City of Los Angeles Department of Water and Power

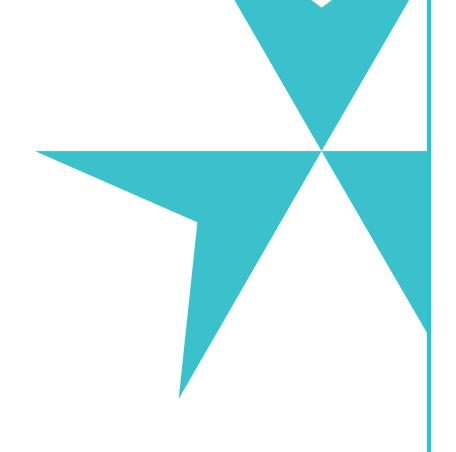
Governmental Accounting Standards Board Statement 75 (GAS 75) Actuarial Valuation for the Death Benefit Fund

Actuarial Valuation Based on June 30, 2022 Measurement Date for Employer Reporting as of June 30, 2023

- 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 LADWP to assist in preparing their financial report for their liabilities associated with the Death Benefit Fund. This valuation report may not otherwise be copied or reproduced in any form without the consent of the LADWP 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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November 16, 2023

Ms. Ann Santilli
Chief Financial Officer
Department of Water and Power – City of Los Angeles
111 North Hope Street, Room 450
Los Angeles, CA 90012

Dear Ann:

We are pleased to submit this Governmental Accounting Standards (GAS) 75 Actuarial Valuation of the Death Benefit Fund based on a June 30, 2022 measurement date for employer reporting as of June 30, 2023. It contains various information that will need to be disclosed in order for the two systems in the Los Angeles Department of Water and Power (LADWP) to comply with GAS 75.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the LADWP to assist the sponsors in preparing their financial report for their liabilities associated with the Death Benefit Fund. 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 Eva Yum, FSA, 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

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

EH/jl

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Purpose and basis

This report has been prepared by Segal to present certain disclosure information required by Governmental Accounting Standards (GAS) 75 for employer reporting as of June 30, 2023. The results used in preparing this GAS 75 report are comparable to those used in preparing the GAS 74 report for the Water and Power Employees' Death Benefit Fund based on a reporting date and a measurement date as of June 30, 2022. 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, 2022, provided by the Retirement Office;
- The assets of the Fund as of June 30, 2022, provided by the Retirement Office;
- Economic assumptions regarding future salary increases and investment earnings adopted by the Board for the July 1, 2022 valuation; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc. adopted by the Board for the July 1, 2022 valuation.

General observations on GAS 75 actuarial valuation

- 1. 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 should develop and adopt funding policies under current practices.
- When measuring OPEB Death Benefit liability, GASB uses the same actuarial cost method (Entry Age method) and the same type of discount rate (expected return on assets) as WPERP uses for funding. This means that the Total OPEB Liability (TOL) measure for financial reporting shown in this report is determined on the same basis as WPERP's Death Benefit Actuarial Accrued Liability (AAL) measure for funding. We note that the same is generally true for the Normal Cost component of the annual plan cost for funding and financial reporting.

3. The Net OPEB Liability (NOL) is equal to the difference between the TOL and the Plan Fiduciary Net Position. The Plan 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 on a market value basis. The NOL reflects all investment gains and losses as of the measurement date.

Highlights of the valuation

- 1. For this report, the reporting dates for the employer are June 30, 2023 and June 30, 2022. The NOLs were measured as of June 30, 2022 and June 30, 2021 and determined from the actuarial valuations as of July 1, 2022 and July 1, 2021, respectively. The Plan Fiduciary Net Position (plan assets) and the TOL were valued as of the measurement dates. Consistent with the provisions of GAS 75, the assets and liabilities measured as of June 30, 2022 and June 30, 2021 are not adjusted or rolled forward to the June 30, 2023 and June 30, 2022 reporting dates, respectively.
- 2. The June 30, 2022 measurement date results reflect changes in the economic and demographic assumptions as recommended by Segal and adopted by the board for the July 1, 2022 valuation on July 13, 2022. These changes were documented in our Analysis of Actuarial Experience During the Period July 1, 2018 through June 30, 2021 for The Water and Power Employees' Retirement Plan of the City of Los Angeles and in our letter Review of Investment Return Assumption for Death and Disability Funds dated May 20, 2022.
- 3. For the June 30, 2022 measurement, we used assumptions and methods consistent with those used by the Retirement Plan, with the exception of a 2.75% discount rate assumption and additional assumptions regarding family composition for the Family Death Benefit and Supplemental Family Death Benefit. The 2.75% 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 2.50% inflation assumption used for the July 1, 2022 retirement plan valuation.
- 4. The NOL increased from \$93.3 million as of June 30, 2021 to \$112.7 million as of June 30, 2022. The primary reasons for the increase in NOL were the assumption changes and the unfavorable investment return during the year ending June 30, 2022 (-10.23% return which was lower than the assumed return of 3.50%) partially offset by the employer contributions made during 2021-2022 to pay down the Unfunded Actuarial Accrued Liability. Changes in these values during the last two fiscal years ending June 30, 2021 and June 30, 2022 can be found in Section 2, Schedule of changes in Net OPEB Liability on page 16.
- 5. The discount rates used to determine the TOL and NOL as of June 30, 2022 and 2021 were 2.75% and 3.50%, respectively. Details on the derivation of the discount rate as of June 30, 2022 can be found in Section 2, Determination of discount rate and investment rates of return on page 14. Various other information that is required to be disclosed can be found throughout Section 2. Actuarial assumptions and methods can be found in the Actuarial Assumptions and Methods subsection in Section 3.

- 6. There was an increase in the total employer OPEB expense from \$7.4 million calculated last year to \$10.8 million calculated this year. The primary cause of the increase was \$3.5 million in new charges from the assumption changes, lower than expected return on market value of assets during the year ending June 30, 2022, and actual experience less favorable than expected in the total OPEB liability. A breakdown of the OPEB expenses for this year and last year can be found in Section 2, OPEB Expense on page 22.
- 7. The NOL has been allocated based on the projected compensation for each system for the fiscal year following the measurement date. LADWP provided us with information that indicates each member's percentage under Water versus Power and we used these percentages to determine each member's allocation between these two systems. The NOL allocation can be found in Section 2, Determination of Proportionate Share on page 19.
- 8. Results shown in this report exclude any employer contributions made after the measurement date of June 30, 2022. LADWP should consult with their auditors to determine the deferred outflow that should be created for these contributions.
- 9. It is important to note that this actuarial valuation is based on plan assets as of June 30, 2022. The Plan's funded status does not reflect short-term fluctuations of the market, but rather is based on the market values on the last day of the Plan Year. Moreover, this actuarial valuation does not include any possible short-term or long-term impacts on mortality of the covered population that may emerge after March 31, 2022 due to COVID-19. Segal is available to prepare projections of potential outcomes of market conditions and other demographic experience upon request.

Summary of key valuation results

Reporting Date for Employer under GAS 75 Measurement Date for Employer under GAS 75		June 30, 2023 ¹	June 30, 2022¹
		June 30, 2022	June 30, 2021
Disclosure elements for	Service cost ²	\$5,052,420	\$5,040,195
plan year ending	 Total OPEB Liability 	153,187,434	134,038,066
June 30:	 Plan Fiduciary Net Position³ 	40,525,139	40,738,247
	 Net OPEB Liability 	112,662,295	93,299,819
	OPEB expense	10,783,007	7,366,966
Schedule of contributions	 Actuarially determined contributions⁴ 	\$13,075,979	\$12,565,096
for plan year ending • Actual contributions		13,133,730	12,898,727
June 30:	 Contribution deficiency / (excess) 	-57,751	-333,631
Demographic data for plan	 Number of beneficiaries⁵ 	93	82
year ending June 30:	 Number of retired members 	7,760	7,621
	 Vested terminated members⁶ 	595	599
	 Number of active members⁷ 	10,799	10,605
Key assumptions as of	Discount rate	2.75%	3.50%
June 30:	 Inflation rate 	2.50%	2.75%
	 Projected salary increases⁸ 	4.25% to 10.00%; varying by service, including inflation	4.50% to 10.25%; varying by service, including inflation
	Cost of living adjustments	2.75% for Tier 1 and 2.00% for Tier 2	2.75% for Tier 1 and 2.00% for Tier 2

The reporting dates and measurement dates for the plan are June 30, 2022 and 2021, respectively.

Includes inflation at 2.50% and 2.75% per year plus real across-the-board salary increases of 0.50% plus merit and promotion increases as of June 30, 2022 and 2021, respectively.



The service cost is always based on the previous year's assumptions, meaning that the June 30, 2022 and June 30, 2021 measurement values are based on the assumptions shown in the June 30, 2021 column as there had been no changes in the actuarial assumptions between the July 1, 2020 and July 1, 2021 valuations.

Based on final audited financial statements as of June 30, 2022.

Based on actual covered payroll reported by the Retirement Office.

Receiving Family Death or Supplemental Family Death benefits.

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.

Includes 1,587 and 1,593 active members who have Supplemental Family Death Benefit coverage for 2022 and 2021, respectively.

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 a valuation, 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 provisions.
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 measurement 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, termination, 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.
Models	Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are prepared to meet regulatory, legislative and client requirements. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility and user control. The client team programs the assumptions and the plan provisions, validates the models, and reviews test lives and results, under the supervision of the responsible actuary.

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 LADWP to assist in preparing items related to the Death Benefit Fund in their financial report. 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 LADWP 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. LADWP should look to their other advisors for expertise in these areas.

As Segal 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 or LADWP.

General information about the 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, 2022, the members of the Death Benefit Fund consisted of the following:

Beneficiaries currently receiving benefits from Death Benefit Fund	93
Retired members currently receiving benefits from Retirement Plan	7,760
Vested terminated members entitled to, but not yet receiving benefits ¹	595
Active members	10,799
Total	19,247

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 at 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 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 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, 2022 are as follows:

		Mem	bers
	Department	Active	Retired
Total Death Benefit Fund	1.11% of payroll		
Family Death Benefit		N/A	N/A
Supplemental Family Death Benefit		\$2.25 biweekly	\$4.90 monthly
Insured Lives:			
Contributing		\$1.00 biweekly	N/A
Noncontributing		N/A	N/A

Net OPEB Liability

Reporting Date for Employer under GAS 75	June 30, 2023	June 30, 2022
Measurement Date for Employer under GAS 75	June 30, 2022	June 30, 2021
Components of the Net OPEB Liability		
Total OPEB Liability	\$153,187,434	\$134,038,066
Plan Fiduciary Net Position	<u>40,525,139</u>	40,738,247
Net OPEB Liability	\$112,662,295	\$93,299,819
Plan Fiduciary Net Position as a percentage of the Total OPEB Liability	26.45%	30.39%

The Net OPEB Liability (NOL) was measured as of June 30, 2022 and 2021 and determined based upon the Plan Fiduciary Net Position (plan assets) and Total OPEB Liability (TOL) from actuarial valuations as of July 1, 2022 and 2021, respectively.

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

Actuarial assumptions. The TOL as of June 30, 2022 was determined by the actuarial valuation as of July 1, 2022. The actuarial assumptions used in the June 30, 2022 measurement was based on the results of an experience study for the period from July 1, 2018 through June 30, 2021. They are the same as the assumptions used in the July 1, 2022 actuarial valuation for the Retirement Plan, with the exception of a 2.75% 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 June 30, 2022 measurement:

Inflation	2.50%
Cost of living adjustment	2.75% for Tier 1 and 2.00% for Tier 2
Salary increases	4.25% to 10.00%, vary by service, including inflation
Investment rate of return	2.75%, net of investment expense, including inflation
Other assumptions:	Same as those described in the Actuarial assumptions and Methods subsection in Section 3.

The TOL as of June 30, 2021 was determined by an actuarial valuation as of July 1, 2021. The actuarial assumptions used in the June 30, 2021 measurement were based on the results of an experience study for the period from July 1, 2015 through June 30, 2018. They are the same as the assumptions used in the July 1, 2021 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 June 30, 2021 measurement:

Inflation	2.75%
Cost of living adjustment	2.75% for Tier 1 and 2.00% for Tier 2
Salary Increases	4.50% to 10.25%, varying by service, including inflation
Investment Rate of Return	3.50%, net of investment expense, including inflation
Other assumptions	Same as those described in the Actuarial assumptions and Methods subsection in Section 3.

The Water and Power Employees' Death Benefit Fund – GAS 75 Actuarial Valuation for Employer Reporting as of June 30, 2023

Determination of discount rate and investment rates of return

The long-term expected rate of return on Death Benefit Fund investments was determined in 2022 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 as of June 30, 2022 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	100%	0.36%
Total	100%	

Discount rate: The discount rates used to measure the TOL were 2.75% and 3.50% as of June 30, 2022 and 2021, respectively. A "crossover test" was not explicitly performed as of June 30, 2022 since the municipal bond rate as of June 30, 2022 was 3.54%, which was higher than the 2.75% long-term expected rate of return on the Death Benefit Fund's investments. Therefore, the long-term expected rate of return on the Death Benefit Fund's investments was applied to all periods of projected benefit payments to determine the TOL as of June 30, 2022.

The projection of cash flows used to determine the June 30, 2021 discount rate assumed member contributions will be made at the current contribution rates and that employer contributions will be made at rates equal to the required contribution rates. For this purpose, only employee and 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, as well as projected contributions from future plan members, are not included. Based on those assumptions, the Plan 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 the Death Benefit Fund's investments was applied to all periods of projected benefit payments to determine the TOL as June 30, 2021.

Discount rate sensitivity

Sensitivity of the Net OPEB Liability to changes in the discount rate. The following presents the NOL of the Plan as of June 30, 2022, calculated using the discount rate of 2.75%, as well as what the Plan NOL would be if it were calculated using a discount rate that is 1-percentage-point lower (1.75%) or 1-percentage-point higher (3.75%) than the current rate:

System	1% Decrease (1.75%)	1% Decrease (1.75%) Current Discount Rate (2.75%)	
Water	\$45,572,271	\$37,035,574	\$30,275,388
Power	93,058,673	<u>75,626,721</u>	61,822,407
Total for all systems	\$138,630,944	\$112,662,295	\$92,097,795

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

Schedule of changes in Net OPEB Liability

Reporting Date for Employer under GAS 75 Measurement Date for Employer under GAS 75	June 30, 2023 June 30, 2022	June 30, 2022 June 30, 2021
Total OPEB Liability		
Service Cost	\$5,052,420	\$5,040,195
Interest	4,704,713	4,677,912
Change of benefit terms	0	0
Differences between expected and actual experience	1,508,032	828,147
Changes of assumptions	17,224,419	0
Benefit payments	<u>-9,340,216</u>	-10,245,251
Net change in Total OPEB Liability	\$19,149,368	\$301,003
Total OPEB Liability – beginning	<u>\$134,038,066</u>	<u>\$133,737,063</u>
Total OPEB Liability – ending (a)	\$153,187,434	\$134,038,066
Plan Fiduciary Net Position		
 Contributions – employer (including those for administrative expenses) 	\$14,991,933	\$14,522,798
Contributions – employee	372,258	373,989
Net investment income	-4,381,121	343,631
Benefit payments	-9,340,216	-10,245,251
Administrative expense	<u>-1,855,962</u>	<u>-1,621,742</u>
Net change in Plan Fiduciary Net Position	-\$213,108	\$3,373,425
Plan Fiduciary Net Position – beginning	\$40,738,247	\$37,364,822
Plan Fiduciary Net Position – ending (b)	\$40,525,139	\$40,738,247
Net OPEB Liability – ending (a) – (b)	\$112,662,295	\$93,299,819
Plan Fiduciary Net Position as a percentage of the Total OPEB Liability	26.45%	30.39%
Covered payroll	\$1,178,016,102	\$1,121,883,556
Plan Net OPEB Liability as percentage of covered payroll	9.56%	8.32%

Notes to Schedule:

Benefit changes: None.

Schedule of Employer Contributions – Last Seven Fiscal Years

Year Ended June 30	Actuarially Determined Contributions ^{1,2}	Contributions in Relation to the Actuarially Determined Contributions ¹	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%
2019	7,259,955	7,259,955	0	1,028,212,002	0.71%
2020	13,334,780	13,299,775	35,005	1,130,066,141	1.18%
2021	12,565,096	12,898,727	-333,631	1,121,883,556	1.15%
2022	13,075,979	13,133,730	-57,751	1,178,016,102	1.11%

See accompanying notes to this schedule on the next page.

¹ Excludes employer contributions towards administrative expenses.

² Starting in 2020, the actuarially determined contribution is determined based on actual covered payroll reported by the Retirement Office.

Notes to Schedule:

Methods and assumptions used to establish "actuarially determined contribution" (ADC) 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:	Entry Age Actuarial Cost Method
Asset valuation method:	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.
Amortization Method	Level dollar amortization
Remaining amortization period	The July 1, 2019 Unfunded Actuarial Accrued Liability is amortized over a fifteen-year period commencing July 1, 2019 (fully amortized as of July 1, 2034). Any subsequent changes in Surplus or Unfunded Actuarial Accrued Liability are amortized over separate fifteen-year periods.

Actuarial assumptions:

Valuation Date:	July 1, 2022 Valuation Date	July 1, 2021 Valuation Date
Investment rate of return:	2.75%, net of investment expenses	3.50%, net of investment expenses
Inflation rate:	2.50%	2.75%
Real across-the-board salary increase:	0.50%	0.50%
Projected salary increases:1	4.25% to 10.00%	4.50% to 10.25%
Cost of living adjustments:	2.75% for Tier 1 and 2.00% for Tier 2 (actual increases are contingent upon CPI increases with a 3.00% maximum for Tier 1, 2.00% maximum for Tier 2)	2.75% for Tier 1 and 2.00% for Tier 2 (actual increases are contingent upon CPI increases with a 3.00% maximum for Tier 1, 2.00% maximum for Tier 2)
Other assumptions:	Same as those used in the July 1, 2022 funding actuarial valuation	Same as those used in the July 1, 2021 funding actuarial valuation

¹ Includes inflation at 2.50% and 2.75% as of July 1, 2022 and 2021, respectively plus real across-the-board salary increases of 0.50% plus merit and promotion increases.

Determination of proportionate share

Projected Compensation by System July 1, 2022 to June 30, 2023

System	Projected Compensation	Percentage
Water	\$430,588,227	32.873%
Power	<u>879,262,093</u>	<u>67.127%</u>
Total	\$1,309,850,320	100.000%

Allocation of June 30, 2022 Net OPEB Liability (NOL)

System	NOL	Percentage
Water	\$37,035,574	32.873%
Power	<u>75,626,721</u>	<u>67.127%</u>
Total	\$112,662,295	100.000%

Notes:

- The unrounded percentages are used in the allocation of the NOL amongst systems.
- The Net OPEB Liability (NOL) has been allocated based on the projected compensation for each system for the fiscal year
 following the measurement date. LADWP provided us with information that indicates each member's percentage under Water
 versus Power and we used those percentages to determine each member's allocation between these two systems. Projected
 July 1, 2022 through June 30, 2023 compensation information is from the July 1, 2022 actuarial valuation for the Retirement
 Plan.
- The NOL is equal to the difference between the Total OPEB Liability (TOL) and the Plan Fiduciary Net Position (plan assets).
- The NOL is allocated based on the projected compensation from each system. The steps used for the allocation are as follows:
 - 1. First calculate the ratio of the projected compensation from the system to the total projected compensation.
 - 2. Then multiply this ratio by the NOL to determine the system's proportionate share of the NOL.

Determination of proportionate share (continued)

Projected Compensation by System July 1, 2021 to June 30, 2022

System	Projected Compensation	Percentage
Water	\$400,027,431	32.436%
Power	<u>833,237,747</u>	<u>67.564%</u>
Total	\$1,233,265,178	100.000%

Allocation of June 30, 2021 Net OPEB Liability (NOL)

System	NOL	Percentage
Water	\$30,263,148	32.436%
Power	<u>63,036,671</u>	<u>67.564%</u>
Total	\$ 93,299,819	100.000%

Notes:

- The unrounded percentages are used in the allocation of the NOL amongst systems.
- The Net OPEB Liability (NOL) has been allocated based on the projected compensation for each system for the fiscal year following the measurement date. LADWP provided us with information that indicates each member's percentage under Water versus Power and we used those percentages to determine each member's allocation between these two systems. Projected July 1, 2021 through June 30, 2022 compensation information is from the July 1, 2021 actuarial valuation for the Retirement Plan.
- The NOL is equal to the difference between the Total OPEB Liability (TOL) and the Plan Fiduciary Net Position (plan assets).
- The NOL is allocated based on the projected compensation from each system. The steps used for the allocation are as follows:
 - 1. First calculate the ratio of the projected compensation from the system to the total projected compensation.
 - 2. Then multiply this ratio by the NOL to determine the system's proportionate share of the NOL.

Determination of proportionate share (continued)

Notes:

For purposes of the above results, the reporting dates for the employer under GAS 75 are June 30, 2023 and June 30, 2022. The reporting date and measurement date for the plan under GAS 74 are June 30, 2022 and June 30, 2021, respectively. Consistent with the provisions of GAS 75, the assets and liabilities measured as of June 30, 2022 and June 30, 2021 are <u>not</u> adjusted or "rolled forward" to June 30, 2023 and June 30, 2022 reporting dates. Other results, such as the total deferred inflows and outflows would also be allocated based on the same proportionate shares determined above.

The following items are allocated based on the corresponding proportionate share shown above.

- Net OPEB Liability
- 2. Service Cost
- 3. Interest on the Total OPEB Liability
- 4. Current-period benefit changes
- 5. Expensed portion of current-period difference between expected and actual experience in the Total OPEB Liability
- 6. Expensed portion of current-period changes of assumptions or other inputs
- 7. Member contributions
- 8. Projected earnings on plan investments
- 9. Expensed portion of current-period differences between actual and projected earnings on plan investments
- 10. Administrative expense
- 11. Recognition of beginning of year deferred outflows of resources as OPEB expense
- 12. Recognition of beginning of year deferred inflows of resources as OPEB expense

OPEB Expense

Total

Reporting Date for Employer under GAS 75	June 30, 2023	June 30, 2022
Measurement Date for Employer under GAS 75	June 30, 2022	June 30, 2021
Service cost	\$5,052,420	\$5,040,195
Interest on the Total OPEB Liability	4,704,713	4,677,912
 Expensed portion of current-period changes in proportion and differences between locations contributions and proportionate share of contributions 	0	0
Current-period benefit changes	0	0
 Expensed portion of current-period difference between expected and actual experience in the Total OPEB Liability 	185,947	102,493
Expensed portion of current-period changes of assumptions or other inputs	2,123,849	0
Member contributions	(372,258)	(373,989)
Projected earnings on plan investments	(1,498,779)	(1,360,790)
 Expensed portion of current-period differences between actual and projected earnings on plan investments 	1,175,980	203,432
Administrative expense	1,855,962	1,621,742
• Other	0	0
Recognition of beginning of year deferred outflows of resources as OPEB expense	604,932	505,730
Recognition of beginning of year deferred inflows of resources as OPEB expense	(3,049,759)	(3,049,759)
 Net amortization of deferred amounts from changes in proportion and differences between system's contributions and proportionate share of contributions 	0	0
OPEB Expense	\$10,783,007	\$7,366,966

OPEB Expense (continued)

Water

Reporting Date for Employer under GAS 75	June 30, 2023	June 30, 2022
Measurement Date for Employer under GAS 75	June 30, 2022	June 30, 2021
Service cost	\$1,660,887	\$1,634,861
Interest on the Total OPEB Liability	1,546,584	1,517,349
 Expensed portion of current-period changes in proportion and differences between locations contributions and proportionate share of contributions 	54,143	14,403
Current-period benefit changes	0	0
 Expensed portion of current-period difference between expected and actual experience in the Total OPEB Liability 	61,127	33,245
Expensed portion of current-period changes of assumptions or other inputs	698,175	0
Member contributions	(122,373)	(121,309)
Projected earnings on plan investments	(492,695)	(441,392)
 Expensed portion of current-period differences between actual and projected earnings on plan investments 	386,581	65,986
Administrative expense	610,112	526,036
• Other	0	0
Recognition of beginning of year deferred outflows of resources as OPEB expense	198,860	164,041
Recognition of beginning of year deferred inflows of resources as OPEB expense	(1,002,550)	(989,234)
 Net amortization of deferred amounts from changes in proportion and differences between system's contributions and proportionate share of contributions 	<u>84,175</u>	69,772
OPEB Expense	\$3,683,026	\$2,473,758

OPEB Expense (continued)

Power

Reporting Date for Employer under GAS 75	June 30, 2023	June 30, 2022
Measurement Date for Employer under GAS 75	June 30, 2022	June 30, 2021
Service cost	\$3,391,533	\$3,405,334
Interest on the Total OPEB Liability	3,158,129	3,160,563
 Expensed portion of current-period changes in proportion and differences between locations contributions and proportionate share of contributions 	(54,143)	(14,403)
Current-period benefit changes	0	0
 Expensed portion of current-period difference between expected and actual experience in the Total OPEB Liability 	124,820	69,248
Expensed portion of current-period changes of assumptions or other inputs	1,425,674	0
Member contributions	(249,885)	(252,680)
Projected earnings on plan investments	(1,006,084)	(919,398)
 Expensed portion of current-period differences between actual and projected earnings on plan investments 	789,399	137,446
Administrative expense	1,245,850	1,095,706
• Other	0	0
Recognition of beginning of year deferred outflows of resources as OPEB expense	406,072	341,689
Recognition of beginning of year deferred inflows of resources as OPEB expense	(2,047,209)	(2,060,525)
 Net amortization of deferred amounts from changes in proportion and differences between system's contributions and proportionate share of contributions 	<u>(84,175)</u>	<u>(69,772)</u>
OPEB Expense	\$7,099,981	\$4,893,208

Deferred Outflows of Resources and Deferred Inflows of Resources

Total		
Reporting Date for Employer under GAS 75	June 30, 2023	June 30, 2022
Measurement Date for Employer under GAS 75	June 30, 2022	June 30, 2021
Deferred Outflows of Resources		
 Changes in proportion and differences between system's contributions and proportionate share of contributions¹ 	\$1,392,892	\$1,287,048
Changes of assumptions or other inputs	15,100,570	0
Net difference between projected and actual earnings on OPEB plan investments	4,369,925	0
Difference between actual and expected experience	2,188,259	1,051,497
Total Deferred Outflows of Resources	\$23,051,646	\$2,338,545
Deferred Inflows of Resources	· · ·	
Changes in proportion and differences between system's contributions and proportionate share of contributions ¹	\$1,392,892	\$1,287,048
Changes of assumptions or other inputs	5,453,530	7,016,146
Net difference between actual and projected earnings on OPEB plan investments	0	521,793
Difference between expected and actual experience	<u>2,613,686</u>	<u>3,493,422</u>
Total Deferred Inflows of Resources	\$9,460,108	\$12,318,409
Deferred outflows of resources and deferred inflows of resources related to OPEB will be	e recognized as follows	S:
Reporting Date for Employer under GAS 75 Year Ended June 30:		
2023	N/A	\$(2,444,827)
2024	\$823,690	(2,662,086)
2025	1,077,231	(2,408,545)
2026	1,894,175	(1,591,601)
2027	2,590,056	(895,720)
2028	2,222,015	(87,781)
2029	2,412,289	102,493
2030	2,317,999	8,203
2031	254,083	0
Thereafter	0	0

¹ Calculated in accordance with Paragraphs 64 and 65 of GAS 75.

Deferred Outflows of Resources and Deferred Inflows of Resources (continued)

Mator

Water		
Reporting Date for Employer under GAS 75	June 30, 2023	June 30, 2022
Measurement Date for Employer under GAS 75	June 30, 2022	June 30, 2021
Deferred Outflows of Resources		
 Changes in proportion and differences between location's contributions and proportionate share of contributions¹ 	\$1,107,659	\$904,347
Changes of assumptions or other inputs	4,964,023	0
Net difference between projected and actual earnings on OPEB plan investments	1,436,529	0
Difference between actual and expected experience	719,348	<u>341,068</u>
Total Deferred Outflows of Resources	\$8,227,559	\$1,245,415
Deferred Inflows of Resources		
 Changes in proportion and differences between location's contributions and proportionate share of contributions¹ 	\$285,233	\$382,701
Changes of assumptions or other inputs	1,792,744	2,275,789
Net difference between actual and projected earnings on OPEB plan investments	0	169,251
Difference between expected and actual experience	<u>859,199</u>	<u>1,133,142</u>
Total Deferred Inflows of Resources	\$2,937,176	\$3,960,883
Deferred outflows of resources and deferred inflows of resources related to OPEB will be	e recognized as follows	s:
Reporting Date for Employer under GAS 75 Year Ended June 30:		
2023	N/A	\$(708,840)
2024	\$410,383	(778,018)
2025	513,978	(675,530)
2026	734,409	(458,667)
2027	988,316	(207,798)
2028	874,983	61,922
2029	861,540	47,648
2030	817,296	3,815
2031	89,478	0
Thereafter	0	0

¹ Calculated in accordance with Paragraphs 64 and 65 of GAS 75.

Deferred Outflows of Resources and Deferred Inflows of Resources (continued)

DOTATOR

Reporting Date for Employer under GAS 75 Measurement Date for Employer under GAS 75	June 30, 2023 June 30, 2022	June 30, 2022 June 30, 2021
Deferred Outflows of Resources		
 Changes in proportion and differences between location's contributions and proportionate share of contributions¹ 	\$285,233	\$382,701
Changes of assumptions or other inputs	10,136,547	0
Net difference between projected and actual earnings on OPEB plan investments	2,933,396	0
Difference between actual and expected experience	<u>1,468,911</u>	<u>710,429</u>
Total Deferred Outflows of Resources	\$14,824,087	\$1,093,130
Deferred Inflows of Resources		
 Changes in proportion and differences between location's contributions and proportionate share of contributions¹ 	\$1,107,659	\$904,347
Changes of assumptions or other inputs	3,660,786	4,740,357
Net difference between actual and projected earnings on OPEB plan investments	0	352,542
Difference between expected and actual experience	<u>1,754,487</u>	<u>2,360,280</u>
Total Deferred Inflows of Resources	\$6,522,932	\$8,357,526
Deferred outflows of resources and deferred inflows of resources related to OPEB will be	e recognized as follows	s:
Reporting Date for Employer under GAS 75 Year Ended June 30:		
2023	N/A	\$(1,735,987)
2024	\$413,307	(1,884,068)
2025	563,253	(1,733,015)
2026	1,159,766	(1,132,934)
2027	1,601,740	(687,922)
2028	1,347,032	(149,703)
2029	1,550,749	54,845
2030	1,500,703	4,388
2031	164,605	0
Thereafter	0	0

¹ Calculated in accordance with Paragraphs 64 and 65 of GAS 75.

Deferred Outflows of Resources and Deferred Inflows of Resources (continued)

There are changes in each system's proportionate share of the total Net OPEB Liability (NOL) during the measurement period ended June 30, 2022. The net effect of the change on the system's proportionate share of the collective NOL and collective deferred outflows of resources and deferred inflows of resources is recognized over the average of the expected remaining service lives of all employees that are provided with benefits through WPERP's Death Benefit Fund which is 8.111 years determined as of July 1, 2021 (the beginning of the measurement period ended June 30, 2022). This is described in Paragraph 64 of GAS 75.

In addition, the difference between the actual employer contributions and the proportionate share of the employer contributions during the measurement period ended June 30, 2022 is recognized over the same period.

The net effects of the change on the system's proportionate share of the collective NOL and collective deferred outflows of resources and deferred inflows of resources and the difference between the actual employer contributions and the proportionate share of the employer contributions for prior periods continue to be recognized based on the expected remaining service lives of all employees calculated as of those prior measurement dates.

The average of the expected service lives of all employees is determined by:

- Calculating each active employees' expected remaining service life as the present value of \$1 per year of future service at zero percent interest.
- Setting the remaining service life to zero for each nonactive or retired member.
- Dividing the sum of the above amounts by the total number of active employee, nonactive and retired members.

¹ The remaining service lives of all employees of 8.11 years used here for GAS 75 is different from the 7.01 years used for GAS 68 because the number of payees and nonactive members (with 0 years of expected remaining service lives) receiving death benefits under the Plan is less than the number of payees and nonactive members receiving pension benefits.

Schedule of Proportionate Share of Net OPEB Liability

Total

Reporting Date for Employer Under GAS 75 as of June 30	Measurement Date as of June 30	Proportion of the Net OPEB Liability	Proportionate Share of Net OPEB Liability	Projected Compensation	Covered Payroll ¹	Proportionate Share of the Net OPEB Liability as a Percentage of Covered Payroll	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability
2017	2016	100.0%	\$117,714,806	\$928,888,680	\$861,818,854	13.66%	19.32%
2018	2017	100.0%	119,224,438	991,814,994	892,332,196	13.36%	18.79%
2019	2018	100.0%	116,659,806	1,073,554,608	953,635,670	12.23%	18.91%
2020	2019	100.0%	105,450,856	1,141,875,616	1,028,212,002	10.26%	21.46%
2021	2020	100.0%	96,372,241	1,211,798,340	1,130,066,141	8.53%	27.94%
2022	2021	100.0%	93,299,819	1,233,265,178	1,121,883,556	8.32%	30.39%
2023	2022	100.0%	112,662,295	1,309,850,320	1,178,016,102	9.56%	26.45%

¹ These are the actual payroll amounts for the years ending on the measurement dates shown.

Schedule of Proportionate Share of Net OPEB Liability (continued)

Water

Reporting Date for Employer Under GAS 75 as of June 30	Measurement Date as of June 30	Proportion of the Net OPEB Liability	Proportionate Share of Net OPEB Liability	Projected Compensation	Covered Payroll ¹	Proportionate Share of the Net OPEB Liability as a Percentage of Covered Payroll	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability
2017	2016	31.892%	\$37,541,667	\$296,241,656	\$274,851,713	13.66%	19.32%
2018	2017	31.748%	37,851,746	314,884,513	283,300,404	13.36%	18.79%
2019	2018	32.121%	37,472,190	344,835,498	306,316,444	12.23%	18.91%
2020	2019	31.610%	33,332,775	360,944,278	325,015,469	10.26%	21.46%
2021	2020	32.319%	31,146,705	391,643,122	365,227,957	8.53%	27.94%
2022	2021	32.436%	30,263,148	400,027,431	363,899,188	8.32%	30.39%
2023	2022	32.873%	37,035,574	430,588,227	387,250,250	9.56%	26.45%

¹ These are the actual payroll amounts for the years ending on the measurement dates shown.

Schedule of Proportionate Share of Net OPEB Liability (continued)

Power

Reporting Date for Employer Under GAS 75 as of June 30	Measurement Date as of June 30	Proportion of the Net OPEB Liability	Proportionate Share of Net OPEB Liability	Projected Compensation	Covered Payroll ¹	Proportionate Share of the Net OPEB Liability as a Percentage of Covered Payroll	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability
2017	2016	68.108%	\$80,173,139	\$632,647,024	\$586,967,141	13.66%	19.32%
2018	2017	68.252%	81,372,692	676,930,481	609,031,792	13.36%	18.79%
2019	2018	67.879%	79,187,616	728,719,110	647,319,226	12.23%	18.91%
2020	2019	68.390%	72,118,081	780,931,338	703,196,533	10.26%	21.46%
2021	2020	67.681%	65,225,536	820,155,218	764,838,184	8.53%	27.94%
2022	2021	67.564%	63,036,671	833,237,747	757,984,368	8.32%	30.39%
2023	2022	67.127%	75,626,721	879,262,093	790,765,852	9.56%	26.45%

¹ These are the actual payroll amounts for the years ending on the measurement dates shown.

Schedule of Reconciliation of Net OPEB Liability

Total

Reporting Date for Employer under GAS 75	June 30, 2023	June 30, 2022
Measurement Date for Employer under GAS 75	June 30, 2022	June 30, 2021
Beginning Net OPEB Liability	\$93,299,819	\$96,372,241
OPEB Expense	10,783,007	7,366,966
Employer Contributions	(14,991,933)	(14,522,798)
New Net Deferred Inflows/Outflows	21,126,575	1,539,381
Change in Allocation of Prior Deferred Inflows/Outflows	0	0
New Net Deferred Flows Due to Change in Proportion ¹	0	0
Recognition of Prior Deferred Inflows/Outflows	2,444,827	2,544,029
Recognition of Prior Deferred Flows Due to Change in Proportion ¹	0	0
Ending Net OPEB Liability	112,662,295	\$93,299,819

¹ Includes differences between actual employer contributions and proportionate share of contributions.

Schedule of Reconciliation of Net OPEB Liability (continued)

Water

Reporting Date for Employer under GAS 75	June 30, 2023	June 30, 2022
Measurement Date for Employer under GAS 75	June 30, 2022	June 30, 2021
Beginning Net OPEB Liability	30,263,148	\$31,146,705
OPEB Expense	3,683,026	2,473,758
Employer Contributions	(4,916,451)	(4,697,537)
New Net Deferred Inflows/Outflows	6,944,957	499,319
Change in Allocation of Prior Deferred Inflows/Outflows	(43,576)	(16,494)
 New Net Deferred Flows Due to Change in Proportion¹ 	384,955	101,976
Recognition of Prior Deferred Inflows/Outflows	803,690	825,193
 Recognition of Prior Deferred Flows Due to Change in Proportion¹ 	<u>(84,175)</u>	(69,772)
Ending Net OPEB Liability	37,035,574	\$30,263,148

¹ Includes differences between actual employer contributions and proportionate share of contributions.

Schedule of Reconciliation of Net OPEB Liability (continued)

Power

Reporting Date for Employer under GAS 75	June 30, 2023	June 30, 2022
Measurement Date for Employer under GAS 75	June 30, 2022	June 30, 2021
Beginning Net OPEB Liability	\$63,036,671	\$65,225,536
OPEB Expense	7,099,981	4,893,208
Employer Contributions	(10,075,482)	(9,825,261)
New Net Deferred Inflows/Outflows	14,181,618	1,040,062
Change in Allocation of Prior Deferred Inflows/Outflows	43,576	16,494
 New Net Deferred Flows Due to Change in Proportion¹ 	(384,955)	(101,976)
Recognition of Prior Deferred Inflows/Outflows	1,641,137	1,718,836
 Recognition of Prior Deferred Flows Due to Change in Proportion¹ 	<u>84,175</u>	69,772
Ending Net OPEB Liability	75,626,721	\$63,036,671

¹ Includes differences between actual employer contributions and proportionate share of contributions.

Schedule of Recognition of Changes in Total Net OPEB Liability

Increase (Decrease) in OPEB Expense Arising from the Recognition of the Effects of Differences between Actual and Expected Experience on Total OPEB Liability

Reporting Date for Employer	Differences				Re	porting Date for	r Employer und	er GAS 75 Year	Ended June 30	:		
under GAS 75 Year Ended June 30	Differences Between Actual and Expected Experience	Recognition Period (Years)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2018	\$125,381	6.94	\$18,066	\$18,066	\$16,985	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2019	(4,443,689)	7.22	(615,469)	(615,469)	(615,469)	(615,469)	(135,406)	0	0	0	0	0
2020	485,084	7.49	64,764	64,764	64,764	64,764	64,764	31,736	0	0	0	0
2021	(2,040,143)	7.72	(264,267)	(264,267)	(264,267)	(264,267)	(264,267)	(264,267)	(190,274)	0	0	0
2022	828,147	8.08	102,493	102,493	102,493	102,493	102,493	102,493	102,493	102,493	8,203	0
2023	1,508,032	8.11	<u>N/A</u>	<u>185,947</u>	<u>185,947</u>	185,947	<u>185,947</u>	<u>185,947</u>	<u>185,947</u>	<u>185,947</u>	<u>185,947</u>	<u>20,456</u>
Net Increas	se/(Decrease) in OPE	EB Expense	\$(694,413)	\$(508,466)	\$(509,547)	\$(526,532)	\$(46,469)	\$55,909	\$98,166	\$288,440	\$194,150	\$20,456

As described in Section 2, Schedule of Deferred Outflows of Resources and Deferred Inflows of Resources, the average of the expected remaining service lives of all employees that are provided with benefits through the WPERP's Death Benefit Fund (active and inactive employees) determined as of July 1, 2021 (the beginning of the measurement period ending June 30, 2022) is 8.11 years.

Schedule of Recognition of Changes in Total Net OPEB Liability (continued)

Increase (Decrease) in OPEB Expense Arising from the Recognition of the Effects of Assumption Changes

Reporting Date for Employer under GAS				Reporting Date for Employer under GAS 75 Year Ended June 30:										
75 Year Ended June 30	Effect of Assumption Changes	Recognition Period (Years)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031		
2018	\$0	6.94	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
2019	0	7.22	0	0	0	0	0	0	0	0	0	0		
2020	(11,703,994)	7.49	(1,562,616)	(1,562,616)	(1,562,616)	(1,562,616)	(1,562,616)	(765,682)	0	0	0	0		
2021	0	7.72	0	0	0	0	0	0	0	0	0	0		
2022	0	8.08	0	0	0	0	0	0	0	0	0	0		
2023	17,224,419	8.11	N/A	2,123,849	2,123,849	2,123,849	2,123,849	2,123,849	2,123,849	2,123,849	2,123,849	233,627		
Net Increase/	/(Decrease) in OP	EB Expense	\$(1,562,616)	\$561,233	\$561,233	\$561,233	\$561,233	\$1,358,167	\$2,123,849	\$2,123,849	\$2,123,849	\$233,627		

As described in Section 2, Schedule of Deferred Outflows of Resources and Deferred Inflows of Resources, the average of the expected remaining service lives of all employees that are provided with benefits through the WPERP's Death Benefit Fund (active and inactive employees) determined as of July 1, 2021 (the beginning of the measurement period ending June 30, 2022) is 8.11 years.

Schedule of Recognition of Changes in Total Net OPEB Liability (continued)

Increase (Decrease) in OPEB Expense Arising from the Recognition of Differences between Projected and Actual Earnings on OPEB Plan Investments

Reporting Date for Employer	Differences		Reporting Date for Employer under GAS 75 Year Ended June 30:									
under GAS 75 Year Ended June 30	Between Projected Actual Earnings	Recognition Period (Years)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2018	\$1,033,609	5.00	\$206,721	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2019	1,080,893	5.00	216,179	216,177	0	0	0	0	0	0	0	0
2020	(1,352,626)	5.00	(270,525)	(270,525)	(270,526)	0	0	0	0	0	0	0
2021	(1,684,410)	5.00	(336,882)	(336,882)	(336,882)	(336,882)	0	0	0	0	0	0
2022	1,017,159	5.00	203,432	203,432	203,432	203,432	203,431	0	0	0	0	0
2023	5,879,900	5.00	N/A	<u>1,175,980</u>	<u>1,175,980</u>	<u>1,175,980</u>	<u>1,175,980</u>	<u>1,175,980</u>	0	0	0	0
Net Increase/(D	ecrease) in OPEB E	xpense	\$18,925	\$988,182	\$772,004	\$1,042,530	\$1,379,411	\$1,175,980	\$0	\$0	\$0	\$0

The difference between projected and actual earnings on OPEB plan investments are recognized over a five-year period per Paragraph 43b. of GAS 75.

Schedule of Recognition of Changes in Total Net OPEB Liability (continued)

Total Increase (Decrease) in OPEB Expense

Reporting Date for Employer under GAS 75				Ended June 30:							
Year Ended June 30	Total Differences	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2018	\$1,158,990	\$224,787	\$18,066	\$16,985	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2019	(3,362,796)	(399,290)	(399,292)	(615,469)	(615,469)	(135,406)	0	0	0	0	0
2020	(12,571,536)	(1,768,377)	(1,768,377)	(1,768,378)	(1,497,852)	(1,497,852)	(733,946)	0	0	0	0
2021	(3,724,553)	(601,149)	(601,149)	(601,149)	(601,149)	(264,267)	(264,267)	(190,274)	0	0	0
2022	1,845,306	305,925	305,925	305,925	305,925	305,924	102,493	102,493	102,493	8,203	0
2023	24,612,351	<u>N/A</u>	3,485,776	3,485,776	3,485,776	3,485,776	3,485,776	2,309,796	2,309,796	2,309,796	<u>254,083</u>
Net Increase/(De	crease) in OPEB Expense	\$(2,238,104)	\$1,040,949	\$823,690	\$1,077,231	\$1,894,175	\$2,590,056	\$2,222,015	\$2,412,289	\$2,317,999	\$254,083

Allocation of Changes in Total Net OPEB Liability

In addition to the amounts shown in Section 2, Schedule of Recognition of Changes in Total Net OPEB Liability, there are changes in each system's proportionate share of the total Net OPEB Liability (NOL) during the measurement period ending on June 30, 2022. The net effect of the change on the system's proportionate share of the collective NOL and collective deferred outflows of resources and deferred inflows of resources is also recognized over the average of the expected remaining service lives of all employees shown previously. The differences between the actual employer contributions and the proportionate share of the employer contributions during the measurement period ending on June 30, 2022 is recognized over the same period. These amounts are shown below, with the corresponding amounts for the reporting periods ending each June 30 beginning in 2018 as follows. While these amounts are different for each system, they sum to zero for the entire Plan.

Increase (Decrease) in OPEB Expense Arising from the Recognition of the Effects of the Change in Proportion and Change in Employer Contributions for the Reporting Year Ended June 30, 2023

	Re			Rep							
	Total Change to be Recognized	Period (Years)	2023	2024	2025	2026	2027	2028	2029	2030	2031
Water	\$439,098	8.11	\$54,143	\$54,143	\$54,143	\$54,143	\$54,143	\$54,143	\$54,143	\$54,143	\$5,954
Power	(439,098)	8.11	<u>(54,143)</u>	<u>(5,954)</u>							
Total	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Increase (Decrease) in OPEB Expense Arising from the Recognition of the Effects of the Change in Proportion and Change in Employer Contributions for the Reporting Year Ended June 30, 2022

		Recognition		Reporting Date for Employer under GAS 75 Year Ended June 30									
	Total Change to be Recognized	_	2022	2023	2024	2025	2026	2027	2028	2029	2030		
Water	\$116,379	8.08	\$14,403	\$14,403	\$14,403	\$14,403	\$14,403	\$14,403	\$14,403	\$14,403	\$1,155		
Power	(116,379)	8.08	(14,403)	(14,403)	(14,403)	<u>(14,403)</u>	<u>(14,403)</u>	<u>(14,403)</u>	<u>(14,403)</u>	(14,403)	<u>(1,155)</u>		
Total	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		

Allocation of Changes in Total Net OPEB Liability (continued)

Increase (Decrease) in OPEB Expense Arising from the Recognition of the Effects of the Change in Proportion and Change in Employer Contributions for the Reporting Year Ended June 30, 2021

	Recognition			Re	Reporting Date for Employer under GAS 75 Year Ended June 30					
	Total Change to be Recognized	Period (Years)	2021	2022	2023	2024	2025	2026	2027	2028
Water	\$814,793	7.72	\$105,543	\$105,543	\$105,543	\$105,543	\$105,543	\$105,543	\$105,543	\$75,992
Power	<u>(814,793)</u>	7.72	(105,543)	(105,543)	(105,543)	(105,543)	(105,543)	(105,543)	<u>(105,543)</u>	(75,992)
Total	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Increase (Decrease) in OPEB Expense Arising from the Recognition of the Effects of the Change in Proportion and Change in Employer Contributions for the Reporting Year Ended June 30, 2020

	Recognition		Reporting Date for Employer under GAS 75 Year Ended June 30							
	Total Change to be Recognized	Period (Years)	2020	2021	2022	2023	2024	2025	2026	2027
Water	(\$568,693)	7.49	(\$75,927)	(\$75,927)	(\$75,927)	(\$75,927)	(\$75,927)	(\$75,927)	(\$75,927)	(\$37,204)
Power	<u>568,693</u>	7.49	<u>75,927</u>	<u>75,927</u>	<u>75,927</u>	<u>75,927</u>	<u>75,927</u>	<u>75,927</u>	<u>75,927</u>	37,204
Total	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Allocation of Changes in Total Net OPEB Liability (continued)

Increase (Decrease) in OPEB Expense Arising from the Recognition of the Effects of the Change in Proportion and Change in Employer Contributions for the Reporting Year Ended June 30, 2019

		Recognition		Rep	oorting Date for	Employer unde	er GAS 75 Year	Ended June 30		
	Total Change to be Recognized	Period (Years)	2019	2020	2021	2022	2023	2024	2025	2026
Water	\$445,452	7.22	\$61,697	\$61,697	\$61,697	\$61,697	\$61,697	\$61,697	\$61,697	\$13,573
Power	<u>(445,452)</u>	7.22	<u>(61,697)</u>	<u>(61,697)</u>	<u>(61,697)</u>	<u>(61,697)</u>	<u>(61,697)</u>	<u>(61,697)</u>	<u>(61,697)</u>	(13,573)
Total	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Increase (Decrease) in OPEB Expense Arising from the Recognition of the Effects of the Change in Proportion and Change in Employer Contributions for the Reporting Year Ended June 30, 2018

		Recognition	Reporting Date for Employer under GAS 75 Year Ended June 30						
	Total Change to be Recognized	Period (Years)	2018	2019	2020	2021	2022	2023	2024
Water	(\$149,494)	6.94	(\$21,541)	(\$21,541)	(\$21,541)	(\$21,541)	(\$21,541)	(\$21,541)	(\$20,248)
Power	149,494	6.94	<u>21,541</u>	<u>21,541</u>	<u>21,541</u>	<u>21,541</u>	<u>21,541</u>	<u>21,541</u>	<u>20,248</u>
Total	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0

Actuarial Assumptions and Methods

For June 30, 2022 Measurement Date and Employer Reporting as of June 30, 2023

Rationale for Assumptions

The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is generally shown in the July 1, 2018 through June 30, 2021 Actuarial Experience Study and our supplemental letter entitled Review of Investment Return Assumption for Death and Disability Funds both dated May 20, 2022. All actuarial assumptions and methods shown below apply to both Tier 1 and Tier 2 members.

Actuarial Assumptions

Net Investment Return:	2.75%, net of investment expenses.					
Family Composition at Death for Active Members:	Plan	Family Death Benefits	Supplemental Family Death Benefit			
	Not Married; No Children	20%	0%			
	Not Married; One Child	5%	15%			
	Not Married; 2+ Children	7%	17%			
	Married; No Children	16%	0%			
	Married; One Child	15%	22%			
	Married; 2+ Children	30%	39%			
	Married; One Disabled Child	7%	7%			
	1 st Child's Age	10	10			
	2 nd Child's Age	8	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. Healthy child payments are assumed to end when the child reaches age 18. Disabled child payments are assumed to continue for life.
Other Actuarial Assumptions:	Same as those used in July 1, 2022 actuarial valuation report for the Retirement Plan

Actuarial Methods

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.
Projected Compensation:	Projected compensation for the year following the valuation date is calculated by annualizing the bi-weekly pay rate increased by the assumed rate of salary increase. For members with less than one year of service as of the valuation date, no salary increase assumption is applied to their annualized compensation.
Expected Remaining Service Lives:	 The average of the expected service lives of all employees is determined by: Calculating each active employee's expected remaining service life as the present value of \$1 per year of future service at zero percent interest. Setting the remaining service life to zero for each nonactive or retired member. Dividing the sum of the above amounts by the total number of active employee, nonactive and retired members.

Changes in Actuarial Assumptions

The discount rate was decreased from 3.50% to 2.75%.

Same as those shown in the July 1, 2022 actuarial valuation report for the Retirement Plan.

Appendix A: Definition of Terms

Definitions of certain terms as they are used in Statement 75. The terms may have different meanings in other contexts.

Active Employees:	Individuals employed at the end of the reporting or measurement period, as applicable.		
Actuarial Present Value of Projected Benefit Payments:	Projected benefit payments discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment.		
Actuarial Valuation:	The determination, as of a point in time (the actuarial valuation date), of the service cost, Total OPEB Liability, and related actuarial present value of projected benefit payments for OPEB benefits performed in conformity with Actuarial Standards of Practice unless otherwise specified by the GASB.		
Actuarial Valuation Date:	The date as of which an actuarial valuation is performed.		
Actuarially Determined Contribution:	A target or recommended contribution to a defined benefit OPEB plan for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.		
Ad Hoc Cost-of-Living Adjustments (Ad Hoc COLAs):	Cost-of-living adjustments that require a decision to grant by the authority responsible for making such decisions.		
Ad Hoc Postemployment Benefit Changes:	Postemployment benefit changes that require a decision to grant by the authority responsible for making such decisions.		
Agent Employer:	An employer whose employees are provided with OPEB benefits through an agent multiple- employer defined benefit plan.		
Agent Multiple-Employer Defined Benefit OPEB Plan (Agent OPEB Plan):	A multiple-employer defined benefit OPEB plan in which OPEB plan assets are pooled for investment purposes but separate accounts are maintained for each individual employer so that each employer's share of the pooled assets is legally available to pay the benefits of only its employees.		
Automatic Cost-of-Living Adjustments (Automatic COLAs):	Cost-of-living adjustments that occur without a requirement for a decision to grant by a responsible authority, including those for which the amounts are determined by reference to a specified experience factor (such as the earnings experience of the OPEB plan) or to another variable (such as an increase in the consumer price index).		
Automatic Postemployment Benefit Changes:	Postemployment benefit changes that occur without a requirement for a decision to grant by a responsible authority, including those for which the amounts are determined by reference to a specified experience factor (such as the earnings experience of the OPEB plan) or to another variable (such as an increase in the consumer price index).		

Closed Period:	A specific number of years that is counted from one date and declines to zero with the passage of time. For example, if the recognition period initially is five years on a closed basis, four years remain after the first year, three years after the second year, and so forth.
Collective Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB:	Deferred outflows of resources and deferred inflows of resources related to OPEB arising from certain changes in the collective Net OPEB Liability or collective Total OPEB Liability.
Collective Net OPEB Liability:	The Net OPEB Liability for benefits provided through (1) a cost-sharing OPEB plan or (2) a single-employer OPEB plan or an agent OPEB plan in circumstances in which there is a special funding situation.
Collective OPEB Expense:	OPEB expense arising from certain changes in the collective Net OPEB Liability or collective Total OPEB Liability.
Contributions:	Additions to an OPEB Plan Fiduciary Net Position for amounts from employers, non-employer contributing entities (for example, state government contributions to a local government OPEB plan), or employees.
Cost-of-Living Adjustments:	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
Cost-Sharing Employer:	An employer whose employees are provided with benefit through a cost-sharing multiple- employer defined benefit OPEB plan.
Cost-Sharing Multiple-Employer Defined Benefit OPEB Plan (Cost-Sharing OPEB Plan):	A multiple-employer defined benefit OPEB plan in which the OPEB obligations to the employees of more than one employer are pooled and OPEB plan assets can be used to pay the benefits of the employees of any employer that provides benefits through the OPEB plan.
Covered Payroll:	Payroll on which contributions to the OPEB plan are based.
Defined Benefit OPEB Plans:	OPEB plans that are used to provide defined benefit OPEB.
Defined Benefit OPEB benefit:	Benefits for which the income or other benefits that the employee will receive at or after separation from employment are defined by the benefit terms. The benefit may be stated as a specified dollar amount or as an amount that is calculated based on one or more factors such as age, years of service, and compensation. (A benefit that does not meet the criteria of a defined contribution OPEB benefit is classified as a defined benefit OPEB benefit for purposes of Statement 75.)
Defined Contribution OPEB Plans:	OPEB plans that are used to provide defined contribution benefits.

Defined Contribution OPEB benefits:	OPEB benefits having terms that (1) provide an individual account for each employee; (2) define the contributions that an employer is required to make (or the credits that it is required to provide) to an active employee's account for periods in which that employee renders service; and (3) provide that the benefit an employee will receive will depend only on the contributions (or credits) to the employee's account, actual earnings on investments of those contributions (or credits), and the effects of forfeitures of contributions (or credits) made for other employees, as well as OPEB plan administrative costs, that are allocated to the employee's account.
Discount Rate:	The single rate of return that, when applied to all projected benefit payments, results in an actuarial present value of projected benefit payments equal to the total of the following:
	1. The actuarial present value of benefit payments projected to be made in future periods in which (a) the amount of the OPEB Plan Fiduciary Net Position is projected (under the requirements of Statement 75) to be greater than the benefit payments that are projected to be made in that period and (b) OPEB plan assets up to that point are expected to be invested using a strategy to achieve the long-term expected rate of return, calculated using the long-term expected rate of return on OPEB plan investments.
	2. The actuarial present value of projected benefit payments not included in (1), calculated using the municipal bond rate.
Entry Age Actuarial Cost Method:	A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age(s). The portion of this actuarial present value allocated to a valuation year is called the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is called the actuarial accrued liability.
Inactive Employees:	Terminated individuals that have accumulated benefits but are not yet receiving them, and retirees or their beneficiaries currently receiving benefits.
Measurement Period:	The period between the prior and the current measurement dates.
Multiple-Employer Defined Benefit OPEB Plan:	A defined benefit OPEB plan that is used to provide benefits to the employees of more than one employer.
Net OPEB Liability (NOL):	The liability of employers and non-employer contributing entities to employees for benefits provided through a defined benefit OPEB plan.
Other Postemployment Benefits (OPEB):	All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a OPEB plan, as well as postemployment healthcare benefits, regardless of the manner in which they are provided. Other postemployment benefits do not include termination benefits.
OPEB Plans:	Arrangements through which benefits are determined, assets dedicated for OPEB are accumulated and managed and benefits are paid as they come due.

Plan Members:	Individuals that are covered under the terms of an OPEB plan. Plan members generally include (1) employees in active service (active plan members) and (2) terminated employees who have accumulated benefits but are not yet receiving them and retirees or their beneficiaries currently receiving benefits (inactive plan members).					
Postemployment:	The period after employment.					
Postemployment Benefit Changes:	Adjustments to the benefits of an inactive employee.					
Postemployment Healthcare Benefits:	Medical, dental, vision, and other health-related benefits paid subsequent to the termination of employment.					
Projected Benefit Payments:	All benefits estimated to be payable through the OPEB plan to current active and inactive employees as a result of their past service and their expected future service.					
Public Employee Retirement System:	A special-purpose government that administers one or more pension plans; also may administer other types of employee benefit plans, including postemployment healthcare plans and deferred compensation plans.					
Real Rate of Return:	The rate of return on an investment after adjustment to eliminate inflation.					
Service Costs:	The portions of the actuarial present value of projected benefit payments that are attributed to valuation years.					
Single Employer:	An employer whose employees are provided with benefits through a single-employer defined benefit OPEB plan.					
Single-Employer Defined Benefit OPEB Plan (Single-Employer OPEB Plan):	A defined benefit OPEB plan that is used to provide benefits to employees of only one employer.					
Termination Benefits:	Inducements offered by employers to active employees to hasten the termination of services, or payments made in consequence of the early termination of services. Termination benefits include early-retirement incentives, severance benefits, and other termination-related benefits.					
Total OPEB Liability (TOL):	The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service in conformity with the requirements of Statement 75.					

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