The Water and Power Employees' Retirement Disability and Death Benefit Insurance Plan

Review of the Death Benefit Fund

As of July 1, 2020

Segal

Segal

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December 30, 2020

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

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of July 1, 2020 for the Death Benefit Fund. It summarizes the actuarial data used in the valuation and establishes the funding requirements for July 1, 2020 to June 30, 2021.

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

The actuarial calculations were directed under the supervision of Eva Yum, FSA, MAAA and 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 this actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the Fund.

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

Sincerely,

Segal

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Senior Vice President and Actuary

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Senior Actuary

JAC/mv

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Section 1: Actuarial Valuation Summary

Purpose and Basis

This report was prepared by Segal to present a valuation of the Death Benefit Fund as of July 1, 2020. The valuation was performed to determine whether the assets and contribution rates are sufficient to provide the prescribed benefits. The measurements shown in this actuarial valuation may not be applicable for other purposes. In particular, the measures herein are not necessarily appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's accrued benefit obligations.

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; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law.

The contribution requirements presented in this report are based on:

- The benefit provisions of the Fund, as administered by the Board;
- The characteristics of covered active members, inactive vested members, and retired members and beneficiaries as of March 31, 2020, provided by the Retirement Office;
- The assets of the Fund as of June 30, 2020, provided by the Retirement Office;
- Economic assumptions regarding future salary increases and investment earnings adopted by the Retirement Board for the July 1, 2020 valuation;
- Other actuarial assumptions regarding employee terminations, retirement, death, etc. adopted by the Retirement Board for the July 1, 2020 valuation; and
- The funding policy adopted by the Retirement Board.

One of the general goals of an actuarial valuation is to establish contributions which fully fund the Fund's liabilities, and which, as a percentage of payroll, remain as level as possible for each generation of active members. Annual actuarial valuations measure the progress toward this goal, as well as test the adequacy of the contribution rates.

Section 1: Actuarial Valuation Summary

In preparing this valuation, we have employed generally accepted actuarial methods and assumptions to evaluate the Fund's assets, liabilities and future contribution requirements. Our calculations are based upon member data and financial information provided to us by the Retirement Office. This information has not been audited by us, but it has been reviewed and found to be consistent, both internally and with prior year's information.

The contribution requirements are determined as a percentage of payroll. The employer rates provide for both Normal Cost and a contribution to amortize any unfunded or overfunded actuarial accrued liabilities. In this valuation, we have applied the funding policy adopted by the Retirement Board in 2019. Details of the funding policy are provided in Section 4, Exhibit I on page 37.

A schedule of current amortization balances and payments may be found in Section 3, Exhibit F on page 29. A graphical projection of the Unfunded Actuarial Accrued Liabilities (UAAL) amortization balances and payments has been included in Section 3, Exhibit G starting on page 30.

The rates calculated in this report may be adopted by the Board for the fiscal year that extends from July 1, 2020 through June 30, 2021.

Valuation Highlights

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1. The Actuarial Accrued Liability exceeds the Actuarial Value of Assets, resulting in an Unfunded Actuarial Accrued Liability (UAAL) of $97.7 million as of July 1, 2020, which is a decrease from $105.7 million in the previous valuation. The Board's funding policy determines the Department's required contribution as the normal cost increased or offset by a UAAL amortization charge or credit. Under this funding policy, the Fund's UAAL is amortized over various 15-year periods, each beginning with the year that each portion or base of the UAAL was first identified and amortized. A reconciliation of the Fund's UAAL is provided in Section 2, Subsection C. A schedule of the current UAAL amortization amounts is provided in Section 3, Exhibit F. A graphical projection of the UAAL amortization bases and payments is provided in Section 3, Exhibit G.

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2. The Department's required contribution rate decreased from 1.18% to 1.12% of payroll for the 2020-2021 plan year; those contributions are estimated to be $13.6 million. This decrease is primarily due to an increase in total payroll reducing the UAAL contribution rate. A complete reconciliation of the aggregate required contribution rate is provided in Section 2, Subsection D.

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3. The market value of assets earned a return of 8.82% for the July 1, 2019 to June 30, 2020 plan year. The Actuarial Value of Assets earned a return of 4.33% for the July 1, 2019 to June 30, 2020 plan year due to the deferral of most of the current year investment gain. This resulted in an actuarial gain of $0.3 million when measured against the assumed rate of return of 3.50% for 2019-2020. This actuarial investment gain did not change the Department's required contribution rate (after rounding to 1/100th of one percent).

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4. Based on the funding policy adopted by the Board on December 18, 2019, effective with the July 1, 2020 valuation, we no longer exclude 1% of the end of year market value of assets ($0.4 million as of July 1, 2020) as a non-valuation reserve. This change results in no change in the Department's required contribution rate (after rounding to 1/100th of one percent).

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5. The total unrecognized return (i.e., the difference between the market value of assets and the "smoothed" actuarial value of assets) is $1.3 million unrecognized net investment gain in 2020. As of June 30, 2019, there were no deferred investment gains/losses as the method was effective with the 2019 valuation on a prospective basis. This net deferred investment gain will be recognized in the determination of the Actuarial Value of Assets for funding purposes over the next four years. This means that, if the plan earns the assumed rate of investment return of 3.50% per year (net of expenses) on a market value basis, then the net deferred gain will be recognized over the next four years as shown in the footnote to the Determination of Actuarial Value of Assets in Section 2, Subsection B.

6. The unrecognized net investment gain of $1.3 million represent about 3.6% of the Market Value of Assets. Unless offset by future investment losses or other unfavorable experience, the recognition of the $1.3 million in the net market gains is expected to have an impact on the plan's future funded ratio and the Department's required contributions. The potential impact may be illustrated as follows:

a. If the net deferred gains were recognized immediately in the Actuarial Value of Assets, the funded percentage would increase from 26.93% to 27.94%.

b. If the net deferred gains were recognized immediately in the Actuarial Value of Assets, the Department's required contribution rate would decrease from 1.12% of covered payroll to 1.11% of covered payroll.

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7. Actuarial Standard of Practice No. 51 (ASOP 51) requires actuaries to identify and assess risks that "may reasonably be anticipated to significantly affect the plan's future financial condition". The key risk that is particularly relevant to the Death Benefit Fund is longevity risk. The standard also requires an actuary to consider if there is any ongoing contribution risk to the plan, however it does not require the actuary to evaluate the particular ability or willingness of contributing entities to make contributions when due, nor does it require the actuary to assess the likelihood or consequence of future changes in applicable law.

   The actuary's assessment can be qualitative or quantitative (e.g., based on numerical demonstrations). The actuary may use nonnumerical methods for assessing risks that might take the form of commentary about potential adverse experience and the likely effect on future results. While the standard does not require that every valuation include a quantitative risk assessment, the actuary may recommend that a more detailed risk assessment be performed. When making that decision, the actuary will take into account such factors as the Fund's design, maturity, size, funded status, asset allocation, cash flow, possible insolvency and current market conditions.

   Since the actuarial valuation results are dependent on a fixed set of assumptions and data as of a specific date, there is risk that emerging results may differ, perhaps significantly, as actual experience is fluid and will not exactly track current assumptions. This potential divergence may have a significant impact on the future financial condition of the plan. We have not been engaged to perform a detailed analysis of the potential range of the impact of risk relative to the future financial condition of the plan, but have included a brief discussion of key risks that may affect the Plan in Section 2, Subsection G.

8. Segal strongly recommends an actuarial funding method that targets 100% funding of the actuarial accrued liability. Generally, this implies payments that are ultimately at least enough to cover normal cost, interest on the unfunded actuarial accrued liability and the principal balance. The funding policy adopted by the Board meets this standard.

9. The actuarial valuation as of July 1, 2020 is based on financial information as of that date. Changes in the value of assets subsequent to that date are not reflected. Declines in asset values will increase the actuarial cost of the plan, while increases will decrease the actuarial cost of the plan.

Section 1: Actuarial Valuation Summary

10. It is important to note that this actuarial valuation is based on plan assets as of June 30, 2020. Due to the COVID-19 pandemic, market conditions have changed significantly during 2020. The Fund'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 is based on Fund data as of March 31, 2020 (adjusted to June 30, 2020 by adding 3 months of age, service and interest on contribution balance, and increasing Retirement benefit by the assumed July 1 COLA for members in pay status) and it does not include any short-term or long-term impacts on mortality of the covered population since March 31, 2020. While it is impossible to determine how the pandemic will continue to affect market conditions and other demographic experience of the Fund prior to next year's valuation, Segal is available to prepare projections of potential outcomes upon request.

Summary of key valuation results

		July 1, 2020		July 1, 2019	
		Total Rate (% of Compensation)	Estimated Annual Dollar Amount	Total Rate (% of Compensation)	Estimated Annual Dollar Amount
Required Contribution for plan year beginning July 1: [1]		1.12%	$13,556,829	1.18%	$13,440,562

		July 1, 2020	July 1, 2019
Actuarial Accrued Liability as of July 1:	• Retired members and beneficiaries	$93,050,267	$92,126,194
	• Inactive vested members	4,445,455	4,475,153
	• Active members	36,241,341	37,656,249
	• Total Actuarial Accrued Liability	133,737,063	134,257,596
	• Total Normal Cost (beginning of year) for plan year beginning July 1	5,040,195	4,716,844
Assets as of June 30:	• Market Value of Assets (MVA)	$37,364,822	$28,806,740
	• Actuarial Value of Assets (AVA)	36,017,294	28,518,673
	• Actuarial Value of Assets as a percentage of Market Value of Assets	96.4%	99.0%
Funded status as of July 1:	• Unfunded Actuarial Accrued Liability on Market Value of Assets basis	$96,372,241	$105,450,856
	• Funded percentage on MVA basis	27.94%	21.46%
	• Unfunded Actuarial Accrued Liability on Actuarial Value of Assets basis	$97,719,769	$105,738,923
	• Funded percentage on AVA basis	26.93%	21.24%
Key assumptions as of July 1:	• Net investment return	3.50%	3.50%
	• Price Inflation	2.75%	2.75%

[1] Required contributions are assumed to be paid at the middle of every year.

Summary of key valuation results (continued)

		July 1, 2020	July 1, 2019	Change From Prior Year
Demographic data as of July 1:	**Active Members**			
	• Number of members[1]	10,778	10,362	4.0%
	• Average age	46.7	47.2	-0.5
	• Average service	13.9	14.6	-0.7
	• Total projected compensation	$1,211,798,340	$1,141,875,615	6.1%
	• Average projected compensation	112,433	$110,198	2.0%
	Retired Members and Beneficiaries:			
	• Number of members:			
	– Retired members[2]	7,472	7,355	1.6%
	– Beneficiaries[3]	88	90	-2.2%
	– Total	7,560	7,445	1.5%
	• Average age	72.5	72.5	0.0
	• Average monthly benefit[4]	$415	$415	0.0%
	Inactive Vested Members:			
	• Number of members[5]	619	630	-1.7%
	• Average Age	55.3	55.0	0.3
	Total Members:	18,957	18,437	2.8%

[1] Includes 1,524 and 1,789 active members who have Supplemental Family Death Benefit (SFDB) coverage for 2020 and 2019, respectively.
[2] Includes 163 and 151 retired members who have SFDB coverage for 2020 and 2019, respectively.
[3] Receiving Family Death or Supplemental Family Death benefits.
[4] This is the average monthly benefit for beneficiaries currently receiving Family Death or Supplemental Family Death Benefits.
[5] 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.

Important Information about actuarial valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a pension 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. Even where they appear precise, outside factors may change how they operate. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our 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	The valuation is based on the Market Value of Assets as of the valuation date, as provided by the Retirement Office. The Fund uses an "Actuarial Value of Assets" that differs from market value to gradually reflect year-to-year changes in the Market Value of Assets in determining the contribution requirements.
Actuarial assumptions	In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The projected benefits are then discounted to a present value, based on the assumed rate of return that is expected to be achieved on the plan's assets. There is a reasonable range for each assumption used in the projection and the results may vary materially based on which assumptions are selected. It is important for any user of an actuarial valuation to understand this concept. Actuarial assumptions are periodically reviewed to ensure that future valuations reflect emerging plan experience. While future changes in actuarial assumptions may have a significant impact on the reported results that does not mean that the previous assumptions were unreasonable.
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 presented 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.

Section 1: Actuarial Valuation Summary

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

The actuarial valuation is prepared at the request of the WPERP. 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. Future contribution requirements may differ from those determined in the valuation because of:

- Differences between actual experience and anticipated experience;
- Changes in actuarial assumptions or methods; and
- Changes in statutory provisions.

Some actuarial results in this report are not rounded, but that does not imply precision.

If the 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 Fund 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 the plan, it is not a fiduciary in its capacity as actuaries and consultants with respect to the plan.

Section 2: Actuarial Valuation Results

A. Member Data

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

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

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

Member Population: 2019 - 2020

Year Ended June 30	Active Members	Inactive Vested Members	Retired Members and Beneficiaries	Total Non-Actives	Ratio of Non-Actives to Actives	Ratio of Retired Members and Beneficiaries to Actives
2019	10,362	630	7,445	8,075	0.78	0.72
2020	10,778	619	7,560	8,179	0.76	0.70

Historical Plan Population

The chart below demonstrates the progression of the active population. The chart also shows the growth among the retired population over the same time period.

Member Data Statistics: 2019 - 2020

	Active Members			Retired Members and Beneficiaries		
Year Ended June 30	Count	Average Age	Average Service	Count	Average Age	Average Monthly Amount[1]
2019	10,362	47.2	14.6	7,445	72.5	$415
2020	10,778	46.7	13.9	7,560	72.5	$415

[1] This is the average monthly benefit for beneficiaries currently receiving Family Death or Supplemental Family Death Benefits.

B. Financial Information

Retirement plan funding anticipates that, over the long term, both contributions and investment earnings (less investment fees) will be needed to cover benefit payments. Retirement plan assets change as a result of the net impact of these income and expense components. Additional financial information, including a summary of transactions for the valuation year, is presented in Section 3, Exhibits C, D and E.

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the valuation asset value and the plan costs are more stable. The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

Allocation of Market Value of Assets as of June 30, 2020

Estimated Liability for Family Allowances	$3,891,107
Contribution Account for Family Allowances	6,904,286
General Reserve	21,216,867
Total Reserves and Designated Balances	$32,012,260
Unrealized Appreciation/(Depreciation) in the Fair Value of Investments	5,352,562
Total Reserves and Designated balances at Fair Value	**$37,364,822**

Section 2: Actuarial Valuation Results

Determination of Actuarial Value of Assets for Year Ended June 30, 2020

		Total Actual Market Return (net)	Expected Market Return (net)	Investment[1] Gain (Loss)	Deferred Factor	Deferred Return[2]
1	**Market Value of Assets as of June 30, 2020**					**$37,364,822**
2	Calculation of unrecognized return					
a)	Year ended June 30, 2019	N/A	N/A	N/A	N/A	$0
b)	Year ended June 30, 2020	$2,793,526	$1,109,116	$1,684,410	80%	1,347,528
c)	Total unrecognized return[3]					$1,347,528
3	**Actuarial Value of Assets as of June 30, 2020 (1) – (2c)[4]**					**$36,017,294**
4	Actuarial Value of Assets as a percentage of Market Value of Assets (3) / (1)					96.4%

[1] Total return minus expected return on a market value basis. As of June 30, 2019, there are no deferred investment gains/losses as the method was effective with the 2019 valuation on a prospective basis.

[2] Recognition at 20% per year over 5 years.

[3] Deferred return as of June 30, 2020 recognized in each of the next four years:

(a)	Amount recognized during 2020/2021	$336,882
(b)	Amount recognized during 2021/2022	336,882
(c)	Amount recognized during 2022/2023	336,882
(d)	Amount recognized during 2023/2024	336,882
(e)	Total unrecognized return as of June 30, 2020	$1,347,528

[4] Based on the funding policy most recently adopted by the Retirement Board, effective with the July 1, 2020 valuation, the Actuarial Value of Assets will not be reduced by 1% of the market value of assets as a non-valuation reserve.

Investment Experience

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the Fund's investment policy. The rate of return on the Market Value of Assets was 8.82% for the year ended June 30, 2020.

For valuation purposes, the assumed rate of return on the Actuarial Value of Assets was 3.50% for the 2019-2020 plan year (based on the July 1, 2019 valuation). The actual rate of return on an actuarial basis for the 2019-2020 plan year was 4.33%. Since the actual return for the year was greater than the assumed return, the Fund experienced an actuarial gain during the year ended June 30, 2020 with regard to its investments.

Investment Experience for Year Ended June 30, 2020

		Market Value	Actuarial Value
1	Net investment income	$2,793,526	$1,360,417
2	Average value of assets	31,689,018	31,400,951
3	Rate of return: **1 ÷ 2**	8.82%	4.33%
4	Assumed rate of return	3.50%	3.50%
5	Expected investment income: **2 x 4**	$1,109,116	$1,099,033
6	**Actuarial gain/(loss): 1 - 5**	**$1,684,410**	**$261,384**

C. Development of Unfunded Actuarial Accrued Liability

Development for Year Ended June 30, 2020

1	**Unfunded Actuarial Accrued Liability as beginning of year**		**$105,738,923**
2	Total Normal cost at beginning of year		4,716,844
3	Expected employer and employee contributions		-13,824,948
4	Interest		
	a) For whole year on 1 + 2	$3,865,952	
	b) For half year on 3	-237,775	
	c) Total interest		3,628,177
5	Expected Unfunded Actuarial Accrued Liability at end of year		$100,258,996
6	Changes due to:		
	a) Actual employer contributions less than expected[1]	$135,949	
	b) Eliminating the exclusion of 1% market value of assets as non-valuation reserve	-373,648	
	c) Investment return greater than expected (after smoothing)[2]	-261,384	
	d) Method change[3]	-1,574,761	
	e) Other experience net gains[4]	-465,383	
	Total changes		-2,539,227
7	**Unfunded actuarial accrued liability at end of year**		**$97,719,769**

[1] The actual employer contributions were less than expected due to actual covered payroll for 2019-2020 lower than the payroll projected in the July 1, 2019 valuation.
[2] The actual rate of return on an actuarial basis for the year ended June 30, 2020 is 4.33% compared to the assumed rate of return of 3.50%.
[3] We have made a minor refinement to the entry age actuarial cost method calculations as of July 1, 2020. This refinement does not change the present value of future benefits, but it slightly increases the normal cost rate and decreases the actuarial accrued liability, and results in a net increase in the Department contribution rate of 0.01% of payroll.
[4] Includes effect of differences in actual versus expected experience including mortality, disability, termination, and retirement experience.

D. Required Contribution

The required contribution is equal to the employer Normal Cost payment and the amortization of the Unfunded Actuarial Accrued Liability. As of July 1, 2020, the recommended employer contribution rate is 1.12% of compensation or $13.6 million in dollars.

Under the current funding policy, the required contribution rate decreased as a percentage of pay. This was mainly the result of the actuarial gain, eliminating the exclusion of 1% of market value of assets as non-valuation reserve, and the effect of the increases in total payroll on the UAAL amortization rate.

The Board sets the funding policy used to calculate the required contribution based on layered amortization periods. See Section 4, Exhibit I for further details on the elements of the funding policy.

The contribution requirement as of July 1, 2020 is based on the data previously described, the actuarial assumptions and plan provisions described in Section 4, including all changes affecting future costs adopted at the time of the actuarial valuation, actuarial gains and losses, and changes in the actuarial assumptions.

Required Employer Contribution for Year Beginning July 1

		2020		2019	
		Amount	% of Projected Compensation	Amount	% of Projected Compensation
1	Total Normal Cost	$5,040,195	0.42%	$4,716,844	0.41%
2	Expected member contributions	-373,845	-0.03%	-377,775	-0.03%
3	Employer Normal Cost: 1 – 2	$4,666,350	0.39%	$4,339,069	0.38%
4	Actuarial Accrued Liability	$133,737,063		$134,257,596	
5	Actuarial Value of Assets	36,017,294		28,518,673	
6	Unfunded Actuarial Accrued Liability: 4 – 5	$97,719,769		$105,738,923	
7	Amortization payment on Unfunded Actuarial Accrued Liability	8,657,315	0.71%	8,870,328	0.78%
8	Interest adjustment to middle of year	233,164	0.02%	231,165	0.02%
9	Total required employer contribution:[1] 3 + 7 + 8	13,556,829	1.12%	$13,440,562	1.18%
10	**Projected compensation**	**$1,211,798,340**		**$1,141,875,615**	

[1] Contributions are assumed to be paid at the middle of the year.

Reconciliation of Department's Required Contribution Rate

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

Reconciliation of Department's Required Contribution Rate from July 1, 2019 to July 1, 2020

	Contribution Rate
Aggregate Required Contribution Rate as of July 1, 2019	**1.18%**
1. Effect of increase in total payroll on UAAL amortization rate	-0.05%
2. Effect of other experience net gains[1]	-0.01%
Total Change	-0.06%
Aggregate Required Contribution Rate as of July 1, 2020	**1.12%**

[1] Includes effect of differences in actual versus expected experience including mortality, disability, termination, and retirement experience as well as a minor refinement to the entry age actuarial cost method calculations. This refinement does not change the present value of future benefits, but it slightly increases the normal cost rate and decreases the actuarial accrued liability, and results in a net increase in the Department contribution rate of 0.01%.

E. Funded Status

A commonly reported piece of information regarding the plan's financial status is the funded ratio. These ratios compare the Market and Actuarial Value of Assets to the Actuarial Accrued Liability of the plan. Higher ratios indicate a relatively well-funded plan while lower ratios may indicate recent changes to actuarial assumptions, funding of the plan below actuarial requirements, poor asset performance, or a variety of other causes.

The funded status measures shown in this valuation are appropriate for assessing the need for or amount of future contributions. However, they are not necessarily appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.

The chart below shows the plan's schedule of funding progress for the last two years.

Schedule of Funding Progress for Plan Years Ending June 30, 2019 – 2020

Actuarial Valuation Date as of July 1	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b) - (a)	Funded Ratio (%) (a) / (b)	Projected Covered Payroll (c)	UAAL as a Percentage of Projected Covered Payroll (%) [(b) - (a)] / (c)
2019	$28,518,673	$134,257,596	$105,738,923	21.2%	$1,141,875,615	9.3%
2020	36,017,294	133,737,063	97,719,769	26.9%	1,211,798,340	8.1%

F. Actuarial Balance Sheet

An overview of the plan's funding is given by an Actuarial Balance Sheet. In this approach, the amount and timing of all future payments that will be made by the plan for current participants is determined first. Then these payments are discounted at the valuation interest rate to the date of the valuation, thereby determining the present value, referred to as the Actuarial Present Value of Future Benefits of the plan.

Second, this Actuarial Present Value of Future Benefits is compared to the assets. The "assets" for this purpose include the net amount of assets already accumulated by the plan, the present value of future member contributions, the present value of future employer normal cost contributions, and the present value of future employer amortization payments for the unfunded actuarial accrued liability.

Actuarial Balance Sheet

	July 1, 2020	July 1, 2019
Actuarial Present Value of Future Benefits		
Present value of benefits for retired members and beneficiaries	$93,050,267	$92,126,194
• Present value of benefits for inactive vested members	4,445,455	4,475,153
• Present Value of benefits for active members	99,386,497	95,410,017
Total Actuarial Present Value of Future Benefits	**$196,882,219**	**$192,011,364**
Current and future assets		
• Total Actuarial Value of Assets	$36,017,294	$28,518,673
• Present value of future normal cost contributions	63,145,156	57,753,768
• Present value of future Unfunded Actuarial Accrued Liability contributions	97,719,769	105,738,923
Total of current and future assets	**$196,882,219**	**$192,011,364**

G. Risk Assessment

Since the actuarial valuation results are dependent on a fixed set of assumptions and data as of a specific date, there is risk that emerging results may differ, perhaps significantly, as actual experience is fluid and will not exactly track current assumptions. This potential divergence may have a significant impact on the future financial condition of the plan.

This section does not contain a detailed analysis of the potential range of future measurements, but does include a concise discussion of some of the primary risks that may affect the future financial condition of the Death Benefit Fund. We do not recommend that a more detailed assessment of the risks be performed due to the relatively small liabilities of the death benefits as compared to the main retirement benefits paid by WPERP.

This section provides descriptions and basic assessments of the primary risks that are likely to have an ongoing influence on the financial health of the Death Benefit Fund. Historical trends and maturity measures are shown in Section 2, Subsection L of the July 1, 2020 Actuarial Valuation Report for WPERP.

Risk Assessments

- Longevity Risk (the risk that mortality experience will be different than expected)

  The actuarial valuation includes current life expectancy assumptions and an expectation of future improvement in life expectancy, which are significant assumptions given the relatively long duration of liabilities for pension plans. Emerging plan experience that does not match these expectations will result in increases or decreases in the actuarially determined contribution over time. Because the Death Benefit Fund provides for death benefits payable to surviving spouses and children rather than a retirement annuity such as that paid by the Retirement Plan, members living longer than expected generally results in a decrease in liabilities and contribution rates.

- Other Risks

  In addition to longevity, the valuation includes a variety of other assumptions that are unlikely to match future experience exactly. Examples of other demographic assumptions include retirement, termination and disability assumptions.

Some plans also carry significant contribution risk, defined as the potential for actual future contributions deviating from expected future contributions. However, the employer has a proven track-record of making the Actuarially Determined Contributions based on the Board's Actuarial Funding Policy, so contribution risk is minimal.

Section 3: Supplemental Information

Exhibit A: Table of Plan Coverage

Total Plan

	Year Ended July 1		Change From Prior Year
	2020	2019	
Active members in valuation:			
• Number[1]	10,778	10,362	4.0%
• Average age	46.7	47.2	-0.5
• Average years of service	13.9	14.6	-0.7
• Total projected compensation	$1,211,798,340	$1,141,875,615	6.1%
• Average projected compensation	$112,433	$110,198	2.0%
Inactive vested members:			
Number[2]	619	630	-1.7%
Average Age	55.3	55.0	0.3
Retired members:			
• Number in pay status[3]	7,472	7,355	1.6%
• Average age	72.9	72.9	0.0
Beneficiaries:			
• Number in pay status[4]	88	90	-2.2%
• Average age	37.5	36.4	1.1
• Average monthly benefit	$415	$415	0.0%

1 Includes 1,524 and 1,789 active members who have Supplemental Family Death Benefit (SFDB) coverage for 2020 and 2019, respectively.
2 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.
3 Includes 163 and 151 retired members who have SFDB coverage for 2020 and 2019, respectively.
4 Receiving Family Death or Supplemental Family Death benefits

Exhibit B: Members in Active Service as of July 1, 2020 by Age, Years of Service, and Average Projected Compensation

Total Plan

		Years of Service								
Age	**Total**	**0 – 4**	**5 – 9**	**10 – 14**	**15 – 19**	**20 – 24**	**25 – 29**	**30 – 34**	**35 – 39**	**40 & over**
Under 25	167	167	--	--	--	--	--	--	--	--
	$94,449	$94,449	--	--	--	--	--	--	--	--
25 – 29	752	672	79	1	--	--	--	--	--	--
	101,247	97,978	$128,508	$143,796	--	--	--	--	--	--
30 – 34	1,082	764	231	85	2	--	--	--	--	--
	102,846	94,256	118,674	136,952	$106,773	--	--	--	--	--
35 – 39	1,342	669	256	302	108	7	--	--	--	--
	109,590	94,244	113,601	131,095	133,260	$136,560	--	--	--	--
40 – 44	1,431	511	204	287	321	106	2	--	--	--
	111,026	92,429	107,824	120,394	129,376	125,610	$126,968	--	--	--
45 – 49	1,418	367	152	249	312	278	54	6	--	--
	112,268	96,248	104,333	113,362	120,984	120,051	145,887	$131,422	--	--
50 – 54	1,669	255	131	182	274	259	258	300	10	--
	118,533	94,925	105,679	111,350	111,002	118,393	141,102	135,809	$129,038	--
55 – 59	1,537	151	83	138	206	180	211	417	144	7
	122,296	99,634	102,851	113,715	109,086	113,620	131,013	136,743	139,382	$147,969
60 – 64	916	54	43	90	118	115	130	194	145	27
	116,915	100,718	110,688	104,173	108,441	112,025	120,239	122,102	130,790	131,787
65 – 69	352	15	12	42	55	55	39	66	37	31
	109,297	102,318	97,652	104,432	100,347	101,060	111,313	119,973	113,739	123,695
70 & over	112	4	2	9	19	12	15	17	16	18
	108,001	63,141	69,715	86,122	103,641	100,971	113,739	105,581	126,838	123,215
Total	**10,778**	**3,629**	**1,193**	**1,385**	**1,415**	**1,012**	**709**	**1,000**	**352**	**83**
	$112,433	**$95,262**	**$111,445**	**$118,881**	**$118,059**	**$117,009**	**$132,381**	**$131,954**	**$132,283**	**$128,270**

Exhibit C: Summary Statement of Income and Expenses on a Market Value Basis

	Year Ended June 30, 2020		Year Ended June 30, 2019	
Net assets at market value at the beginning of the year		**$28,806,740**		**$27,210,220**
Department of Water & Power Contributions:				
• Death Benefit[1]	$13,299,775		$0	
• Active members	0		2,110,835	
• Retired members (non-contributing)	0		4,963,513	
• Family death benefit	0		185,607	
• Administrative expenses	1,609,109		1,517,626	
Net department contribution income		$14,908,884		$8,777,581
Contributions from Members:				
• Insured lives' death benefit	$271,564		$252,939	
• Supplemental family death benefits	113,329		105,134	
Net members' contribution		$384,893		$358,073
Investment Income:				
• Net appreciation in fair value of investments	$1,942,508		$1,346,590	
• Investment income	889,541		981,308	
• Less investment expense	(38,523)		(35,099)	
Net investment income		$2,793,526		$2,292,799
Total income available for benefits:		**$18,087,303**		**$11,428,453**
Less benefit payments and administrative expense:				
• Death benefit (active/retired members)	$(7,368,268)		$(7,685,403)	
• Family allowances	(554,424)		(546,650)	
• Administrative expense	(1,606,529)		(1,599,880)	
Total payments		$(9,529,221)		$(9,831,933)
Change in net assets at market value		**$8,558,082**		**$1,596,520**
Net assets at market value at the end of the year		**$37,364,822**		**$28,806,740**

Note: Results may be slightly off due to rounding.

[1] Effective with the July 1, 2019 valuation (which determined the contribution requirement for 2019-2020), Department contributions for the various death benefit categories are determined on a combined basis.

Exhibit D: Summary Statement of Plan Assets

	Year Ended June 30, 2020	Year Ended June 30, 2019
Cash equivalents	$1,902,557	$994,997
Accounts receivable:		
Department of Water and Power	$3,263,520	$1,505,548
Accrued investment income	77,712	86,518
Others	20,044	20,044
Total accounts receivable	$3,361,276	$1,612,110
Investments:		
• Fixed income	$37,023,700	$30,896,023
• Short-term investments	259,090	$254,304
Total investments at market value	$37,282,790	$31,150,327
Other assets	$0	$0
Total assets	$42,546,623	$33,757,434
Accounts payable:		
Pending investment purchases	$77,601	$85,993
Other	719,130	776,220
Death claims in process – insured lives	4,385,070	4,088,481
Total liability	$5,181,801	$4,950,694
Net assets at market value	**$37,364,822**	**$28,806,740**
Net assets at actuarial value	**$36,017,294**	**$28,518,673**

Note: Results may be slightly off due to rounding.

Exhibit E: Development of the Fund through June 30, 2020

Year Ended June 30	Market Value of Assets at Beginning of Year	Employer Contributions	Member Contributions	Administrative Expenses	Net Investment Return	Benefit Payments	Market Value of Assets at Year-End
2019	$27,210,220	$8,777,581	$358,073	$1,599,880	$2,292,799	$8,232,053	$28,806,740
2020	28,806,740	14,908,884	384,893	1,606,529	2,793,526	7,922,692	37,364,822

Exhibit F: Table of Amortization Bases

Type	Date Established	Initial Amount	Initial Period	Outstanding Balance	Years Remaining	Annual Payment[1]
Initial Amortization	July 1, 2019	$117,442,917	15	$111,356,430	14	$9,852,164
Assumption Changes	July 1, 2019	(11,703,994)	15	(11,097,434)	14	(981,836)
Actuarial Gain	July 1, 2020	(2,165,579)	15	(2,165,579)	15	(181,668)
Funding Policy Changes	July 1, 2020	(373,648)	15	(373,648)	15	(31,345)
Total				**$97,719,769**		**$8,657,315**

[1] Level dollar amount as of beginning of year.

Exhibit G: Projection of UAAL Balances and Payments

Outstanding Balance of $97.7 Million in Net UAAL as of July 1, 2020

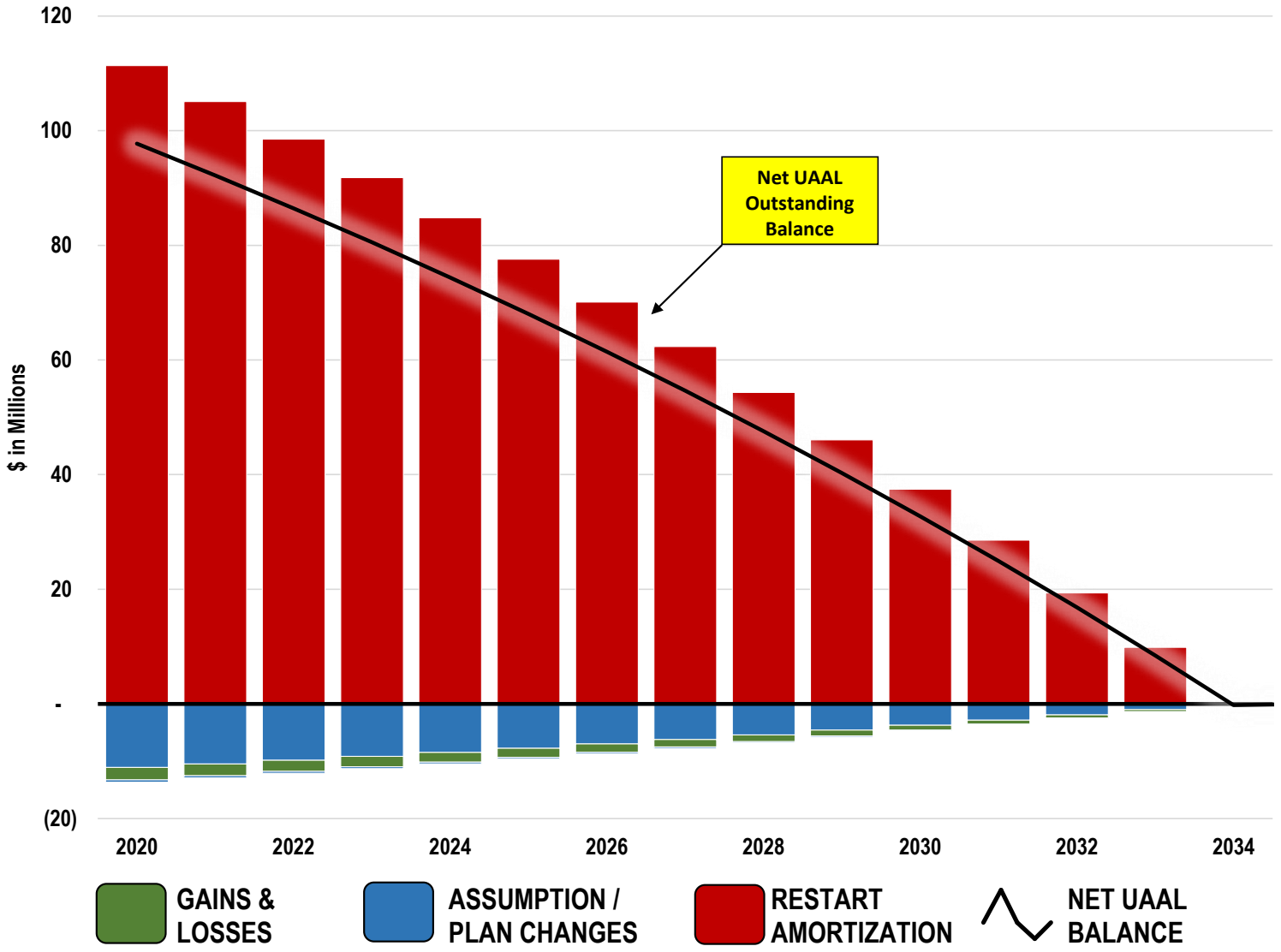

Exhibit G: Projection of UAAL Balances and Payments (Continued)

Annual Payments Required to Amortize $97.7 Million in Net UAAL as of July 1, 2020

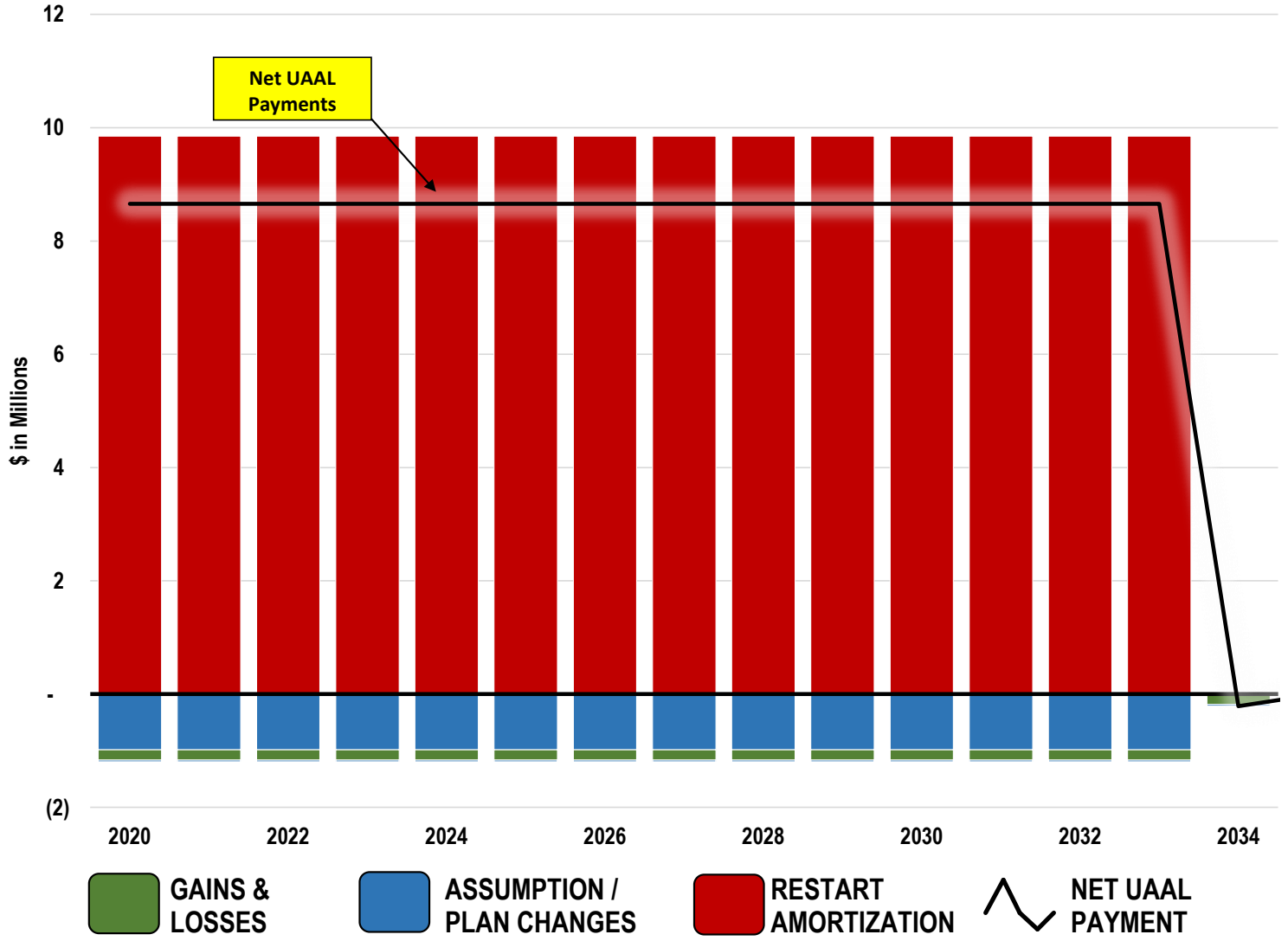

Exhibit H: Definition of Pension Terms

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

Actuarial Accrued Liability for Actives:	The equivalent of the accumulated normal costs allocated to the years before the valuation date.
Actuarial Accrued Liability for Pensioners and Beneficiaries:	Actuarial Present Value of lifetime benefits to existing pensioners and beneficiaries. This sum takes account of life expectancies appropriate to the ages of the annuitants and the interest that the sum is expected to earn before it is entirely paid out in benefits.
Actuarial Cost Method:	A procedure allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability that are used to determine the actuarially determined contribution.
Actuarial Gain or Loss:	A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., assets earn more than projected, salary increases are less than assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results yield in actuarial liabilities that are larger than projected.
Actuarially Equivalent:	Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.
Actuarial Present Value (APV):	The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. Each such amount or series of amounts is: Adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.) Multiplied by the probability of the occurrence of an event (such as survival, death, disability, withdrawal, etc.) on which the payment is conditioned, and Discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Section 3: Supplemental Information

Actuarial Present Value of Future Plan Benefits:	The Actuarial Present Value of benefit amounts expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age, anticipated future compensation, and future service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive members entitled to either a refund of member contributions or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits when due.
Actuarial Valuation:	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan as well as Actuarially Determined Contributions.
Actuarial Value of Assets (AVA):	The value of the Fund's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly plans use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the Actuarially Determined Contributions.
Actuarially Determined:	Values that have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the Plan.
Actuarially Determined Contribution (ADC):	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under the Plan's funding policy. The ADC consists of the Employer Normal Cost and the Amortization Payment.
Amortization Method:	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the Unfunded Actuarial Accrued Liability. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the Unfunded Actuarial Accrued Liability. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.
Amortization Payment:	The portion of the pension plan contribution, or ADC, that is intended to pay off the Unfunded Actuarial Accrued Liability.

Section 3: Supplemental Information

Assumptions or Actuarial Assumptions:	The estimates upon which the cost of the Fund is calculated, including: Investment return - the rate of investment yield that the Fund will earn over the long-term future; Mortality rates - the rate or probability of death at a given age for employees and pensioners; Retirement rates - the rate or probability of retirement at a given age or service; Disability rates – the probability of disability retirement at a given age; Termination rates - the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement; Salary increase rates - the rates of salary increase due to inflation, real wage growth and merit and promotion increases.
Closed Amortization Period:	A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example, if the amortization period is initially set at 20 years, it is 19 years at the end of one year, 18 years at the end of two years, etc. See Open Amortization Period.
Decrements:	Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or termination.
Defined Benefit Plan:	A retirement plan in which benefits are defined by a formula applied to the member's compensation and/or years of service.
Defined Contribution Plan:	A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.
Employer Normal Cost:	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
Experience Study:	A periodic review and analysis of the actual experience of the Fund that may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.
Funded Ratio:	The ratio of the Actuarial Value of Assets (AVA) to the actuarial accrued liability (AAL). Plans sometimes calculate a market funded ratio, using the Market Value of Assets (MVA), rather than the AVA.
Investment Return:	The rate of earnings of the Fund from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.

Section 3: Supplemental Information

Normal Cost:	The portion of the Actuarial Present Value of Future Benefits allocated to a valuation year by the Actuarial Cost Method. Any payment with respect to an Unfunded Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits that are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated.
Open Amortization Period:	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. If the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period.
Unfunded Actuarial Accrued Liability:	The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative, in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus.
Valuation Date or Actuarial Valuation Date:	The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Plan Benefits is determined. The expected benefits to be paid in the future are discounted to this date.

Section 4: Actuarial Valuation Basis

Exhibit I: Actuarial Assumptions and Methods

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, 2015 through June 30, 2018 Actuarial Experience Study and our supplemental letter entitled Review of Investment Return Assumption for Death and Disability Funds both dated June 12, 2019. All actuarial assumptions and methods shown below apply to both Tier 1 and Tier 2 members.
Economic Assumptions	
Net Investment Return:	3.50%, net of investment expenses.
Demographics Assumptions	
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%
1st Child's Age	10	10
2nd 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, 2020 actuarial valuation report for the Retirement Plan.

Section 4: Actuarial Valuation Basis

Actuarial Funding Policy	
Actuarial Value of Assets:	The market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual and expected returns on a market value basis and is recognized over a five-year period. Based on the funding policy most recently adopted by the Retirement Board, effective with the July 1, 2020 valuation, the Actuarial Value of Assets will not be reduced by 1% of the market value of assets as a non-valuation reserve.
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, with Normal Cost determined as if the current benefit accrual rate had always been in effect.
Amortization Policy:	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. All amortization amounts are determined in equal dollar amounts over the amortization period. The Board may, by resolution, adopt a separate period of not more than thirty years to amortize the change in Surplus or Unfunded Actuarial Accrued Liability resulting from an unusual event, plan amendment or change in assumptions or methods.
Changed Actuarial Assumptions:	Same as those shown in the July 1, 2020 actuarial valuation report for the Retirement Plan except for net investment return.
Changed Actuarial Funding Policy: *Actuarial Value of Assets:*	The following items in the actuarial funding policy have been changed since the prior valuation as adopted by the Retirement Board as of December 18, 2019: 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 recognize over a five-year period. As directed by the Retirement Office, the actuarial value of assets is reduced by 1% as an amount classified as a non-valuation reserve to develop the net actuarial value of assets.

Exhibit II: Summary of Plan Provisions

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

Plan Year:	July 1 through June 30
Covered Members:	
Age and Service Requirement for Family Death Benefit	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.
Age and Service Requirement for Supplemental Family Death Benefit	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 for Family Death Benefit and Supplemental Family Death Benefit	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.
Insured Lives Death Benefit (Contributing Active Members)	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.
Insured Lives Death Benefit (Non-Contributing Retired Members)	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.
Member Contribution Rate:	
Family Death Benefit	None.
Supplemental Family Death Benefit	$2.25 per biweekly period (or $4.90 per month if retired).
Insured Lives Death Benefit (Contributing Active Members)	$1.00 per biweekly payroll period.
Insured Lives Death Benefit (Non-Contributing Retired Members)	None.
Department Contribution Rate:	The Department of Water and Power makes actuarially determined contributions that consist of the Normal Cost plus an amortization of the Unfunded Actuarial Accrued Liability as described in further detail in Exhibit I.

Section 4: Actuarial Valuation Basis

Benefit	
Family Death 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
Supplemental Family Death Benefit	The monthly benefit is the sum of: $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) 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.
Insured Lives Death Benefit (Contributing Active Members)	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).
Insured Lives Death Benefit (Non-Contributing Retired Members)	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 Plan Provisions:	There were no changes in plan provisions.

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