the Water and Power Employees' Death Benefit Fund

EXHIBIT 1

General Information – “Financial Statements”, Note Disclosures and Required Supplementary Information for a Single-Employer OPEB 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, 2018, the members of the Death Benefit Fund consisted of the following:

Beneficiaries currently receiving benefits from Death Benefit Fund	91
Retired members currently receiving benefits from Retirement Plan	7,199
Vested terminated members entitled to, but not yet receiving benefits ⁽¹⁾	656
Active members	<u>10,114</u>
Total	18,060

⁽¹⁾ Includes members receiving Permanent Total Disability (PTD) benefits. Excludes terminated members with less than five years of service who are not eligible for death benefits.

Benefits provided. The WPERP Death Benefit Fund pays death benefits to the beneficiaries of eligible employees. Generally, to be eligible for the Family Death Benefit allowance, an employee must be a full member of WPERP and contributing to WPERP at the time of death. If death occurs after retirement, the retired member must be receiving a monthly retirement allowance from WPERP, and had a least five years of Department Service at retirement. The Family Death Benefit program pays a monthly allowance of \$416 to the surviving spouse of a member with minor (or disabled) children plus \$416 for each minor (or disabled) child up to a maximum monthly allowance of \$1,170. In addition, the spouse's portion will not be paid if

SECTION 2: GASB 74 Information for the Water and Power Employees' Death Benefit Fund

the spouse is receiving a Survivor's Optional Death Benefit Allowance or an Eligible Spouse Allowance from the Retirement Plan.

The Supplemental Family Death program is similar, but is optional and subject to making additional member contributions. The Supplemental Family Death Benefit program pays a monthly allowance of \$520 for each surviving spouse or child, in addition to the amounts payable from the Family Death Benefit program, subject to a maximum of \$1,066 for the additional benefits.

The Insured Lives Death Benefit Fund for Contributing Members provides death benefits to employees that die while employed by the Department. Generally, to be eligible, an employee must be a full member of WPERP and contributing to WPERP at time of death. The benefit paid from the Death Benefit Fund is a single sum that is equal to the lesser of 14 times the member's monthly compensation with no maximum.

The Insured Lives Death Benefit Fund for Noncontributing Members provides death benefits to employees that 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 to the Death Benefit Fund 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 and member contribution rates as of June 30, 2018 are as follows:

	Department	Members	
		Active	Retired
Family Death Benefit	\$1.76 monthly per active member	N/A	N/A
Supplemental Family Death Benefit	N/A	\$2.25 biweekly	\$4.90 monthly
Insured Lives:			
Contributing	\$0.21 per \$100 of payroll	\$1.00 biweekly	N/A
Noncontributing	\$1.01 per \$100 of monthly retirement benefit	N/A	N/A

SECTION 2: GASB 74 Information for the Water and Power Employees' Death Benefit Fund

EXHIBIT 2

Net OPEB Liability

The components of the Net OPEB Liability are as follows:

	June 30, 2018	June 30, 2017
Total OPEB Liability	\$143,870,026	\$146,808,572
Plan's Fiduciary Net Position	<u>-27,210,220</u>	<u>-27,584,134</u>
Net OPEB Liability	\$116,659,806	\$119,224,438
Plan's Fiduciary Net Position as a percentage of the Total OPEB Liability	18.91%	18.79%

The Net OPEB Liability (NOL) was measured as of June 30, 2018 and 2017 and determined based upon the Plan's Fiduciary Net Position (plan assets) and Total OPEB Liability (TOL) from actuarial valuations as of July 1, 2018 and 2017, respectively.

Plan provisions. The plan provisions used in the measurement of the NOL are the same as those described previously and also shown later.

Actuarial assumptions. The TOL as of June 30, 2018 and 2017 were determined by actuarial valuations as of July 1, 2018 and 2017, respectively. The actuarial assumptions used in the June 30, 2018 and 2017 measurements were based on the results of an experience study for the period from July 1, 2012 through June 30, 2015. They are the same as the assumptions used in the July 1, 2018 actuarial valuation for the Retirement Plan, with the exception of a 3.50% investment return assumption and additional assumptions regarding family composition for the Family Death Benefit and Supplemental Family Death Benefit. In particular, the following assumptions were applied to all periods included in the measurement:

Inflation	3.00%
Salary increases	4.50% to 10.00%, vary by service, including inflation
Investment rate of return	3.50%, net of investment expense, including inflation
Other assumptions:	Same as those described in Exhibits 5 through 8

The long-term expected rate of return on OPEB plan investments was determined in 2016 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,

SECTION 2: GASB 74 Information for the Water and Power Employees' Death Benefit Fund

but before deducting investment expenses, used in the derivation of the long-term expected investment rate of return assumption as of June 30, 2018 and 2017 are summarized in the following table. This information will change every three years based on the actuarial experience study.

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Fixed Income	96%	0.82%
Cash and Cash Equivalents	<u>4%</u>	-0.46%
Total	100%	

Discount rate: The discount rate used to measure the TOL was 3.50% as of June 30, 2018 and 2017, respectively. A “crossover test” was not explicitly performed since the municipal bond rate as of June 30, 2018 and 2017 was 3.87% and 3.58%, respectively. Those municipal bond rates were actually higher than the 3.50% long-term expected rate of return on OPEB plan investments. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the TOL as of both June 30, 2018 and June 30, 2017.

Sensitivity of the Net OPEB Liability to changes in the discount rate. The following presents the NOL of the Plan as of June 30, 2018, calculated using the discount rate of 3.50%, as well as what the Plan NOL would be if it were calculated using a discount rate that is 1-percentage-point lower (2.50%) or 1-percentage-point higher (4.50%) than the current rate:

	1% Decrease (2.50%)	Current Discount Rate (3.50%)	1% Increase (4.50%)
Net OPEB Liability as of June 30, 2018	\$138,389,690	\$116,659,806	\$99,378,700

Since there is no trend rate assumption used in valuing these benefits, the NOL is unaffected by any changes in trend rates.

SECTION 2: GASB 74 Information for the Water and Power Employees' Death Benefit Fund

EXHIBIT 3

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

	2018	2017
Total OPEB Liability		
Service Cost	\$3,875,903	\$3,656,610
Interest	5,140,912	5,095,026
Change of benefit terms	90,905	0
Differences between expected and actual experience	-4,443,689	125,381
Changes of assumptions	0	0
Benefit payments	<u>-7,602,577</u>	<u>-7,968,010</u>
Net change in Total OPEB Liability	-\$2,938,546	\$909,007
Total OPEB Liability – beginning	<u>\$146,808,572</u>	<u>\$145,899,565</u>
Total OPEB Liability – ending (a)	<u>\$143,870,026</u>	<u>\$146,808,572</u>
Plan's Fiduciary Net Position		
Contributions – employer (including those for administrative expenses)	\$8,101,199	\$8,206,607
Contributions – employee	346,931	336,630
Net investment income	-119,894	-56,662
Benefit payments	-7,602,577	-7,968,010
Administrative expense	-1,099,573	-1,119,190
Other	<u>0</u>	<u>0</u>
Net change in Plan's Fiduciary Net Position	-\$373,914	-\$600,625
Plan's Fiduciary Net Position – beginning	<u>\$27,584,134</u>	<u>\$28,184,759</u>
Plan's Fiduciary Net Position – ending (b)	<u>\$27,210,220</u>	<u>\$27,584,134</u>
Net OPEB Liability – ending (a) – (b)	<u>\$116,659,806</u>	<u>\$119,224,438</u>
Plan's Fiduciary Net Position as a percentage of the Total OPEB Liability	18.91%	18.79%
Covered employee payroll	\$953,635,670	\$892,332,196
Plan Net OPEB Liability as percentage of covered employee payroll	12.23%	13.36%

Notes to Schedule:

Benefit changes: Certain technical amendments related to the administration of Tier 2 provisions were adopted. The vesting requirement for Tier 2 members was amended to include a reduction in the minimum vesting requirement for Tier 2 members to 5 years.

SECTION 2: GASB 74 Information for the Water and Power Employees' Death Benefit Fund

EXHIBIT 4

Schedule of Employer Contributions – Last Three Fiscal Years

Year Ended June 30	Actuarially Determined Contributions*	Contributions in Relation to the Actuarially Determined Contributions*	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
2016	\$7,206,780	\$7,206,780	\$0	\$861,818,854	0.84%
2017	7,137,953	7,137,953	0	892,332,196	0.80%
2018	7,137,211	7,137,211	0	953,635,670	0.75%

* Excludes employer contributions towards administrative expenses.

See accompanying notes to this schedule on next page.

SECTION 2: GASB 74 Information for the Water and Power Employees' Death Benefit Fund

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	Varies by component of the Death Benefit Fund as follows: Family Death Benefit: Recommend a contribution rate that maintains assets at a target level equal to the reserve for benefits granted plus an additional 20% Supplemental Family Death Benefit: Established once stable annual costs are achieved. Insured Lives Death Benefit (Both): 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.

	<u>July 1, 2018 Valuation Date</u>	<u>July 1, 2017 Valuation Date</u>
Actuarial assumptions:		
Investment rate of return	3.50%, net of investment expenses	3.50%, net of investment expenses
Inflation rate	3.00%	3.00%
Real across-the-board salary increase	0.50%	0.50%
Projected salary increases	4.50% to 10.00%	4.50% to 10.00%
Other assumptions	Same as those described in Exhibits 5 through 8	Same as those described in Exhibits 5 through 8

SECTION 2: GASB 74 Information for the Water and Power Employees' Death Benefit Fund

EXHIBIT 5

Methods, Assumptions and Plan Summary for the Family Death Benefit

Plan Year: July 1 through June 30
Net Investment Return: 3.50%, net of investment expenses.

Family Composition at Death for Active Members:

Member's Age at Death								Children's Age	
	Not Married No Child	Not Married One Child	Not Married 2+ Child	Married No Child	Married One Child	Married 2+ Child	Married One Disabled Child	Child 1	Child 2
Under 55	20%	5%	7%	16%	15%	30%	7%	10	8

No benefits are assumed to be payable upon deaths of active members age 55 or over or deaths of inactive vested members (receiving a Permanent Total Disability benefit) or retirees at any age.

Other Actuarial Assumptions: Same as those used in July 1, 2018 actuarial valuation report for the Retirement Plan.
Actuarial Cost Method: Entry Age 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
Member Contribution Rate: None
Department Contribution Rate: Current monthly rate is \$1.76 per active covered member.
Age and Service Requirement: Pre-retirement death of an active member at any age who is a full member of WPERP and was contributing to WPERP. If death occurs after retirement, must be receiving a retirement monthly retirement allowance from WPERP and had at least five years of Department Service at retirement.
Other Requirements: The plan provides a monthly benefit for each surviving child that is:

- the naturally or legally adopted child of the member
- is under 18 and unmarried, or
- disabled and over age 18 (only if the disability occurred before age 18) and unmarried.

SECTION 2: GASB 74 Information for the Water and Power Employees' Death Benefit Fund

EXHIBIT 5 (continued)

Methods, Assumptions and Plan Summary for the Family Death Benefit

Monthly Benefit:

The monthly benefit is the sum of:

- \$416 per month to each surviving child, plus
- \$416 per month to spouse (if the member's spouse has care of one or more of the member's eligible children)

limited so that the total amount payable cannot exceed \$1,170 per month. In addition, the spouse's portion will not be paid if the spouse is receiving a Survivor's Optional Death Benefit Allowance or an Eligible Spouse Allowance from the Retirement Plan. The benefit is no longer payable when the member's children no longer satisfy the eligibility requirements noted above.

Changes in Actuarial Assumptions:

There have been no changes in actuarial assumptions since the prior valuation.

SECTION 2: GASB 74 Information for the Water and Power Employees' Death Benefit Fund

EXHIBIT 6

Methods, Assumptions and Plan Summary for the Supplemental Family Death Benefit

Plan Year: July 1 through June 30
Net Investment Return: 3.50%, net of investment expenses.

Family Composition at Death for Active Members:

Member's Age at Death								Children's Age	
	Not Married No Child	Not Married One Child	Not Married 2+ Child	Married No Child	Married One Child	Married 2+ Child	Married One Disabled Child	Child 1	Child 2
Under 55	0%	15%	17%	0%	22%	39%	7%	10	8

No benefits are assumed to be payable upon deaths of active members age 55 or over or deaths of inactive vested members (receiving a Permanent Total Disability benefit) or retirees at any age.

Other Actuarial Assumptions: Same as those used in July 1, 2018 actuarial valuation report for the Retirement Plan.
Actuarial Cost Method: Entry Age 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
Member Contribution Rate: \$2.25 per biweekly period (or \$4.90 per month if retired).
Department Contribution Rate: The department will provide any additional funds necessary to fund the benefits.
Age and Service Requirement: Pre-retirement death of an active member at any age who is a full member of WPERP and was contributing to WPERP or post-retirement death of retired member receiving monthly retirement allowance from WPERP.
 Must be enrolled and make contributions by payroll deductions for 39 successive biweekly payroll periods (approximately 18 months) before coverage becomes effective.
Other Requirements: Same as Family Death Benefit shown in Exhibit 5.

SECTION 2: GASB 74 Information for the Water and Power Employees' Death Benefit Fund

EXHIBIT 6 (continued)

Methods, Assumptions and Plan Summary for the Supplemental Family Death Benefit

Monthly Benefit:	<p>The monthly benefit is the sum of:</p> <ul style="list-style-type: none">• \$520 per month to each surviving child, plus• \$520 per month to spouse (if the member's spouse has care of one or more of the member's eligible children) <p>limited so that the total amount payable cannot exceed \$1,066 per month. In addition, the spouse's portion will not be paid if the spouse is receiving a Survivor's Optional Death Benefit Allowance or an Eligible Spouse Allowance from the Retirement Plan. The benefit is no longer payable when the member's children no longer satisfy the eligibility requirements noted above.</p>
Changes in Actuarial Assumptions:	<p>There have been no changes in actuarial assumptions since the prior valuation.</p>

SECTION 2: GASB 74 Information for the Water and Power Employees' Death Benefit Fund

EXHIBIT 7

Methods, Assumptions and Plan Summary for the Insured Lives Death Benefit (Contributing Active Members)

Plan Year:	July 1 through June 30
Net Investment Return	3.50%, net of investment expenses.
Other Actuarial Assumptions:	Same as those used in July 1, 2018 actuarial valuation report for the Retirement Plan.
Actuarial Cost Method:	Entry Age 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
Member Contribution Rate:	Employees contribute \$1.00 per biweekly payroll period.
Department Contribution Rate:	Rate recommended by Board's Actuary as an amount per \$100 of covered payroll. Current rate is \$0.21 per \$100 of payroll.
Age and Service Requirement:	Any age with six months of continuous service. Pre-retirement death of an active member who is a full member of WPERP and was contributing to WPERP.
Benefit:	A single sum distribution equal to 14 times monthly salary. In addition to this Insured Lives Death Benefit, death benefits payable from the Retirement Plan are payable to the beneficiary (not valued in this valuation).
Changes in Actuarial Assumptions:	There have been no changes in actuarial assumptions since the prior valuation.

SECTION 2: GASB 74 Information for the Water and Power Employees' Death Benefit Fund

EXHIBIT 8

Methods, Assumptions and Plan Summary for the Insured Lives Death Benefit (Non-Contributing Retired Members)

Plan Year:	July 1 through June 30
Net Investment Return	3.50%, net of investment expenses.
Other Actuarial Assumptions:	Same as those used in July 1, 2018 actuarial valuation report for the Retirement Plan.
Actuarial Cost Method:	Entry Age 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
Member Contribution Rate:	None
Department Contribution Rate:	Rate recommended by Board's Actuary as an amount per \$100 of retirement benefits paid during the year. Current contribution rate is \$1.01 per \$100 of monthly retirement benefit.
Age and Service Requirement:	Death occurs after retirement and member was receiving a retirement monthly allowance from WPERP and had at least five years of Department Service at retirement.
Benefit:	A single sum distribution equal to 14 times the member's Full Retirement Allowance (to a maximum of \$20,000). In addition to this Insured Lives Death Benefit, death benefits payable from the Retirement Plan include any unpaid Retirement Plan allowances due and the balance of contributions remaining in the Retirement Plan if Option A was the member's selected method of pension payment all of which is payable to beneficiary (not valued in this valuation).
Changes in Actuarial Assumptions:	There have been no changes in actuarial assumptions since the prior valuation.

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