

**CITY OF LOS ANGELES
WATER AND POWER EMPLOYEES'
RETIREMENT PLAN
FINANCIAL STATEMENTS
AND SUPPLEMENTARY INFORMATION
For the Years Ended June 30, 2018 and 2017**



**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, 2018 and 2017, 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 circum-



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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, 2018 and 2017, 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 57; the Schedule of Changes in Net Other Postemployment Benefit and Related Ratios on pages 61 and 65; the Schedule of Employer Contributions and related notes on pages 58, 59, 62, 63, 66, and 67; and the Schedule of Investment Returns on pages 60, 64, and 68 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.

A handwritten signature in cursive script that reads "Simpson & Simpson".

Los Angeles, California

November 2, 2018

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, 2018 and 2017.

FINANCIAL HIGHLIGHTS

- At June 30, 2018, the fiduciary net position was \$12.3 billion, \$46.4 million, \$27.2 million, and \$2.1 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 \$963.2 million or 8.51%, and \$173.8 million or 9.09% for the Retirement and the Retiree Health Benefits Fund respectively. Total fiduciary net position decreased by \$0.8 million or 1.65%, and \$0.4 million or 1.36% for the Disability and the Death Benefit Fund respectively.
- Additions to the Retirement Fund's fiduciary net position totaled \$1.5 billion in the current year, while additions to the Retiree Health Benefit Fund's fiduciary net position totaled \$269.6 million. They were due mainly to investments' market value appreciation in 2018.
- Deductions from the Retirement Fund's fiduciary net position increased \$22.8 million from \$545.7 million to \$568.5 million over the prior year or approximately 4.18%, due to a modest increase in benefit payments.
- At June 30, 2018, the fiduciary net position as a percentage of total pension liability of the Retirement Fund was 93.10%.
- At June 30, 2018, the Department's net pension liability under the Retirement Fund was \$910.5 million.
- At June 30, 2018, the fiduciary net position as a percentage of total other postemployment benefits liability of the Retiree Health Benefits Fund and Death Benefit Fund was 84.46% and 18.91%, respectively.
- At June 30, 2018, the Department's net other postemployment benefits liability under the Retiree Health Benefits Fund and Death Benefit Fund was \$383.6 million and \$116.7 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 56 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 56 to 68 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 69 to 71 of this report.

FINANCIAL ANALYSIS

Retirement Fund

Fiduciary Net Position

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

Condensed Statements of Fiduciary Net Position (In Thousands)					
	2018	2017	2016	2017-18 % Change	2016-17 % Change
Cash	\$ 8,064	\$ 8,803	\$ 15,849	-8.39%	-44.46%
Prepaid expense	2	8	1	-75.00%	700.00%
Receivables	355,239	287,125	325,716	23.72%	-11.85%
Investments	12,816,076	12,033,013	10,751,335	6.51%	11.92%
 Total assets	 13,179,381	 12,328,949	 11,092,901	 6.90%	 11.14%
 Liabilities	 902,296	 1,015,050	 995,058	 -11.11%	 2.01%
 Fiduciary net position	 <u>\$ 12,277,085</u>	 <u>\$ 11,313,899</u>	 <u>\$ 10,097,843</u>	 8.51%	 12.04%

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.

Fiscal year ended June 30, 2017

Fiduciary net position increased \$1.2 billion or 12.04% over the prior fiscal year to \$11.3 billion. Investments were up \$1.3 billion or 11.92% due to strong market performance. Cash decreased by \$7.0 million or 44.46% from prior fiscal year based on projected liquidity needs. Total

Retirement Fund (Continued)

receivables decreased by \$38.6 million or 11.85% to \$287.1 million due to the lower pending investment sales at fiscal year-end.

Changes in Fiduciary Net Position

	Condensed Statements of Changes in Fiduciary Net Position (In Thousands)			2017-18 % Change	2016-17 % Change
	2018	2017	2016		
Additions					
Members' contributions	\$ 93,659	\$ 83,239	\$ 75,069	12.52%	10.88%
Employer contributions	439,299	397,748	368,259	10.45%	8.01%
Net investment income	998,777	1,280,806	95,808	-22.02%	1236.85%
Total additions	1,531,735	1,761,793	539,136	-13.06%	226.78%
Deductions					
Benefit payments	558,901	535,915	505,592	4.29%	6.00%
Refund	4,312	4,447	4,893	-3.04%	-9.12%
Administrative expenses	5,336	5,375	5,108	-0.73%	5.23%
Total deductions	568,549	545,737	515,593	4.18%	5.85%
Net decrease					
in fiduciary net position	963,186	1,216,056	23,543	-20.79%	5065.26%
Fiduciary net position beginning	11,313,899	10,097,843	10,074,300	12.04%	0.23%
Fiduciary net position ending	\$ 12,277,085	\$ 11,313,899	\$ 10,097,843	8.51%	12.04%

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, 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.

Fiscal year ended June 30, 2017

Net investment income increased \$1.2 billion from \$95.8 million to \$1.3 billion in fiscal year 2017. The increase was attributed to the net appreciation in the fair value of investments. Member contributions and employer contributions for fiscal year 2017 were up 10.88% and 8.01% respectively over the prior fiscal year. The increase in contributions was due primarily to the increase in the number of active Plan members.

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, 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.

Fiscal year ended June 30, 2017

Deductions for the fiscal year ended June 30, 2017 totaled \$545.7 million, up \$30.1 million or 5.85% over the prior fiscal year. Benefit payments increased by \$30.3 million or 6.00% over the prior fiscal year. The increase was due to the rise in the total number of retirees.

Disability Fund

Fiduciary Net Position

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

	Condensed Statements of Fiduciary Net Position (In Thousands)			2017-18	2016-17
	2018	2017	2016	% Change	% Change
Cash	\$ 1,293	\$ 3,139	\$ 2,662	-58.81%	17.92%
Receivables	8,022	6,804	7,469	17.90%	-8.90%
Investments	37,572	37,688	37,724	-0.31%	-0.10%
Total assets	46,887	47,631	47,855	-1.56%	-0.47%
Liabilities	473	436	368	8.49%	18.48%
Fiduciary net position	<u>\$ 46,414</u>	<u>\$ 47,195</u>	<u>\$ 47,487</u>	-1.65%	-0.61%

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.

Fiscal year ended June 30, 2017

The Disability Fund's fiduciary net position decreased by approximately \$0.3 million, or 0.61% in fiscal year 2017. The decrease in net position was the result of declining return of fixed income investments during fiscal year 2017.

Disability Fund (Continued)

Changes in Fiduciary Net Position

	Condensed Statements of Changes in Fiduciary Net Position (In Thousands)			2017-18	2016-17
	2018	2017	2016	% Change	% Change
Additions					
Members' contributions	\$ 493	\$ 473	\$ 458	4.23%	3.28%
Employer contributions	16,499	16,365	17,067	0.82%	-4.11%
Net investment income (loss)	(159)	(80)	2,068	-98.75%	-103.87%
Total additions	16,833	16,758	19,593	0.45%	-14.47%
Deductions					
Benefit payments	16,719	16,185	15,945	3.30%	1.51%
Administrative expenses	895	865	908	3.47%	-4.74%
Total deductions	17,614	17,050	16,853	3.31%	1.17%
Net increase (decrease) in fiduciary net position	(781)	(292)	2,740	-167.47%	-110.66%
Fiduciary net position beginning	47,195	47,487	44,747	-0.61%	6.12%
Fiduciary net position ending	\$ 46,414	\$ 47,195	\$ 47,487	-1.65%	-0.61%

Additions to Fiduciary Net Position

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, 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.

Fiscal year ended June 30, 2017

Employer contributions for fiscal year 2017 totaled \$16.4 million, down approximately \$0.7 million or 4.11% from a year ago. The decrease was due to the decrease in the Department's actuarial contribution rate for temporary disability benefits. The Department's actuarial contribution rate for fiscal year 2017 was \$1.52 per \$100 of covered compensation, while the rate was \$1.71 per \$100 of covered compensation in fiscal year 2016.

Net investment income decreased by \$2.1 million, or 103.87%, from fiscal year 2016. The decreased is mainly attributed to the declining return of fixed income investments during fiscal year 2017.

Deductions from Fiduciary Net Position

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

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.

Fiscal year ended June 30, 2017

Total deductions were consistent with prior fiscal year; it was only up by \$0.2 million or 1.17% versus fiscal year 2016.

Death Benefit Fund

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

	Condensed Statements of Fiduciary Net Position (In Thousands)			2017-18	2016-17
	2018	2017	2016	% Change	% Change
Cash	\$ 940	\$ 960	\$ 1,048	-2.08%	-8.40%
Receivables	1,178	1,023	944	15.15%	8.37%
Investments	29,802	29,533	29,557	0.91%	-0.08%
Total assets	31,920	31,516	31,549	1.28%	-0.10%
Liabilities	4,710	3,932	3,364	19.79%	16.88%
Total fiduciary net position	<u>\$ 27,210</u>	<u>\$ 27,584</u>	<u>\$ 28,185</u>	-1.36%	-2.13%

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.

Fiscal year ended June 30, 2017

The Fund's fiduciary net position decreased by \$0.6 million or 2.13% when compared to prior year's fiduciary net position of \$28.2 million. Liabilities at June 30, 2017 were up \$0.6 million, or 16.88% against last year. This is mostly attributable to the higher expenses payable outstanding at fiscal year-end.

Death Benefit Fund (Continued)**Changes in Fiduciary Net Position**

	Condensed Statements of Changes in Fiduciary Net Position (In Thousands)			2017-18	2016-17
	2018	2017	2016	% Change	% Change
Additions					
Members' contributions	\$ 347	\$ 336	\$ 326	3.27%	3.07%
Employer contributions	8,101	8,207	8,230	-1.29%	-0.28%
Net investment income (loss)	(120)	(57)	1,594	-110.53%	-103.58%
Total additions	8,328	8,486	10,150	-1.86%	-16.39%
Deductions					
Benefit payments	7,603	7,968	7,519	-4.58%	5.97%
Administrative expenses	1,099	1,119	1,020	-1.79%	9.71%
Total deductions	8,702	9,087	8,539	-4.24%	6.42%
Net increase (decrease) in fiduciary net position	(374)	(601)	1,611	37.77%	-137.31%
Fiduciary net position beginning	27,584	28,185	26,574	-2.13%	6.06%
Fiduciary net position ending	<u>\$ 27,210</u>	<u>\$ 27,584</u>	<u>\$ 28,185</u>	-1.36%	-2.13%

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, 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.

Fiscal year ended June 30, 2017

Net investment income decreased by \$1.7 million, or 103.58%, from fiscal year 2016. The decrease is attributed to the decline in the fair value of fixed income investments during fiscal year 2017.

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, 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.

Fiscal year ended June 30, 2017

Fiscal year 2017 benefit payments increased by \$0.4 million, up 5.97% from prior year. The increase was due to the rise 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, 2018 the fiduciary net position of the fund totaled approximately \$2.1 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)			2017-18	2016-17
	2018	2017	2016	% Change	% Change
Cash	\$ 370	\$ 518	\$ 1,075	-28.57%	-51.81%
Receivables	45,142	34,786	49,303	29.77%	-29.44%
Investments	2,220,685	2,071,771	1,864,644	7.19%	11.11%
Total assets	2,266,197	2,107,075	1,915,022	7.55%	10.03%
Liabilities	180,506	195,194	222,105	-7.52%	-12.12%
Total fiduciary net position	<u>\$ 2,085,691</u>	<u>\$ 1,911,881</u>	<u>\$ 1,692,917</u>	9.09%	12.93%

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.

Retiree Health Benefits Fund (continued)

Fiscal year ended June 30, 2017

Fiduciary net position increased \$219.0 million or 12.93% over the prior fiscal year to \$1.9 billion. Investments were up \$207.1 million or 11.11% due to elevated market performance. Cash decreased by \$0.6 million or 51.81% from prior fiscal year based on projected liquidity needs. Total receivables decreased by \$14.5 million or 29.44% to \$34.8 million due to the lower pending investment sales at fiscal year-end.

Changes in Fiduciary Net Position

	Condensed Statements of Changes in Fiduciary Net Position (In Thousands)			2017-18 % Change	2016-17 % Change
	2018	2017	2016		
Additions					
Employer contributions	\$ 95,919	\$ 91,024	\$ 80,607	5.38%	12.92%
Net investment income	173,674	218,836	14,463	-20.64%	1413.07%
Total additions	269,593	309,860	95,070	-13.00%	225.93%
Deductions					
Benefit payments	95,234	90,311	79,896	5.45%	13.04%
Administrative expenses	549	585	578	-6.15%	1.21%
Total deductions	95,783	90,896	80,474	5.38%	12.95%
Net increase in fiduciary net position	173,810	218,964	14,596	-20.62%	1400.16%
Fiduciary net position beginning	1,911,881	1,692,917	1,678,321	12.93%	0.87%
Fiduciary net position ending	<u>\$ 2,085,691</u>	<u>\$ 1,911,881</u>	<u>\$ 1,692,917</u>	9.09%	12.93%

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, 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.

Fiscal year ended June 30, 2017

Net investment income increased \$204.3 million from \$14.5 million to \$218.8 million in fiscal year 2017. The increase was attributed to the net appreciation in the fair value of investments.

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, 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.

Fiscal year ended June 30, 2017

Insurance premiums paid for the benefit of retirees increased \$10.4 million or 13.04% in fiscal year 2017 when compared to fiscal year 2016.

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

	Pension Plan		Other Benefits Plan		Other Postemployment Benefits Plans			
	Retirement Fund		Disability Fund		Death Benefit Fund		Retiree Health Benefits Fund	
	2018	2017	2018	2017	2018	2017	2018	2017
ASSETS								
Cash (Notes 2 and 3)	\$ 8,063,652	\$ 8,802,584	\$ 1,292,540	\$ 3,139,543	\$ 939,600	\$ 960,417	\$ 370,123	\$ 517,754
Prepaid expense	2,536	8,320	-	-	-	-	-	-
Receivables								
Accrued investment income	32,914,444	31,270,415	92,379	79,650	71,175	61,779	5,289,156	5,082,987
Department of Water and Power	59,147,316	54,944,775	2,867,535	2,558,855	1,087,132	940,753	-	-
Pending investment sales	256,132,221	194,450,263	-	-	-	-	39,852,447	29,702,767
Other	7,044,572	6,460,102	1,751,910	855,379	20,044	20,044	-	-
Contingent disability benefit advance	-	-	3,310,339	3,310,339	-	-	-	-
Total receivables	355,238,553	287,125,555	8,022,163	6,804,223	1,178,351	1,022,576	45,141,603	34,785,754
Investments, at fair value (Notes 2, 3, and 4)								
Fixed income	2,848,790,689	2,890,372,785	37,327,310	37,446,312	29,554,341	28,789,442	484,791,809	490,306,092
Equity	6,689,840,829	6,366,019,664	-	-	-	-	1,158,878,523	1,099,466,674
Short-term investments	324,250,963	295,916,861	245,110	241,535	248,138	743,931	61,419,921	56,039,761
Alternative investments	1,628,016,346	1,066,184,581	-	-	-	-	281,791,375	180,124,322
Real estate	716,440,769	656,782,077	-	-	-	-	107,329,484	98,213,306
Securities lending - short-term collateral investment pool	608,736,556	757,736,926	-	-	-	-	126,473,770	147,620,446
Total investments	12,816,076,152	12,033,012,894	37,572,420	37,687,847	29,802,479	29,533,373	2,220,684,882	2,071,770,601
Total assets	13,179,380,893	12,328,949,353	46,887,123	47,631,613	31,920,430	31,516,366	2,266,196,608	2,107,074,109
LIABILITIES								
Payables								
Pending investment purchases	279,145,489	246,375,692	91,959	79,415	70,700	61,056	47,367,851	41,642,210
Department of Water and Power	-	-	-	-	-	-	31,891	2,690
Other	14,413,585	10,937,400	381,287	356,795	999,290	932,325	6,632,018	5,928,227
Securities lending - collateral payable (Note 4)	608,736,556	757,736,926	-	-	-	-	126,473,770	147,620,446
Death claims in process - insured lives	-	-	-	-	3,640,220	2,938,851	-	-
Total liabilities	902,295,630	1,015,050,018	473,246	436,210	4,710,210	3,932,232	180,505,530	195,193,573
Fiduciary net position restricted for pension, other postemployment, and disability benefits	\$ 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

	Pension Plan		Other Benefits Plan		Other Postemployment Benefits Plans			
	Retirement Fund		Disability Fund		Death Benefit Fund		Retiree Health Benefits Fund	
	2018	2017	2018	2017	2018	2017	2018	2017
ADDITIONS								
Members' contributions								
Retirement benefit	\$ 93,659,240	\$ 83,239,105	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Temporary disability benefit	-	-	249,642	238,341	-	-	-	-
Permanent total disability	-	-	243,575	234,419	-	-	-	-
Insured lives death benefit	-	-	-	-	244,551	235,031	-	-
Supplemental family death benefit	-	-	-	-	102,380	101,599	-	-
Total members' contributions	93,659,240	83,239,105	493,217	472,760	346,931	336,630	-	-
Department of Water and Power contributions towards:								
Retirement benefit (net of reversions)	433,412,569	391,717,359	-	-	-	-	-	-
Insurance premiums	-	-	-	-	-	-	95,233,622	90,310,419
Temporary disability benefits	-	-	14,103,745	14,265,345	-	-	-	-
Supplemental disability benefits	-	-	1,497,638	1,233,786	-	-	-	-
Active members	-	-	-	-	2,049,059	2,000,073	-	-
Retired members (non-contributing)	-	-	-	-	4,893,639	4,943,984	-	-
Family death benefit	-	-	-	-	194,513	193,896	-	-
Administrative expenses	5,885,875	6,030,419	897,795	866,534	963,988	1,068,654	685,090	713,507
Total Department of Water and Power contributions	439,298,444	397,747,778	16,499,178	16,365,665	8,101,199	8,206,607	95,918,712	91,023,926
Total contributions	532,957,684	480,986,883	16,992,395	16,838,425	8,448,130	8,543,237	95,918,712	91,023,926
Investment income								
Net appreciation (depreciation) in fair value of investments	817,302,623	1,107,153,958	(1,117,049)	(823,457)	(857,419)	(633,088)	144,145,469	190,298,244
Interest	110,619,932	101,281,516	1,001,807	787,201	771,276	609,893	18,044,351	17,088,400
Dividends	74,421,498	69,165,701	-	-	-	-	12,998,061	11,531,477
Income from real estate investments	30,666,108	30,084,952	-	-	-	-	4,591,788	4,528,433
Income from alternative investments	4,295,489	3,299,642	-	-	-	-	320,561	307,317
Securities lending (Note 4)	14,510,674	7,820,872	-	-	-	-	2,905,337	1,721,823
Total investment income	1,051,816,324	1,318,806,641	(115,242)	(36,256)	(86,143)	(23,195)	183,005,567	225,475,694
Less: Securities lending expenses (Note 4)	(10,902,675)	(3,034,878)	-	-	-	-	(2,201,552)	(715,863)
Less: Investment expenses	(42,957,057)	(35,268,327)	(43,793)	(43,481)	(33,751)	(33,467)	(7,207,236)	(5,944,569)
Net investment income	997,956,592	1,280,503,436	(159,035)	(79,737)	(119,894)	(56,662)	173,596,779	218,815,262
Other income	820,635	302,852	-	-	-	-	77,580	20,572
Total additions	1,531,734,911	1,761,793,171	16,833,360	16,758,688	8,328,236	8,486,575	269,593,071	309,859,760

(Continued)

	Pension Plan		Other Benefits Plan		Other Postemployment Benefits Plan			
	Retirement Fund		Disability Fund		Death Benefit Fund		Retiree Health Benefits Fund	
	2018	2017	2018	2017	2018	2017	2018	2017
DEDUCTIONS								
Benefits paid								
Retirement	558,900,946	535,914,984	-	-	-	-	-	-
Temporary disability	-	-	12,989,490	12,766,755	-	-	-	-
Extended temporary disability	-	-	379,185	484,247	-	-	-	-
Permanent total disability	-	-	1,853,258	1,700,103	-	-	-	-
Supplemental	-	-	1,497,638	1,233,786	-	-	-	-
Death benefits (active/retired members)	-	-	-	-	7,059,333	7,427,860	-	-
Family allowances	-	-	-	-	543,244	540,150	-	-
Retiree health benefits paid (insurance premiums)	-	-	-	-	-	-	95,233,622	90,310,419
Total benefits paid	558,900,946	535,914,984	16,719,571	16,184,891	7,602,577	7,968,010	95,233,622	90,310,419
Refund of members' contributions	4,311,579	4,446,351	-	-	-	-	-	-
Administrative expenses	5,336,458	5,375,229	895,315	865,322	1,099,573	1,119,190	548,907	585,352
Total deductions	568,548,983	545,736,564	17,614,886	17,050,213	8,702,150	9,087,200	95,782,529	90,895,771
Net increase (decrease) in fiduciary net position	963,185,928	1,216,056,607	(781,526)	(291,527)	(373,914)	(600,625)	173,810,542	218,963,989
Fiduciary net position restricted for pension, other postemployment, and disability benefits								
Beginning of year	11,313,899,335	10,097,842,728	47,195,403	47,486,930	27,584,134	28,184,759	1,911,880,536	1,692,916,547
End 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

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 subsidiaries. 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, 2018 and 2017:

	2018		2017	
	Retirement	Death Benefit	Retirement	Death Benefit
Retirees, beneficiaries	9,165	7,290	9,272	7,206
Terminated vested	1,728	656	1,648	726
Active	10,114	10,114	9,806	9,806
Total	<u>21,007</u>	<u>18,060</u>	<u>20,726</u>	<u>17,738</u>

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-Riverside-Orange County, 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 2018 and 2017 (based on the July 1, 2017 and 2016 valuations) were 44.62% and 45.25% 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 2018 and 2017 for temporary disability (based on the July 1, 2017 and 2016 valuations) were \$1.44 and \$1.52 per \$100 of covered payroll, respectively. Department contribution for

NOTE 1 – PLAN DESCRIPTIONS (Continued)

permanent total disability continues to be suspended, as current reserve significantly exceeds the target reserve amount.

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 \$0.21 and \$0.22 per \$100 of covered payroll for fiscal years 2018 and 2017 respectively. In addition, the Department contributions for the IDB for non-contributing members were at \$1.01 and \$1.05 per \$100 of retirement benefits paid for fiscal years 2018 and 2017, respectively.

- Family Death Benefit

The Department contribution rate was \$1.76 and \$1.62 per active member per month for fiscal years 2018 and 2017, 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

Membership

The Retiree Health Benefits Plan's membership consisted of the following at June 30, 2018 and 2017:

	2018	2017
Current retirees and beneficiaries	8,185	8,185
Current active members	10,114	9,806
Total	18,299	17,844

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 2018 and 2017, the Department contributed \$95.9 million and \$91.0 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.

Use of Estimates

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.

Reclassifications

Certain reclassifications have been made to 2017 amounts to conform to the 2018 financial statement presentation. There was no impact on the previously reported fiduciary net positions.

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 2018 and 2017:

<u>Asset Class</u>	<u>Target Allocation</u>
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	<u>100.00%</u>

Cash

As of June 30, 2018 and 2017, 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, 2018 and 2017. 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.

NOTE 3 – CASH AND INVESTMENTS (Continued)

Investments

As of June 30, 2018, and 2017, the WPERP had the following investments:

<u>Investment Type</u>	<u>June 30, 2018</u> <u>Fair Value</u>	<u>June 30, 2017</u> <u>Fair Value</u>
Domestic equities	\$ 5,081,268,433	\$ 4,906,224,287
International equities	2,735,232,279	2,538,027,836
U.S. Treasuries	817,381,695	936,151,383
U.S. agencies	891,017,438	869,598,674
Preferred securities/convertible bonds/other	32,218,640	21,234,215
Mortgage and asset backed securities	167,777,326	199,303,886
Corporate debt - domestic	956,783,790	1,020,548,609
Corporate debt - international	348,556,493	226,684,122
Government debt - international	147,484,966	123,825,882
Municipal/provincial bonds	4,580,790	4,566,320
Mutual funds	453,045,783	419,177,843
Private equity & hedge funds	1,909,807,721	1,246,308,903
Real estate	823,770,253	754,995,383
Securities lending short-term collateral investment pool	735,210,326	905,357,372
Total investments	<u>\$ 15,104,135,933</u>	<u>\$ 14,172,004,715</u>

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:

- 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.

NOTE 3 – CASH AND INVESTMENTS (Continued)

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, 2018:

Fair Value Measurement at June 30, 2018*				
	Level 1	Level 2	Level 3	Total
Equity securities:				
Domestic equities	\$ 5,081,268,433	\$ -	\$ -	\$ 5,081,268,433
International equities	2,735,232,279	-	-	2,735,232,279
Preferred securities	32,218,640	-	-	32,218,640
Fixed income securities:	-			
U.S. Treasuries	-	817,381,695	-	817,381,695
U.S. agencies	-	891,017,438	-	891,017,438
Mortgage and asset backed securities	-	167,777,326	-	167,777,326
Corporate debt - domestic	-	956,783,790	-	956,783,790
Corporate debt - international	-	348,556,493	-	348,556,493
Government debt -international	-	147,484,966	-	147,484,966
Municipal/provincial bonds	-	4,580,790	-	4,580,790
Alternative investments				
GILS	-	424,712,265	-	424,712,265
Real estate	61,029,772	-	-	61,029,772
Total investments by fair value	\$ 7,909,749,124	\$ 3,758,294,763	\$ -	\$ 11,668,043,887

* Mutual funds of \$453.0 million and Sec Lending ST investments of \$735.2 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 33.

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.

NOTE 3 – CASH AND INVESTMENTS (Continued)

Alternative investments classified under level 2 include global inflation linked securities (GILS) managed by Western Assets Management Company with total fair value of \$424.7 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.

Fair Value of Investments Measured at the Net Asset Value (NAV) — Below is a summary of the WPERP's investments at June 30, 2018 for which fair value is measured based on the NAV.

Investments Measured at the NAV	Fair Value	Unfunded Commitment	Redemption Frequency (if Currently Eligible)	Redemption Notice Period
<u>Private Equity</u>				
Direct partnerships	\$ 486,339,054	\$ 399,914,545	Not Eligible	Not Eligible
Fund of funds	97,286,869	209,434,865	Not Eligible	Not Eligible
<u>Real Estate</u>				
Open ended	444,036,576	-	Quarterly	45-90 days
Close ended	318,703,905	420,389,618	Not Eligible	Not Eligible
<u>Real Return</u>				
Commodities	161,151,768	-	Daily	2 days
Timberland	39,798,494	-	Not Eligible	Not Eligible
<u>Hedge Fund</u>				
Fund of funds	700,519,271	-	1-30 Days	30-60 Days
Total investments measured at the NAV	\$ <u>2,247,835,937</u>	\$ <u>1,029,739,028</u>		

NOTE 3 – CASH AND INVESTMENTS (Continued)

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.

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.

NOTE 3 – CASH AND INVESTMENTS (Continued)

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, 2018 and 2017, the annual money-weighted rate of return on the Retirement Fund investments, net of investment expense, was 8.89% and 12.79%, respectively.

For the year ended June 30, 2018 and 2017, the annual money-weighted rate of return on the Retiree Health Benefits Fund investments, net of investment expense, was 9.08% and 12.92%, respectively; the annual money-weighted rate of return on the Death Benefit Fund investments, net of investment expense, was -0.39% and -0.18%, 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.

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, 2018 are as follows:

<u>Investment Type</u>	<u>Credit Rating</u>	<u>Fair Value</u>	<u>% of Portfolio</u>
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%
	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		<u>\$ 3,818,846,922</u>	<u>100.00%</u>

* 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, 2017 are as follows:

<u>Investment Type</u>	<u>Credit Rating</u>	<u>Fair Value</u>	<u>% of Portfolio</u>
U.S. Treasuries	AAA	\$ 936,151,383	24.50%
U.S. Agency notes	AAA	869,598,674	22.76%
Preferred securities/convertible bonds/other	B or better	375,656	0.01%
	Not rated	20,858,559	0.55%
Mortgage and asset backed securities	AAA	91,990,201	2.41%
	A or better	16,946,334	0.44%
	B or better	55,848,733	1.46%
	C or better	28,772,964	1.47%
	Not rated	5,745,654	0.15%
Corporate debt - domestic	AAA	22,138,694	0.58%
	A or better	108,692,701	2.84%
	B or better	724,014,619	18.95%
	C or better	87,918,151	2.30%
	D/Not rated	77,784,444	2.04%
Corporate debt - international	A or better	38,530,861	1.01%
	B or better	175,296,824	4.59%
	C or better	2,772,869	0.07%
	WR/Not Rated	10,083,568	0.26%
Government debt - international	AAA	28,782,284	0.75%
	A or better	12,734,088	0.33%
	B or better	63,007,233	1.65%
	C or better	10,694,675	0.28%
	Not Rated	8,607,602	0.23%
Municipal / Provincial Bond	C or better	1,947,720	0.05%
	Not rated	2,618,600	0.07%
Mutual funds	Not rated	419,177,843 *	10.97%
Total		<u>\$ 3,821,090,934</u>	<u>100.00%</u>

* 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, 2018 and 2017, 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, 2018, and 2017, 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, 2018, the WPERP's exposure to interest rate risk is as follows:

<u>Investment Type</u>	<u>Fair Value</u>	<u>Weighted Average Maturity (Years)</u>
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

NOTE 3 – CASH AND INVESTMENTS (Continued)

As of June 30, 2017, the WPERP's exposure to interest rate risk is as follows:

<u>Investment Type</u>	<u>Fair Value</u>	<u>Weighted Average Maturity (Years)</u>
U.S. Treasuries	\$ 936,151,383	3.88
U.S. Agency notes	869,598,674	20.16
Preferred securities	21,234,215	0.00
Mortgage and asset backed securities	199,303,886	19.11
Corporate debt - domestic	1,020,548,609	9.68
Corporate debt - international	226,684,122	12.37
Government debt - international	123,825,882	10.36
Municipal/provincial bonds	4,566,320	17.94
Mutual funds	419,177,843	0.00
Total	\$ 3,821,090,934	10.21

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, 2018 and 2017, the WPERP's exposure to foreign currency risk is as follows:

<u>Currency</u>	<u>Investment Type</u>	<u>2018</u>	<u>2017</u>
Australian Dollar	Cash & cash equivalents	\$ 83,420	\$ 38,578
	Equities	52,891,596	66,307,930
	Fixed Income	2,410,202	2,444,859
Brazil Real	Cash & cash equivalents	8,508	3,026
	Equities	16,908,598	16,339,013
Canadian Dollar	Cash & cash equivalents	274,663	167,054
	Equities	67,843,703	60,284,843
	Fixed Income	13,093,907	10,013,435
Danish Krone	Cash & cash equivalents	-	(11)
	Equities	12,499,111	17,454,551
Euro Currency Unit	Cash & cash equivalents	33,726,828	23,359,338
	Equities	481,639,841	407,906,377
	Fixed Income	144,423,608	103,053,514
Hong Kong Dollar	Cash & cash equivalents	61,797	77,207
	Equities	121,970,452	106,168,198
Hungarian Forint	Equities	1,045,177	975,924
Indonesian Rupiah	Equities	10,778,347	9,598,386
Japanese Yen	Cash & cash equivalents	2,041,805	1,686,198
	Equities	320,293,320	299,940,908
	Fixed Income	6,334,019	6,157,475
South Korea Won	Cash & cash equivalents	119	-
	Equities	60,346,531	63,731,094
Malaysian Ringgit	Equities	15,348,421	8,871,245
Mexican New Peso	Cash & cash equivalents	356,079	5,541
	Equities	13,152,068	6,835,952
	Fixed Income	9,068,604	-
New Taiwan Dollar	Cash & cash equivalents	392	-
	Equities	57,215,812	49,458,219
New Zealand Dollar	Cash & cash equivalents	135,960	38,730
	Fixed Income	4,357,896	4,515,656
	Equities	3,897,928	4,425,692
Norwegian Krone	Cash & cash equivalents	223	89
	Equities	18,945,498	15,666,591
Philippine Peso	Cash & cash equivalents	526	556
	Equities	1,016,138	1,297,713
Polish Zloty	Cash & cash equivalents	852	863
	Equities	1,510,098	6,447,688
Pound Sterling	Cash & cash equivalents	3,017,047	4,098,061
	Equities	216,478,690	207,283,874
	Fixed Income	96,592,505	89,591,887

NOTE 3 – CASH AND INVESTMENTS (Continued)

<u>Currency</u>	<u>Investment Type</u>	<u>2018</u>	<u>2017</u>
S. African Rand	Cash & cash equivalents	332	348
	Equities	18,397,638	14,192,890
Singapore Dollar	Equities	6,533,571	3,438,950
Swedish Krona	Cash & cash equivalents	8,337	8,886
	Equities	19,307,684	22,317,452
Swiss Franc	Cash & cash equivalents	200	103
	Equities	120,336,032	127,830,666
Thailand Baht	Equities	16,469,165	15,730,217
Turkish Lira	Cash & cash equivalents	9	12
	Equities	8,365,774	9,549,267
Total		<u>\$ 1,979,189,031</u>	<u>\$ 1,787,315,043</u>

The WPERP's investment policy permits it to invest up to 19.00 % of total investments of the WPERP in non-U.S. investments. The WPERP's position is 13.10% and 12.61% as of June 30, 2018 and 2017, respectively.

NOTE 3 – CASH AND INVESTMENTS (Continued)

Derivative Instruments

The fair value balances and notional amounts of derivatives instruments outstanding at June 30, 2018 and 2017, classified by type, and the changes in fair values of such derivative instruments for the years then ended as reported in the 2018 and 2017 financial statements are as follows:

Type	2018				
	Changes in Fair Value		Fair Value		Notional Amount
	Classification	Amount	Classification	Amount	
Forward Contracts	Investment Income / (Loss)	\$ 14,751,807	Investment	\$ 10,447,990	\$ 1,273,018,619

Type	2017				
	Changes in Fair Value		Fair Value		Notional Amount
	Classification	Amount	Classification	Amount	
Forward Contracts	Investment Income / (Loss)	\$ 2,548,910	Investment	\$ (4,303,817)	\$ 1,129,442,220

At June 30, 2018 and 2017, 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 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

NOTE 4 – SECURITIES LENDING PROGRAM (Continued)

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, 2018, and 2017, 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 79 days and 66 days as of June 30, 2018 and 2017, respectively.

The fair values of the underlying securities on loan, collateralized by cash and securities as of June 30, 2018 and 2017 are:

<u>Securities on loan</u>	<u>2018</u>	<u>2017</u>
Global agencies	\$ -	\$ 943,374
Global equities	200,350,142	101,234,043
Global corporate fixed	19,218,338	210,396
Global government fixed	496,180,209	266,488,847
U.S. Agency notes	4,665,074	4,700,159
U.S. corporate fixed	174,072,468	184,976,651
U.S. equities	415,299,763	439,571,304
U.S. government fixed	274,916,345	438,780,577
	<u> </u>	<u> </u>
Total	<u>\$ 1,584,702,339</u>	<u>\$ 1,436,905,351</u>

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, 2018 and 2017 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, 2018	\$13,187,551,040	\$12,277,085,263	\$910,465,777	93.10%
As of June 30, 2017	\$12,657,109,576	\$11,313,899,335	\$1,343,210,241	89.39%

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, 2018 and 2017. The NPL as of June 30, 2018 and 2017 was determined by actuarial valuation as of July 1, 2018 and July 1, 2017, respectively. The actuarial assumptions used in the June 30, 2018 and 2017 measurements were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2015. In particular, the following assumptions were applied in the 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 2016 using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. 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, 2018 and 2017 are summarized in the following table. This information may change as the actuarial experience study is conducted at the maximum of five years interval.

Asset Class	Target Allocation	Long-Term Expected 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 7.25% as of June 30, 2018 and June 30, 2017. 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, 2018 and 2017.

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, 2018 and 2017, calculated using the discount rate of 7.25%, as well as what the NPL would be if it were calculated using a discount rate that is 1-percentage-point lower (6.25%) or 1-percentage-point higher (8.25%) than the current rate:

	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
NPL as of June 30, 2018	\$2,690,251,200	\$910,465,777	\$(561,244,711)
NPL as of June 30, 2017	\$3,062,653,283	\$1,343,210,241	\$(77,418,597)

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, 2018 and 2017 are as follows:

	Total OPEB Liability	RHBF Fiduciary Net Position	Net OPEB Liability	Fiduciary Net Position as % of Total OPEB Liability
As of June 30, 2018	\$2,469,304,377	\$2,085,691,078	\$383,613,299	84.46%
As of June 30, 2017	\$2,347,483,631	\$1,911,880,536	\$435,603,095	81.44%

An independent actuarial firm conducts annual actuarial valuation to determine the total OPEB liability of the Department. The NOL as of June 30, 2018 and 2017 were determined by the actuarial valuation as of June 30, 2018 and 2017. The non-healthcare cost actuarial assumptions used in both measurements were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2015. In particular, the following assumptions were applied in the 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 6 – NET OTHER POSTEMPLOYMENT BENEFITS LIABILITY OF THE DEPARTMENT (Continued)

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, 2018 and 2017 measurements:

	June 30, 2018	June 30, 2017
Non-Medicare medical plan	7.00%, graded down to an ultimate of 4.50% over 10 years	7.00%, graded down to an ultimate of 4.50% over 10 years
Medicare medical plans	6.50%, graded down to an ultimate of 4.50% over 8 years	6.50%, graded down to an ultimate of 4.50% over 8 years
Dental and Medicare Part B	4.00%	4.50%

Investment rate of return: The long-term expected rate of return on RHBF's investments was determined in 2016 using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. 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, 2018 and 2017 are summarized in the following table. This information may change as the actuarial experience study is conducted at the maximum of five years interval.

Asset Class	Target Allocation	Long-Term Expected 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%	

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

Discount rate: The discount rate used to measure the total OPEB liability was 7.25% as of June 30, 2018 and 2017. The projection of cash flows used to determine the discount rate assumed Department contributions will be made at rates equal to or exceed the actuarially determined contribution rates. Under that assumption, the Fund Fiduciary Net Position as of June 30, 2018 is greater than the present value of future benefits and administrative expenses, less the present value of future normal cost contributions, discounted at 7.25% to the same date. In other words, the current level of assets is projected to be more than sufficient to fund all future expected benefit payments and expenses assuming the Department continues to make the determined contributions. 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, 2018 and 2017.

Sensitivity of the net OPEB liability to changes in the discount rate: The following presents the RHBF's NOL as of June 30, 2018 and 2017, calculated using the discount rate of 7.25%, as well as what the NOL would be if it were calculated using a discount rate that is 1-percentage-point lower (6.25%) or 1-percentage-point higher (8.25%) than the current rate:

	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
NOL as of June 30, 2018	\$726,798,149	\$383,613,299	\$101,707,364
NOL as of June 30, 2017	\$756,185,506	\$435,603,095	\$170,513,190

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, 2018 and 2017, calculated using the healthcare cost trend rates assumed in the June 30, 2018 and 2017 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:

	1% Decrease	Assumed Trend Rates	1% Increase
NOL as of June 30, 2018	\$66,555,802	\$383,613,299	\$809,369,825
NOL as of June 30, 2017	\$134,636,277	\$435,603,095	\$837,749,274

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

Death Benefit Fund

The components of the NOL of the Death Benefit Fund as of June 30, 2018 and 2017 are as follows:

	Total OPEB Liability	Death Benefit Fund Fiduciary Net Position	Net OPEB Liability	Fiduciary Net Position as % of Total OPEB Liability
As of June 30, 2018	\$143,870,026	\$27,210,220	\$116,659,806	18.91%
As of June 30, 2017	\$146,808,572	\$27,584,134	\$119,224,438	18.79%

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, 2018 and 2017 were determined by the actuarial valuations as of June 30, 2018 and 2017. The actuarial assumptions used in the June 30, 2018 and 2017 measurements were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2015, with the exception of a 3.50% investment return assumption and additional assumptions regarding family composition for the Family Death Benefit and Supplemental Family Death Benefit. In particular, the following assumptions were applied in the 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

Investment rate of return: The long-term expected rate of return on the Death Benefit Fund’s investments was determined in 2016 using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. 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.

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

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, 2018 and 2017 are summarized in the following table. This information may change as the actuarial experience study is conducted at the maximum of five years interval.

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Fixed income	96.00%	0.82%
Cash and cash equivalents	4.00%	-0.46%
Total	100.00%	

Discount rate: The discount rate used to measure the total OPEB liability was 3.50% as of June 30, 2018 and 2017. A "crossover test" was not explicitly performed since the municipal bond rate as of June 30, 2018 and 2017 was 3.87% and 3.58%, respectively. Those municipal bond rates were actually higher than the 3.50% long-term expected rate of return on 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, 2018 and 2017.

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, 2018 and 2017, 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 (2.50%)	Current Discount Rate (3.50%)	1% Increase (4.50%)
NOL as of June 30, 2018	\$138,389,690	\$116,659,806	\$99,378,700
NOL as of June 30, 2017	\$140,751,137	\$119,224,438	\$102,000,459

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, 2017 and July 1, 2016) 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 \$1.52 per to \$1.44 per \$100 of covered payroll. The rate change was approved by the Retirement Board in January 2018 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.

Member contribution accounts 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.

Department contribution accounts 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.

Estimated benefit liabilities reserves 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.

General reserves 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, 2018 and 2017 are as follows:

	2018	2017
<u>Retirement Fund - Reserves and Designated Balances</u>		
Reserve for retirement allowances	\$ 7,409,140,493	\$ 6,942,830,729
Contributions:		
Members' contributions	1,667,598,977	1,592,237,219
Department contributions	(1,382,598,166)	(1,335,629,737)
Total contributions	285,000,811	256,607,482
General reserve	2,388,641,092	2,118,011,960
Total reserves and designated balances	10,082,782,396	9,317,450,171
Unrealized appreciation in the fair value of investments	2,194,302,867	1,996,449,164
Total reserves and designated balances at fair value	<u>\$ 12,277,085,263</u>	<u>\$ 11,313,899,335</u>
<u>Disability Fund - Reserves and Designated Balances</u>		
Estimated liability for temporary and permanent disability cases	\$ 17,458,849	\$ 16,697,388
General reserve	24,940,465	25,366,403
Total reserves and designated balances	42,399,314	42,063,791
Unrealized appreciation in the fair value of investments	4,014,563	5,131,612
Total reserves and designated balances at fair value	<u>\$ 46,413,877</u>	<u>\$ 47,195,403</u>
<u>Death Benefit Fund - Reserves and Designated Balances</u>		
Estimated liability for family allowances	\$ 3,941,818	\$ 4,192,337
Contribution account - family allowances	7,254,184	6,861,583
General reserve	13,594,205	13,252,783
Total reserves and designated balances	24,790,207	24,306,703
Unrealized appreciation in the fair value of investments	2,420,013	3,277,431
Total reserves and designated balances at fair value	<u>\$ 27,210,220</u>	<u>\$ 27,584,134</u>
<u>Retiree Health Benefits Fund - Reserves and Designated Balances</u>		
Department contributions (net of insurance premiums payment)	\$ 1,037,604,927	\$ 1,037,604,927
General reserve	658,580,136	521,256,877
Total reserves and designated balances	1,696,185,063	1,558,861,804
Unrealized appreciation in the fair value of investments	389,506,015	353,018,732
Total reserves and designated balances at fair value	<u>\$ 2,085,691,078</u>	<u>\$ 1,911,880,536</u>

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, 2018 and 2017:

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.

Fiscal year ended June 30, 2017

Effective for fiscal years beginning after June 30, 2016, the Reserve for Investment Gains and Losses within the Retirement Fund is eliminated. Realized investment gains and losses are recorded and accumulated within the Retirement Fund's General Reserve instead.

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 November 2, 2018, the date the financial statements were available to be issued, and has determined that no other significant subsequent events have occurred through that date.

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

Plan Year Ended June 30	Actuarially Determined Contributions	Actual Contributions	Contribution Deficiency/ (Excess)	Covered Employee Payroll	Contribution as Percentage of Covered Payroll
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%
2009	141,291,589	145,941,276	(4,649,687)	696,704,083	20.95%

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	7.25%
Inflation rate	3.00%
Projected salary increases	4.50% to 10.00%
Cost of living adjustments	3.00% (actual increases are contingent upon CPI increases with a 3.00% maximum for Tier 1, 2.00% maximum for Tier 2)
Mortality	Head count-weighted RP-2014 Health Annuitant Mortality Table with no age adjustment for males and set back one year for females, projected generationally with the two-dimensional MP-2015 projected scale.
Other assumptions	Same as those used in the July 1, 2018 funding actuarial valuation

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Annual money-weighted rate of return, net of investment expense	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.

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

Note to Schedule:

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

<u>Plan Year Ended June 30</u>	<u>Actuarially Determined Contributions</u>	<u>Actual Contributions</u>	<u>Contribution Deficiency/ (Excess)</u>	<u>Covered Employee Payroll</u>	<u>Contribution as Percentage of Covered Payroll</u>
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%
2009	58,717,975	159,412,621	(100,694,646)	696,704,083	22.88%

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; 18 years remaining as of June 30, 2017
Asset valuation method	Total market value of the Retiree Health Benefits Fund at valuation date
Actuarial assumptions:	
Investment rate of return	7.25%, net of investment expense
Inflation rate	3.00%
Projected salary increase	4.50% to 10.00%
Healthcare cost trend rates:	
Non-Medicare medical plan	7.00%, graded down to an ultimate of 4.50% over 10 years
Medicare medical plans	6.50%, graded down to an ultimate of 4.50% over 8 years
Dental and Medicare Part B	4.00%

	<u>2018</u>	<u>2017</u>
Annual money-weighted rate of return, net of investment expense	9.08%	12.92%

Note to schedule:

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

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

Note to Schedule:

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

Plan Year Ended June 30	Actuarially Determined Contributions	Actual Contributions	Contribution Deficiency/ (Excess)	Covered Employee Payroll	Contribution as Percentage of Covered Payroll
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.

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	3.00%
Projected salary increase	4.50% to 10.00%

	<u>2018</u>	<u>2017</u>
Annual money-weighted rate of return, net of investment expense	-0.39%	-0.18%

Note to schedule:

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

	Current Service	Minimum Pension	Cost of Living Adjustments	Continuance to Eligible Spouse	Department of Water and Power Total	Members' Total	Combined Total	Estimated Liabilities for Retirement Allowances
Balance at June 30, 2016	\$ 1,466,021,466	\$ (638,213,689)	\$ (2,056,439,783)	\$ (114,980,611)	\$ (1,343,612,617)	\$ 1,495,226,521	\$ 151,613,904	\$ 6,609,724,302
Contributions received	52,464,871	342,632,000	-	-	395,096,871	83,239,105	478,335,976	-
Contributions refunded	(3,379,512)	-	-	-	(3,379,512)	(4,446,351)	(7,825,863)	-
Net Contributions	49,085,359	342,632,000	-	-	391,717,359	78,792,754	470,510,113	-
Transfers from contribution accounts for retiring members	(91,469,038)	(87,162,493)	(98,411,499)	(10,141,949)	(287,184,979)	(93,261,776)	(380,446,755)	380,446,756
Retirement allowances paid								(535,914,984)
Interest at 7.50% per annum	108,318,729	(38,818,397)	(157,133,790)	(8,916,041)	(96,549,499)	111,479,720	14,930,221	488,574,655
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	51,075,538	385,574,488	-	-	436,650,026	93,659,240	530,309,266	-
Contributions refunded	(3,237,457)	-	-	-	(3,237,457)	(4,311,579)	(7,549,036)	-
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 - February & 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

	Members'	Department of Water and Power	Combined Total	Estimated Liability for Family Allowances
Balances at June 30, 2016	<u>\$ 5,799,731</u>	<u>\$ 964,772</u>	<u>\$ 6,764,503</u>	<u>\$ 4,150,244</u>
Contributions received	101,599	193,896	295,495	-
Transfers to estimated liability for family allowances from contribution accounts for member deceased during the year	(70,951)	(361,272)	(432,223)	432,223
Family allowances paid	-	-	-	(540,150)
Interest transferred from general reserve at 3.5% per annum	<u>206,033</u>	<u>27,775</u>	<u>233,808</u>	<u>150,020</u>
Balances at June 30, 2017	<u>\$ 6,036,412</u>	<u>\$ 825,171</u>	<u>\$ 6,861,583</u>	<u>\$ 4,192,337</u>
Contributions received	102,380	194,513	296,893	-
Transfers to estimated liability for family allowances from contribution accounts for members deceased during the year	(59,299)	(89,136)	(148,435)	148,435
Family allowances paid	-	-	-	(543,244)
Interest transferred from general reserve at 3.5% per annum	<u>214,450</u>	<u>29,693</u>	<u>244,143</u>	<u>144,290</u>
Balances at June 30, 2018	<u><u>\$ 6,293,943</u></u>	<u><u>\$ 960,241</u></u>	<u><u>\$ 7,254,184</u></u>	<u><u>\$ 3,941,818</u></u>

Revenues by Source

Fiscal Year	Members' Contributions	Department Contributions*	Investment Income**	Total
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
2009	\$ 59,394,076	\$ 154,140,202	\$ 192,121,861	\$ 405,656,139

Expenses by Type

Fiscal Year	Benefits	Administrative Expenses***	Refunds****	Total
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
2009	\$ 363,691,635	\$ 17,842,282	\$ 8,062,235	\$ 389,596,152

* 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.