CITY OF LOS ANGELES
WATER AND POWER EMPLOYEES'
RETIREMENT PLAN
FINANCIAL STATEMENTS
AND SUPPLEMENTARY INFORMATION
For the Years Ended June 30, 2019 and 2018

CITY OF LOS ANGELES WATER AND POWER EMPLOYEES' RETIREMENT PLAN

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INDEPENDENT AUDITOR'S REPORT

To the Board of Administration City of Los Angeles Water and Power Employees' Retirement Plan Los Angeles, California

Report on the Financial Statements

We have audited the accompanying financial statements of the Retirement Fund, Disability Fund, Death Benefit Fund, and Retiree Health Benefits Fund (individually referred to as the Funds), administered by the City of Los Angeles Water and Power Employees' Retirement Plan (WPERP), which comprise the statements of fiduciary net position as of June 30, 2019 and 2018, and the related statements of changes in fiduciary net position for the years then ended, and the related notes to the financial statements for each fund.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express opinions on the respective financial statements for each fund mentioned in the first paragraph, based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not





for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Retirement Fund, Disability Fund, Death Benefit Fund, and Retiree Health Benefits Fund as of June 30, 2019 and 2018, and the respective changes in fiduciary net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 4 through 18; the Schedule of Changes in Net Pension Liability and Related Ratios on page 62; the Schedule of Changes in Net Other Postemployment Benefit and Related Ratios on pages 66 and 70; the Schedule of Employer Contributions and related notes on pages 63, 64, 67, 68, 71, and 72; and the Schedule of Investment Returns on pages 65, 69, and 73 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audits of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.



Other Information

Our audits were conducted for the purpose of forming opinions on the financial statements of the Retirement Fund, Disability Fund, Death Benefit Fund, and Retiree Health Benefits Fund. The supplementary information as listed in the accompanying table of contents are presented for the purposes of additional analysis and are not a required part of the basic financial statements. The Retirement Fund - Schedule of Contribution Accounts and Estimated Liability for Retirement Allowances, Death Benefit Fund – Schedule of Contribution Accounts and Estimated Liability for Family Allowances, and Retirement Fund - Schedule of Revenues by Source and Expenses by Type are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the Retirement Fund - Schedule of Contribution Accounts and Estimated Liability for Retirement Allowances, Death Benefit Fund - Schedule of Contribution Accounts and Estimated Liability for Family Allowances, and Retirement Fund - Schedule of Revenues by Source and Expenses by Type are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Los Angeles, California

Simpson & Simpson

December 2, 2019

We are pleased to provide this overview and analysis of the financial activities of the City of Los Angeles Department of Water and Power (Department) Employees' Retirement Plan (WPERP) for the years ended June 30, 2019 and 2018.

FINANCIAL HIGHLIGHTS

- At June 30, 2019, the fiduciary net position was \$13.0 billion, \$48.3 million, \$28.8 million, and \$2.2 billion for the Retirement, Disability, Death Benefit, and Retiree Health Benefits Funds, respectively. All of the fiduciary net positions were available to meet the obligations to participants and their beneficiaries.
- Total fiduciary net position increased by \$710.0 million or 5.78%, \$1.9 million or 4.03%, \$1.6 million or 5.87%, and \$134.9 million or 6.47% for the Retirement, Disability, Death Benefit and Retiree Health Benefits Fund respectively.
- Additions to the Retirement Fund's fiduciary net position totaled \$1.3 billion in the current year, while additions to the Retiree Health Benefit Fund's fiduciary net position totaled \$237.3 million. They were due mainly to investments' market value appreciation in 2019.
- Deductions from the Retirement Fund's fiduciary net position increased \$34.2 million from \$568.5 million to \$602.8 million over the prior year or approximately 6.02%, due to the rise in the total number of retirees and the cost of living adjustment granted.
- At June 30, 2019, the fiduciary net position as a percentage of total pension liability of the Retirement Fund was 94.03%.
- At June 30, 2019, the Department's net pension liability under the Retirement Fund was \$824.9 million.
- At June 30, 2019, the fiduciary net position as a percentage of total other postemployment benefits liability of the Retiree Health Benefits Fund and Death Benefit Fund was 82.75% and 21.46%, respectively.
- At June 30, 2019, the Department's net other postemployment benefits liability under the Retiree Health Benefits Fund and Death Benefit Fund was \$462.9 million and \$105.5 million, respectively.

OVERVIEW OF THE FINANCIAL STATEMENTS

The following discussion and analysis is intended to serve as an introduction to the financial statements of the WPERP, which are:

- 1. Statements of Fiduciary Net Position
- 2. Statements of Changes in Fiduciary Net Position
- 3. Notes to the Financial Statements

The Statements of Fiduciary Net Position is a snapshot of account balances at year end. It indicates the amount of assets available for payment to retirees, beneficiaries, and any current liabilities owed at this time.

The Statements of Changes in Fiduciary Net Position reports additions to and deductions from the fiduciary net position during the year.

The above statements are on a full accrual basis of accounting. Investment gains and losses are shown at trade date, and account balances are based on market values recognizing both realized and unrealized gains and losses on investments.

Notes to the Financial Statements provide additional information essential to a full understanding of the data provided in the financial statements. These notes are presented in pages 22 to 61 of this report.

Required Supplementary Information: This report presents certain required supplementary information concerning the Retirement Fund, the Retiree Health Benefits Fund, and the Death Benefit Fund's progress in funding to provide pension, health benefits, and insured life benefits to members. The report also provides summary information on employer contributions. The required supplementary information is on pages 62 to 73 of this report.

Supplementary Information: The supplementary information is also available in this report for a better understanding of the WPERP's financial activities. The supplementary information is on pages 74 to 76 of this report.

FINANCIAL ANALYSIS

Retirement Fund

Fiduciary Net Position

A summary of the Retirement Fund's fiduciary net position is presented below:

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	(In Thousands)								
		2019		2018		2017	2018-19 % Change	2017-18 % Change	
Cash	\$	8,237	\$	8,064	\$	8,803	2.15%	-8.39%	
Prepaid expense		3		2		8	50.00%	-75.00%	
Receivables		164,798		355,239		287,125	-53.61%	23.72%	
Investments		13,519,694		12,816,076		12,033,013	5.49%	6.51%	
Total assets		13,692,732		13,179,381		12,328,949	3.90%	6.90%	
Liabilities		705,645		902,296		1,015,050	-21.79%	-11.11%	
Fiduciary net position	\$	12,987,087	\$	12,277,085	\$	11,313,899	5.78%	8.51%	

Fiscal year ended June 30, 2019

Fiduciary net position increased by \$710.0 million or 5.78% over the prior fiscal year to \$13.0 billion. Investments were up \$703.6 million or 5.49% due to solid market performance. Total receivables decreased by \$190.4 million or 53.61% due to the lower pending investment sales at fiscal year-end. Total liabilities decreased by \$196.7 million or 21.79% due to lower pending investment purchases and less securities lending collateral held at fiscal year-end.

Fiscal year ended June 30, 2018

Fiduciary net position increased by \$963.2 million or 8.51% over the prior fiscal year to \$12.3 billion. Investments were up \$783.1 million or 6.51% due to continued strong market performance. Total receivables rose by \$68.1 million or 23.72% due to the higher pending investment sales at fiscal year-end. Total liabilities decreased by \$112.8 million or 11.11% due mainly to the lower securities lending collateral held at fiscal year-end.

Retirement Fund (Continued)

Changes in Fiduciary Net Position

Condensed Statements of Changes in Fiduciary Net Position
(In Thousands)

		2019	2018	2017	2018-19 % Change	2017-18 % Change
Additions				 		
Members' contributions	\$	104,742	\$ 93,659	\$ 83,239	11.83%	12.52%
Employer contributions		416,180	439,299	397,748	-5.26%	10.45%
Net investment income		791,832	 998,777	 1,280,806	-20.72%	-22.02%
Total additions		1,312,754	 1,531,735	 1,761,793	-14.30%	-13.06%
Deductions						
Benefit payments		591,461	558,901	535,915	5.83%	4.29%
Refund		6,102	4,312	4,447	41.51%	-3.04%
Administrative expenses		5,189	 5,336	 5,375	-2.75%	-0.73%
Total deductions		602,752	568,549	 545,737	6.02%	4.18%
Net decrease						
in fiduciary net position		710,002	963,186	1,216,056	-26.29%	-20.79%
Fiduciary net position beginning		12,277,085	11,313,899	 10,097,843	8.51%	12.04%
Fiduciary net position ending	\$	12,987,087	\$ 12,277,085	\$ 11,313,899	5.78%	8.51%

Retirement Fund (Continued)

Additions to Fiduciary Net Position

Additions needed to fund benefit payments are accumulated through contributions from the employees and the employer, and from income generated from the Retirement Fund's investing activities.

Fiscal year ended June 30, 2019

Member contributions for fiscal year 2019 were up 11.83% over the prior fiscal year. The increase in contributions was due primarily to the increase in covered payroll. Employer contributions decreased by 5.26% over the same period, due to the lower required contribution rate versus the prior year. Net investment income totaled \$791.8 million in fiscal year 2019, a decrease of 20.72%. The decrease was attributed to lesser appreciation in the fair value of investments relative to prior year.

Fiscal year ended June 30, 2018

Member contributions and employer contributions for fiscal year 2018 were up 12.52% and 10.45% respectively over the prior fiscal year. The increase in contributions was due primarily to the increase in the number of active Plan members. Net investment income decreased by \$282.0 million, or 22.02%, to \$1.0 billion in fiscal year 2018. The decrease was attributed to lesser appreciation in the fair value of investments relative to prior year.

Deductions from Fiduciary Net Position

Costs associated with the Retirement Fund include benefit payments as designated by the Plan document, refund of contributions due to terminations and member deaths, and administrative expenses.

Fiscal year ended June 30, 2019

Deductions for the fiscal year ended June 30, 2019 totaled \$602.8 million, up \$34.2 million or 6.02% over the prior fiscal year. Benefit payments increased by 5.83% over the prior fiscal year. The increase was due to the rise in the total number of retirees and the cost of living adjustment granted.

Fiscal year ended June 30, 2018

Deductions for the fiscal year ended June 30, 2018 totaled \$568.5 million, up \$22.8 million or 4.18% over the prior fiscal year. Benefit payments increased by \$23.0 million or 4.29% over the prior fiscal year. The increase was due to the rise in the total number of retirees and the cost of living adjustment granted.

Disability Fund

Fiduciary Net Position

The Disability Fund's fiduciary net position is summarized below:

Condensed Statements	of Fiduciary Net Position
/T (T)	1 \

		(In T				
	 2019		2018	2017	2018-19 % Change	2017-18 % Change
Cash	\$ 2,004	\$	1,293	\$ 3,139	54.99%	-58.81%
Receivables	8,019		8,022	6,804	-0.04%	17.90%
Investments	38,730	1	37,572	37,688	3.08%	-0.31%
Total assets	48,753		46,887	47,631	3.98%	-1.56%
Liabilities	 470		473	436	-0.63%	8.49%
Fiduciary net position	\$ 48,283	\$	46,414	\$ 47,195	4.03%	-1.65%

Fiscal year ended June 30, 2019

The Disability Fund's fiduciary net position increased by \$1.9 million, or 4.03% in fiscal year 2019. Cash increased by \$0.7 million or 54.99% from prior year based on projected liquidity needs.

Fiscal year ended June 30, 2018

The Disability Fund's fiduciary net position decreased by \$0.8 million, or 1.65% in fiscal year 2018. Cash decreased by \$1.8 million or 58.81% from prior year. It mainly resulted from higher receivables outstanding at fiscal year-end.

Condensed Statements of Changes in Fiduciary Net Position (In Thousands)

17,614

(781)

47,195

46,414

17,050

(292)

47,487

47,195

1.62%

339.31%

-1.65%

4.03%

3.31%

-167.47%

-0.61%

-1.65%

Disability Fund (Continued)

Changes in Fiduciary Net Position

2018-19 2017-18 2019 2018 2017 % Change % Change **Additions** Members' contributions \$ 504 \$ 493 \$ 473 4.23% 2.23% 16,365 **Employer contributions** 16,504 16,499 0.03% 0.82% Net investment income (loss) 2,761 (159)(80)1836.48% -98.75% 16,758 Total additions 19,769 16,833 17.44% 0.45% **Deductions** Benefit payments 16,881 16,719 16,185 0.97% 3.30% Administrative expenses 1,019 895 865 13.85% 3.47%

17,900

1,869

46,414

48,283

Additions to Fiduciary Net Position

Total deductions

Net increase (decrease) in fiduciary net position

Fiduciary net position beginning

Fiduciary net position ending

Additions needed to fund benefits are accumulated through employer and employee contributions and investment income generated from the Fund's investing activities.

Disability Fund (Continued)

Fiscal year ended June 30, 2019

Net investment income increased by \$2.9 million compared to fiscal year 2018. The increase is attributed to the rebound in fair value of fixed income investments during fiscal year 2019.

Fiscal year ended June 30, 2018

Employer contributions increased minimally during fiscal year 2018. Net investment income totaled negative \$0.2 million due to the continued challenging fixed income market.

Deductions from Fiduciary Net Position

The costs associated with the Disability Fund include disability benefit payments and administrative expenses.

Fiscal year ended June 30, 2019

Total deductions were consistent with prior fiscal year; it was only up by \$0.3 million or 1.62% versus fiscal year 2018.

Fiscal year ended June 30, 2018

Fiscal year 2018 benefit payments increased by \$0.6 million or 3.30% from a year ago. The increase was primarily due to increases in the permanent disability and industrial supplemental disability benefits paid.

Death Benefit Fund

The Death Benefit Fund's fiduciary net position is summarized below:

Condensed Statements of Fiduciary	
Not Docition (In Thousands)	

	Net P	OS1t10				
	 2019		2018	2017	2018-19 % Change	2017-18 % Change
			_	 _		
Cash	\$ 995	\$	940	\$ 960	5.85%	-2.08%
Receivables	1,612		1,178	1,023	36.84%	15.15%
Investments	 31,150		29,802	29,533	4.52%	0.91%
Total assets	33,757		31,920	31,516	5.76%	1.28%
Liabilities	 4,950		4,710	 3,932	5.10%	19.79%
Total fiduciary net position	\$ 28,807	\$	27,210	\$ 27,584	5.87%	-1.36%

Fiscal year ended June 30, 2019

The Fund's fiduciary net position increased by \$1.6 million, or 5.87% when compared to prior year's fiduciary net position. Investments were up \$1.3 million, or 4.52% against last year. This is mostly attributable to the appreciation in the fair value of investments.

Fiscal year ended June 30, 2018

The Fund's fiduciary net position decreased slightly by \$0.4 million or 1.36% when compared to prior year's fiduciary net position of \$27.6 million. Liabilities at June 30, 2018 were up \$0.8 million, or 19.79% against last year. This is mostly attributable to the higher death benefit claims outstanding at fiscal year-end.

Death Benefit Fund (Continued)

Changes in Fiduciary Net Position

		Condensed Fiduciary N						
		2019	2018		2017		2018-19 % Change	2017-18 % Change
Additions	•							
Members' contributions	\$	358	\$	347	\$	336	3.17%	3.27%
Employer contributions		8,778		8,101		8,207	8.36%	-1.29%
Net investment income (loss)		2,293		(120)		(57)	2010.83%	-110.53%
Total additions		11,429		8,328		8,486	37.24%	-1.86%
Deductions								
Benefit payments		8,232		7,603		7,968	8.27%	-4.58%
Administrative expenses	_	1,600		1,099		1,119	45.59%	-1.79%
Total deductions		9,832		8,702		9,087	12.99%	-4.24%
Net increase (decrease)								
in fiduciary net position		1,597		(374)		(601)	527.01%	37.77%
Fiduciary net position beginning		27,210		27,584		28,185	-1.36%	-2.13%
Fiduciary net position ending	\$	28,807	\$	27,210	\$	27,584	5.87%	-1.36%

Additions to Fiduciary Net Position

Additions to fund the benefits are accumulated through contributions and investment income from invested funds.

Death Benefit Fund (Continued)

Fiscal year ended June 30, 2019

Net investment income totaled \$2.3 million in fiscal year 2019. The increase is attributed to the superior performance of fixed income investments during fiscal year 2019.

Fiscal year ended June 30, 2018

Net investment income totaled negative \$0.1 million. The decrease is attributed to the continued decline in the fair value of fixed income investments during fiscal year 2018.

Deductions from Fiduciary Net Position

The costs associated with the Death Benefit Fund include the benefits payments and administrative expenses.

Fiscal year ended June 30, 2019

Fiscal year 2019 benefit payments increased by \$0.6 million, up 8.27% from prior year. The increase was due to the rise in the number of death benefits claimed. Administrative expenses increased \$0.5 million from the previous year. The rise is mostly attributed to the increase in salary expense allocation.

Fiscal year ended June 30, 2018

Fiscal year 2018 benefit payments decreased by \$0.4 million, or 4.58% from prior year. The decrease was due to a drop in the number of death benefits claimed.

Retiree Health Benefits Fund

The DWP Board of Water and Power commissioners (DWP Board) approved the creation of the Retiree Health Benefits Fund in September 2006 to defray current and future retiree health benefit liabilities and related costs. The Retirement Board has the fiduciary responsibility for investing the assets of the RHBF and administering payments from it, while the DWP Board continues to have the responsibility to set the funding policy and the funding levels of the RHBF. The RHBF assets amounting to \$642.0 million were transferred to the WPERP to establish the fund during fiscal year 2007.

As of June 30, 2019 the fiduciary net position of the fund totaled approximately \$2.2 billion. A condensed statements of the fund's fiduciary net position and a condensed statements of changes in fiduciary net position are as follow:

Fiduciary Net Position

Condensed Statements of Fiduciary Net Position (In Thousands)

		Net P	ositic						
		2019		2018		2017	2018-19 % Change	2017-18 % Change	
Cash	\$	915	\$	370	\$	518	147.30%	-28.57%	
Receivables		16,515		45,142		34,786	-63.42%	29.77%	
Investments	2	2,353,913		2,220,685		2,071,771	6.00%	7.19%	
Total assets	2	2,371,343		2,266,197		2,107,075	4.64%	7.55%	
Liabilities		150,792		180,506		195,194	-16.46%	-7.52%	
Total fiduciary net position	\$ 2	2,220,551	\$:	2,085,691	\$	1,911,881	6.47%	9.09%	

Fiscal year ended June 30, 2019

Fiduciary net position increased \$134.9 million or 6.47% over the prior fiscal year to \$2.2 billion. Cash increased by \$0.5 million from prior fiscal year based on projected liquidity needs. Total receivables decreased by \$28.6 million or 63.42% due to lower pending investment sales at fiscal year-end. Total liabilities decreased by \$29.7 million or 16.46% due mainly to lesser pending investment purchases at fiscal year-end.

Retiree Health Benefits Fund (continued)

Fiscal year ended June 30, 2018

Fiduciary net position increased \$173.8 million or 9.09% over the prior fiscal year. Investments were up \$148.9 million or 7.19% due to sustained positive market performance. Total receivables rose by \$10.4 million or 29.77% due to the higher pending investment sales at fiscal year-end. Total liabilities decreased by \$14.7 million or 7.52% due mainly to the lower securities lending collateral held at fiscal year-end.

Changes in Fiduciary Net Position

	Condense					
	 Fiduciary	Net I				
					2018-19	2017-18
	2019		2018	2017	% Change	% Change
Additions						
Employer contributions	\$ 102,631	\$	95,919	\$ 91,024	7.00%	5.38%
Net investment income	 134,707		173,674	 218,836	-22.44%	-20.64%
Total additions	237,338		269,593	309,860	-11.96%	-13.00%
Deductions						
Benefit payments	101,595		95,234	90,311	6.68%	5.45%
Administrative expenses	 883		549	 585	60.84%	-6.15%
Total deductions	102,478		95,783	 90,896	6.99%	5.38%
Net increase						
in fiduciary net position	134,860		173,810	218,964	-22.41%	-20.62%
Fiduciary net position beginning	 2,085,691		1,911,881	 1,692,917	9.09%	12.93%
Fiduciary net position ending	\$ 2,220,551	\$	2,085,691	\$ 1,911,881	6.47%	9.09%

Retiree Health Benefits Fund (Continued)

Additions to Fiduciary Net Position

Additions to fund the benefits are accumulated through contributions from the Department and investment income derived from invested funds.

Fiscal year ended June 30, 2019

Net investment income decreased \$39.0 million or 22.44% in fiscal year 2019. The decrease was attributed to lesser appreciation in the fair value of investments relative to prior year.

Fiscal year ended June 30, 2018

Net investment income decreased \$45.2 million from \$218.8 million to \$173.7 million in fiscal year 2018. The decrease was attributed to smaller appreciation in the fair value of investments relative to prior year.

Deductions from Fiduciary Net Position

Deductions represent medical and dental insurance premiums paid for the benefit of retirees and operating costs.

Fiscal year ended June 30, 2019

Insurance premiums paid for the benefit of retirees increased \$6.4 million or 6.68% in fiscal year 2019. Administrative expenses increased \$0.3 million from the previous year. The rise is mostly attributed to the increase in salary expense allocation.

Fiscal year ended June 30, 2018

Insurance premiums paid for the benefit of retirees experienced a moderate increase \$4.9 million or 5.45% in fiscal year 2018 when compared to fiscal year 2017.

Request for Information

This financial report is designed to provide the Retirement Board, members, investment managers and creditors with a general overview of the WPERP's finances. Questions concerning any of the information provided in this report or requests for additional information should be addressed to:

Linda P. Le, Interim Retirement Plan Manager Water and Power Employees' Retirement Plan 111 N. Hope Street, Room 357 Los Angeles, CA 90012

CITY OF LOS ANGELES WATER AND POWER EMPLOYEES' RETIREMENT PLAN STATEMENTS OF FIDUCIARY NET POSITION AS OF JUNE 30, 2019 AND 2018

	Pensio	on Plan	Other Benefits Plan		Other Postemployment Benefits Plans			
	Retirem	ent Fund	Disabil	ity Fund	Death Ber	nefit Fund	Retiree Health	Benefits Fund
	2019	2018	2019	2018	2019	2018	2019	2018
ASSETS								
Cash (Notes 2 and 3)	\$ 8,236,991	\$ 8,063,652	\$ 2,004,310	\$ 1,292,540	\$ 994,997	\$ 939,600	\$ 914,705	\$ 370,123
Prepaid expense	2,500	2,536	-	-	-	-	-	-
Receivables								
Accrued investment income	37,291,739	32,914,444	107,617	92,379	86,518	71,175	5,927,876	5,289,156
Department of Water and Power	55,310,152	59,147,316	2,772,908	2,867,535	1,505,548	1,087,132	114,440	-
Pending investment sales	68,016,136	256,132,221	-	-	-	-	10,473,340	39,852,447
Other	4,179,911	7,044,572	1,828,443	1,751,910	20,044	20,044	31	-
Contingent disability benefit advance	<u> </u>		3,310,339	3,310,339				
Total receivables	164,797,938	355,238,553	8,019,307	8,022,163	1,612,110	1,178,351	16,515,687	45,141,603
Investments, at fair value (Notes 2, 3, and 4)								
Fixed income	2,993,027,511	2,848,790,689	38,478,528	37,327,310	30,896,023	29,554,341	510,524,982	484,791,809
Equity	6,854,961,546	6,689,840,829	-	-	-	-	1,188,542,388	1,158,878,523
Short-term investments	421,180,428	324,250,963	251,500	245,110	254,304	248,138	66,115,479	61,419,921
Alternative investments	1,831,807,159	1,628,016,346	-	_	-	-	318,574,277	281,791,375
Real estate	896,221,087	716,440,769	-	-	-	-	147,051,417	107,329,484
Securities lending - short-term collateral investment pool	522,496,357	608,736,556					123,104,324	126,473,770
Total investments	13,519,694,088	12,816,076,152	38,730,028	37,572,420	31,150,327	29,802,479	2,353,912,867	2,220,684,882
Total assets	13,692,731,517	13,179,380,893	48,753,645	46,887,123	33,757,434	31,920,430	2,371,343,259	2,266,196,608
LIABILITIES								
Payables								
Pending investment purchases	168,746,737	279,145,489	107,098	91,959	85,993	70,700	23,442,203	47,367,851
Department of Water and Power	_	-	-	_	_	_	-	31,891
Other	14,401,422	14,413,585	363,272	381,287	776,220	999,290	4,245,298	6,632,018
Securities lending - collateral payable (Note 4)	522,496,357	608,736,556	-	-	-	-	123,104,324	126,473,770
Death claims in process - insured lives					4,088,481	3,640,220		
Total liabilities	705,644,516	902,295,630	470,370	473,246	4,950,694	4,710,210	150,791,825	180,505,530
Fiduciary net position restricted for pension,								
other postemployment, and disability benefits	\$ 12,987,087,001	\$ 12,277,085,263	\$ 48,283,275	\$ 46,413,877	\$ 28,806,740	\$ 27,210,220	\$ 2,220,551,434	\$ 2,085,691,078

The accompanying notes are an integral part of these financial statements.

CITY OF LOS ANGELES WATER AND POWER EMPLOYEES' RETIREMENT PLAN STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION FOR THE YEARS ENDED JUNE 30, 2019 AND 2018

	Pension Plan		Other Benefits Plan		Other Postemployment Benefits Plans			
	Retireme	nt Fund	Disabil	ity Fund	Death Ber	nefit Fund	Retiree Health Benefits Fund	
	2019	2018	2019	2018	2019	2018	2019	2018
ADDITIONS							·	
Members' contributions								
Retirement benefit	\$ 104,741,925	\$ 93,659,240	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Temporary disability benefit	=	=	251,825	249,642	-	-	-	-
Permanent total disability	=	=	252,574	243,575	-	-	-	-
Insured lives death benefit	-	-	-	-	252,939	244,551	-	-
Supplemental family death benefit	-	-	-	-	105,134	102,380	-	-
Total members' contributions	104,741,925	93,659,240	504,399	493,217	358,073	346,931		
Department of Water and Power contributions towards:								
Retirement benefit (net of reversions)	410,165,124	433,412,569	-	-	-	-	-	-
Insurance premiums	-	-	-	-	-	-	101,594,970	95,233,622
Temporary disability benefits	-	-	14,176,920	14,103,745	-	-	-	-
Supplemental disability benefits	-	-	1,304,880	1,497,638	-	-	-	_
Active members	=	-	_	_	2,110,835	2,049,059	=	-
Retired members (non-contributing)	=	-	-	-	4,963,513	4,893,639	-	-
Family death benefit	-	-	_	-	185,607	194,513	_	_
Administrative expenses	6,015,073	5,885,875	1,021,835	897,795	1,517,626	963,988	1,036,490	685,090
Total Department of Water and Power contributions	416,180,197	439,298,444	16,503,635	16,499,178	8,777,581	8,101,199	102,631,460	95,918,712
Total contributions	520,922,122	532,957,684	17,008,034	16,992,395	9,135,654	8,448,130	102,631,460	95,918,712
Investment income								
Net appreciation (depreciation) in fair value of investments	583,142,901	817,302,623	1,613,231	(1,117,049)	1,346,590	(857,419)	100,632,276	144,145,469
Interest	123,770,821	110,619,932	1,190,476	1,001,807	981,308	771,276	19,541,413	18,044,351
Dividends	87,792,103	74,421,498	-	-	-	-	15,492,139	12,998,061
Income from real estate investments	38,244,903	30,666,108	_	_	=	-	6,321,780	4,591,788
Income from alternative investments	4,625,795	4,295,489	-	-	-	-	616,469	320,561
Securities lending (Note 4)	17,510,795	14,510,674	-	-	-	-	3,718,375	2,905,337
Total investment income	855,087,318	1,051,816,324	2,803,707	(115,242)	2,327,898	(86,143)	146,322,452	183,005,567
Less: Securities lending expenses (Note 4)	(14,610,056)	(10,902,675)	· · · · -		_	` _	(3,127,803)	(2,201,552)
Less: Investment expenses	(49,249,999)	(42,957,057)	(42,759)	(43,793)	(35,099)	(33,751)	(8,514,980)	(7,207,236)
Net investment income	791,227,263	997,956,592	2,760,948	(159,035)	2,292,799	(119,894)	134,679,669	173,596,779
Other income	604,850	820,635					26,922	77,580
Total additions	1,312,754,235	1,531,734,911	19,768,982	16,833,360	11,428,453	8,328,236	237,338,051	269,593,071
								(Continued)

The accompanying notes are an integral part of these financial statements.

CITY OF LOS ANGELES WATER AND POWER EMPLOYEES' RETIREMENT PLAN STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION FOR THE YEARS ENDED JUNE 30, 2019 AND 2018

	Pensio	Pension Plan Other Benefits Plan			Other Postemployment Benefits Plan			
	Retireme	ent Fund	Disabili	ty Fund	Death Ber	nefit Fund	Retiree Health	Benefits Fund
	2019	2018	2019	2018	2019	2018	2019	2018
DEDUCTIONS								
Benefits paid								
Retirement	591,461,776	558,900,946	-	-	-	-	-	-
Temporary disability	-	-	13,353,351	12,989,490	-	-	-	-
Extended temporary disability	-	-	320,631	379,185	-	-	-	-
Permanent total disability	-	-	1,901,678	1,853,258	-	-	-	-
Supplemental	-	-	1,304,880	1,497,638	-	-	-	-
Death benefits (active/retired members)	-	-	-	-	7,685,403	7,059,333	-	-
Family allowances	-	-	-	-	546,650	543,244	-	-
Retiree health benefits paid (insurance premiums)							101,594,970	95,233,622
Total benefits paid	591,461,776	558,900,946	16,880,540	16,719,571	8,232,053	7,602,577	101,594,970	95,233,622
Refund of members' contributions	6,101,790	4,311,579	-	-	_	-	-	-
Administrative expenses	5,188,931	5,336,458	1,019,044	895,315	1,599,880	1,099,573	882,725	548,907
Total deductions	602,752,497	568,548,983	17,899,584	17,614,886	9,831,933	8,702,150	102,477,695	95,782,529
Net increase (decrease) in fiduciary net position	710,001,738	963,185,928	1,869,398	(781,526)	1,596,520	(373,914)	134,860,356	173,810,542
Fiduciary net position restricted for pension, other postemployment, and disability benefits								
Beginning of year	12,277,085,263	11,313,899,335	46,413,877	47,195,403	27,210,220	27,584,134	2,085,691,078	1,911,880,536
End of year	\$ 12,987,087,001	\$ 12,277,085,263	\$ 48,283,275	\$ 46,413,877	\$ 28,806,740	\$ 27,210,220	\$ 2,220,551,434	\$ 2,085,691,078

The accompanying notes are an integral part of these financial statements.

CITY OF LOS ANGELES WATER AND POWER EMPLOYEES' RETIREMENT PLAN STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION FOR THE YEARS ENDED JUNE 30, 2019 AND 2018

NOTE 1 – PLAN DESCRIPTIONS

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 (Department) in 1938. The WPERP is a single employer public employee retirement system whose main function is to provide pension, death and disability benefits, to eligible employees of the Department.

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

In 1986, DWP Board adopted the Department Health Plans Board Resolution. This resolution established provisions for the health, dental and other medical plans of the Department and its subsidies. This resolution and subsequent amendments have created the Department's Postretirement Health Care Benefit Plan (Retiree Health Benefits Plan), a single-employer postemployment healthcare benefit plan. The DWP Board establishes the benefit terms and funding policy of the Retiree Health Benefits Plan. The DWP Board has five members. The members are appointed by the Mayor of the City of Los Angeles, subject to the approval of City Council. On September 6, 2006, the Retirement Board approved the creation and establishment of the Retiree Health Benefits Fund (RHBF) as an independent trust fund to discharge the benefits provided under the Retiree Health Benefits Plan. The Retirement Board has investment oversight of the RHBF.

The WPERP has four separate funds – Retirement Fund, Disability Fund, Death Benefit Fund, and RHBF. Each fund is considered a separate plan and an independent trust fund of the Department. The Retirement Fund is a single employer defined benefit pension plan. The Death Benefit Fund and Retiree Health Benefit Fund are single employer defined benefit other postemployment benefits (OPEB) plans. The Disability Fund is for the payment of temporary disability and permanent total disability of the Department's employees, and is considered neither a pension plan nor an OPEB plan.

NOTE 1 – PLAN DESCRIPTIONS (Continued)

Retirement Fund, Disability Fund, and Death Benefit Fund

Membership

The Retirement Fund's and Death Benefit Fund's membership consisted of the following at June 30, 2019 and 2018:

	20	19	2018			
	Retirement	Death Benefit	Retirement	Death Benefit		
Retirees, beneficiaries	9,315	7,445	9,165	7,290		
Terminated vested	1,663	630	1,728	656		
Active	10,362	10,362	10,114	10,114		
Total	21,340	18,437	21,007	18,060		

Benefit Provisions

Retirement Fund

The Retirement Fund consists of both defined contribution and defined benefit elements. Under Tier 1, members vest in the defined contribution element (annuity) after one year of service. Members vest in the defined benefit element (pension) only after qualifying for retirement and meeting the criteria for the formula pension. Generally, new and returning employees of the Department become eligible for Plan membership on the first day of the payroll period following entry into Department service. New eligible employees must complete 26 weeks of continuous service before becoming entitled to disability and/or death benefits. During the fiscal year 2014, the City of Los Angeles (City) and the Department agreed to a new tier of retirement benefits for new hires to the Department. On December 11, 2013, the Retirement Board adopted a Plan amendment to create a new tier, Tier 2, for the Department's new-hires on or after January 1, 2014. Major benefit provisions for each tier are described below.

Tier 1 members are eligible for normal retirement at age 60. Early retirement at age 55 is generally available if the member has at least 10 years of qualifying service out of the last 12 years before retirement. Members with 30 or more years of qualifying service also may retire at any age and receive a reduced benefit. The early retirement benefit reduction is not applicable if the member is between the ages of 55 and 60, and has at least 30 years of service credits. Upon qualifying for retirement, Tier 1 members will also qualify for a formula pension if they have been employed by the Department or City for at least five years before retirement and have been a contributing member of the Plan for at least four of five years immediately preceding

NOTE 1 – PLAN DESCRIPTIONS (Continued)

retirement or while eligible to retire (or during any of those four years if they were receiving either disability benefits under the Disability Benefit Plan or payments under any Workers' Compensation Law).

Eligible Tier 1 members are entitled to an annual retirement benefit, payable monthly for life currently in an amount equal to a retirement factor of 2.1% of their highest average salary, for each year of credited service. Members who have at least 30 years of service credit and are at least 55 years of age are entitled to a retirement factor of 2.3% in the calculation of their retirement allowance. "Highest average salary" is defined as the employee's average base salary over the highest 26 consecutive contributing payroll periods. Retirees who are receiving a formula pension are entitled to annual cost of living adjustment (COLA). Adjustments are applied each July 1 based on the Consumer Price Index (Los Angeles-Long Beach-Anaheim, CA – All Items) as published by the Bureau of Labor Statistics of the United States Department of Labor (CPI) for each of the two immediately preceding calendar years. The maximum adjustment, positive or negative, is 3% in any one year.

Tier 2 members are eligible for normal retirement at age 60 with at least 5 years of continuous Department service (5 year must be as a contributing member and/or receiving either disability benefits under the Disability Benefit Plan or payments under any Workers' Compensation Law). A reduced benefit for early retirement at any age is generally available if the member has at least 30 years of service. Members with 30 or more years of credited service may retire at age 55 and receive unreduced benefits.

Eligible Tier 2 members are entitled to an annual retirement benefit, payable monthly for life currently in an amount equal to a retirement factor multiplying each year of credited service, and then multiplying their final average salary. The specific retirement factor is based on the combination of member's age and credited service as follows:

- 1.5% at age 60 with 5 years of continuous Department service or 10 years of qualifying service
- 2.0% at any age with 30 years
- 2.0% at age 63 with 5 years of continuous Department service or 10 years of qualifying service
- 2.1% at age 63 with 30 years

"Final average salary" is defined as the employee's average base salary over the highest 78 consecutive payroll periods. A member's monthly pension amount is capped at 80% of one's final average salary. Retirees who are receiving a formula pension are entitled to annual COLA. Adjustments are applied each July 1 based on the CPI for each of the two immediately preceding

NOTE 1 – PLAN DESCRIPTIONS (Continued)

calendar years. The maximum adjustment, positive or negative, is 2% in any one year. Members may purchase additional post-retirement COLA coverage, not to exceed an additional 1% per year, at full actuarial cost to the Plan. Members, who are eligible for a deferred retirement (vesting), are also eligible for a formula pension, but they are not entitled to an annual COLA.

Death Benefit Fund

The Death Benefit Fund consists of the insured lives death benefit (IDB), family death benefit (FDB), and supplemental family death benefit (SFDB).

• Insured Lives Death Benefit

For contributing active members, death benefit coverage begins after completion of 26 weeks of continuous Department service. If the death occurs while an active member of the Plan, the benefit includes a single lump sum distribution equal to fourteen times the member's monthly salary, and the Retirement Fund contributions plus accrued interest, payable to the beneficiary.

For retired members, the benefits include a single lump sum distribution equal to fourteen times the member's full retirement allowance not to exceed \$20,000, plus any unpaid retirement allowances due, and the unused portion of the Retirement Fund contributions upon death (if elected at retirement) payable to the beneficiary.

• Family Death Benefit

Coverage begins after completion of 26 weeks of continuous Department service. The Plan provides a monthly FDB allowance of \$416 to each qualified surviving child plus \$416 to the spouse, if the spouse has the care of one or more of the member's eligible children. The maximum monthly FDB allowance cannot exceed \$1,170.

• Supplemental Family Death Benefit

The SFDB program supplements the FDB. Coverage begins after enrollment and payment of premiums for 39 consecutive biweekly payroll deductions. The Plan provides for an additional monthly SFDB allowance of \$520 to each qualified surviving child plus \$520 to the spouse, if the spouse has the care of one or more of the member's eligible children. The maximum SFDB allowance cannot exceed \$1,066.

NOTE 1 – PLAN DESCRIPTIONS (Continued)

Contributions

Retirement Fund

Retirement contributions are determined by a member's Tier designation. Covered Tier 1 employees continue to contribute 6% of their annual covered payroll upon becoming a Plan member on or after June 1, 1984. Employees entering the Plan before June 1, 1984 contribute an amount based upon an entry-age percentage rate. If an employee leaves or dies while employed, employee contribution plus credited interest is refundable. After one year of membership, the employee may leave his or her contribution on account with the Plan along with the Department's matching contributions and receive a money purchase allowance at retirement age. A surviving spouse of an employee who dies while eligible to retire or with at least 25 years of service may elect to receive a monthly allowance from the Retirement Fund for life rather than a refund of the employee's contributions and interest.

Covered Tier 2 employees are required to contribute 10% of their annual covered payroll upon becoming a Plan member. A Tier 2 member has the same benefits as a Tier 1 member upon termination or death while employed with a single exception. A Tier 2 member will not receive a money purchase allowance with vesting after one year. Instead a Tier 2 member will only receive a formula pension if one is at age 60 and has at least 5 years of continuous Department service.

The Department contributes \$1.10 for each \$1.00 contributed by Tier 1 members, plus an actuarially determined percentage of covered payroll. The Department solely contributes an actuarially determined percentage of covered payroll for Tier 2 members. Contribution provisions are established and amended by the Retirement Board upon the advice of the Plan actuary. The average employer contribution rates for fiscal years 2019 and 2018 (based on the July 1, 2018 and 2017 valuations) were 40.15% and 44.62% of compensation, respectively.

Disability Fund

Each bi-weekly payroll period, both eligible Tiers 1 and 2 members contribute \$1.00 each for temporary disability and permanent total disability. The Department contribution rate for fiscal years 2019 and 2018 for temporary disability (based on the July 1, 2018 and 2017 valuations) were \$1.31 and \$1.44 per \$100 of covered payroll, respectively. Department contribution for permanent total disability continues to be suspended, as current reserve significantly exceeds the target reserve amount.

NOTE 1 – PLAN DESCRIPTIONS (Continued)

Death Benefit Fund

• Insured Lives Death Benefit

Contributing active Tiers 1 and 2 members contribute \$1.00 per bi-weekly payroll period. The Department contributions for the IDB for contributing active members are at \$0.20 and \$0.21 per \$100 of covered payroll for fiscal years 2019 and 2018 respectively. In addition, the Department contributions for the IDB for non-contributing members were at \$0.96 and \$1.01 per \$100 of retirement benefits paid for fiscal years 2019 and 2018, respectively.

• Family Death Benefit

The Department contribution rate was \$1.36 and \$1.76 per active member per month for fiscal years 2019 and 2018, respectively.

• Supplemental Family Death Benefit

Active members contribute \$2.25 per bi-weekly payroll period, and retired members contribute \$4.90 per month. Member contributions plus earnings from investments are intended to cover the cost of the benefits.

Retiree Health Benefits Fund

<u>Membership</u>

The Retiree Health Benefits Plan's membership consisted of the following at June 30, 2019 and 2018:

2019	2018
8,253	8,185
10,362	10,114
18,615	18,299
	8,253 10,362

NOTE 1 – PLAN DESCRIPTIONS (Continued)

Benefit Provisions

Retired members of the Plan are eligible to receive a medical and dental subsidy based on their age and years of service at retirement. The retirees pay any health and dental plan premiums in excess of Department subsidy limits that they are eligible for.

Contributions

The DWP Board establishes the funding policy and funding levels of the RHBF. The Department retains the responsibility and obligation to fund the RHBF to the extent necessary and appropriate as recommended by the Department's actuary, based on funding parameters set by the Department on advice of the actuary. During fiscal years 2019 and 2018, the Department contributed \$102.6 million and \$95.9 million, respectively, to fund current and future retiree health benefits liabilities and related costs.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting and Presentation

The financial statements are prepared using the accrual basis of accounting and reflect the overall financial operations of each fund of the WPERP. Member and Department contributions are recognized as revenues in the period in which the employee services are performed and when due, and benefits and refunds are recognized when due and payable in accordance with the terms of each benefit fund.

Other expenses are recognized when incurred. The net appreciation (depreciation) in fair value of investments is recorded as an increase (decrease) to investment income based on the valuation of investments.

Investments

Investments are reported at fair value. Investments that do not have a readily determinable fair value may be valued at Net Asset Value (NAV), such as member units or an ownership interest in partners' capital to which a proportionate share of net assets is attributed. Short-term investments are reported at cost, which approximates fair value.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

The fair value of securities is determined by the published market prices and quotations from major investment dealers. Securities traded on a national or international exchange are valued at the last reported sales price at current currency exchange rates in effect. Mortgages are valued on the basis of future principal and interest payments, and are discounted at prevailing interest rates for similar investments. Hedge funds are initially recorded at cost and subsequently valued at fair value, and these are reported as "Alternative Investments" on the statements of fiduciary net position. The WPERP has investments in commingled real estate funds in which real property is its primary underlying investment. These are reported as "Real Estate" at fair value on the statements of fiduciary net position. Fair values of real estate investments are estimated by fund managers based upon property appraisal reports both internally and externally.

Purchases and sales of securities are recorded on a trade-date basis. Unsettled investment trades as of year-end are reported in the financial statements as receivable for pending sales or payable for pending purchases.

Cash

Cash consists primarily of cash on deposits in the City Treasury under the City's investment pool program.

Derivatives

To the extent permitted by policy and individual agreements, investment managers are authorized to use derivatives for risk management purposes. Accordingly, derivatives held are not held for trading purposes. Derivative securities are instruments whose value is derived from an underlying security or index. They include options, futures, swaps, forwards, structured notes, and stripped securities. These instruments offer unique characteristics and risks that assist the investment managers with meeting their investment strategies.

<u>Use of Estimates</u>

The preparation financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect certain financial statement amounts and disclosures. Actual results could differ from those estimates.

NOTE 3 – CASH AND INVESTMENTS

Investment Policy

Investment authority is granted to the WPERP by the City Charter and is exercised in accordance with the Retirement Board's investment policy. The City Charter authorizes the form and type of investment vehicles that may be purchased. The Retirement Board may invest in common and preferred stocks (including both domestic and international equities), convertible debt, fixed income, alternative investments, and real estate; and it may utilize stock covered call options and securities lending.

The following is the asset allocation policy as of June 2019:

Asset Class	Target Allocation
Large Cap US equity	22.95%
Small Cap US equity	1.75%
Developed international Large Cap equity	13.06%
Developed international Small Cap equity	2.18%
Global equity	2.90%
Emerging market equity	5.16%
Fixed income	25.00%
Real estate	8.00%
Real return	5.00%
Private equity	8.00%
Hedge funds	5.00%
Cash equivalents	1.00%
Total	100.00%

The following is the asset allocation policy as of June 2018:

Asset Class	Target Allocation
Domestic equity	29.00%
International equity	19.00%
Fixed income	25.00%
Real estate	8.00%
Real return	5.00%
Private equity	8.00%
Hedge funds	5.00%
Cash equivalents	1.00%
Total	100.00%
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NOTE 3 – CASH AND INVESTMENTS (Continued)

Cash

As of June 30, 2019 and 2018, the cash balances consist primarily of cash deposits in the City Treasury. The WPERP's participation in the program is less than 1% at June 30, 2019 and 2018. Interest earned on the City's investment pool is allocated by the City Treasury to the WPERP based on its average daily cash balance during the allocation period.

Investments

As of June 30, 2019, and 2018, the WPERP had the following investments:

Investment Type	June 30, 2019 Fair Value		June 30, 2018 Fair Value
Domestic equities	\$	5,210,951,550	\$ 5,081,268,433
International equities		2,799,827,678	2,735,232,279
U.S. Treasuries		774,227,106	817,381,695
U.S. agencies		957,820,449	891,017,438
Preferred securities/convertible bonds/other		32,724,707	32,218,640
Mortgage and asset backed securities		121,149,682	167,777,326
Corporate debt - domestic		1,030,840,075	956,783,790
Corporate debt - international		427,873,692	348,556,493
Government debt - international		187,283,297	147,484,966
Municipal/provincial bonds		4,358,191	4,580,790
Mutual funds		557,176,262	453,045,783
Private equity & hedge funds		2,150,381,436	1,909,807,721
Real estate		1,043,272,504	823,770,253
Securities lending short-term collateral investment pool		645,600,681	 735,210,326
Total investments	\$	15,943,487,310	\$ 15,104,135,933

Fair Value of Investments

The WPERP categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of an asset or liability as follows:

NOTE 3 – CASH AND INVESTMENTS (Continued)

- Level 1 Inputs utilized are unadjusted quoted prices in active markets for identical assets or liabilities.
- Level 2 Inputs include quoted prices for similar assets or liabilities, and inputs other than quoted prices that are observable for the asset or liability, including quoted prices in markets that are not active.
- Level 3 Inputs are unobservable for an asset or liability.

Investments that do not have a readily determinable fair value may be valued at the NAV, such as member units or an ownership interest in partners' capital to which a proportionate share of net assets is attributed. Investments whose fair value is measured at NAV are excluded from the fair value hierarchy.

The WPERP has the following recurring fair value measurement as of June 30, 2019:

	Fair Value Measurement at June 30, 2019*						
_	Level 1	Level 2	Level 3	Total			
_							
Equity securities:							
Domestic equities \$	5,210,951,550 \$	- \$	- \$	5,210,951,550			
International equities	2,799,827,678	-	-	2,799,827,678			
Preferred securities	32,724,707	-	-	32,724,707			
Fixed income securities:	-						
U.S. Treasuries	-	774,227,106	-	774,227,106			
U.S. agencies	-	957,820,449	-	957,820,449			
Mortgage and asset backed securities	-	121,149,682	-	121,149,682			
Corporate debt - domestic	-	1,030,840,075	-	1,030,840,075			
Corporate debt - international	-	427,873,692	-	427,873,692			
Government debt -international	-	187,283,297	-	187,283,297			
Municipal/provincial bonds	-	4,358,191	-	4,358,191			
Alternative investments							
GILS	(322,063)	364,490,473	98,143,103	462,311,513			
Real estate	67,564,028		<u> </u>	67,564,028			
Total investments by fair value \$_	8,110,745,900 \$	3,868,042,965 \$	98,143,103 \$	12,076,931,968			

^{*} Mutual funds of \$557.2 million and Sec Lending ST investments of \$645.6 million are not included in FV hierarchy. Investment measured at NAV are also not included within the fair value hierarchy. See description of investments measured at the NAV on page 34.

NOTE 3 – CASH AND INVESTMENTS (Continued)

Equity securities, preferred securities, and certain real estate funds classified in level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities and real estate funds. Debt securities classified in level 2 of the fair value hierarchy are valued based on evaluated quotes provided by independent pricing services and matrix pricing technique. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. Mortgage and asset backed securities classified in level 2 are valued on the basis of discounted future principal and interest payments.

Alternative investments classified under level 2 include global inflation linked securities (GILS) managed by Western Assets Management Company with total fair value of \$364.5 million. The fair value determination techniques may include, but not be limited to, matrix pricing, modeled securities. Examples of these models include but are not limited to: a) bespoke total return swaps that are priced using the change in relevant indices, and b) certain restructured securities that can be mapped to prices of other securities; and other valuation techniques. These other valuation techniques include, but are not limited to, discounted cash flow methods using comparable index yields, comparable bond spreads applied to treasuries or comparable prepayment speeds and yields, asset based valuations using the values from securities underlying the security being priced, and relative valuation techniques including total enterprise value/EBITDA for multiple companies and applied to the capital structure of the security being priced.

NOTE 3 – CASH AND INVESTMENTS (Continued)

Fair Value of Investments Measured at the Net Asset Value (NAV) — Below is a summary of the WPERP's investments at June 30, 2019 for which fair value is measured based on the NAV.

				Unfunded	Redemption Frequency (if Currently	Redemption Notice
Investments Measured at the NA	V	Fair Value		Commitment	Eligible)	Period
Private Equity						
Direct partnerships	\$	657,012,612	\$	425,112,792	Not Eligible	Not Eligible
Fund of funds		131,704,224		183,638,082	Not Eligible	Not Eligible
Real Estate						
Open ended		602,044,298		26,006,512	Quarterly	45-90 days
Close ended		373,664,179		360,239,576	Not Eligible	Not Eligible
Real Return						
Commodities		149,170,036		-	Daily	2 days
Timberland		38,720,489		-	Not Eligible	Not Eligible
Hedge Fund						
Fund of funds	_	711,462,561	_	-	1-30 Days	30-60 Days
Total investments measured at the NAV	\$_	2,663,778,399	\$	994,996,962		

WPERP's private equity portfolio consists of ventured capital, leveraged buyouts, distressed debt, and other special equity funds. WPERP's participation is either through direct partnership or fund of funds. Both structures are not eligible for redemption. Instead, distributions are received as underlying investments within the partnerships and funds are liquidated, which on average can occur over the span of 10 to 15 years.

NOTE 3 – CASH AND INVESTMENTS (Continued)

The real estate portfolio consists of investments in domestic and international commercial and industrial real property. WPERP is invested in both open ended and close ended funds/partnerships. Open ended funds/partnerships can be redeemed subject to the redemption schedule as listed above. Close ended funds/partnerships are not eligible for redemption. Instead, distributions are received as underlying investments within the funds/partnerships are liquidated, which on average can occur over the span of 10 to 15 years.

Real return investments include a commingled commodities fund and two timberland direct partnerships. The timberland partnerships are not eligible for redemption. The estimated duration of these partnerships ranges from 10 to 15 years.

Two hedge fund investments are executed through fund of funds. The underlying third party hedge fund managers' strategies could include, but is not limited to convertible arbitrage, distressed securities, fixed income arbitrage, merger arbitrage, long/short credit, long/short equity, etc.

Rate of Return

The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for changing amounts actually invested. For the years ended June 30, 2019 and 2018, the annual money-weighted rate of return on the Retirement Fund investments, net of investment expense, was 6.50% and 8.89%, respectively.

For the year ended June 30, 2019 and 2018, the annual money-weighted rate of return on the Retiree Health Benefits Fund investments, net of investment expense, was 6.46% and 9.08%, respectively; the annual money-weighted rate of return on the Death Benefit Fund investments, net of investment expense, was 7.56% and -0.39%, respectively.

Credit Risk

The WPERP's investment policy is to apply the "prudent person" standards. Investments are made with care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims. The WPERP's investment policy has been designed to produce the most favorable long-term total portfolio return consistent with reasonable levels of risks. Prudent risk-taking is warranted within the context of overall portfolio diversification.

NOTE 3 – CASH AND INVESTMENTS (Continued)

According to the WPERP's investment policy for fixed income securities, the WPERP can invest in both investment grade and high yield fixed income securities. Investment grade fixed income securities that are rated by Moody's, Standard & Poor's, and Fitch, should have a minimum rating of BBB- or Baa3 by two or more rating agencies. Investment managers for investment grade fixed income securities will notify the WPERP's management of subsequent decline in ratings and will develop an investment strategy for investments rated below Baa3 or BBB-.

Active high yield fixed income investment is composed primarily of non-investment grade securities as rated by Moody's, Standard & Poor's or Fitch. If a bond is rated by all three rating agencies, then it must be graded BB+ or Ba1 or below by two or more rating agencies. If a bond is rated by two rating agencies, it must be rated below investment grade by at least one rating agency.

NOTE 3 – CASH AND INVESTMENTS (Continued)

The credit ratings of the WPERP's investments at June 30, 2019 are as follows:

Investment Type	Credit Rating	Fair Value	% of Portfolio
U.S. Treasuries	AAA	\$ 774,227,106	18.91%
U.S. agency notes	AAA	957,820,449	23.40%
Preferred securities/convertible bonds/other	Not rated	32,724,707	0.80%
Mortgage and asset backed securities	AAA	88,040,967	2.15%
	A or better	6,686,957	0.16%
	B or better	20,994,569	0.51%
	Not rated	5,427,189	0.13%
Corporate debt - domestic	AAA	14,544,053	0.36%
•	A or better	121,024,794	2.96%
	B or better	749,850,123	18.32%
	C or better	93,803,292	2.29%
	Not rated	51,617,814	1.26%
Corporate debt - international	A or better	46,480,926	1.14%
1	B or better	351,166,475	8.58%
	C or better	26,283,988	0.64%
	Not Rated	3,942,302	0.10%
Government debt - international	AAA	25,493,836	0.62%
	A or better	33,666,271	0.82%
	B or better	89,902,394	2.20%
	C or better	22,185,513	0.54%
	D/Not Rated	16,035,283	0.39%
Municipal/provincial bonds	A or better	2,694,350	0.07%
	C or better	1,663,841	0.04%
Mutual funds	Not rated	557,176,262 *	13.61%
Total		\$ 4,093,453,461	100.00%

^{*} Consist of money market fund or short-term investment fund investing in the fixed income securities.

NOTE 3 – CASH AND INVESTMENTS (Continued)

The credit ratings of the WPERP's investments at June 30, 2018 are as follows:

Investment Type	Credit Rating	Fair Value	% of Portfolio
U.S. Treasuries	AAA	\$ 817,381,695	21.40%
U.S. agency notes	AAA	891,017,438	23.33%
Preferred securities/convertible bonds/other	Not rated	32,218,640	0.84%
Mortgage and asset backed securities	AAA	80,184,709	2.10%
	A or better	20,665,149	0.54%
	B or better	63,927,258	1.67%
	C or better	537,885	0.01%
	Not rated	2,462,326	0.06%
Corporate debt - domestic	AAA	4,660,470	0.12%
	A or better	49,724,081	1.30%
	B or better	690,701,034	18.09%
	C or better	140,445,312	3.68%
	D/Not rated	71,252,892	1.87%
Corporate debt - international	A or better	30,248,277	0.79%
1	B or better	304,157,774	7.96%
	WR/Not Rated	14,150,443	0.37%
Government debt - international	AAA	22,929,523	0.60%
	A or better	36,015,957	0.94%
	B or better	76,318,832	2.00%
	C or better	2,727,256	0.07%
	D/Not Rated	9,493,398	0.25%
Municipal/provincial bonds	B or better	2,572,250	0.07%
	C or better	2,008,540	0.05%
Mutual funds	Not rated	453,045,783 *	11.86%
Total		\$ 3,818,846,922	100.00%

^{*} Consist of money market fund or short-term investment fund investing in the fixed income securities.

NOTE 3 – CASH AND INVESTMENTS (Continued)

Custodial Credit Risks

For deposits, custodial credit risk is the risk that in the event of a bank failure, the WPERP's deposits may not be returned. As of June 30, 2019 and 2018, the WPERP's cash balances consist primarily of cash deposits in the City Treasury.

Collateral received in securities lending transactions are cash collateral and marketable securities. See Note 4 for further disclosure on securities lending transactions.

Concentration of Credit Risk

According to the WPERP's investment policy, no more than 5% of investments shall be invested in any one issue, except for investment in the fixed income asset class where no more than 10% of investment shall be invested in any one issue. United States Treasury or United States Agency issues are exempted from this limitation. As of June 30, 2019, and 2018, there were no investments holdings of more than 5% in any one issue of each fund's net position or in the WPERP's aggregate net position, except investments issued or guaranteed by the U.S. Government and investments in commingled funds.

Interest Rate Risk

As of June 30, 2019, the WPERP's exposure to interest rate risk is as follows:

Investment Type	 Fair Value	Weighted Average Maturity (Years)
U.S. Treasuries	\$ 774,227,106	4.07
U.S. agency notes	957,820,449	24.63
Preferred securities	32,724,707	0.00
Mortgage and asset backed securities	121,149,682	20.26
Corporate debt - domestic	1,030,840,075	8.07
Corporate debt - international	427,873,692	8.98
Government debt - international	187,283,297	10.75
Municipal / Provincial Bonds	4,358,191	15.00
Mutual funds	 557,176,262	0.02
Total	\$ 4,093,453,461	10.61

NOTE 3 – CASH AND INVESTMENTS (Continued)

As of June 30, 2018, the WPERP's exposure to interest rate risk is as follows:

		Weighted Average Maturity
Investment Type	 Fair Value	(Years)
U.S. Treasuries	\$ 817,381,695	3.97
U.S. agency notes	891,017,438	21.21
Preferred securities	32,218,640	0.00
Mortgage and asset backed securities	167,777,327	18.43
Corporate debt - domestic	956,783,789	9.15
Corporate debt - international	348,556,494	17.45
Government debt - international	147,484,966	11.39
Municipal / Provincial Bonds	4,580,790	17.19
Mutual funds	 453,045,783	0.00
Total	\$ 3,818,846,922	10.95

The WPERP has a long-term investment horizon and it utilizes an asset allocation that encompasses a long-run perspective of capital markets. The WPERP maintains an interest rate risk consistent with its long-term investment horizon.

NOTE 3 – CASH AND INVESTMENTS (Continued)

Foreign Currency Risk

As of June 30, 2019 and 2018, the WPERP's exposure to foreign currency risk is as follows:

Currency	Investment Type	2019	2018
Australian Dollar	Cash & cash equivalents	\$ 127,339	\$ 83,420
	Equities	52,286,522	52,891,596
	Fixed Income	2,470,487	2,410,202
Brazil Real	Cash & cash equivalents	18,555	8,508
	Equities	32,366,609	16,908,598
Canadian Dollar	Cash & cash equivalents	900,545	274,663
	Equities	74,232,805	67,843,703
	Fixed Income	13,341,564	13,093,907
HK offshore Chinese	Equities	9,662,256	-
Yuan Renminbi	Cash & cash equivalents	18,022	-
Danish Krone	Cash & cash equivalents	(745)	-
	Equities	14,815,444	12,499,111
Euro Currency Unit	Cash & cash equivalents	34,550,028	33,726,828
	Equities	471,416,437	481,639,841
	Fixed Income	261,471,976	144,423,608
Hong Kong Dollar	Cash & cash equivalents	305,320	61,797
	Equities	137,381,919	121,970,452
Hungarian Forint	Equities	2,846,607	1,045,177
Indonesian Rupiah	Equities	8,700,468	10,778,347
Japanese Yen	Cash & cash equivalents	1,643,159	2,041,805
	Equities	305,505,891	320,293,320
	Fixed Income	13,965,993	6,334,019
South Korea Won	Cash & cash equivalents	115	119
	Equities	51,788,100	60,346,531
Malaysian Ringgit	Equities	2,813,286	15,348,421
Mexican New Peso	Cash & cash equivalents	633,230	356,079
	Equities	12,548,281	13,152,068
	Fixed Income	9,110,848	9,068,604
New Taiwan Dollar	Cash & cash equivalents	-	392
	Equities	53,883,929	57,215,812
New Zealand Dollar	Cash & cash equivalents	118,061	135,960
	Fixed Income	4,789,692	4,357,896
	Equities	3,576,375	3,897,928
Norwegian Krone	Cash & cash equivalents	28	223
	Equities	17,987,661	18,945,498
Philippine Peso	Cash & cash equivalents	77	526
	Equities	1,605,611	1,016,138
Polish Zloty	Cash & cash equivalents	856	852
	Equities	2,821,559	1,510,098
Pound Sterling	Cash & cash equivalents	3,459,114	3,017,047
	Equities	232,128,226	216,478,690
	Fixed Income	135,805,272	96,592,505

NOTE 3 – CASH AND INVESTMENTS (Continued)

Currency	Investment Type	2019	2018
Qatari Riyal	Equities	278,860	-
S. African Rand	Cash & cash equivalents	-	332
	Equities	-	18,397,638
Singapore Dollar	Equities	8,290,317	6,533,571
	_	254	-
Swedish Krona	Cash & cash equivalents	7,696	8,337
	Equities	20,740,473	19,307,684
Swiss Franc	Cash & cash equivalents	(2,523)	200
	Equities	158,527,560	120,336,032
Thailand Baht	Equities	12,793,354	16,469,165
Turkish Lira	Cash & cash equivalents	7	9
	Equities	6,054,712	8,365,774
Total		\$ 2,177,788,232	\$ 1,979,189,031

The WPERP's investment policy permits it to invest up to 23.30 % of total investments of the WPERP in non-U.S. investments. The WPERP's position is 13.66% and 13.10% as of June 30, 2019 and 2018, respectively.

NOTE 3 – CASH AND INVESTMENTS (Continued)

Derivative Instruments

The fair value balances and notional amounts of derivatives instruments outstanding at June 30, 2019 and 2018, classified by type, and the changes in fair values of such derivative instruments for the years then ended as reported in the 2019 and 2018 financial statements are as follows:

		2019			
Changes in	Fair Value	Fair V	Fair Value		
Classification	Amount	Classification	Amount	Notional Amount	
Investment Income / (Loss)	\$ (10,119,898)	Investment	\$ 328,092	\$ 1,326,254,627	
Changes in I	F-:- W-1	2018	1		
Cnanges in I	rair value	Fair Va	iiue		
Classification	Amount	Classification	Amount	Notional Amount	
Investment	\$ 1 <i>4</i> 751 807	Investment	\$ 10 <i>44</i> 7 990	\$ 1,273,018,619	
	Classification Investment Income / (Loss) Changes in l	Investment Income / (Loss) \$ (10,119,898) Changes in Fair Value Classification Amount Investment	Classification Amount Classification Investment Income / (Loss) \$ (10,119,898) Investment Changes in Fair Value Fair Value Classification Amount Classification Investment	Changes in Fair Value Classification Amount Classification Amount Investment Income / (Loss) \$ (10,119,898) Investment \$ 328,092 Changes in Fair Value Fair Value Classification Amount Classification Amount Investment	

At June 30, 2019 and 2018, the WPERP had direct commitments to purchase and/or sell foreign currency in the forms of forward contracts as part of the strategy of hedging its currency risk. The fair values of forward contracts were based on the market price.

NOTE 4 – SECURITIES LENDING PROGRAM

The WPERP is authorized by the City Charter and the Retirement Board's investment policy to lend its investment securities to various brokers, without limit. The lending is managed by the WPERP's custodial bank. The WPERP or the borrowers can terminate the contract with advance notice. Prior to August 2013, the lending arrangements are collateralized by cash and marketable securities (guaranteed by the full faith and credit of the U.S. Government) at (i) 102% with respect to U.S. Securities; (ii) 105% with respect to foreign securities; or (iii) a percentage mutually agreed of the underlying securities' market value. In August 2013, the Retirement Board adopted an amendment to the securities lending program to expand the acceptance of

NOTE 4 – SECURITIES LENDING PROGRAM (Continued)

equities as non-cash collateral. Equities received are required to be collateralized at 110% with respect to loaned securities' value. The custodial bank will assume the equity risk and indemnify the WPERP 100% for any shortfall if a loan position is not returned, and proceeds from the sale of equity collateral were insufficient to replace the loan position.

These arrangements provide for the return of the investments and a share of the interest earned on the collateral. The securities on loan to brokers remain the property of the WPERP and continue to be included in their respective accounts on the statements of fiduciary net position. The WPERP does not have the ability to pledge or sell collateral assets unless the borrower is in default of its obligation. As of June 30, 2019, and 2018, the WPERP has no credit risk exposure because the value of the collateral received exceeded the value of the securities on loan.

The WPERP's custodian is the authorized agent to handle the WPERP's securities lending activity. The WPERP's custodian may invest the cash collateral received in connection with securities on loan in investments permitted by the WPERP. The WPERP bears sole risk of all losses of the invested collateral, including losses incurred in the event of liquidation of the permitted investments. The custodian bank is responsible for the return of loaned securities from borrowers. In lending domestic securities, cash collateral is invested in the lending agent's short-term investment pool, which has an average maturity of 72 days and 79 days as of June 30, 2019 and 2018, respectively.

The fair values of the underlying securities on loan, collateralized by cash and securities as of June 30, 2019 and 2018 are:

Securities on loan	2019		2018
Global agencies	\$	1,142,480	\$ -
Global equities		131,981,209	200,350,142
Global corporate fixed		21,448,101	19,218,338
Global government fixed		316,795,034	496,180,209
U.S. agency notes		6,294,318	4,665,074
U.S. corporate fixed		148,122,264	174,072,468
U.S. equities		441,800,077	415,299,763
U.S. government fixed		201,282,076	274,916,345
			_
Total	\$	1,268,865,559	\$ 1,584,702,339

NOTE 5 – NET PENSION LIABILITY OF THE DEPARTMENT

Retirement Fund

The components of the net pension liability (NPL) of the Retirement Fund as of June 30, 2019 and 2018 are as follows:

	Total Pension Liability	Retirement Fund Fiduciary Net Position	Net Pension Liability	Fiduciary Net Position as % of Total Pension Liability
As of June 30, 2019	\$13,811,964,793	\$12,987,087,001	\$824,877,792	94.03%
As of June 30, 2018	\$13,187,551,040	\$12,277,085,263	\$910,465,777	93.10%

The WPERP engages an independent actuarial firm to conduct annual actuarial valuation to determine the total pension liability of the Department as of June 30, 2019 and 2018. The NPL as of June 30, 2019 and 2018 was determined by actuarial valuation as of July 1, 2019 and July 1, 2018, respectively. The actuarial assumptions used in the June 30, 2019 measurements were based on the results of the most recently completed actuarial experience study for the period from July 1, 2015 through June 30, 2018. The actuarial assumptions used in the June 30, 2018 measurements were based on the results of the previous actuarial experience study for the period from July 1, 2012 through June 30, 2015. In particular, the following assumptions were applied in the measurements:

June 30, 2019 measurements

Inflation rate	2.75%
Projected salary increases	4.50% to 10.25%, includes inflation at 2.75%, "across the board" increases of 0.50% plus merit and promotional increases
Cost-of-living adjustments (COLA)	Contingent upon Consumer Price Index (CPI) increases with a 3.00% maximum for Tier 1 members and 2.00% maximum for Tier 2 members.
Investment rate of return	7.00% net of investment expense, including inflation

NOTE 5 – NET PENSION LIABILITY OF THE DEPARTMENT (Continued)

Mortality Pub-2010 General Healthy Retiree Amount-Weighted

Above-Median Mortality Table (separate tables for males and females) times 105% for males and 100% for females, projected generationally with the two-dimensional mortality

improvement scale MP-2018.

June 30, 2018 measurements

Inflation rate 3.00%

Projected salary increases 4.50% to 10.00%, includes inflation at 3.00%, "across the

board" increases of 0.50% plus merit and promotional

increases

Cost-of-living adjustments

(COLA)

Contingent upon Consumer Price Index (CPI) increases with

a 3.00% maximum for Tier 1 members and 2.00% maximum

for Tier 2 members.

Investment rate of return 7.25% net of investment expense, including inflation

Mortality Head count-weighted RP-2014 Healthy Annuitant Mortality

Table with no age adjustment for males and set back one

year for females, projected generationally with the two-

dimensional MP-2015 projection scale.

NOTE 5 – NET PENSION LIABILITY OF THE DEPARTMENT (Continued)

Investment rate of return: The long-term expected rate of return on Retirement Fund's investments was determined in 2019 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. These returns are 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 Retirement Fund's target asset 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 assumptions as of June 30, 2019 and 2018 are summarized in the following table. The expected rates of return are based on their respective actuarial experience studies.

June 30, 2019 measurements

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Large cap U.S. equity	22.95%	5.44%
Small cap U.S. equity	1.75%	6.18%
Developed international large cap equity	13.06%	6.54%
Developed international small cap equity	2.18%	6.64%
Global equity	2.90%	6.45%
Emerging market equity	5.16%	8.73%
Fixed income	25.00%	1.65%
Real estate	8.00%	4.60%
Real return	5.00%	2.07%
Private equity	8.00%	9.27%
Hedge funds	5.00%	3.53%
Cash and cash equivalents	1.00%	0.25%
Total	100.00%	

NOTE 5 – NET PENSION LIABILITY OF THE DEPARTMENT (Continued)

June 30, 2018 measurements

	Target	Long-Term Expected
Asset Class	Allocation	Real Rate of Return
Domestic equity	29.00%	5.76%
Broad international equity	19.00%	7.25%
Fixed income	25.00%	1.74%
Real estate	8.00%	4.37%
Real return	5.00%	2.39%
Private equity	8.00%	7.75%
Hedge funds	5.00%	3.50%
Cash and cash equivalents	1.00%	-0.46%
Total	100.00%	

Discount rate: The discount rate used to measure the total pension liability was 7.00% and 7.25% as of June 30, 2019 and June 30, 2018, respectively. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that Department contributions will be made at rates equal to the actuarially determined contribution rates. For this purpose, only Department contributions that are intended to fund benefits for current plan members and their beneficiaries are included. Projected Department 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 Retirement Fund's fiduciary net position was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on Retirement Fund's investments was applied to all periods of projected benefit payments to determine the total pension liability as of June 30, 2019 and 2018.

NOTE 5 – NET PENSION LIABILITY OF THE DEPARTMENT (Continued)

Sensitivity of the net pension liability to changes in the discount rate: The following presents the Retirement Fund's NPL as of June 30, 2019 and 2018, calculated using its respective discount rate, as well as what the NPL would be if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage-point higher than the utilized rate:

	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
NPL as of June 30, 2019	\$2,684,655,288	\$824,877,792	\$(711,927,203)
	1% Decrease (6.25%)	Discount Rate (7.25%)	1% Increase (8.25%)
NPL as of June 30, 2018	\$2,690,251,200	\$910,465,777	\$(561,244,711)

NOTE 6 – NET OTHER POSTEMPLOYMENT BENEFITS LIABILITY OF THE DEPARTMENT

The WPERP benefits and funds included within the definition of Other Postemployment Benefits (OPEB) are the RHBF and the Death Benefit Fund.

Retiree Health Benefits Fund

The components of the net OPEB liability (NOL) of the RHBF as of June 30, 2019 and 2018 are as follows:

	RHBF Total OPEB Fiduciary Net Liability Position		Net OPEB Liability	Fiduciary Net Position as % of Total OPEB Liability
As of June 30, 2019	\$2,683,446,018	\$2,220,551,434	\$462,894,584	82.75%
As of June 30, 2018	\$2,469,304,377	\$2,085,691,078	\$383,613,299	84.46%

NOTE 6 – NET OTHER POSTEMPLOYMENT BENEFITS LIABILITY OF THE DEPARTMENT (Continued)

An independent actuarial firm conducts annual actuarial valuation to determine the total OPEB liability of the Department. The NOL as of June 30, 2019 and 2018 were determined by the actuarial valuation as of June 30, 2019 and 2018. The non-healthcare cost actuarial assumptions used in the June 30, 2019 measurements were based on the results of the most recently completed actuarial experience study for the period from July 1, 2015 through June 30, 2018. The actuarial assumptions used in the June 30, 2018 measurements were based on the results of the previous actuarial experience study for the period from July 1, 2012 through June 30, 2015. In particular, the following assumptions were applied in the measurements:

June 30, 2019 measurements

Inflation rate 2.75%

Projected salary increases 4.50% to 10.25%, includes inflation at 2.75%, "across the

board" increases of 0.50% plus merit and promotional increases

Investment rate of return 7.00% net of investment expense, including inflation

Mortality Headcount-weighted Above Median Pub-2010 General Healthy

Retiree Mortality Table (separate tables for males and females) times 105% for males and 100% for females, projected generationally with the two-dimensional mortality improvement

scale MP-2018.

NOTE 6 – NET OTHER POSTEMPLOYMENT BENEFITS LIABILITY OF THE DEPARTMENT (Continued)

June 30, 2018 measurements

Inflation rate 3.00%

Projected salary increases 4.50% to 10.00%, includes inflation at 3.00%, "across the board" increases of 0.50% plus merit and promotional increases

Investment rate of return 7.25% net of investment expense, including inflation

Mortality Head count-weighted RP-2014 Healthy Annuitant Mortality

Table with no age adjustment for males and set back one year for females, projected generationally with the two-dimensional MP-2015 projection scale.

Healthcare cost assumptions are separately developed by the actuary annually. They are based on annual cost trend survey of the healthcare industry and plan specific information. Specifically, the following assumptions were applied in the June 30, 2019 and 2018 measurements:

	June 30, 2019	June 30, 2018
Non-Medicare medical plan	6.75%, graded down to an	7.00%, graded down to an
	ultimate of 4.50% over 9 years	ultimate of 4.50% over 10 years
Medicare medical plans	6.25%, graded down to an ultimate of 4.50% over 7 years	6.50%, graded down to an ultimate of 4.50% over 8 years
Dental	4.00%	4.00%
Medicare Part B	4.50%	4.00%

NOTE 6 – NET OTHER POSTEMPLOYMENT BENEFITS LIABILITY OF THE DEPARTMENT (Continued)

Investment rate of return: The long-term expected rate of return on RHBF's investments was determined in 2019 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. These returns are 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 RHBF's target asset 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 assumptions as of June 30, 2019 and 2018 are summarized in the following table. The expected rates of return are based on their respective actuarial experience studies.

June 30, 2019 measurements

	Target	Long-Term Expected Real
Asset Class	Allocation	Rate of Return
Large cap U.S. equity	22.95%	5.44%
Small cap U.S. equity	1.75%	6.18%
Developed international large cap equity	13.06%	6.54%
Developed international small cap equity	2.18%	6.64%
Global equity	2.90%	6.45%
Emerging market equity	5.16%	8.73%
Fixed income	25.00%	1.65%
Real estate	8.00%	4.60%
Real return	5.00%	2.07%
Private equity	8.00%	9.27%
Hedge funds	5.00%	3.53%
Cash and cash equivalents	1.00%	0.25%
Total	100.00%	

NOTE 6 – NET OTHER POSTEMPLOYMENT BENEFITS LIABILITY OF THE DEPARTMENT (Continued)

June 30, 2018 measurements

	Target	Long-Term Expected Real
Asset Class	Allocation	Rate of Return
Domestic equity	29.00%	5.76%
Broad international equity	19.00%	7.25%
Fixed income	25.00%	1.74%
Real estate	8.00%	4.37%
Real return	5.00%	2.39%
Private equity	8.00%	7.75%
Hedge funds	5.00%	3.50%
Cash and cash equivalents	1.00%	-0.46%
Total	100.00%	

Discount rate: The discount rate used to measure the total OPEB liability was 7.00% as of June 30, 2019 and 7.25% as of June 30, 2018. The projection of cash flows used to determine the discount rate assumed Department contributions will be equal to benefit payments. For this purpose, only Department contributions that are intended to fund benefits for current plan members and their beneficiaries are included. Projected Department 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 RHBF's fiduciary net position was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on RHBF's investments was applied to all periods of projected benefit payments to determine the total OPEB liability as of June 30, 2019 and 2018.

NOTE 6 – NET OTHER POSTEMPLOYMENT BENEFITS LIABILITY OF THE DEPARTMENT (Continued)

Sensitivity of the net OPEB liability to changes in the discount rate: The following presents the RHBF's NOL as of June 30, 2019 and 2018, calculated using its respective discount rate, as well as what the NOL would be if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage-point higher than the utilized rate:

	1% Decrease	Current Discount	1% Increase
	(6.00%)	Rate (7.00%)	(8.00%)
NOL as of June 30, 2019	\$833,848,943	\$462,894,584	\$157,692,076
	1% Decrease	Discount	1% Increase
	(6.25%)	Rate (7.25%)	(8.25%)
NOL as of June 30, 2018	\$726,798,149	\$383,613,299	\$101,707,364

Sensitivity of the net OPEB liability to changes in the healthcare cost trend rate: The following presents the RHBF's NOL as of June 30, 2019 and 2018, calculated using the healthcare cost trend rates assumed in the June 30, 2019 and 2018 actuarial valuations, as well as what the NOL would be if it were calculated using trend rates that are 1-percentage-point lower or 1-percentage-point higher than the assumed rates:

	Assumed Trend			
	1% Decrease	1% Increase		
NOL as of June 30, 2019	\$116,743,580	\$462,894,584	\$926,010,141	
NOL as of June 30, 2018	\$66,555,802	\$383,613,299	\$809,369,825	

Death Benefit Fund

The components of the NOL of the Death Benefit Fund as of June 30, 2019 and 2018 are as follows:

				Fiduciary Net
		Death Benefit		Position as %
	Total OPEB	Fund Fiduciary	Net OPEB	of Total OPEB
	Liability	Net Position	Liability	Liability
As of June 30, 2019	\$134,257,596	\$28,806,740	\$105,450,856	21.46%
As of June 30, 2018	\$143,870,026	\$27,210,220	\$116,659,806	18.91%

NOTE 6 – NET OTHER POSTEMPLOYMENT BENEFITS LIABILITY OF THE DEPARTMENT (Continued)

The WPERP engages an independent actuarial firm to conduct annual actuarial valuation to determine the total OPEB liability of the Department. The NOL as of June 30, 2019 and 2018 were determined by the actuarial valuations as of June 30, 2019 and 2018. The actuarial assumptions used in the June 30, 2019 measurements were based on the results of the most recently completed actuarial experience study for the period from July 1, 2015 through June 30, 2018, 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. The actuarial assumptions used in the June 30, 2018 measurements were based on the results of the previous actuarial experience study for the period from July 1, 2012 through June 30, 2015. In particular, the following assumptions were applied in the measurements:

June 30, 2019 measurements

Inflation rate 2.75%

Projected salary increases 4.50% to 10.25%, includes inflation at 2.75%, "across the

board" increases of 0.50% plus merit and promotional

increases

Investment rate of return 3.50% net of investment expense, including inflation

June 30, 2018 measurements

Inflation rate 3.00%

Projected salary increases 4.50% to 10.00%, includes inflation at 3.00%, "across the

board" increases of 0.50% plus merit and promotional

increases

Investment rate of return 3.50% net of investment expense, including inflation

NOTE 6 – NET OTHER POSTEMPLOYMENT BENEFITS LIABILITY OF THE DEPARTMENT (Continued)

Investment rate of return: The long-term expected rate of return on the Death Benefit Fund's investments was determined in 2019 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. These returns are 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 Death Benefit Fund's target asset 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 assumptions valuation as of June 30, 2019 and 2018 are summarized in the following table. This information may change as the actuarial experience study is conducted at the maximum of five years interval.

		June 30, 2019 Long-	June 30, 2018 Long-
	Target	Term Expected Real	Term Expected Real
Asset Class	Allocation	Rate of Return	Rate of Return
Fixed income	96.00%	1.42%	0.82%
Cash and cash equivalents	4.00%	0.25%	-0.46%
Total	100.00%		

Discount rate: The discount rate used to measure the total OPEB liability was 3.50% as of June 30, 2019 and 2018. A "crossover test" was not explicitly performed since the municipal bond rate as of June 30, 2019 and 2018 was 3.50% and 3.87%, respectively. Those municipal bond rates were actually higher than or equal to the 3.50% long-term expected rate of return on Death Benefit Fund's investments. Therefore, the long-term expected rate of return on Death Benefit Fund's investments was applied to all periods of projected benefit payments to determine the total OPEB liability as of June 30, 2019 and 2018.

Sensitivity of the net OPEB liability to changes in the discount rate: The following presents the Death Benefit Fund's NOL as of June 30, 2019 and 2018, calculated using the discount rate of 3.50%, as well as what the NOL would be if it were calculated using a discount rate that is 1-percentage-point lower (2.50%) or 1-percentage-point higher (4.50%) than the current rate:

	1% Decrease	Current Discount	1% Increase
	(2.50%)	Rate (3.50%)	(4.50%)
NOL as of June 30, 2019	\$127,029,200	\$105,450,856	\$88,288,477
NOL as of June 30, 2018	\$138,389,690	\$116,659,806	\$99,378,700

NOTE 6 – NET OTHER POSTEMPLOYMENT BENEFITS LIABILITY OF THE DEPARTMENT (Continued)

Sensitivity of the net OPEB liability to changes in the cost trend rate: Since there is no trend rate assumption used in valuing these benefits, the net OPEB liability is unaffected by any changes in trend rates.

NOTE 7 – ACTUARIAL VALUATION – DISABILITY FUND

Actuarial studies are performed annually on the Disability Fund to determine and recommend the appropriate contribution rates and the benefit reserves levels needed to fund the current and future benefit liabilities. The results of the most recent annual actuarial reviews (as of July 1, 2018 and July 1, 2017) for the Disability Fund found that the Fund's accumulated reserves had met the recommended reserve level. The actuarial recommendations for the contribution rates, reserve levels, and general reserve transfers were approved by the Retirement Board.

For permanent total disability, the Department's contribution rate remains at \$0 per \$100 of covered payroll. As for temporary disability, the Department's contribution rate was decreased from \$1.44 per to \$1.31 per \$100 of covered payroll. The rate change was approved by the Retirement Board in January 2019 and was implemented the same month.

NOTE 8 – RESERVES AND DESIGNATED BALANCES

Reserve accounts are established to cover all deferred liabilities as they accrue. Reserves are established from members and Department contributions and the accumulation of investment income after satisfying investment and administrative expenses. There are four major classes of reserves and designated accounts.

<u>Member contribution accounts</u> represent the balance of member contributions. Additions include member contributions and interest. Deductions include refunds of member contributions and transfers to the reserve for retirement allowances and the reserve for death benefit.

<u>Department contribution accounts</u> represent the balance of Department contributions for future retirement payments to current active members. Additions include contributions from the Department and related earnings. Deductions include transfers to the reserve for retirement allowances and reserve for death benefit.

<u>Estimated benefit liabilities reserves</u> represent the balance of transfers from member contribution and/or Department contribution accounts and related earnings less payments to retired members, members on disability and beneficiaries.

<u>General reserves</u> represent reserves accumulated for future earnings deficiencies, investment losses and other contingencies. Additions include investment income and other revenue. Deductions include investment expense, interest allocated to member and Department contribution accounts, and interest allocated to the estimated benefits liabilities reserves accounts.

NOTE 8 – RESERVES AND DESIGNATED BALANCES (Continued)

The WPERP's reserves and designated balances at June 30, 2019 and 2018 are as follows:

The WI LIM 3 reserves and designated barances at June 30, 2017 and 20		2019		2018
Retirement Fund - Reserves and Designated Balances				
Reserve for retirement allowances	\$	7,853,587,428	\$	7,409,140,493
Contributions: Members' contributions		1,753,563,838		1,667,598,977
Department contributions		(1,441,549,089)		(1,382,598,166)
Total contributions		312,014,749		285,000,811
General reserve		2,406,274,766		2,388,641,092
Total reserves and designated balances		10,571,876,943		10,082,782,396
Unrealized appreciation in the fair value of investments		2,415,210,058		2,194,302,867
Total reserves and designated balances at fair value	\$	12,987,087,001	\$	12,277,085,263
Disability Fund - Reserves and Designated Balances				
Estimated liability for temporary and permanent disability cases	\$	17,873,839	\$	17,458,849
General reserve	Ψ	25,107,150	Ψ	24,940,465
Total reserves and designated balances		42,980,989		42,399,314
Unrealized appreciation in the fair value of investments		5,302,286		4,014,563
Total reserves and designated balances at fair value	\$	48,283,275	\$	46,413,877
Death Beaufit Food Beautiful Delivered Delivered				
<u>Death Benefit Fund - Reserves and Designated Balances</u> Estimated liability for family allowances	\$	4,289,423	\$	3,941,818
Contribution account - family allowances	Ψ	7,044,579	Ψ	7,254,184
General reserve		13,879,500		13,594,205
Total reserves and designated balances		25,213,502		24,790,207
Unrealized appreciation in the fair value of investments		3,593,238		2,420,013
Total reserves and designated balances at fair value	\$	28,806,740	\$	27,210,220
Retiree Health Benefits Fund - Reserves and Designated Balances	Ф	1 027 (04 027	ф	1 027 (04 027
Department contributions (net of insurance premiums payment) General reserve	\$	1,037,604,927 748,311,847	\$	1,037,604,927 658,580,136
Total reserves and designated balances Unrealized appreciation in the fair value of investments		1,785,916,774 434,634,660		1,696,185,063 389,506,015
	_		_	
Total reserves and designated balances at fair value	\$	2,220,551,434	\$	2,085,691,078

NOTE 9 – PLAN AMENDMENTS

The Plan is periodically amended to meet changes in economic conditions and sound business practices. The following is a summary of the more significant Plan amendments taken effect during the fiscal years ended June 30, 2019 and 2018:

Fiscal year ended June 30, 2019

There were no significant Plan amendments for the fiscal year ended June 30, 2019.

Fiscal year ended June 30, 2018

The Regular Interest rate, as defined in the Plan, is used to credit members' retirement contributions on deposit with the Plan. An amendment was adopted to align the Regular Interest rate with the Plan's investment return assumption as adopted by the Retirement Board, so long as the investment return assumption is at least 7.00%. Post adoption, the Regular Interest rate was decreased from 7.50% to 7.25% effective March 1, 2018.

Another amendment aligned the mortality tables used by the Plan to calculate retirement allowances and the conversion to optional benefit amounts with the mortality assumptions as adopted by the Retirement Board. Effective July 1, 2018, such calculations shall be based upon the mortality and associated interest rate assumptions as adopted by the Retirement Board, so long as the interest rate assumption is at least 7.00%.

Lastly an amendment was adopted to reduce the minimum vesting requirement for all Tier 2 members to 5 years of continuous Department service.

NOTE 10 – RISKS AND UNCERTAINTIES

The WPERP invests in various investment securities. Investment securities are exposed to various risks such as interest rate, market, and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect the amounts reported in the statements of fiduciary net position. Department contributions and actuarial valuations are reported based on certain assumptions pertaining to interest rates and employee demographics, all of which are subject to change. Due to uncertainties inherent in the estimations and assumptions process, it is at least reasonably possible that changes in these estimates and assumptions in the near term would be material to the financial statements.

NOTE 11 – SUBSEQUENT EVENTS

The WPERP has evaluated subsequent events through December 2, 2019, the date the financial statements were available to be issued, and has determined that no other significant subsequent events have occurred through that date.

REQUIRED SUPPLEMENTARY INFORMATION RETIREMENT FUND SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS (Unaudited)

	 2019	 2018	2017	_	2016	2015	 2014	 2013
Total pension liability Service cost Interest Change of benefit terms	\$ 243,262,953 952,071,733	\$ 228,621,066 913,798,415 (59,019,242)	\$ 217,276,778 887,133,571	\$	209,832,859 837,977,383	\$ 214,735,027 821,047,664 (144,007,904)	\$ 193,661,118 779,396,615	\$ 189,950,104 748,904,919
Change of benefit terms Differences between expected and actual experience Change of assumptions Benefit payments, including refund of	17,806,843 8,835,790	10,253,750	(196,176,749) -		(189,461,173) 722,927,661	(144,007,904) (162,912,927)	(154,221,968) 525,443,921	(98,062,638)
member contributions	(597,563,566)	 (563,212,525)	 (540,361,335)		(510,484,986)	(485,966,910)	 (463,596,940)	(438,527,366)
Net change in total pension liability	624,413,753	530,441,464	367,872,265		1,070,791,744	242,894,950	880,682,746	402,265,019
Total pension liability - beginning	 13,187,551,040	 12,657,109,576	 12,289,237,311	_	11,218,445,567	 10,975,550,617	 10,094,867,871	 9,692,602,852
Total pension liability - ending	\$ 13,811,964,793	\$ 13,187,551,040	\$ 12,657,109,576	\$	12,289,237,311	\$ 11,218,445,567	\$ 10,975,550,617	\$ 10,094,867,871
Fiduciary net position Contributions - employer, including administrative expenses Contributions - employees Net investment income Benefit payments, incluidng refund of member contribution Administrative expense	\$ 416,180,197 104,741,925 791,832,113 (597,563,566) (5,188,931)	\$ 439,298,444 93,659,240 998,777,227 (563,212,525) (5,336,458)	\$ 397,747,778 83,239,105 1,280,806,288 (540,361,335) (5,375,229)	\$	368,259,056 75,068,523 95,807,981 (510,484,986) (5,108,115)	\$ 382,231,868 68,552,375 410,778,109 (485,966,910) (4,612,476)	\$ 389,138,324 72,299,526 1,405,686,199 (463,596,941) (4,221,234)	\$ 372,819,194 69,633,449 919,679,147 (438,527,366) (3,736,871)
Net change in fiduciary net position Fiduciary net position - beginning	710,001,738 12,277,085,263	963,185,928 11,313,899,335	1,216,056,607 10,097,842,728		23,542,459 10,074,300,269	370,982,966 9,703,317,303	1,399,305,874 8,304,011,429	919,867,553 7,384,143,876
Fiduciary net position - ending	\$ 12,987,087,001	\$ 12,277,085,263	\$ 11,313,899,335	\$	10,097,842,728	\$ 10,074,300,269	\$ 9,703,317,303	\$ 8,304,011,429
Net pension liability	\$ 824,877,792	\$ 910,465,777	\$ 1,343,210,241	\$	2,191,394,583	\$ 1,144,145,298	\$ 1,272,233,314	\$ 1,790,856,442
Fiduciary net position as % of total pension liability	94.03%	93.10%	89.39%		82.17%	89.80%	88.41%	82.26%
Covered employee payroll	\$ 1,028,212,002	\$ 953,635,670	\$ 892,332,196	\$	861,818,854	\$ 839,213,254	\$ 819,923,866	\$ 817,421,028
Net pension liability as % of covered employee payroll	80.22%	95.47%	150.53%		254.28%	136.34%	155.16%	219.09%

Note to Schedule:

This schedule is presented for those years for which information is available.

See accompanying independent auditor's report.

REQUIRED SUPPLEMENTARY INFORMATION RETIREMENT FUND SCHEDULE OF EMPLOYER CONTRIBUTIONS (Unaudited)

		Actuarially			_	ontribution	Covered	Contribution as Percentage
Plan Year		Determined		Actual		Deficiency/	Employee	of Covered
Ended June 30	(Contributions	(Contributions		(Excess)	Payroll	Payroll
2019	\$	408,750,192	\$	410,165,124	\$	(1,414,932)	\$ 1,028,212,002	39.89%
2018		425,512,236		433,412,569		(7,900,333)	953,635,670	45.45%
2017		403,780,319		391,717,359		12,062,960	892,332,196	43.90%
2016		368,599,924		362,359,894		6,240,030	861,818,854	42.05%
2015		387,464,759		376,902,022		10,562,737	839,213,254	44.91%
2014		387,823,989		384,265,892		3,558,097	819,923,866	46.87%
2013		376,667,610		368,426,348		8,241,262	817,421,028	45.07%
2012		336,874,865		321,688,919		15,185,946	805,607,436	39.93%
2011		304,431,910		286,699,384		17,732,526	791,760,493	36.21%
2010		200,578,278		201,034,807		(456,529)	767,912,436	26.18%

See accompanying independent auditor's report.

REQUIRED SUPPLEMENTARY INFORMATION RETIREMENT FUND NOTES TO SCHEDULE OF EMPLOYER CONTRIBUTIONS (Unaudited)

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

Amortization method Level dollar amortization

Remaining amortization period The July 1, 2004 Unfunded Actuarial Accrued Liability is amortized

> over a 15-year period commencing July 1, 2004. Any subsequent changes in Unfunded Actuarial Accrued Liability are amortized over

separate 15-year periods effective with that valuation.

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 market returns and the expected returns on a market value basis, and is recognized over a five-year period. As directed by the Retirement Office, the actuarial valuation of assets may be reduced by an amount

classified as a non-valuation reserve.

Other information All members hired on or after January 1, 2014 enter Tier 2.

Actuarial assumptions:

Investment rate of return 7.00% Inflation rate 2.75%

Projected salary increases 4.50% to 10.25%

Cost of living adjustments 2.75% (actual increases are contingent upon CPI increases with a 3.00%

maximum for Tier 1, 2.00% maximum for Tier 2)

Mortality Pub-2010 General Healthy Retiree Amount-Weighted Above Median

Mortality Table (separate tables for males and females) times 105% for

males and 100% for females, projected generationally with the two-

dimensional mortality improvement scale MP-2018.

Other assumptions Same as those used in the July 1, 2019 funding actuarial valuation

REQUIRED SUPPLEMENTARY INFORMATION RETIREMENT FUND SCHEDULE OF INVESTMENT RETURNS (Unaudited)

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	2015	2014
Annual money-weighted rate of return,						
net of investment expense	6.50%	8.89%	12.79%	0.96%	4.27%	17.05%

Note to schedule:

This schedule is presented for the year for which information is available.

REQUIRED SUPPLEMENTARY INFORMATION RETIREE HEALTH BENEFITS FUND SCHEDULE OF CHANGES IN NET OTHER POSTEMPLOYMENT BENEFIT LIABILITY AND RELATED RATIOS

(Unaudited)

		2019	2018		2017	2016
Total OPEB liability			 		_	 _
Service cost	\$	46,187,613	\$ 49,190,698	\$	49,295,168	\$ 38,342,912
Interest		178,690,352	170,306,670		169,518,251	146,596,915
Change of benefit terms		-	(285,566)		-	-
Differences between expected and actual experience		(40,431,700)	(6,956,314)		(44,553,945)	87,184,567
Change of assumptions		131,290,346	4,798,880		(70,508,237)	185,583,627
Benefit payments		(101,594,970)	(95,233,622)		(90,310,419)	 (79,895,671)
Net change in total OPEB liability		214,141,641	121,820,746		13,440,818	377,812,350
Total OPEB liability - beginning		2,469,304,377	 2,347,483,631		2,334,042,813	 1,956,230,463
Total OPEB liability - ending	\$	2,683,446,018	\$ 2,469,304,377	\$	2,347,483,631	\$ 2,334,042,813
Fiduciary net position						
Contributions - employer, including administrative expenses	\$	102,631,460	\$ 95,918,712	\$	91,023,926	\$ 80,606,726
Net investment income		134,706,591	173,674,359		218,835,834	14,462,876
Benefit payments		(101,594,970)	(95,233,622)		(90,310,419)	(79,895,671)
Administrative expense	_	(882,725)	 (548,907)	_	(585,352)	 (578,174)
Net change in fiduciary net position		134,860,356	173,810,542		218,963,989	14,595,757
Fiduciary net position - beginning		2,085,691,078	 1,911,880,536		1,692,916,547	 1,678,320,790
Fiduciary net position - ending	\$	2,220,551,434	\$ 2,085,691,078	\$	1,911,880,536	\$ 1,692,916,547
Net OPEB liability	\$	462,894,584	\$ 383,613,299	\$	435,603,095	\$ 641,126,266
Fiduciary net position as % of total OPEB liability Covered employee payroll	\$	82.75% 1,028,212,002	\$ 84.46% 953,635,670	\$	81.44% 892,332,196	\$ 72.53% 861,818,854
Net OPEB liability as % of covered employee payroll		45.02%	40.23%		48.82%	74.39%

Note to Schedule:

This schedule is presented for those years for which information is available.

See accompanying independent auditor's report.

EXHIBIT V

CITY OF LOS ANGELES WATER AND POWER EMPLOYEES' RETIREMENT PLAN

REQUIRED SUPPLEMENTARY INFORMATION RETIREE HEALTH BENEFITS FUND SCHEDULE OF EMPLOYER CONTRIBUTIONS (Unaudited)

Plan Year Ended June 30	I	Actuarially Determined ontributions	 Actual Contributions	-	Contribution Deficiency/ (Excess)	Covered Employee Payroll	Contribution as Percentage of Covered Payroll
2019	\$	80,850,687	\$ 101,594,970	\$	(20,744,283)	\$1,028,212,002	9.88%
2018		85,339,091	95,233,622		(9,894,531)	953,635,670	9.99%
2017		93,920,143	90,310,419		3,609,724	892,332,196	10.12%
2016		61,971,138	79,895,671		(17,924,533)	861,818,854	9.27%
2015		70,748,429	78,496,618		(7,748,189)	839,213,254	9.35%
2014		58,453,215	74,105,548		(15,652,333)	819,923,866	9.04%
2013		36,907,715	67,562,881		(30,655,166)	817,421,028	8.27%
2012		40,094,940	101,720,586		(61,625,646)	805,607,436	12.63%
2011		66,188,311	140,132,520		(73,944,209)	791,760,493	17.70%
2010		56,294,335	160,236,897		(103,942,562)	767,912,436	20.87%

REQUIRED SUPPLEMENTARY INFORMATION RETIREE HEALTH BENEFITS FUND NOTES TO SCHEDULE OF EMPLOYER CONTRIBUTIONS (Unaudited)

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, Level Percent of Pay

Amortization method Single Closed amortization period, level percent of pay; 17 years remaining as

of June 30, 2018

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 market returns and the expected returns on a market value basis, and is recognized over

a five-year period.

Actuarial assumptions:

Investment rate of return 7.00%, net of investment expense

Inflation rate 2.75%

Projected salary increases 4.50% to 10.25%

Healthcare cost trend rates:

Non-Medicare medical 6.75%, graded down to an ultimate of 4.50% over 9 years

plan

Medicare medical plans 6.25%, graded down to an ultimate of 4.50% over 7 years

Dental 4.00% Medicare Part B 4.50%

REQUIRED SUPPLEMENTARY INFORMATION RETIREE HEALTH BENEFITS FUND SCHEDULE OF INVESTMENT RETURNS (Unaudited)

	2019	2018	2017
Annual money-weighted rate of return,			
net of investment expense	6.46%	9.08%	12.92%

Note to schedule:

This schedule is presented for the year for which information is available.

REQUIRED SUPPLEMENTARY INFORMATION DEATH BENEFIT FUND SCHEDULE OF CHANGES IN NET OTHER POST EMPLOYMENT BENEFIT LIABILITY AND RELATED RATIOS (Unaudited)

	 2019	2018	2017
Total OPEB liability	_	·	_
Service cost	\$ 4,779,848	\$ 3,875,903	\$ 3,656,610
Interest	5,058,685	5,140,912	5,095,026
Change of benefit terms	-	90,905	-
Differences between expected and actual experience	485,084	(4,443,689)	125,381
Change of assumptions	(11,703,994)	-	-
Benefit payments	 (8,232,053)	 (7,602,577)	 (7,968,010)
Net change in total OPEB liability	(9,612,430)	(2,938,546)	909,007
Total OPEB liability - beginning	 143,870,026	146,808,572	 145,899,565
Total OPEB liability - ending	\$ 134,257,596	\$ 143,870,026	\$ 146,808,572
Fiduciary net position			
Contributions - employer, including administrative expenses	\$ 8,777,581	\$ 8,101,199	\$ 8,206,607
Contributions - employees	358,073	346,931	336,630
Net investment income	2,292,799	(119,894)	(56,662)
Benefit payments	(8,232,053)	(7,602,577)	(7,968,010)
Administrative expense	 (1,599,880)	 (1,099,573)	 (1,119,190)
Net change in fiduciary net position	1,596,520	(373,914)	(600,625)
Fiduciary net position - beginning	27,210,220	27,584,134	28,184,759
Fiduciary net position - ending	\$ 28,806,740	\$ 27,210,220	\$ 27,584,134
Net OPEB liability	\$ 105,450,856	\$ 116,659,806	\$ 119,224,438
Fiduciary net position as % of total OPEB liability	21.46%	18.91%	18.79%
Covered employee payroll	\$ 1,028,212,002	\$ 953,635,670	\$ 892,332,196
Net OPEB liability as % of covered employee payroll	10.26%	12.23%	13.36%

Note to Schedule:

This schedule is presented for those years for which information is available.

EXHIBIT VIII

CITY OF LOS ANGELES WATER AND POWER EMPLOYEES' RETIREMENT PLAN

REQUIRED SUPPLEMENTARY INFORMATION DEATH BENEFIT FUND SCHEDULE OF EMPLOYER CONTRIBUTIONS (Unaudited)

	1	Actuarially			(Contribution	Covered	Contribution as Percentage
Plan Year	Ι	Determined		Actual		Deficiency/	Employee	of Covered
Ended June 30	C	ontributions	C	ontributions	(Excess)		Payroll	Payroll
2019	\$	7,259,955	\$	7,259,955	\$	-	\$ 1,028,212,002	0.71%
2018		7,137,211		7,137,211		-	953,635,670	0.75%
2017		7,137,953		7,137,953		-	892,332,196	0.80%
2016		7,206,780		7,206,780		-	861,818,854	0.84%

Note to schedule:

This schedule is presented for the years for which information is available.

REQUIRED SUPPLEMENTARY INFORMATION DEATH BENEFIT FUND NOTES TO SCHEDULE OF EMPLOYER CONTRIBUTIONS (Unaudited)

Valuation date Actuarially determined contribution rates are calculated as of June 30, one

year prior to the end of the fiscal year in which contributions are reported.

Actuarial cost method Pay as you go, subject to modifications by the Board's funding policy

Funding policy Varies by component of the Death Benefit Fund as follows:

Family Death Benefit: Recommend a contribution rate that maintains assets at a target level equal to the reserve for benefits granted plus an additional 20%

Supplemental Family Death Benefit: Establish once stable annual costs are

achieved

Insured Lives Death Benefit (Both): Recommend a contribution rate that maintains the general reserve at a target level of the average of the benefits

paid for the last five years

Asset valuation method Total market value of the Death Benefit Fund at valuation date

Actuarial assumptions:

Investment rate of return 3.50%, net of investment expense

Inflation rate 2.75%

Projected salary increase 4.50% to 10.25%

REQUIRED SUPPLEMENTARY INFORMATION DEATH BENEFIT FUND SCHEDULE OF INVESTMENT RETURNS (Unaudited)

	2019	2018	2017
A			
Annual money-weighted rate of return,			
net of investment expense	7.56%	-0.39%	-0.18%

Note to schedule:

This schedule is presented for the year for which information is available.

CITY OF LOS ANGELES WATER AND POWER EMPLOYEES' RETIREMENT PLAN SUPPLEMENTARY INFORMATION

RETIREMENT FUND SCHEDULE OF CONTRIBUTION ACCOUNTS AND ESTIMATED LIABILITY FOR RETIREMENT ALLOWANCES For the Years Ended June 30, 2019 and 2018 (Unaudited)

	Current Service	Minimum Pension	Cost of Living Adjustments	Continuance to ligible Spouse	Department of Water and Power Total		Members' Total			Combined Total	Estimated Lia for Retirer Allowan	
Balance at June 30, 2017	\$ 1,531,956,516	\$ (421,562,579)	\$ (2,311,985,072)	\$ (134,038,601)	\$	(1,335,629,736)	\$	1,592,237,219	\$	256,607,483	\$	6,942,830,729
Contributions received Contributions refunded	 51,075,538 (3,237,457)	 385,574,488	- -	 - -		436,650,026 (3,237,457)		93,659,240 (4,311,579)		530,309,266 (7,549,036)		<u>-</u>
Net Contributions	 47,838,081	 385,574,488				433,412,569		89,347,661		522,760,230		-
Transfers from contribution accounts for retiring members	(128,776,286)	(114,894,048)	(128,282,495)	(13,055,817)		(385,008,646)		(130,811,408)		(515,820,054)		515,820,054
Retirement allowances paid	-	-	-	-		-		-		-		(558,900,946)
Interest at 7.50% July - Februrary & 7.25% per annum thereafter	 111,059,573	 (21,279,914)	(174,854,431)	 (10,297,580)		(95,372,352)		116,825,504		21,453,152		509,390,656
Balance at June 30, 2018	 1,562,077,884	 (172,162,053)	(2,615,121,998)	 (157,391,998)		(1,382,598,165)		1,667,598,977		285,000,811		7,409,140,493
Contributions received Contributions refunded Net Contributions	49,871,075 (3,522,527) 46,348,548	363,816,576 - 363,816,576	- - -	 - - -		413,687,651 (3,522,527) 410,165,124		104,741,925 (6,101,790) 98,640,135		518,429,576 (9,624,317) 508,805,259		- - -
Transfers from contribution accounts for retiring members Retirement allowances paid	(129,167,886)	(88,323,610)	(135,942,915)	(18,276,723)		(371,711,134)		(132,242,574)		(503,953,708)		503,953,708 (591,461,776)
Interest at 7.25% per annum	110,322,435	(2,370,237)	(193,418,131)	(11,938,981)		(97,404,914)		119,567,300		22,162,386		531,955,003
Balance at June 30, 2019	\$ 1,589,580,981	\$ 100,960,676 \$	(2,944,483,044) \$	(187,607,702) \$		(1,441,549,089)		1,753,563,838 \$	<u> </u>	312,014,749 \$		7,853,587,428

CITY OF LOS ANGELES WATER AND POWER EMPLOYEES' RETIREMENT PLAN SUPPLEMENTARY INFORMATION

DEATH BENEFIT FUND SCHEDULE OF CONTRIBUTION ACCOUNTS AND ESTIMATED LIABILITY FOR FAMILY ALLOWANCES

For the Years Ended June 30, 2019 and 2018

	Members'	Department of Water and Power	Combined Total	Estimated Liability for Family Allowances
Balances at June 30, 2017	\$ 6,036,412	\$ 825,171	\$ 6,861,583	\$ 4,192,337
Contributions received	102,380	194,513	296,893	-
Transfers to estimated liability for family allowances from contribution accounts for member deceased during the year Family allowances paid	(59,299)	(89,136)	(148,435)	148,435 (543,244)
Interest transferred from general reserve at 3.5% per annum	214,450	29,693	244,143	144,290
Balances at June 30, 2018	\$ 6,293,943	\$ 960,241	\$ 7,254,184	\$ 3,941,818
Contributions received Transfers to estimated liability for family allowances from contribution accounts for	105,134	185,607	290,741	-
members deceased during the year	(67,560)	(679,657)	(747,217)	747,217
Family allowances paid	-	-	-	(546,650)
Interest transferred from general reserve at 3.5% per annum	224,421	22,450	246,871	147,038
Balances at June 30, 2019	\$ 6,555,938	\$ 488,641	\$ 7,044,579	\$ 4,289,423

CITY OF LOS ANGELES WATER AND POWER EMPLOYEES' RETIREMENT PLAN SUPPLEMENTARY INFORMATION

RETIREMENT FUND SCHEDULE OF REVENUES BY SOURCE AND EXPENSES BY TYPES June 30, 2019

Revenues by Source

Fiscal Year	Members' Contributions		Department ontributions*	Investment Income**	Total		
2019	\$	104,741,925	\$ 419,702,724	\$ 257,334,361	\$	781,779,010	
2018	\$	93,659,240	\$ 442,535,901	\$ 223,611,026	\$	759,806,167	
2017	\$	83,239,105	\$ 401,127,290	\$ 208,617,806	\$	692,984,201	
2016	\$	75,068,523	\$ 371,845,053	\$ 184,829,756	\$	631,743,332	
2015	\$	68,552,375	\$ 386,286,580	\$ 175,987,770	\$	630,826,725	
2014	\$	72,299,526	\$ 394,811,381	\$ 191,737,068	\$	658,847,975	
2013	\$	69,633,449	\$ 378,115,576	\$ 191,561,805	\$	639,310,830	
2012	\$	60,088,614	\$ 331,276,047	\$ 193,927,979	\$	585,292,640	
2011	\$	65,954,329	\$ 293,311,870	\$ 201,657,143	\$	560,923,342	
2010	\$	71,240,553	\$ 208,518,237	\$ 180,881,790	\$	460,640,580	

Expenses by Type

Fiscal	Administrative							
Year	Benefits		Expenses***		Refunds****		Total	
2019	\$	591,461,776	\$	54,438,930	\$	9,624,317	\$	655,525,023
2018	\$	558,900,946	\$	48,293,515	\$	7,549,036	\$	614,743,497
2017	\$	535,914,984	\$	40,643,556	\$	7,825,863	\$	584,384,403
2016	\$	505,591,726	\$	33,807,268	\$	8,479,257	\$	547,878,251
2015	\$	480,465,024	\$	35,470,631	\$	9,556,598	\$	525,492,253
2014	\$	457,558,214	\$	32,227,775	\$	11,711,783	\$	501,497,772
2013	\$	432,708,113	\$	27,233,363	\$	11,115,635	\$	471,057,111
2012	\$	410,814,067	\$	24,147,076	\$	10,805,587	\$	445,766,730
2011	\$	396,124,862	\$	25,146,053	\$	4,425,116	\$	425,696,031
2010	\$	377,051,650	\$	20,790,611	\$	6,028,583	\$	403,870,844

^{*} Represents Department contributions before Current Service reversions and includes contributions towards administrative expenses.

^{**} Represents "booked" investment income and excludes "net appreciation (depreciation) in fair value of investment."

^{***} Represents investment and administrative expenses.

^{****} Represents both refunds on members' contributions and reversions on Department Current Service contributions.