

City of Manchester Employees' Contributory Retirement System

GASB Statement Nos. 67 and 68 Accounting and
Financial Reporting for Pensions

December 31, 2017





May 10, 2018

Board of Trustees
City of Manchester Employees'
Contributory Retirement System
1045 Elm Street, Suite 403
Manchester, New Hampshire 03101-1824

Dear Board Members:

The purpose of this report is to provide the accounting and financial reporting information that is intended to comply with the Governmental Accounting Standards Board (GASB) Statement Nos. 67 and 68 for the City of Manchester Employees' Contributory Retirement System (MECRS). These calculations have been made on a basis that is consistent with our understanding of these accounting standards. This report should not be relied upon for any other purpose than described herein.

GASB Statement Nos. 67 and 68 are the accounting standards that apply to the stand-alone financial reports issued by retirement systems. This information is presented in draft form for review by the City's auditor. Please let us know if there are items that the auditor changes so that we may maintain consistency with the City's financial statements.

Our calculation of the liability associated with the benefits described in this report was performed for the purpose of assisting in the reporting and disclosure information that satisfies certain requirements of GASB Statement Nos. 67 and 68. The Net Pension Liability is not an appropriate measure for determining the sufficiency of plan assets to cover the estimated cost of settling the employer's benefit obligation. The Net Pension Liability is not an appropriate measure for assessing the need for or amount of future employer contributions. The calculation of the City's liability for this report may not be applicable for funding purposes of the Retirement System. A calculation of the City's liability for purposes other than satisfying the requirements of GASB Statement Nos. 67 and 68 may produce significantly different results. GASB Statement Nos. 67 and 68 cover pension benefits provided by the Retirement System. The Retirement System also provides post-retirement health benefits through a Section 401(h) sub-trust. The assets and liabilities of the sub-trust have not been included in this report. Please refer to the actuarial valuation for information concerning the liabilities and assets of the sub-trust.

This report may be provided to parties other than the City of Manchester Employees' Contributory Retirement System and the Board of Trustees only in its entirety and only with the permission of the Board. Authorized or unauthorized use of this report does not create a liability between GRS and the other party. GRS is not responsible for unauthorized use of this report.

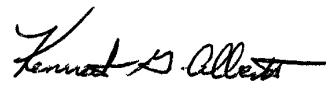
This report is based upon information, furnished to us by the Retirement System, concerning retirement and ancillary benefits, active members, deferred vested members, retirees and beneficiaries, and financial data. If your understanding of this information is different, please let us know. This information was checked for internal consistency, but was not audited. We are not responsible for the accuracy or completeness of such information.

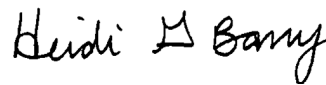
This report complements the actuarial valuation report provided to the City of Manchester Employees' Contributory Retirement System and should be considered collectively as a combined report for the plan year ending December 31, 2017. Please refer to the December 31, 2017 actuarial valuation report for additional discussion of the nature of actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions.

To the best of our knowledge, the information contained within this report is accurate and fairly represents the actuarial position of the City of Manchester Employees' Contributory Retirement System for the purposes of GASB Statements No. 67 and No. 68 reporting. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as with the Actuarial Standards of Practice issued by the Actuarial Standards Board. Heidi G. Barry is a Member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. The signing individuals are independent of the plan sponsor.

This communication shall not be construed to provide tax advice, legal advice, accounting advice, or investment advice.

Respectfully submitted,


Kenneth G. Alberts


Heidi G. Barry, ASA, FCA, MAAA

KGA/HGB:rmn



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SECTION A



EXECUTIVE SUMMARY

Executive Summary as of December 31, 2017

Actuarial Valuation Date	December 31, 2017
Measurement Date of the Net Pension Liability	December 31, 2017
Employer's Fiscal Year Ending Date (Reporting Date)	June 30, 2018

Membership

Number of	
- Retirees and Beneficiaries	882
- Inactive, Nonretired Members	96
- Active Members	1,176
- Total	2,154
Covered Payroll #	\$ 53,364,536

Net Pension Liability

Total Pension Liability	\$ 344,418,296
Plan Fiduciary Net Position	219,277,973
Net Pension Liability	\$ 125,140,323
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	63.67%
Net Pension Liability as a Percentage of Covered Payroll	234.50%

Development of the Single Discount Rate

Single Discount Rate	7.00%
Long-Term Expected Rate of Investment Return	7.00%
Long-Term Municipal Bond Rate*	3.31%
Last year ending December 31 in the 2018 to 2117 projection period for which projected benefit payments are fully funded	2117

Total Pension Expense	\$ 18,243,614
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Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ 3,194,194	\$ 3,362,782
Changes in assumptions	8,068,913	-
Net difference between projected and actual earnings on pension plan investments	9,868,488	13,301,201
Total	\$ 21,131,595	\$ 16,663,983

Based on valuation payroll as of December 31, 2017.

* Source: Fixed-Income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of December 29, 2017, the most recent business day on or before the measurement date. In describing this index, Fidelity notes that the municipal curves are constructed using option-adjusted analytics of a diverse population of over 10,000 tax exempt securities.

Discussion

Accounting Standard

For pension plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 67 establishes standards of financial reporting for separately issued financial reports and specifies the required approach for measuring the pension liability. Similarly, GASB Statement No. 68 establishes standards for state and local government employers (as well as non-employer contributing entities) to account for and disclose the Net Pension Liability, pension expense, and other information associated with providing retirement benefits to their employees (and former employees) on their basic financial statements.

The following discussion provides a summary of the information that is required to be disclosed under these accounting standards. A number of these disclosure items are provided in this report. However, certain information, such as notes regarding accounting policies and investments, is not included in this report and the retirement system and/or plan sponsor will be responsible for preparing and disclosing that information to comply with these accounting standards.

Financial Statements

GASB Statement No. 68 requires State or local governments to recognize the Net Pension Liability and the pension expense on their financial statements. The Net Pension Liability is the difference between the Total Pension Liability and the Plan's Fiduciary Net Position. In traditional actuarial terms, this is analogous to the accrued liability less the market value of assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement).

Paragraph 57 of GASB Statement No. 68 States, "Contributions to the pension plan from the employer subsequent to the measurement date of the collective net pension liability and before the end of the employer's reporting period should be reported as a deferred outflow of resources related to pensions." The information contained in this report does not incorporate any contributions made to MECRS subsequent to the measurement date of December 31, 2017.

The pension expense recognized each fiscal year is equal to the change in the Net Pension Liability from the beginning of the year to the end of the year, adjusted for deferred recognition of the liability and investment experience.

Pension plans that prepare their own, stand-alone financial statements are required to present two financial statements – a statement of fiduciary net position and a statement of changes in fiduciary net position in accordance with GASB Statement No. 67. The statement of fiduciary net position presents the assets and liabilities of the pension plan at the end of the pension plan's reporting period. The statement of changes in fiduciary net position presents the additions, such as contributions and investment income, and deductions, such as benefit payments and expenses, and net increase or decrease in the fiduciary net position.

Notes to Financial Statements

GASB Statement No. 68 requires the notes of the employer's financial statements to disclose the total pension expense, the pension plan's liabilities and assets, and deferred outflows and inflows of resources related to pensions.

GASB Statement Nos. 67 and 68 require the notes of the financial statements for the employers and pension plans to include certain additional information. The list of disclosure items should include:

- a description of benefits provided by the plan;
- the type of employees and number of members covered by the pension plan;
- a description of the plan's funding policy, which includes member and employer contribution requirements;
- the pension plan's investment policies;
- the pension Plan's Fiduciary Net Position, Net Pension Liability, and the pension plan's fiduciary net position as a percentage of the Total Pension Liability;
- the Net Pension Liability using a discount rate that is 1% higher and 1% lower than used to calculate the Total Pension Liability and Net Pension Liability for financial reporting purposes;
- significant assumptions and methods used to calculate the Total Pension Liability;
- inputs to the discount rates; and
- certain information about mortality assumptions and the dates of experience studies.

Retirement systems that issue stand-alone financial statements are required to disclose additional information in accordance with GASB Statement No. 67. This information includes:

- the composition of the pension plan's Board and the authority under which benefit terms may be amended;
- a description of how fair value is determined;
- information regarding certain reserves and investments, which include concentrations of investments greater than or equal to 5%, receivables, and insurance contracts excluded from plan assets; and
- annual money-weighted rate of return.

Required Supplementary Information

GASB Statement No. 67 requires a 10-year fiscal history of:

- sources of changes in the Net Pension Liability;
- information about the components of the Net Pension Liability and related ratios, including the pension plan's Fiduciary Net Position as a percentage of the Total Pension Liability, and the Net Pension Liability as a percent of covered-employee payroll; and
- comparison of the actual employer contributions to the actuarially determined contributions based on the plan's funding policy.

General Implications of Contribution Allocation Procedure or Funding Policy on Future Expected Plan Contributions and Funded Status

Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 7.00% on the actuarial value of assets), then the following outcomes are expected:

1. The employer normal cost as a percentage of pay is expected to remain level as a percentage of payroll.
2. The unfunded liability is expected to be paid off in approximately 22 years, which is the number of years remaining in the closed amortization schedule of the unfunded liability.
3. The funded status of the plan is expected to reach a 100% funded ratio in approximately 22 years, which is the number of years remaining in the closed amortization schedule of the unfunded liability.

This funding policy results in the expectation that the plan's assets will be able to fully pay for promised benefits through at least 2117. The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.

Timing of the Valuation

An actuarial valuation to determine the Total Pension Liability is required to be performed at least every two years. The Net Pension Liability and pension expense should be measured as of the pension plan's fiscal year end (measurement date) on a date that is within the employer's prior fiscal year. If the actuarial valuation used to determine the Total Pension Liability is not calculated as of the measurement date, the Total Pension Liability is required to be rolled-forward from the actuarial valuation date to the measurement date.

The Total Pension Liability shown in this report is based on an actuarial valuation performed as of December 31, 2017 and a measurement date of December 31, 2017.

Single Discount Rate

Projected benefit payments are required to be discounted to their actuarial present values using a Single Discount Rate that reflects: (1) a long-term expected rate of return on pension plan investments (to the extent that the plan's fiduciary net position is projected to be sufficient to pay benefits); and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.00%; the municipal bond rate is 3.31% (based on the daily rate closest to but not later than the measurement date of the Fidelity "20-Year Municipal GO AA Index"); and the resulting Single Discount Rate is 7.00%.

SECTION B



FINANCIAL STATEMENTS

Statement of Pension Expense Under GASB Statement No. 68

Plan Year Ended December 31, 2017

A. Expense

1. Service Cost	\$	6,341,280
2. Interest on the Total Pension Liability		22,956,480
3. Current-Period Benefit Changes		0
4. Employee Contributions (made negative for addition here)		(2,342,148)
5. Projected Earnings on Plan Investments (made negative for addition here)		(13,803,221)
6. Pension Plan Administrative Expense		759,927
7. Other Changes in Plan Fiduciary Net Position		50,612
8. Recognition of Outflow (Inflow) of Resources due to Liabilities		2,163,438
9. Recognition of Outflow (Inflow) of Resources due to Assets		2,117,246
10. Total Pension Expense	\$	18,243,614

Statement of Outflows and Inflows Arising from Current Reporting Period Plan Year Ended December 31, 2017

A. Outflows (Inflows) of Resources due to Liabilities

1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	\$ 201,281
2. Assumption Changes (gains) or losses	\$ 9,866,319
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}	5.4892
4. Outflow (Inflow) of Resources to be recognized in the current pension expense for the difference between expected and actual experience of the Total Pension Liability	\$ 36,669
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for Assumption Changes	\$ 1,797,406
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	\$ 1,834,075
7. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for the difference between expected and actual experience of the Total Pension Liability	\$ 164,612
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for Assumption Changes	\$ 8,068,913
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	\$ 8,233,525

B. Outflows (Inflows) of Resources due to Assets

1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$ (16,626,501)
2. Recognition period for Assets {in years}	5.0000
3. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Assets	\$ (3,325,300)
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$ (13,301,201)

Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods Plan Year Ended December 31, 2017

A. Outflows and Inflows of Resources due to Liabilities and Assets to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Due to Liabilities	\$ 3,082,985	\$ 919,547	\$ 2,163,438
2. Due to Assets	5,442,546	3,325,300	2,117,246
3. Total	\$ 8,525,531	\$ 4,244,847	\$ 4,280,684

B. Outflows and Inflows of Resources by Source to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Differences between expected and actual experience	\$ 1,285,579	\$ 919,547	\$ 366,032
2. Assumption Changes	1,797,406	-	1,797,406
3. Net Difference between projected and actual earnings on pension plan investments	5,442,546	3,325,300	2,117,246
4. Total	\$ 8,525,531	\$ 4,244,847	\$ 4,280,684

C. Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows of Resources
1. Differences between expected and actual experience	\$ 3,194,194	\$ 3,362,782	\$ (168,588)
2. Assumption Changes	8,068,913	-	8,068,913
3. Net Difference between projected and actual earnings on pension plan investments	9,868,488	13,301,201	(3,432,713)
4. Total	\$ 21,131,595	\$ 16,663,983	\$ 4,467,612

D. Deferred Outflows and Deferred Inflows of Resources by Year to be Recognized in Future Pension Expenses

Year Ending December 31	Net Deferred Outflows of Resources
2018	\$ 4,280,686
2019	2,819,483
2020	(1,434,415)
2021	(2,095,367)
2022	897,225
Thereafter	0
Total	\$ 4,467,612

Statement of Fiduciary Net Position as of December 31, 2017

Assets

Cash and Deposits	\$	4,556,531
Receivables		
Accounts Receivable	\$	319,146
Accrued Interest and Other Dividends		28,887
Additional Contribution Account		834,763
Property, Plant, Equipment		2,504
Total Receivables	<u>\$</u>	<u>1,185,300</u>
Investments	\$	227,878,034
Total Assets	<u>\$</u>	<u>233,619,865</u>

Liabilities

Payables		
Accounts Payable and Accrued Expenses	\$	381,113
Payable for Investments Purchased		1,680
Benefits Payable		1,423,563
Total Liabilities	<u>\$</u>	<u>1,806,356</u>
Assets held for 401(h) Subtrust	<u>\$</u>	<u>12,535,536</u>
Net Position Restricted for Pensions	<u>\$</u>	<u>219,277,973</u>

Statement of Changes in Fiduciary Net Position for Year Ended December 31, 2017

Additions

Contributions

Employer (Including Buybacks, Upgrades and Enrollments)	\$ 12,221,415
Employee (Including Additional Contributions)	2,342,148
Total Contributions	\$ 14,563,563
Other	\$ -

Investment Income

Net Appreciation in Fair Value of Investments	\$ 31,187,768
Less Investment Expense	(758,046)
Net Investment Income	\$ 30,429,722

Total Additions	\$ 44,993,285
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Deductions

Benefit Payments, Additional Contribution Payments, and Refunds of Employee Contributions	\$ 16,835,045
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Pension Plan Administrative Expense	759,927
Other: Custodial Fees and Foreign Taxes	50,612

Total Deductions	\$ 17,645,584
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Net Increase in Net Position	\$ 27,347,701
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Net Position Restricted for Pensions

Beginning of Year	\$ 191,930,272
Prior Year Adjustment	-
End of Year	\$ 219,277,973

Schedule of Proportionate Employer Share for Year Ended December 31, 2017

Deferred Outflows of Resources

Covered Payroll	Employer	Prop. Share	Net Pension Liability	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments*	Changes of Assum.	Changes in Proportion and Differences Between Employer Cont. and Share of Cont.	Total Deferred Outflows of Resources
\$ 5,070,535	Airport	9.50%	\$ 11,888,331	\$ 303,448	\$ 937,506	\$ 766,547	\$ 342,043	\$ 2,349,544
568,450	Parking Control	1.07%	1,339,001	34,178	105,593	86,337	303,566	529,674
2,295,582	Environmental Protection	4.30%	5,381,034	137,350	424,345	346,963	58,378	967,036
9,717,908	School District	18.21%	22,788,053	581,663	1,797,052	1,469,349	651,775	4,499,839
4,478,416	Water Works	8.39%	10,499,273	267,993	827,966	676,982	301,517	2,074,458
31,233,645	General Fund City Departments	58.53%	73,244,631	1,869,562	5,776,026	4,722,735	1,300,963	13,669,286
\$ 53,364,536	Total for All Employers	100.00%	\$ 125,140,323	\$ 3,194,194	\$ 9,868,488	\$ 8,068,913	\$ 2,958,242	\$ 24,089,837

**We understand that the recommendation of the American Institute of Certified Public Accountants (AICPA) is for the deferred inflows resulting from the net difference between projected and actual investment earnings on pension plan investments to be shown net of the respective outflows resulting from this difference. Unless instructed otherwise, we will only show the net amount in future reports.*

Schedule of Proportionate Employer Share for Year Ended December 31, 2017 (Concluded)

Employer	Deferred Inflows of Resources				Pension Expense			
	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments*	Changes of Assum.	Changes in Proportion and Differences Between Employer Cont. and Share of Cont.	Total Deferred Inflows of Resources	Prop. Share of Plan Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Employer Pension Expense
Airport	\$ 319,464	\$ 1,263,614	\$ -	\$ 237,341	\$ 1,820,419	\$ 1,733,143	\$ 23,323	\$ 1,756,466
Parking Control	35,982	142,323	-	67,506	245,811	195,207	52,584	247,791
Environmental Protection	144,600	571,952	-	304,288	1,020,840	784,475	(54,778)	729,697
School District	612,363	2,422,149	-	1,263,020	4,297,532	3,322,162	(136,159)	3,186,003
Water Works	282,137	1,115,971	-	287,650	1,685,758	1,530,639	3,089	1,533,728
General Fund City Departments	1,968,236	7,785,192	-	798,437	10,551,865	10,677,988	111,941	10,789,929
Total for All Employers	\$ 3,362,782	\$ 13,301,201	\$ -	\$ 2,958,242	\$ 19,622,225	\$ 18,243,614	\$ -	\$ 18,243,614

*We understand that the recommendation of the American Institute of Certified Public Accountants (AICPA) is for the deferred inflows resulting from the net difference between projected and actual investment earnings on pension plan investments to be shown net of the respective outflows resulting from this difference. Unless instructed otherwise, we will only show the net amount in future reports.

SECTION C

REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Changes in Net Pension Liability and Related Ratios

Current Period

Plan Year Ended December 31, 2017

A. Total Pension Liability	
1. Service cost	\$ 6,341,280
2. Interest on the Total Pension Liability	\$ 22,956,480
3. Changes of benefit terms	\$ -
4. Difference between expected and actual experience of the Total Pension Liability	\$ 201,281
5. Changes of assumptions	\$ 9,866,319
6. Benefit payments, including refunds of employee contributions	\$ (16,835,045)
7. Net change in Total Pension Liability	\$ 22,530,315
8. Total Pension Liability – Beginning	321,887,981
9. Total Pension Liability – Ending	<u><u>\$ 344,418,296</u></u>
B. Plan fiduciary net position	
1. Contributions – Employer	\$ 12,221,415
2. Contributions – Employee	2,342,148
3. Net investment income	30,429,722
4. Benefit payments, including refunds of employee contributions	(16,835,045)
5. Pension plan administrative expense	(759,927)
6. Other	(50,612)
7. Net change in Plan Fiduciary Net Position	\$ 27,347,701
8. Plan Fiduciary Net Position – Beginning	191,930,272
9. Plan Fiduciary Net Position – Ending	<u><u>\$ 219,277,973</u></u>
C. Net Pension Liability	<u><u>\$ 125,140,323</u></u>
D. Plan Fiduciary Net Position as a percentage of the Total Pension Liability	63.67%
E. Covered-Employee Payroll	\$ 53,364,536
F. Net Pension Liability as a percentage of Covered-Employee Payroll	234.50%

Schedules of Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios (Multiyear)

(Ultimately 10 Years Will Be Displayed)

Fiscal Year Ending June 30,	2018	2017	2016	2015
Total Pension Liability				
Service Cost	\$ 6,341,280	\$ 6,327,991	\$ 6,468,648	\$ 6,589,804
Interest on the Total Pension Liability	22,956,480	22,438,990	21,231,157	20,108,289
Benefit Changes: Buybacks and COLA	-	-	-	-
Experience	201,281	(5,201,876)	4,528,433	2,716,119
Assumption Changes	9,866,319	-	-	-
Benefit Payments	(16,605,774)	(15,812,395)	(14,516,835)	(12,335,397)
Refunds	(229,271)	(220,469)	(446,590)	(207,947)
Net Change in Total Pension Liability	22,530,315	7,532,241	17,264,813	16,870,868
Total Pension Liability - Beginning	321,887,981	314,355,740	297,090,927	280,332,479
Prior Year Adjustment	-	-	-	(112,420)
Total Pension Liability - Ending (a)	\$ 344,418,296	\$ 321,887,981	\$ 314,355,740	\$ 297,090,927
Plan Fiduciary Net Position				
Employer and Other Contributions	\$ 12,221,415	\$ 8,391,456	\$ 11,613,137	\$ 10,959,998
Employee and Add'l Contributions	2,342,148	2,389,882	2,744,956	2,254,021
Pension Plan Net Investment Income	30,429,722	11,543,017	(4,783,148)	6,754,397
Benefit Payments	(16,605,774)	(15,812,395)	(14,516,835)	(12,335,397)
Refunds	(229,271)	(220,469)	(446,590)	(207,947)
Pension Plan Administrative Expense	(759,927)	(791,762)	(693,329)	(679,116)
Other	(50,612)	(61,856)	(65,963)	(50,008)
Net Change in Plan Fiduciary Net Position	27,347,701	5,437,873	(6,147,772)	6,695,948
Plan Fiduciary Net Position - Beginning	191,930,272	186,492,399	192,562,665	185,979,137
Adjustment	-	-	77,506	(112,420)
Plan Fiduciary Net Position - Ending (b)	\$ 219,277,973	\$ 191,930,272	\$ 186,492,399	\$ 192,562,665
Net Pension Liability - Ending (a) - (b)	125,140,323	129,957,709	127,863,341	104,528,262
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	63.67 %	59.63 %	59.33 %	64.82 %
Covered-Employee Payroll	\$ 53,364,536	\$ 52,888,074	\$ 52,953,903	\$ 54,267,183
Net Pension Liability as a Percentage of Covered-Employee Payroll	234.50 %	245.72 %	241.46 %	192.62 %
Notes to Schedule:	N/A	N/A	N/A	N/A

Schedules of Required Supplementary Information

Schedule of the Net Pension Liability

(Ultimately 10 Years Will Be Displayed)

<u>December 31,</u>	<u>Total Pension Liability</u>	<u>Plan Net Position</u>	<u>Net Pension Liability</u>	<u>Plan Net Position as a % of Total Pension Liability</u>	<u>Covered Payroll *</u>	<u>Net Pension Liability as a % of Covered Payroll</u>
2014	\$ 297,090,927	\$ 192,562,665	\$ 104,528,262	64.82%	\$ 54,267,183	192.62%
2015	314,355,740	186,492,399	127,863,341	59.33%	52,953,903	241.46%
2016	321,887,981	191,930,272	129,957,709	59.63%	52,888,074	245.72%
2017	344,418,296	219,277,973	125,140,323	63.67%	53,364,536	234.50%

* Based on valuation payroll as of plan year ending December 31.

Schedule of Contributions

(Ultimately 10 Years Will Be Displayed)

Plan Year Ending December 31,	Actuarially Determined Contribution (ADC) #	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll *	Actual Contribution as a % of Covered Payroll
2014	\$ 10,959,998	\$ 10,959,998	\$ -	\$ 54,267,183	20.20%
2015	11,613,137	11,613,137	-	52,953,903	21.93%
2016	8,391,456	8,391,456	-	52,888,074	15.87%
2017	12,221,415	12,221,415	-	53,364,536	22.90%

* Based on valuation payroll as of plan year ending December 31.

Employer contributes based on percent of payroll. Employer pays the ADC percentage.

Notes to Schedule of Contributions

Valuation Date: December 31, 2016
Notes Actuarially determined contribution rates are calculated as of December 31, which is 6 months prior to the beginning of the fiscal year in which contributions are reported.

Methods and Assumptions Used to Determine Contribution Rates:

Actuarial Cost Method	Entry-Age Normal
Amortization Method	Level Percent-of-Payroll, Closed
Remaining Amortization Period	23 years
Asset Valuation Method	5-year smoothed market; 20% corridor
Wage Inflation	3.00%
Salary Increases	3.00% to 7.93% including inflation
Investment Rate of Return	7.25% (net of investment expenses)
Long-Term Municipal Bond Rate	3.31%
Retirement Age	Age and Experience-based table of rates that are specific to the type of eligibility condition.
Mortality	RP-2000 Mortality Table projected to 2020 for males and females.
Expense Load	0.5% of payroll.
COLA Assumption	1.25% compounded annually.

Other Information:

Notes There were no changes to actuarial assumptions or benefit provisions reflected in the TPL as of December 31, 2016.

SECTION D

NOTES TO FINANCIAL STATEMENTS

Single Discount Rate

A Single Discount Rate of 7.00% was used to measure the Total Pension Liability. This Single Discount Rate was based on the expected rate of return on pension plan investments of 7.00%. The projection of cash flows used to determine this Single Discount Rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

Regarding the sensitivity of the Net Pension Liability to changes in the Single Discount Rate, the following presents the plan's Net Pension Liability, calculated using a Single Discount Rate of 7.00%, as well as what the plan's Net Pension Liability would be if it were calculated using a Single Discount Rate that is one percent lower or one percent higher:

Sensitivity of Net Pension Liability to the Single Discount Rate Assumption

	Current Single Discount		
	1% Decrease 6.00%	Rate Assumption 7.00%	1% Increase 8.00%
Total Pension Liability (TPL)	\$ 385,263,819	\$ 344,418,296	\$ 309,818,649
Net Position Restricted for Pensions	219,277,973	219,277,973	219,277,973
Net Pension Liability (NPL)	\$ 165,985,846	\$ 125,140,323	\$ 90,540,676

Summary of Population Statistics

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	882
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	96
Active Plan Members	<u>1,176</u>
Total Plan Members	2,154

SECTION E

SUMMARY OF BENEFITS

Summary of Benefit Provisions as of December 31, 2017

Eligibility

Amount

NORMAL RETIREMENT

Members are eligible to retire at age 60.

Straight life pension equals 2.0% of 3-year Final Average Earnings (FAE) times service on and after January 1, 1999 *plus* 1.5% of FAE times service before January 1, 1999.

Members with at least 20 years of service at retirement are eligible for a minimum benefit if employed on or before January 1, 1974.

Minimum benefit for eligible members is 50% of FAE.

EARLY RETIREMENT

Members are eligible to retire early if the sum of age and service is at least 80, or at age 55 with at least 20 years of service.

Computed as a normal retirement pension. If the early retirement occurs prior to the member attaining age 60, the benefit is reduced by 1/6 of 1% for each month that the early retirement precedes age 60.

DEFERRED RETIREMENT

Members are eligible to retire with a deferred benefit after attaining at least 5 years of service, provided they do not take a refund of member contributions.

Pension is computed as a normal retirement pension, based on service and FAE on date of termination. Commencement of benefits begins at age 60.

NON-DUTY DISABILITY

Members are eligible upon attainment of 15 years of service.

Pension is computed as a normal retirement pension based on service and FAE as of date of disability.

DUTY DISABILITY

No age or service requirement.

Pension is computed as a normal retirement pension based on service and FAE as of date of disability. Minimum duty disability benefit is 50% of FAE.

Summary of Benefit Provisions as of December 31, 2017

Eligibility

Amount

ORDINARY DEATH-IN-SERVICE

- | | |
|--|---|
| (1) Any age with less than 5 years of service. | Beneficiary receives member's contributions and accumulated interest, and an additional lump sum equal to one year's salary. |
| (2) Any age with 5 or more years of service. | Beneficiary receives the option of: (1) the greater of (a) 50% of the accrued service retirement benefit (without any early retirement reduction); or (b) pension computed as normal or early retirement benefit (depending on eligibility), actuarially reduced as if the member had elected the 100% Joint & Survivor benefit; or (2) lump sum equal to 100% of base salary plus the member's accumulated contributions (including interest). |

DUTY DEATH-IN-SERVICE

- | | |
|--|---|
| Death as a result of a work-related accident; not caused by willful neglect of the member. | The option of: (1) the greater of (a) 50% of FAE, or (b) pension computed as an early retirement benefit actuarially reduced as if the member had elected the 100% Joint & Survivor benefit; or (2) a lump sum as described below; options payable to the spouse or child(ren) under age 18. If no spouse or child(ren) are alive at the time of the member's death, a lump sum is payable to the member's estate in the amount of 100% of base salary plus the member's accumulated contributions (including interest) plus accrued fringe benefits not paid at the time of death. |
|--|---|

MEMBER CONTRIBUTIONS

3.75% of pay for service on and after January 1, 1999. 2.5% of pay for service prior to January 1, 1999. Contributions are credited with 5.0% interest per annum. Members may elect to contribute additional contributions which are accounted for separately. At retirement the additional contribution balance is annuitized to provide an additional benefit, within certain limits.

Summary of Benefit Provisions as of December 31, 2017

OPTIONAL FORMS OF PAYMENT

In lieu of the straight life benefit, a member may elect an actuarially reduced benefit in one of the following forms:

- 100% Joint & Survivor with pop-up
- 66 2/3 % Joint & Survivor with pop-up
- 50% Joint & Survivor with pop-up
- 10-year Certain & Life Option

The actuarial factors for optional forms of payment are based on the 1983 Group Annuity Mortality Table and 7.5% interest.

SERVICE UPGRADE

Members may elect to purchase an increase in their benefit multiplier for service rendered before 1999 under Chapter 159 (or Senate Bill 402). The cost to the member is $\frac{1}{2}$ of the actuarially determined increase in System costs and results in a benefit based on 2% of FAE for the time purchased.

SECTION F

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

Actuarial Cost Method

Normal cost and the allocation of benefit values between service rendered before and after the valuation date was determined using the *individual entry-age actuarial cost method*. GASB Statement Nos. 67 and 68 require the use of this method having the following characteristics:

- the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, are sufficient to accumulate the value of the member's benefit at the time of retirement;
- each annual normal cost is a constant percentage of the member's year-by-year projected covered pay; and
- the use of Market Value of Assets for the Net Position Restricted for Pensions.

Actuarial Assumptions Used for the Valuation

The contribution requirements and benefit values of the System are calculated by applying actuarial assumptions to the benefit provisions and member information furnished, using the actuarial cost method described on the previous page.

The principal areas of financial risk which require assumptions about future experience are:

- long-term rates of investment return to be generated by the assets of the System,
- patterns of pay increases to members,
- rates of mortality among members, retirees and beneficiaries,
- rates of withdrawal of active members,
- rates of disability among members, and
- the age patterns of actual retirement.

In a valuation, the monetary effect of each assumption is calculated for as long as a present covered person survives - - - a period of time which can be as long as a century.

Actual experience of the System will not coincide exactly with assumed experience, regardless of the accuracy of the assumptions, or the skill of the actuary and the precision of the many calculations made. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments (usually small) to the computed contribution rate.

From time to time it becomes appropriate to modify one or more of the assumptions, to reflect experience trends (but not random year-to-year fluctuations). The Board has established a policy of performing an experience study every 3-5 years to evaluate/modify valuation assumptions. Assumptions used in this report are based on the January 1, 2012 – December 31, 2016 experience study of the MECRS and were adopted by the Board. These assumptions were first used in the December 31, 2017 actuarial valuation. We believe the assumptions are reasonable individually and in the aggregate. Assumptions are forward-looking.

Actuarial Assumptions Used for the Valuation

The rate of investment return was 7.00% per year, compounded annually (net of investment expenses). This assumption is used to make money payable at one point in time equal in value to a different amount of money payable at another point in time. The assumed real rate of return (the net return in excess of the wage inflation rate) is 4.25%. Experience over the last 5 years has been as follows:

	Year Ended December 31					5-Year Average
	2017	2016	2015	2014	2013	
1) Nominal rate of return#	7.4 %	6.3 %	4.8 %	7.4 %	9.3 %	7.0 %
2) Increase in CPI	2.1 %	2.1 %	0.7 %	0.8 %	1.5 %	1.4 %
3) Average Salary Increase (ASI)	1.2 %	1.1 %	(2.0)%	1.3 %	3.3 %	1.0 %
4) Real Return						
- Total: CPI (1) - (2)						5.6 %
- Total: ASI (1) - (3)						6.1 %
- Assumption	4.25 %	4.25 %	4.25 %	4.25 %	4.25 %	4.3 %

The nominal rate of return was computed using the approximate formula: $i = I$ divided by $\frac{1}{2}(A+B-I)$, where I is realized investment income net of expenses, A is the beginning of year asset funding value and B is the end of year funding asset value.

The rate of assumed price inflation was 2.25% per year. This results in a real rate of return over price inflation of 4.75%.

The rates of salary increase used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which benefit amounts will be based.

Service	Salary Increase Assumptions for an Individual Member		
	Merit & Seniority	Base (Economic)	Increase Next Year
1	3.71%	2.75%	6.46%
2	4.68%	2.75%	7.43%
3	4.47%	2.75%	7.22%
4	3.95%	2.75%	6.70%
5	3.63%	2.75%	6.38%
6	3.18%	2.75%	5.93%
7	2.80%	2.75%	5.55%
8	2.51%	2.75%	5.26%
9	2.31%	2.75%	5.06%
10	2.10%	2.75%	4.85%
15	1.33%	2.75%	4.08%
20	1.02%	2.75%	3.77%
25	1.00%	2.75%	3.75%
30	1.00%	2.75%	3.75%
35	1.00%	2.75%	3.75%
40	1.00%	2.75%	3.75%
Ref:	733		

If the number of active members remains constant, then the total active member payroll will increase 2.75% annually, the base portion of the individual salary increase assumptions. This increasing payroll was recognized in amortizing unfunded actuarial accrued liabilities.

Actuarial Assumptions Used for the Valuation

The post-retirement healthy mortality table was the RP-2014 Mortality Table projected to 2026 using projection scale MP-2017.

Sample Attained Ages	Single Life Retirement Values					
	Present Value of \$1 Monthly for Life		Percent Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women	Men	Women
50	\$152.48	\$156.61	0.3826%	0.2596%	35.07	37.62
55	145.39	150.10	0.5366%	0.3600%	30.31	32.68
60	136.49	141.81	0.7607%	0.5462%	25.72	27.88
65	125.58	131.52	1.1113%	0.8176%	21.33	23.29
70	112.43	118.88	1.6572%	1.2451%	17.20	18.93
75	97.02	103.77	2.6043%	2.0005%	13.39	14.86
80	79.85	86.49	4.3403%	3.4148%	9.98	11.18
Ref:	2135 x 1.00 sb 0	2136 x 1.00 sb 0				

This assumption is used to measure the probabilities of members dying after retirement. The projection to 2026 is the margin for mortality improvement.

Post-retirement disabled mortality table is the RP-2014 Disabled Retiree Annuitant Table projected to 2026 using projection scale MP-2017.

Pre-retirement mortality is modeled using the RP-2014 Employee Mortality Table projected to 2026 using projection scale MP-2017 and multiplied by a factor of 80%.

These tables were updated for the December 31, 2017 valuation in accordance with an experience study for the System of the 5-year period ended December 31, 2016.

The rates of retirement used to measure the probability of eligible members retiring during the next year were updated for the December 31, 2017 valuation and are as follows:

Active Members Retiring Next Year Under Normal Retirement			Active Members Retiring Next Year Under Early Retirement			
Ages	% Retiring		Ages	% Retiring		Rule of 80
	Men	Women		Age and Service		
				Men	Women	
60	10%	10%	50			10%
61	13%	15%	51			4%
62	25%	25%	52			7%
63	15%	12%	53			5%
64	16%	12%	54			5%
65	22%	20%	55	5%	10%	5%
66	30%	25%	56	5%	15%	4%
67	18%	27%	57	5%	8%	8%
68	20%	13%	58	5%	7%	8%
69	20%	20%	59	5%	7%	10%
70	20%	22%				
71	60%	23%				
72	50%	23%				
73	50%	23%				
74	50%	23%				
75	100%	23%				
76	100%	23%				
77	100%	23%				
78	100%	23%				
79	100%	23%				
80	100%	100%				
Ref.	2757	2756		2357	2754	2755

A member was assumed to be eligible for normal retirement after attaining age 60 regardless of years of service. A member was assumed to be eligible for early retirement after attaining age 55 with at least 20 years of service or if the sum of age and service is at least 80.

Actuarial Assumptions Used for the Valuation

Rates of separation from active membership are shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment. These rates were updated for the December 31, 2017 valuation.

Sample Ages	Service	% of Active Members Separating within Next Year	
		Men	Women
	0-1	22.00%	32.00%
	1-2	17.00%	20.00%
	2-3	12.00%	15.00%
	3-4	8.00%	12.00%
	4-5	8.00%	11.00%
	5-6	n/a	9.00%
30	5 & Up (Men) 6 & Up (Women)	4.88%	5.57%
35		3.61%	4.67%
40		2.85%	4.04%
45		2.45%	3.57%
50		2.28%	3.10%
Ref.		1106 77 x 0.4275	1105 37 x 1.05

Rates of disability were divided equally between duty and non-duty disability and are as follows:

Sample Ages	% of Active Members Becoming Disabled within Next Year	
	Male	Female
20	0.002%	0.002%
25	0.002%	0.002%
30	0.002%	0.002%
35	0.011%	0.011%
40	0.043%	0.043%
45	0.088%	0.088%
50	0.144%	0.144%
55	0.214%	0.214%
60	0.318%	0.318%
Ref.	37 x 0.30	37 x 0.30

Miscellaneous and Technical Assumptions

Marriage Assumption:	75% of males and 75% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses.
Pay Increase Timing:	Beginning of the year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and exact fractional service on the date the decrement is assumed to occur.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation:	Disability and withdrawal decrements do not operate after member reaches retirement eligibility.
Expense Load:	1.00% of payroll.
Normal Form of Benefit:	The assumed normal form of benefit is the straight life form.
Benefit Service:	Exact fractional service as of the valuation date is used to determine the amount of benefit payable.
Incidence of Contributions:	For Manchester School District and enterprise funds of the City (Airport, Water Works, and the MECRS), contributions are assumed to be received continuously throughout the year based upon the actual payroll payable at the time contributions are made. For the remaining City group, contributions are assumed to be received on a semiannual basis in December and July.
COLA Assumption:	1.00% compounded annually.
Adjustments:	Normal and Early retirement costs were increased by 10% to reflect lump sums that are payable at retirement but not available in the active data. Retiree liabilities were increased 1% to account for pop-up retiree benefits.

SECTION G

CALCULATION OF THE SINGLE DISCOUNT RATE

Calculation of the Single Discount Rate

GASB Statement No. 67 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total Pension Liability. This rate considers the ability of the fund to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As long as assets are projected to be on hand in a future year, the assumed valuation discount rate is used. In years where assets are not projected to be sufficient to meet benefit payments, the use of a “risk-free” rate is required, as described in the following paragraph.

The Single Discount Rate (SDR) is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects: (1) the long-term expected rate of return on pension plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits); and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.00%; the municipal bond rate is 3.31%; and the resulting SDR is 7.00%.

The tables in this section provide background for the development of the SDR.

The **Projection of Contributions** table shows the development of expected contributions in future years. Normal Cost contributions for future hires are not included (nor are their liabilities). Administrative expenses were projected at the current level of 1.42% of payroll.

The **Projection of Plan Fiduciary Net Position** table shows the development of expected asset levels in future years.

The **Present Values of Projected Benefit Payments** table shows the development of the SDR. It breaks down the benefit payments into present values for funded and unfunded portions and shows the equivalent total at the SDR.

Single Discount Rate Development

Projection of Contributions Ending December 31, 2117

Year	Payroll for Current Employees	Contributions from Current Employees	Service Cost Contributions	Administrative Expense Contributions	UAL Contributions	Total Contributions
0	\$ 53,364,536					
1	55,898,718	\$ 2,096,202	\$ 4,798,476	\$ 796,015	\$ 9,032,459	\$ 16,723,151
2	52,804,334	1,980,163	4,498,778	751,950	9,366,720	16,597,611
3	50,486,551	1,893,246	4,280,044	718,944	9,406,293	16,298,526
4	48,269,838	1,810,119	4,068,675	687,377	9,372,851	15,939,022
5	46,067,740	1,727,540	3,857,299	656,018	9,630,605	15,871,462
6	43,996,348	1,649,863	3,663,176	626,521	9,895,446	15,835,006
7	41,841,154	1,569,043	3,460,301	595,831	10,167,571	15,792,746
8	39,705,768	1,488,966	3,256,027	565,422	10,447,179	15,757,595
9	37,531,559	1,407,433	3,052,262	534,461	10,734,477	15,728,634
10	35,346,779	1,325,504	2,847,629	503,349	11,029,675	15,706,157
11	33,245,737	1,246,715	2,651,370	473,429	11,332,991	15,704,505
12	31,157,027	1,168,389	2,458,317	443,685	11,644,648	15,715,038
13	29,136,530	1,092,620	2,273,698	414,913	11,964,876	15,746,107
14	27,194,596	1,019,797	2,097,462	387,259	12,293,910	15,798,429
15	25,382,943	951,860	1,933,944	361,461	12,631,992	15,879,258
16	23,642,639	886,599	1,778,798	336,678	12,979,372	15,981,447
17	22,033,535	826,258	1,634,835	313,764	13,336,305	16,111,162
18	20,505,531	768,957	1,499,884	292,005	13,703,053	16,263,900
19	19,015,818	713,093	1,370,056	270,791	14,079,887	16,433,828
20	17,659,278	662,223	1,254,017	251,473	14,467,084	16,634,797
21	16,353,476	613,255	1,142,548	232,878	14,864,929	16,853,611
22	15,182,335	569,338	1,046,396	216,201	15,273,715	17,105,649
23	14,009,977	525,374	951,543	199,506	-	1,676,423
24	12,914,702	484,301	864,417	183,909	-	1,532,627
25	11,916,305	446,861	785,722	169,692	-	1,402,275
26	10,941,490	410,306	710,630	155,810	-	1,276,746
27	10,019,201	375,720	642,596	142,676	-	1,160,992
28	9,110,660	341,650	576,677	129,739	-	1,048,066
29	8,294,197	311,032	518,510	118,112	-	947,655
30	7,460,774	279,779	459,975	106,244	-	845,998
31	6,688,047	250,802	408,025	95,240	-	754,067
32	5,929,687	222,363	357,314	84,441	-	664,119
33	5,242,775	196,604	311,736	74,659	-	582,999
34	4,610,143	172,880	270,899	65,650	-	509,430
35	4,016,280	150,611	234,070	57,193	-	441,873
36	3,444,153	129,156	198,127	49,046	-	376,328
37	2,903,852	108,894	165,479	41,352	-	315,726
38	2,438,202	91,433	137,552	34,721	-	263,706
39	1,993,549	74,758	111,200	28,389	-	214,347
40	1,604,921	60,185	88,756	22,855	-	171,795
41	1,286,280	48,235	70,609	18,317	-	137,161
42	1,004,978	37,687	54,530	14,311	-	106,527
43	765,309	28,699	41,185	10,898	-	80,782
44	585,183	21,944	31,295	8,333	-	61,572
45	443,019	16,613	23,474	6,309	-	46,396
46	328,225	12,308	17,175	4,674	-	34,157
47	241,807	9,068	12,471	3,443	-	24,982
48	167,768	6,291	8,544	2,389	-	17,224
49	106,256	3,985	5,366	1,513	-	10,864
50	71,029	2,664	3,517	1,011	-	7,191

Single Discount Rate Development

Projection of Contributions Ending December 31, 2117

(Concluded)

Year	Payroll for Current Employees	Contributions from Current Employees	Service Cost Contributions	Administrative Expense Contributions	UAL Contributions	Total Contributions
51	\$ 45,467	\$ 1,705	\$ 2,195	\$ 647	\$ -	\$ 4,547
52	27,983	1,049	1,346	398	-	2,793
53	17,519	657	801	249	-	1,707
54	12,197	457	570	174	-	1,202
55	7,304	274	341	104	-	719
56	3,968	149	174	57	-	380
57	2,028	76	85	29	-	190
58	825	31	30	12	-	73
59	117	4	5	2	-	11
60	91	3	2	1	-	7
61	-	-	-	-	-	-
62	-	-	-	-	-	-
63	-	-	-	-	-	-
64	-	-	-	-	-	-
65	-	-	-	-	-	-
66	-	-	-	-	-	-
67	-	-	-	-	-	-
68	-	-	-	-	-	-
69	-	-	-	-	-	-
70	-	-	-	-	-	-
71	-	-	-	-	-	-
72	-	-	-	-	-	-
73	-	-	-	-	-	-
74	-	-	-	-	-	-
75	-	-	-	-	-	-
76	-	-	-	-	-	-
77	-	-	-	-	-	-
78	-	-	-	-	-	-
79	-	-	-	-	-	-
80	-	-	-	-	-	-
81	-	-	-	-	-	-
82	-	-	-	-	-	-
83	-	-	-	-	-	-
84	-	-	-	-	-	-
85	-	-	-	-	-	-
86	-	-	-	-	-	-
87	-	-	-	-	-	-
88	-	-	-	-	-	-
89	-	-	-	-	-	-
90	-	-	-	-	-	-
91	-	-	-	-	-	-
92	-	-	-	-	-	-
93	-	-	-	-	-	-
94	-	-	-	-	-	-
95	-	-	-	-	-	-
96	-	-	-	-	-	-
97	-	-	-	-	-	-
98	-	-	-	-	-	-
99	-	-	-	-	-	-
100	-	-	-	-	-	-

Single Discount Rate Development Projection of Plan Fiduciary Net Position Ending December 31, 2117

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 7.00%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
1	\$ 219,277,973	\$ 16,723,151	\$ 18,667,698	\$ 796,015	\$ 15,255,161	\$ 231,792,572
2	231,792,572	16,597,611	19,718,570	751,950	16,092,221	244,011,884
3	244,011,884	16,298,526	20,784,425	718,944	16,901,743	255,708,784
4	255,708,784	15,939,022	21,939,083	687,377	17,669,513	266,690,860
5	266,690,860	15,871,462	23,130,806	656,018	18,396,008	277,171,506
6	277,171,506	15,835,006	24,461,174	626,521	19,083,639	287,002,456
7	287,002,456	15,792,746	25,733,339	595,831	19,727,634	296,193,665
8	296,193,665	15,757,595	26,950,089	565,422	20,328,990	304,764,739
9	304,764,739	15,728,634	28,200,205	534,461	20,886,020	312,644,726
10	312,644,726	15,706,157	29,380,078	503,349	21,397,319	319,864,774
11	319,864,774	15,704,505	30,493,993	473,429	21,865,367	326,467,225
12	326,467,225	15,715,038	31,597,583	443,685	22,290,952	332,431,947
13	332,431,947	15,746,107	32,609,693	414,913	22,675,717	337,829,165
14	337,829,165	15,798,429	33,532,047	387,259	23,024,538	342,732,825
15	342,732,825	15,879,258	34,329,894	361,461	23,344,010	347,264,738
16	347,264,738	15,981,447	34,970,634	336,678	23,643,566	351,582,439
17	351,582,439	16,111,162	35,523,056	313,764	23,932,049	355,788,831
18	355,788,831	16,263,900	35,968,035	292,005	24,217,190	360,009,880
19	360,009,880	16,433,828	36,292,970	270,791	24,508,060	364,388,007
20	364,388,007	16,634,797	36,500,398	251,473	24,814,971	369,085,904
21	369,085,904	16,853,611	36,597,367	232,878	25,148,656	374,257,926
22	374,257,926	17,105,649	36,549,739	216,201	25,521,583	380,119,218
23	380,119,218	1,676,423	36,400,478	199,506	25,406,694	370,602,351
24	370,602,351	1,532,627	36,160,957	183,909	24,744,344	360,534,455
25	360,534,455	1,402,275	35,829,191	169,692	24,047,010	349,984,857
26	349,984,857	1,276,746	35,393,493	155,810	23,319,688	339,031,989
27	339,031,989	1,160,992	34,851,161	142,676	22,568,117	327,767,260
28	327,767,260	1,048,066	34,249,361	129,739	21,796,853	316,233,078
29	316,233,078	947,655	33,599,633	118,112	21,008,761	304,471,749
30	304,471,749	845,998	32,910,899	106,244	20,206,076	292,506,681
31	292,506,681	754,067	32,158,938	95,240	19,391,610	280,398,180
32	280,398,180	664,119	31,342,716	84,441	18,569,377	268,204,518
33	268,204,518	582,999	30,458,647	74,659	17,743,785	255,997,995
34	255,997,995	509,430	29,548,055	65,650	16,918,438	243,812,158
35	243,812,158	441,873	28,624,738	57,193	16,095,166	231,667,266
36	231,667,266	376,328	27,697,734	49,046	15,274,945	219,571,760
37	219,571,760	315,726	26,759,314	41,352	14,458,728	207,545,548
38	207,545,548	263,706	25,761,652	34,721	13,649,659	195,662,541
39	195,662,541	214,347	24,716,170	28,389	12,852,341	183,984,670
40	183,984,670	171,795	23,648,560	22,855	12,070,351	172,555,402
41	172,555,402	137,161	22,563,746	18,317	11,306,593	161,417,093
42	161,417,093	106,527	21,477,782	14,311	10,563,361	150,594,888
43	150,594,888	80,782	20,391,530	10,898	9,842,414	140,115,657
44	140,115,657	61,572	19,306,810	8,333	9,145,618	130,007,703
45	130,007,703	46,396	18,237,222	6,309	8,474,411	120,284,981
46	120,284,981	34,157	17,186,230	4,674	7,829,619	110,957,852
47	110,957,852	24,982	16,159,951	3,443	7,211,758	102,031,199
48	102,031,199	17,224	15,164,380	2,389	6,620,918	93,502,571
49	93,502,571	10,864	14,190,821	1,513	6,057,223	85,378,325
50	85,378,325	7,191	13,238,708	1,011	5,521,177	77,666,975

Single Discount Rate Development Projection of Plan Fiduciary Net Position Ending December 31, 2117 (Concluded)

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 7.00%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
51	\$ 77,666,975	\$ 4,547	\$ 12,315,308	\$ 647	\$ 5,013,077	\$ 70,368,643
52	70,368,643	2,793	11,420,533	398	4,532,929	63,483,435
53	63,483,435	1,707	10,554,704	249	4,080,724	57,010,913
54	57,010,913	1,202	9,720,285	174	3,656,343	50,947,999
55	50,947,999	719	8,918,553	104	3,259,511	45,289,572
56	45,289,572	380	8,148,610	57	2,889,903	40,031,188
57	40,031,188	190	7,410,857	29	2,547,196	35,167,688
58	35,167,688	73	6,706,091	12	2,230,997	30,692,655
59	30,692,655	11	6,034,889	2	1,940,837	26,598,613
60	26,598,613	7	5,398,205	1	1,676,161	22,876,575
61	22,876,575	-	4,797,083	-	1,436,302	19,515,794
62	19,515,794	-	4,232,308	-	1,220,480	16,503,966
63	16,503,966	-	3,704,861	-	1,027,801	13,826,905
64	13,826,905	-	3,215,583	-	857,241	11,468,563
65	11,468,563	-	2,765,106	-	707,658	9,411,114
66	9,411,114	-	2,353,795	-	577,789	7,635,108
67	7,635,108	-	1,981,743	-	466,270	6,119,635
68	6,119,635	-	1,648,803	-	371,642	4,842,475
69	4,842,475	-	1,354,491	-	292,368	3,780,352
70	3,780,352	-	1,097,815	-	226,851	2,909,388
71	2,909,388	-	877,199	-	173,474	2,205,664
72	2,205,664	-	690,475	-	130,639	1,645,828
73	1,645,828	-	534,914	-	96,803	1,207,717
74	1,207,717	-	407,430	-	70,521	870,808
75	870,808	-	304,803	-	50,469	616,474
76	616,474	-	223,752	-	35,454	428,176
77	428,176	-	161,018	-	24,432	291,590
78	291,590	-	113,497	-	16,506	194,599
79	194,599	-	78,312	-	10,927	127,214
80	127,214	-	52,864	-	7,086	81,436
81	81,436	-	34,897	-	4,500	51,039
82	51,039	-	22,521	-	2,798	31,315
83	31,315	-	14,208	-	1,703	18,810
84	18,810	-	8,762	-	1,015	11,063
85	11,063	-	5,282	-	593	6,374
86	6,374	-	3,114	-	339	3,598
87	3,598	-	1,796	-	190	1,993
88	1,993	-	1,014	-	105	1,083
89	1,083	-	561	-	57	579
90	579	-	305	-	30	304
91	304	-	163	-	16	157
92	157	-	85	-	8	80
93	80	-	44	-	4	40
94	40	-	22	-	2	19
95	19	-	11	-	1	9
96	9	-	5	-	0	4
97	4	-	2	-	0	2
98	2	-	1	-	0	1
99	1	-	0	-	0	0
100	0	-	0	-	0	-

Single Discount Rate Development

Present Values of Projected Benefits Ending December 31, 2117

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ^a ((a)-.5)	(g)=(e)*vf ^a ((a)-.5)	(h)=((c)/(1+sdr) ^a (a-.5)
1	\$ 219,277,973	\$ 18,667,698	\$ 18,667,698	\$ -	\$ 18,046,745	\$ -	\$ 18,046,745
2	231,792,572	19,718,570	19,718,570	-	17,815,571	-	17,815,571
3	244,011,884	20,784,425	20,784,425	-	17,550,058	-	17,550,058
4	255,708,784	21,939,083	21,939,083	-	17,313,116	-	17,313,116
5	266,690,860	23,130,806	23,130,806	-	17,059,401	-	17,059,401
6	277,171,506	24,461,174	24,461,174	-	16,860,347	-	16,860,347
7	287,002,456	25,733,339	25,733,339	-	16,576,834	-	16,576,834
8	296,193,665	26,950,089	26,950,089	-	16,224,894	-	16,224,894
9	304,764,739	28,200,205	28,200,205	-	15,866,830	-	15,866,830
10	312,644,726	29,380,078	29,380,078	-	15,449,238	-	15,449,238
11	319,864,774	30,493,993	30,493,993	-	14,985,962	-	14,985,962
12	326,467,225	31,597,583	31,597,583	-	14,512,440	-	14,512,440
13	332,431,947	32,609,693	32,609,693	-	13,997,468	-	13,997,468
14	337,829,165	33,532,047	33,532,047	-	13,451,759	-	13,451,759
15	342,732,825	34,329,894	34,329,894	-	12,870,864	-	12,870,864
16	347,264,738	34,970,634	34,970,634	-	12,253,353	-	12,253,353
17	351,582,439	35,523,056	35,523,056	-	11,632,632	-	11,632,632
18	355,788,831	35,968,035	35,968,035	-	11,007,802	-	11,007,802
19	360,009,880	36,292,970	36,292,970	-	10,380,604	-	10,380,604
20	364,388,007	36,500,398	36,500,398	-	9,756,947	-	9,756,947
21	369,085,904	36,597,367	36,597,367	-	9,142,867	-	9,142,867
22	374,257,926	36,549,739	36,549,739	-	8,533,615	-	8,533,615
23	380,119,218	36,400,478	36,400,478	-	7,942,772	-	7,942,772
24	370,602,351	36,160,957	36,160,957	-	7,374,306	-	7,374,306
25	360,534,455	35,829,191	35,829,191	-	6,828,644	-	6,828,644
26	349,984,857	35,393,493	35,393,493	-	6,304,303	-	6,304,303
27	339,031,989	34,851,161	34,851,161	-	5,801,592	-	5,801,592
28	327,767,260	34,249,361	34,249,361	-	5,328,422	-	5,328,422
29	316,233,078	33,599,633	33,599,633	-	4,885,363	-	4,885,363
30	304,471,749	32,910,899	32,910,899	-	4,472,170	-	4,472,170
31	292,506,681	32,158,938	32,158,938	-	4,084,101	-	4,084,101
32	280,398,180	31,342,716	31,342,716	-	3,720,040	-	3,720,040
33	268,204,518	30,458,647	30,458,647	-	3,378,608	-	3,378,608
34	255,997,995	29,548,055	29,548,055	-	3,063,179	-	3,063,179
35	243,812,158	28,624,738	28,624,738	-	2,773,328	-	2,773,328
36	231,667,266	27,697,734	27,697,734	-	2,507,957	-	2,507,957
37	219,571,760	26,759,314	26,759,314	-	2,264,473	-	2,264,473
38	207,545,548	25,761,652	25,761,652	-	2,037,427	-	2,037,427
39	195,662,541	24,716,170	24,716,170	-	1,826,862	-	1,826,862
40	183,984,670	23,648,560	23,648,560	-	1,633,599	-	1,633,599
41	172,555,402	22,563,746	22,563,746	-	1,456,694	-	1,456,694
42	161,417,093	21,477,782	21,477,782	-	1,295,874	-	1,295,874
43	150,594,888	20,391,530	20,391,530	-	1,149,845	-	1,149,845
44	140,115,657	19,306,810	19,306,810	-	1,017,457	-	1,017,457
45	130,007,703	18,237,222	18,237,222	-	898,216	-	898,216
46	120,284,981	17,186,230	17,186,230	-	791,077	-	791,077
47	110,957,852	16,159,951	16,159,951	-	695,175	-	695,175
48	102,031,199	15,164,380	15,164,380	-	609,671	-	609,671
49	93,502,571	14,190,821	14,190,821	-	533,205	-	533,205
50	85,378,325	13,238,708	13,238,708	-	464,888	-	464,888

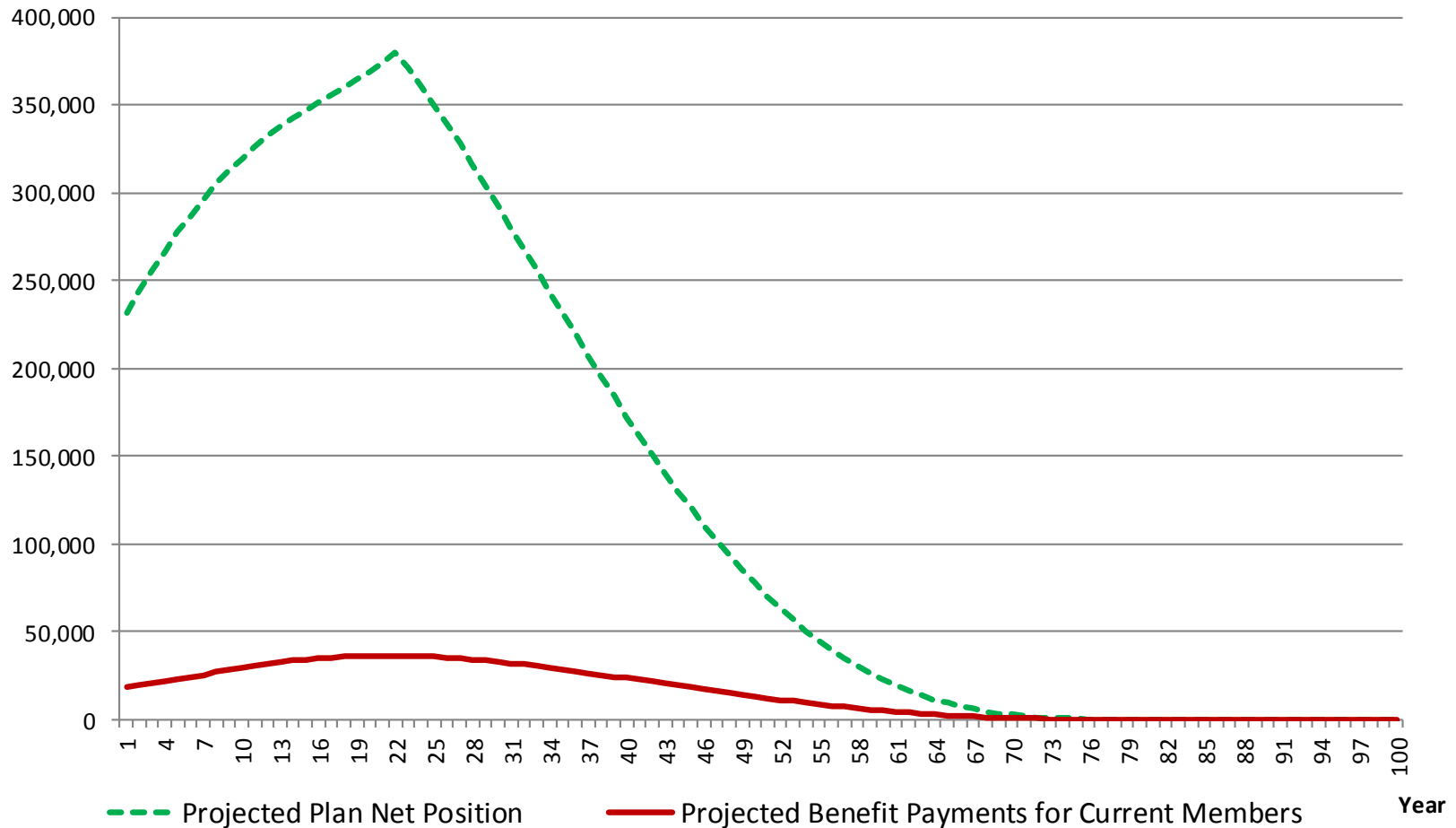
Single Discount Rate Development

Present Values of Projected Benefits Ending December 31, 2117 (Concluded)

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ^a ((a)-.5)	(g)=(e)*vf ^a ((a)-.5)	(h)=((c)/(1+sdr)) ^a (a-.5)
51	\$ 77,666,975	\$ 12,315,308	\$ 12,315,308	\$ -	\$ 404,170	\$ -	\$ 404,170
52	70,368,643	11,420,533	11,420,533	-	350,285	-	350,285
53	63,483,435	10,554,704	10,554,704	-	302,550	-	302,550
54	57,010,913	9,720,285	9,720,285	-	260,404	-	260,404
55	50,947,999	8,918,553	8,918,553	-	223,295	-	223,295
56	45,289,572	8,148,610	8,148,610	-	190,671	-	190,671
57	40,031,188	7,410,857	7,410,857	-	162,063	-	162,063
58	35,167,688	6,706,091	6,706,091	-	137,057	-	137,057
59	30,692,655	6,034,889	6,034,889	-	115,271	-	115,271
60	26,598,613	5,398,205	5,398,205	-	96,364	-	96,364
61	22,876,575	4,797,083	4,797,083	-	80,031	-	80,031
62	19,515,794	4,232,308	4,232,308	-	65,990	-	65,990
63	16,503,966	3,704,861	3,704,861	-	53,987	-	53,987
64	13,826,905	3,215,583	3,215,583	-	43,792	-	43,792
65	11,468,563	2,765,106	2,765,106	-	35,193	-	35,193
66	9,411,114	2,353,795	2,353,795	-	27,998	-	27,998
67	7,635,108	1,981,743	1,981,743	-	22,031	-	22,031
68	6,119,635	1,648,803	1,648,803	-	17,130	-	17,130
69	4,842,475	1,354,491	1,354,491	-	13,152	-	13,152
70	3,780,352	1,097,815	1,097,815	-	9,962	-	9,962
71	2,909,388	877,199	877,199	-	7,439	-	7,439
72	2,205,664	690,475	690,475	-	5,473	-	5,473
73	1,645,828	534,914	534,914	-	3,962	-	3,962
74	1,207,717	407,430	407,430	-	2,821	-	2,821
75	870,808	304,803	304,803	-	1,972	-	1,972
76	616,474	223,752	223,752	-	1,353	-	1,353
77	428,176	161,018	161,018	-	910	-	910
78	291,590	113,497	113,497	-	599	-	599
79	194,599	78,312	78,312	-	387	-	387
80	127,214	52,864	52,864	-	244	-	244
81	81,436	34,897	34,897	-	150	-	150
82	51,039	22,521	22,521	-	91	-	91
83	31,315	14,208	14,208	-	54	-	54
84	18,810	8,762	8,762	-	31	-	31
85	11,063	5,282	5,282	-	17	-	17
86	6,374	3,114	3,114	-	10	-	10
87	3,598	1,796	1,796	-	5	-	5
88	1,993	1,014	1,014	-	3	-	3
89	1,083	561	561	-	1	-	1
90	579	305	305	-	1	-	1
91	304	163	163	-	0	-	0
92	157	85	85	-	0	-	0
93	80	44	44	-	0	-	0
94	40	22	22	-	0	-	0
95	19	11	11	-	0	-	0
96	9	5	5	-	0	-	0
97	4	2	2	-	0	-	0
98	2	1	1	-	0	-	0
99	1	0	0	-	0	-	0
100	0	0	0	-	0	-	0
Totals					\$ 399,065,511	\$ -	\$ 399,065,511

Projection of Plan Net Position and Benefit Payments

\$ [thousands]



SECTION H

GLOSSARY OF TERMS

Glossary of Terms

<i>Actuarial Accrued Liability (AAL)</i>	The AAL is the difference between the actuarial present value of all benefits and the actuarial value of future normal costs. The definition comes from the fundamental equation of funding which states that the present value of all benefits is the sum of the Actuarial Accrued Liability and the present value of future normal costs. The AAL may also be referred to as “accrued liability” or “actuarial liability.”
<i>Actuarial Assumptions</i>	These assumptions are estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and compensation increases. Actuarial assumptions are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (compensation increases, payroll growth, inflation and investment return) consist of an underlying real rate of return plus an assumption for a long-term average rate of inflation.
<i>Accrued Service</i>	Service credited under the system which was rendered before the date of the actuarial valuation.
<i>Actuarial Equivalent</i>	A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.
<i>Actuarial Cost Method</i>	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of the pension trust benefits between future normal cost and actuarial accrued liability. The actuarial cost method may also be referred to as the actuarial funding method.
<i>Actuarial Gain (Loss)</i>	The difference in liabilities between actual experience and expected experience during the period between two actuarial valuations is the gain (loss) on the accrued liabilities.
<i>Actuarial Present Value (APV)</i>	The amount of funds currently required to provide a payment or series of payments in the future. The present value is determined by discounting future payments at predetermined rates of interest and probabilities of payment.
<i>Actuarial Valuation</i>	The actuarial valuation report determines, as of the actuarial valuation date, the service cost, Total Pension Liability, and related actuarial present value of projected benefit payments for pensions.
<i>Actuarial Valuation Date</i>	The date as of which an actuarial valuation is performed.
<i>Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC)</i>	A calculated contribution into a defined benefit pension plan for the reporting period, most often determined based on the funding policy of the plan. Typically the Actuarially Determined Contribution has a normal cost payment and an amortization payment.

Glossary of Terms

<i>Amortization Payment</i>	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
<i>Amortization Method</i>	The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be “open” (meaning, reset each year) or “closed” (the number of years remaining will decline each year).
<i>Cost-of-Living Adjustments</i>	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
<i>Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)</i>	A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.
<i>Covered-Employee Payroll</i>	The payroll of covered employees, which is typically only the pensionable pay and does not include pay above any pay cap.
<i>Deferred Retirement Option Program (DROP)</i>	A program that permits a plan member to elect a calculation of benefit payments based on service credits and salary, as applicable, as of the DROP entry date. The plan member continues to provide service to the employer and is paid for the service by the employer after the DROP entry date; however, the pensions that would have been paid to the plan member are credited to an individual member account within the defined benefit pension plan until the end of the DROP period. Other variations for DROP exist and will be more fully detailed in the plan provision section of the valuation report.
<i>Deferred Inflows and Outflows</i>	The deferred inflows and outflows of pension resources are amounts used under GASB Statement No. 68 in developing the annual pension expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in pension expense should be included in the deferred inflows or outflows of resources.
<i>Discount Rate</i>	For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically: <ol style="list-style-type: none">1. The benefit payments to be made while the pension plans’ fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period; and2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.

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<i>Entry Age Actuarial Cost Method (EAN)</i>	The EAN is a funding method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit ages(s). The portion of the actuarial present value allocated to a valuation year is the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.
<i>GASB</i>	The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.
<i>Fiduciary Net Position</i>	The fiduciary net position is the market value of the assets of the trust dedicated to the defined benefit provisions.
<i>Long-Term Expected Rate of Return</i>	The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.
<i>Money-Weighted Rate of Return</i>	The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For purposes of GASB Statement No. 67, money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense.
<i>Multiple-Employer Defined Benefit Pension Plan</i>	A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.
<i>Municipal Bond Rate</i>	The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.
<i>Net Pension Liability (NPL)</i>	The NPL is the liability of employers and non-employer contribution entities to plan members for benefits provided through a defined benefit pension plan.
<i>Non-Employer Contribution Entities</i>	Non-employer contribution entities are entities that make contributions to a pension plan that is used to provide pensions to the employees of other entities. For purposes of the GASB accounting statements, plan members are not considered non-employer contribution entities.
<i>Normal Cost</i>	The actuarial present value of the pension trust benefits allocated to the current year by the actuarial cost method. The Normal Cost may also be referred to as "Service Cost."

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<i>Other Postemployment Benefits (OPEB)</i>	All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment healthcare benefits regardless of the manner in which they are provided. Other post-employment benefits do not include termination benefits.
<i>Real Rate of Return</i>	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
<i>Service Cost</i>	The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year. The Service Cost may also be referred to as the “Normal Cost.”
<i>Total Pension Expense</i>	The total pension expense is the sum of the following items that are recognized at the end of the employer’s fiscal year: <ol style="list-style-type: none">1. Service Cost2. Interest on the Total Pension Liability3. Current-Period Benefit Changes4. Employee Contributions (made negative for addition here)5. Projected Earnings on Plan Investments (made negative for addition here)6. Pension Plan Administrative Expense7. Other Changes in Plan Fiduciary Net Position8. Recognition of Outflow (Inflow) of Resources due to Liabilities9. Recognition of Outflow (Inflow) of Resources due to Assets
<i>Total Pension Liability (TPL)</i>	The TPL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.
<i>Unfunded Actuarial Accrued Liability (UAAL)</i>	The UAAL is the difference between actuarial accrued liability and valuation assets.
<i>Valuation Assets</i>	The valuation assets are the assets used in determining the unfunded liability of the plan. For purposes of GASB Statement Nos. 67 and 68, the valuation assets are equal to the market value of assets.