

Arkansas Local Police and Fire Retirement System

GASB Statement Nos. 67 and 68 Accounting and
Financial Reporting for Pensions
December 31, 2019





April 3, 2020

Board of Trustees
Arkansas Local Police and Fire Retirement System

Dear Trustees:

This report provides accounting and financial reporting information that is intended to comply with the Governmental Accounting Standards Board (GASB) Statement Nos. 67 and 68 for the Arkansas Local Police and Fire Retirement System ("LOPFI"). These calculations have been made on a basis that is consistent with our understanding of these Statements. This report does not include Pension and Relief Funds under LOPFI Administration. Calculations required for compliance with GASB Statement No. 68 for Pension and Relief Funds under LOPFI Administration will be issued in separate reports.

GASB Statement No. 67 is the accounting standard that applies to the stand-alone financial reports issued by retirement systems. GASB Statement No. 68 establishes accounting and financial reporting for state and local government employers who provide their employees (including former employees) pension benefits through a trust.

Our calculation of the liability associated with the benefits described in this report was performed for the purpose of providing reporting and disclosure information that satisfies the requirements of GASB Statement Nos. 67 and 68. The Net Pension Liability is not an appropriate measure for measuring 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. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB Statement Nos. 67 and 68 may produce significantly different results. This report may be provided to parties other than LOPFI only in its entirety and only with the permission of LOPFI. GRS is not responsible for unauthorized use of this report.

This report is based upon information, furnished to us by LOPFI, concerning retirement and ancillary benefits, active members, deferred vested members, retirees and beneficiaries, and financial data. This information was checked for internal consistency, but it was not audited. We are not responsible for the accuracy or completeness of the data provided by LOPFI staff.

This report complements the actuarial valuation report that was provided to LOPFI and should be considered in conjunction with that report. Please see the actuarial valuation report as of December 31, 2019 for additional discussion of the nature of actuarial calculations and more information related to participant data, demographic assumptions, and benefit provisions. The economic assumptions for purposes of the GASB disclosures were selected by the actuary based on the results of an experience study covering the period from January 1, 2012 through December 31, 2016.

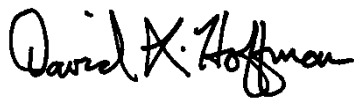
To the best of our knowledge, the information contained within this report is accurate and fairly represents the actuarial position of the Arkansas Local Police and Fire Retirement System. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

It is our understanding that this information, which was previously issued in draft form, has been reviewed and approved by the plan's auditor. This information is intended to assist in preparation of the financial statements of the Arkansas Local Police and Fire Retirement System. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the plan's financial statements.

The signing individuals are independent of the plan sponsor.

Heidi G. Barry and Casey T. Ahlbrandt-Rains are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

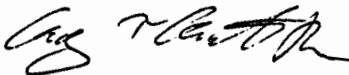
Respectfully submitted,



David L. Hoffman



Heidi G. Barry, ASA, FCA, MAAA



Casey T. Ahlbrandt-Rains, ASA, MAAA

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SECTION A

EXECUTIVE SUMMARY

Executive Summary as of December 31, 2019

	2019
Actuarial Valuation Date	December 31, 2019
Measurement Date of the Net Pension Liability	December 31, 2019
Employer's Fiscal Year Ending Date (Reporting Date)	December 31, 2019

	Paid	Volunteer
Membership		
Number of		
- Retirees and Beneficiaries (Including DROP)	3,553	3,190
- Inactive, Nonretired Members	5,948	6,554
- Active Members	6,509	7,533
- Total	16,010	17,277
Covered Payroll	\$ 371,574,513	N/A

Net Pension Liability		
Total Pension Liability	\$ 2,884,471,916	\$ 136,384,837
Plan Fiduciary Net Position	2,111,731,002	94,385,517
Net Pension Liability	\$ 772,740,914	\$ 41,999,320
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	73.21%	69.21%
Net Pension Liability as a Percentage of Covered Payroll	207.96%	N/A

Development of the Single Discount Rate		
Single Discount Rate	7.00%	7.00%
Long-Term Expected Rate of Investment Return	7.00%	7.00%
Long-Term Municipal Bond Rate*	2.75%	2.75%
Last year ending December 31 in the 2020 to 2119 projection period for which projected benefit payments are fully funded	2119	2119

Total Pension Expense \$ 190,865,228 \$ 8,551,624

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

	Paid		Volunteer	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ 76,032,980	\$ -	\$ 311,722	\$ 143,004
Changes in assumptions	66,729,207	-	1,916,010	-
Net difference between projected and actual earnings on pension plan investments	111,425,912	204,750,561	4,905,774	9,151,549
Total	\$ 254,188,099	\$ 204,750,561	\$ 7,133,506	\$ 9,294,553

**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 31, 2019. 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).

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.

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, 2019 and a measurement date of December 31, 2019.

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 plan's projected fiduciary net position is not sufficient to pay benefits).

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.00%; the municipal bond rate is 2.75% (based on the weekly 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%.

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), it is expected that:

- (1) The unfunded liability may decrease in dollar amount each year in the future.
- (2) The unfunded liability will be paid off in approximately 17 years for paid and 17 years for volunteer, which is the number of years remaining in the closed amortization schedule of the unfunded liability beginning January 1, 2021.
- (3) The funded status of the plan will increase gradually towards a 100% funded ratio.

This funding policy results in the projected plan fiduciary net position being sufficient to pay benefits for all future years and a discount rate of 7.00%. The projections in this report are strictly for the purposes of determining the GASB discount rate and are different from a funding projection for the ongoing plan.

Limitations of Assets as a Percent of Total Pension Liability Measurements

This report includes a measure of the plan fiduciary net position as a percent of total pension liability. Unless otherwise indicated, with regard to any such measurements presented in this report:

- (1) The measurement is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.
- (2) The measurement is inappropriate for assessing the need for or amount of future employer contributions.

Limitation of Project Scope

Actuarial standards do not require the actuary to evaluate the ability of the plan sponsor or other contributing entity to make required contributions to the plan when due. Such an evaluation was not within the scope of this project and is not within the actuary's domain of expertise. Consequently, the actuary performed no such evaluation.

SECTION B

FINANCIAL STATEMENTS

Statement of Pension Expense Under GASB Statement No. 68

Fiscal Year Ended December 31, 2019

	Paid	Volunteer	Total
A. Expense			
1. Service Cost	\$ 57,317,733	\$ 2,383,968	\$ 59,701,701
2. Interest on the Total Pension Liability	185,373,080	8,934,417	194,307,497
3. Current-Period Benefit Changes	-	-	-
4. Employee Contributions (made negative for addition here)	(25,157,606)	-	(25,157,606)
5. Projected Earnings on Plan Investments (made negative for addition here)	(123,885,140)	(5,504,118)	(129,389,258)
6. Pension Plan Administrative Expense	2,911,241	130,156	3,041,397
7. Other Changes in Plan Fiduciary Net Position	-	-	-
8. Recognition of Outflow (Inflow) of Resources Due to Liabilities	92,657,670	2,603,886	95,261,556
9. Recognition of Outflow (Inflow) of Resources Due to Assets	1,648,250	3,315	1,651,565
10. Total Pension Expense	\$190,865,228	\$ 8,551,624	\$199,416,852

Statement of Outflows and Inflows Arising from Current Reporting Period Fiscal Year Ended December 31, 2019

	<u>Paid Service</u>	<u>Volunteer Service</u>
A. Outflows (Inflows) of Resources Due to Liabilities		
1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	\$ 63,967,124	\$ 438,588
2. Assumption Changes (gains) or losses	\$ -	\$ -
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}	3.9879	3.4571
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	\$ 16,040,303	\$ 126,866
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for Assumption Changes	\$ -	\$ -
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	<u>\$ 16,040,303</u>	<u>\$ 126,866</u>
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	\$ 47,926,821	\$ 311,722
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for Assumption Changes	\$ -	\$ -
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	<u>\$ 47,926,821</u>	<u>\$ 311,722</u>
B. Outflows (Inflows) of Resources Due to Assets		
1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$ (207,131,880)	\$ (9,295,198)
2. Recognition period for Assets {in years}	5.0000	5.0000
3. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Assets	\$ (41,426,376)	\$ (1,859,040)
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$ (165,705,504)	\$ (7,436,158)

Paid Service

Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods Fiscal Year Ended December 31, 2019*

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	\$ 92,657,670	\$ -	\$ 92,657,670
2. Due to assets	62,597,154	60,948,904	1,648,250
3. Total	\$ 155,254,824	\$ 60,948,904	\$ 94,305,920

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	\$ 35,874,856	\$ -	\$ 35,874,856
2. Assumption changes	56,782,814	-	56,782,814
3. Net difference between projected and actual earnings on pension plan investments	62,597,154	60,948,904	1,648,250
4. Total	\$ 155,254,824	\$ 60,948,904	\$ 94,305,920

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	\$ 76,032,980	\$ -	\$ 76,032,980
2. Assumption changes	66,729,207	-	66,729,207
3. Net difference between projected and actual earnings on pension plan investments	111,425,912	204,750,561	(93,324,649)
4. Total	\$ 254,188,099	\$ 204,750,561	\$ 49,437,538

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
2020	\$ 60,005,987
2021	20,067,078
2022	10,790,849
2023	(41,426,376)
2024	-
Thereafter	-
Total	\$ 49,437,538

* Totals may not add due to rounding.



Paid Service
Statement of Outflows and Inflows Arising from
Current and Prior Reporting Periods
Fiscal Year Ended December 31, 2019

Year Established	Initial Amount	Initial Recognition Period	Current Year Recognition	Remaining Recognition	Remaining Recognition Period
Deferred Outflow (Inflow) due to Differences Between Expected and Actual Experience on Liabilities					
2015	\$ 6,985,822	4.8701	\$ 1,248,098	\$ -	0.0000
2016	20,160,705	4.5797	4,402,189	2,551,949	0.5797
2017	27,865,374	4.4029	6,328,868	8,878,770	1.4029
2018	32,386,236	4.1228	7,855,398	16,675,440	2.1228
2019	63,967,124	3.9879	16,040,303	47,926,821	2.9879
Total			\$ 35,874,856	\$ 76,032,980	
Deferred Outflow (Inflow) due to Assumption Changes					
2015	\$ 51,592,627	4.8701	\$ 9,217,623	\$ -	0.0000
2016	-	4.5797	-	-	0.5797
2017	209,424,780	4.4029	47,565,191	66,729,207	1.4029
2018	-	4.1228	-	-	2.1228
2019	-	3.9879	-	-	2.9879
Total			\$ 56,782,814	\$ 66,729,207	
Deferred Outflow (Inflow) due to Differences Between Projected and Actual Earnings on Plan Investments					
2015	\$ 109,919,873	5.0000	\$ 21,983,973	\$ -	0.0000
2016	26,034,086	5.0000	5,206,817	5,206,818	1.0000
2017	(97,612,641)	5.0000	(19,522,528)	(39,045,057)	2.0000
2018	177,031,822	5.0000	35,406,364	106,219,094	3.0000
2019	(207,131,880)	5.0000	(41,426,376)	(165,705,504)	4.0000
Total			\$ 1,648,250	\$ (93,324,649)	

Volunteer Service

Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods Fiscal Year Ended December 31, 2019*

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	\$ 2,992,997	\$ 389,111	\$ 2,603,886
2. Due to assets	2,720,051	2,716,736	3,315
3. Total	\$ 5,713,048	\$ 3,105,847	\$ 2,607,201

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	\$ 126,866	\$ 389,111	\$ (262,245)
2. Assumption changes	2,866,131	-	2,866,131
3. Net difference between projected and actual earnings on pension plan investments	2,720,051	2,716,736	3,315
4. Total	\$ 5,713,048	\$ 3,105,847	\$ 2,607,201

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	\$ 311,722	\$ 143,004	\$ 168,718
2. Assumption changes	1,916,010	-	1,916,010
3. Net difference between projected and actual earnings on pension plan investments	4,905,774	9,151,549	(4,245,775)
4. Total	\$ 7,133,506	\$ 9,294,553	\$ (2,161,047)

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
2020	\$ 979,534
2021	(1,041,708)
2022	(239,835)
2023	(1,859,038)
2024	-
Thereafter	-
Total	\$ (2,161,047)

* Totals may not add due to rounding.



Volunteer Service

Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods Fiscal Year Ended December 31, 2019

Year Established	Initial Amount	Initial Recognition Period	Current Year Recognition	Remaining Recognition	Remaining Recognition Period
Deferred Outflow (Inflow) due to Differences Between Expected and Actual Experience on Liabilities					
2015	\$ (1,813,451)	3.9248	\$ -	\$ -	0.0000
2016	(996,748)	3.7857	(206,869)	-	0.0000
2017	(578,714)	3.6685	(157,752)	(105,458)	0.6685
2018	(86,526)	3.5331	(24,490)	(37,546)	1.5331
2019	438,588	3.4571	126,866	311,722	2.4571
Total			\$ (262,245)	\$ 168,718	
Deferred Outflow (Inflow) due to Assumption Changes					
2015	\$ 2,138,654	3.9248	\$ -	\$ -	0.0000
2016	-	3.7857	-	-	0.0000
2017	10,514,403	3.6685	2,866,131	1,916,010	0.6685
2018	-	3.5331	-	-	1.5331
2019	-	3.4571	-	-	2.4571
Total			\$ 2,866,131	\$ 1,916,010	
Deferred Outflow (Inflow) due to Differences Between Projected and Actual Earnings on Plan Investments					
2015	\$ 4,683,542	5.0000	\$ 936,710	\$ -	0.0000
2016	1,110,621	5.0000	222,124	222,125	1.0000
2017	(4,288,479)	5.0000	(857,696)	(1,715,391)	2.0000
2018	7,806,083	5.0000	1,561,217	4,683,649	3.0000
2019	(9,295,198)	5.0000	(1,859,040)	(7,436,158)	4.0000
Total			\$ 3,315	\$ (4,245,775)	

Statement of Fiduciary Net Position as of December 31, 2019

	2019		
	Paid	Volunteer	Total
Assets			
Cash and Short Term Investments	\$ 232,279,405	\$ 10,381,915	\$ 242,661,320
Receivables			
Accrued Interest and Other Dividends	\$ -	\$ -	\$ -
Contributions Receivable	7,483,561	334,485	7,818,046
Accounts Receivable - Other	-	-	-
Total Receivables	<u>\$ 7,483,561</u>	<u>\$ 334,485</u>	<u>\$ 7,818,046</u>
Prepaid Expense	\$ 9,954,387	\$ 444,919	\$ 10,399,306
Investments			
U.S. Treasury Securities	\$ 43,255,804	\$ 1,933,353	\$ 45,189,157
Corporate Bonds	62,680,161	2,801,540	65,481,701
Mortgage-backed Securities	3,949,186	176,512	4,125,698
Alternative Investments	209,985,744	9,385,482	219,371,226
Equity Securities	369,091,910	16,496,860	385,588,770
Mutual Funds	1,168,874,066	52,243,766	1,221,117,832
Real Estate Investment Trusts	4,475,784	200,049	4,675,833
Total Investments	<u>\$ 1,862,312,655</u>	<u>\$ 83,237,562</u>	<u>\$ 1,945,550,217</u>
Land, Building, Furniture and Equipment	\$ 2,054,144	\$ 91,812	\$ 2,145,956
Other Assets	\$ 86,697	\$ 3,875	\$ 90,572
Total Assets	<u>\$ 2,114,170,849</u>	<u>\$ 94,494,568</u>	<u>\$ 2,208,665,417</u>
Liabilities			
Payables			
Accounts Payable and Accrued Expenses	\$ 1,337,467	\$ 59,779	\$ 1,397,246
Refunds Payable	164,982	7,374	172,356
Due to Pension Review Board	504,292	22,540	526,832
Total Liabilities	<u>\$ 2,006,741</u>	<u>\$ 89,693</u>	<u>\$ 2,096,434</u>
Deferred Inflows of Resources			
Deferred amounts for leases	\$ 433,106	\$ 19,358	\$ 452,464
Net Position Restricted for Pensions	<u>\$ 2,111,731,002</u>	<u>\$ 94,385,517</u>	<u>\$ 2,206,116,519</u>



Statement of Changes in Fiduciary Net Position for Year Ended December 31, 2019

	2019		
	Paid	Volunteer	Total
Additions			
Contributions			
Employer	\$ 82,853,422	\$ 5,671,414	\$ 88,524,836
Employee	25,157,606	-	25,157,606
Other	180,761	-	180,761
Total Contributions	\$ 108,191,789	\$ 5,671,414	\$ 113,863,203
Investment Income			
Net Appreciation in Fair Value of Investments	\$ 312,078,739	\$ 13,952,612	\$ 326,031,351
Interest and Dividends	24,527,740	1,096,602	25,624,342
Less Investment Expense	(5,589,459)	(249,898)	(5,839,357)
Net Investment Income	\$ 331,017,020	\$ 14,799,316	\$ 345,816,336
Other	\$ -	\$ -	\$ -
Total Additions	\$ 439,208,809	\$ 20,470,730	\$ 459,679,539
Deductions			
Benefit Payments, including Refunds of Employee Contributions and DROP Distributions	\$ 83,428,020	\$ 3,629,357	\$ 87,057,377
Pension Plan Administrative Expense	2,911,241	130,156	3,041,397
Other	-	-	-
Total Deductions	\$ 86,339,261	\$ 3,759,513	\$ 90,098,774
Net Increase in Net Position	\$ 352,869,548	\$ 16,711,217	\$ 369,580,765
Amount to Reconcile Beginning and End of Year Assets	\$ -	\$ -	\$ -
Net Position Restricted for Pensions			
Beginning of Year	\$ 1,758,861,454	\$ 77,674,300	\$ 1,836,535,754
End of Year	\$ 2,111,731,002	\$ 94,385,517	\$ 2,206,116,519



SECTION C

REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Changes in Net Pension Liability and Related Ratios Current Period Fiscal Year Ended December 31, 2019

	Paid	Volunteer	Total
A. Total Pension Liability			
1. Service Cost	\$ 57,317,733	\$ 2,383,968	\$ 59,701,701
2. Interest on the Total Pension Liability	185,373,080	8,934,417	194,307,497
3. Changes of benefit terms	-	-	-
4. Difference between expected and actual experience of the Total Pension Liability	63,967,124	438,588	64,405,712
5. Changes of assumptions	-	-	-
6. Benefit payments, including refunds of employee contributions & DROP distributions	(83,428,020)	(3,629,357)	(87,057,377)
7. Net change in Total Pension Liability	\$ 223,229,917	\$ 8,127,616	\$ 231,357,533
8. Total Pension Liability – beginning	2,661,241,999	128,257,221	2,789,499,220
9. Total Pension Liability – ending	\$2,884,471,916	\$ 136,384,837	\$3,020,856,753
B. Plan Fiduciary Net Position			
1. Employer contributions	\$ 82,853,422	\$ 5,671,414	\$ 88,524,836
2. Employee contributions	25,157,606	-	25,157,606
3. Other contributions	180,761	-	180,761
4. Pension plan net investment income	331,017,020	14,799,316	345,816,336
5. Benefit payments, including refunds of employee contributions & DROP distributions	(83,428,020)	(3,629,357)	(87,057,377)
6. Pension plan administrative expense	(2,911,241)	(130,156)	(3,041,397)
7. Net change in Plan Fiduciary Net Position	\$ 352,869,548	\$ 16,711,217	\$ 369,580,765
8. Plan Fiduciary Net Position – beginning	1,758,861,454	77,674,300	1,836,535,754
9. Plan Fiduciary Net Position – ending	\$2,111,731,002	\$ 94,385,517	\$2,206,116,519
C. Net Pension Liability	\$ 772,740,914	\$ 41,999,320	\$ 814,740,234
D. Plan Fiduciary Net Position as a percentage of the Total Pension Liability	73.21%	69.21%	73.03%
E. Covered Payroll	\$ 371,574,513	N/A	N/A
F. Net Pension Liability as a percentage of Covered Payroll	207.96%	N/A	N/A



Paid Service

Schedules of Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios

Multiyear

Ultimately 10 Fiscal Years Will Be Displayed

Fiscal year ending December 31,	2019	2018	2017	2016	2015	2014
Total Pension Liability						
Service Cost	\$ 57,317,733	\$ 58,728,968	\$ 50,862,406	\$ 50,307,455	\$ 48,365,128	\$ 49,060,513
Interest on the Total Pension Liability	185,373,080	174,000,936	162,537,756	149,980,786	139,022,240	127,980,919
Benefit Changes	-	(24,831,215)	-	-	-	50,330
Difference between Expected and Actual Experience	63,967,124	32,386,236	27,865,374	20,160,705	6,985,822	(352,391)
Assumption Changes	-	-	209,424,780	-	51,592,627	-
Benefit Payments, DROP Distributions and Refunds	(83,428,020)	(70,812,207)	(61,502,387)	(55,899,631)	(43,058,437)	(33,691,888)
Net Change in Total Pension Liability	223,229,917	169,472,718	389,187,929	164,549,315	202,907,380	143,047,483
Total Pension Liability - Beginning	2,661,241,999	2,491,769,281	2,102,581,352	1,938,032,037	1,735,124,657	1,592,077,174
Total Pension Liability - Ending (a)	\$ 2,884,471,916	\$ 2,661,241,999	\$ 2,491,769,281	\$ 2,102,581,352	\$ 1,938,032,037	\$ 1,735,124,657
Plan Fiduciary Net Position						
Employer Contributions	\$ 82,853,422	\$ 78,694,349	\$ 72,369,349	\$ 70,486,795	\$ 62,792,095	\$ 58,994,602
Employee Contributions	25,157,606	24,456,628	23,351,970	21,816,086	21,187,024	21,844,747
Other Contributions	180,761	87,759	54,467	38,872	34,066	56,744
Pension Plan Net Investment Income	331,017,020	(51,333,962)	217,674,675	84,905,505	1,567,555	91,210,386
Benefit Payments, DROP Distributions and Refunds	(83,428,020)	(70,812,207)	(61,502,387)	(55,899,631)	(43,058,437)	(33,691,888)
Pension Plan Administrative Expense	(2,911,241)	(3,403,120)	(2,826,897)	(2,554,334)	(2,380,241)	(2,167,353)
Net Change in Plan Fiduciary Net Position	352,869,548	(22,310,553)	249,121,177	118,793,293	40,142,062	136,247,238
Plan Fiduciary Net Position - Beginning	1,758,861,454	1,781,172,007	1,532,050,830	1,413,257,537	1,373,115,475	1,236,868,237
Plan Fiduciary Net Position - Ending (b)	\$ 2,111,731,002	\$ 1,758,861,454	\$ 1,781,172,007	\$ 1,532,050,830	\$ 1,413,257,537	\$ 1,373,115,475
Net Pension Liability - Ending (a) - (b)	772,740,914	902,380,545	710,597,274	570,530,522	524,774,500	362,009,182
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	73.21 %	66.09 %	71.48 %	72.87 %	72.92 %	79.14 %
Covered Payroll	\$ 371,574,513	\$ 356,127,157	\$ 339,098,676	\$ 329,344,355	\$ 320,487,331	\$ 310,870,608
Net Pension Liability as a Percentage of Covered Payroll	207.96 %	253.39 %	209.55 %	173.23 %	163.74 %	116.45 %
Notes to Schedule:	N/A	N/A	N/A	N/A	N/A	N/A



Volunteer Service

Schedules of Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios

Multiyear

Ultimately 10 Fiscal Years Will Be Displayed

Fiscal year ending December 31,	2019	2018	2017	2016	2015	2014
Total Pension Liability						
Service Cost	\$ 2,383,968	\$ 2,328,231	\$ 2,137,477	\$ 2,103,552	\$ 2,100,948	\$ 2,087,131
Interest on the Total Pension Liability	8,934,417	8,427,795	8,007,679	7,542,093	7,204,736	6,767,758
Benefit Changes	-	-	-	-	-	222,045
Difference between Expected and Actual Experience	438,588	(86,526)	(578,714)	(996,748)	(1,813,451)	(1,426,660)
Assumption Changes	-	-	10,514,403	-	2,138,654	-
Benefit Payments	(3,629,357)	(3,290,465)	(2,917,621)	(2,398,981)	(2,349,142)	(2,040,757)
Refunds	-	-	-	-	-	-
Net Change in Total Pension Liability	8,127,616	7,379,035	17,163,224	6,249,916	7,281,745	5,609,517
Total Pension Liability - Beginning	128,257,221	120,878,186	103,714,962	97,465,046	90,183,301	84,573,784
Total Pension Liability - Ending (a)	<u>\$ 136,384,837</u>	<u>\$ 128,257,221</u>	<u>\$ 120,878,186</u>	<u>\$ 103,714,962</u>	<u>\$ 97,465,046</u>	<u>\$ 90,183,301</u>
Plan Fiduciary Net Position						
Employer Contributions	\$ 5,671,414	\$ 5,166,749	\$ 5,040,672	\$ 4,811,421	\$ 4,832,505	\$ 4,969,527
Employee Contributions	-	-	-	-	-	-
Pension Plan Net Investment Income	14,799,316	(2,270,359)	9,538,538	3,686,585	74,751	3,842,540
Benefit Payments	(3,629,357)	(3,290,465)	(2,917,621)	(2,398,981)	(2,349,142)	(2,040,757)
Refunds	-	-	-	-	-	-
Pension Plan Administrative Expense	(130,156)	(150,511)	(123,875)	(111,065)	(101,882)	(91,307)
Reconciliation Adjustment	-	-	-	-	-	-
Net Change in Plan Fiduciary Net Position	16,711,217	(544,586)	11,537,714	5,987,960	2,456,232	6,680,003
Plan Fiduciary Net Position - Beginning	77,674,300	78,218,886	66,681,172	60,693,212	58,236,980	51,556,977
Plan Fiduciary Net Position - Ending (b)	<u>\$ 94,385,517</u>	<u>\$ 77,674,300</u>	<u>\$ 78,218,886</u>	<u>\$ 66,681,172</u>	<u>\$ 60,693,212</u>	<u>\$ 58,236,980</u>
Net Pension Liability - Ending (a) - (b)	41,999,320	50,582,921	42,659,300	37,033,790	36,771,834	31,946,321
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	69.21 %	60.56 %	64.71 %	64.29 %	62.27 %	64.58 %
Covered Payroll	N/A	N/A	N/A	N/A	N/A	N/A
Net Pension Liability as a Percentage of Covered Payroll	N/A	N/A	N/A	N/A	N/A	N/A
Notes to Schedule:	N/A	N/A	N/A	N/A	N/A	N/A



Schedules of Required Supplementary Information

Schedule of the Net Pension Liability Multiyear

LOPFI Paid Service Employers

Ultimately 10 Fiscal Years Will Be Displayed

FY Ending December 31,	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered Payroll*	Net Pension Liability as a % of Covered Payroll
2014	\$ 1,735,124,657	\$ 1,373,115,475	\$ 362,009,182	79.14%	\$ 310,870,608	116.45%
2015	1,938,032,037	1,413,257,537	524,774,500	72.92%	320,487,331	163.74%
2016	2,102,581,352	1,532,050,830	570,530,522	72.87%	329,344,355	173.23%
2017	2,491,769,281	1,781,172,007	710,597,274	71.48%	339,098,676	209.55%
2018	2,661,241,999	1,758,861,454	902,380,545	66.09%	356,127,157	253.39%
2019	2,884,471,916	2,111,731,002	772,740,914	73.21%	371,574,513	207.96%

* Actual payroll reported.

LOPFI Volunteer Service Employers

Ultimately 10 Fiscal Years Will Be Displayed

FY Ending December 31,	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered Payroll	Net Pension Liability as a % of Covered Payroll
2014	\$ 90,183,301	\$ 58,236,980	\$ 31,946,321	64.58%	N/A	N/A
2015	97,465,046	60,693,212	36,771,834	62.27%	N/A	N/A
2016	103,714,962	66,681,172	37,033,790	64.29%	N/A	N/A
2017	120,878,186	78,218,886	42,659,300	64.71%	N/A	N/A
2018	128,257,221	77,674,300	50,582,921	60.56%	N/A	N/A
2019	136,384,837	94,385,517	41,999,320	69.21%	N/A	N/A



Schedule of Contributions Multiyear

LOPFI Paid Service Employers

Last 10 Fiscal Years

FY Ending December 31,	Actuarially Determined Contribution#	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll*	Actual Contribution as a % of Covered Payroll
2010	\$ 39,299,629	\$ 39,299,629	\$ -	\$ 265,628,662	14.79%
2011	46,312,346	46,312,346	-	274,656,592	16.86%
2012	48,370,995	48,370,995	-	282,170,105	17.14%
2013	54,034,420	54,034,420	-	296,617,370	18.22%
2014	58,994,602	58,994,602	-	310,870,608	18.98%
2015	62,792,095	62,792,095	-	320,487,331	19.59%
2016	70,486,795	70,486,795	-	329,344,355	21.40%
2017	72,369,349	72,369,349	-	339,098,676	21.34%
2018	78,694,349	78,694,349	-	356,127,157	22.10%
2019	82,853,422	82,853,422	-	371,574,513	22.30%

* Actual payroll reported for years beginning December 31, 2014 and thereafter. Census payroll reported for valuation at year end for years prior to December 31, 2014. Contributions are made on actual payroll during the year.

We do not compute a dollar amount for the Actuarially Determined Contribution. It is our understanding that employers contribute the Actuarially Determined Contribution. The amount shown in this column, therefore, matches the actual contributions.

LOPFI Volunteer Service Employers

Last 10 Fiscal Years

FY Ending December 31,	Actuarially Determined Contribution#	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll
2010	\$ 3,610,187	\$ 3,610,187	\$ -	N/A	N/A
2011	3,960,764	3,960,764	-	N/A	N/A
2012	4,195,779	4,195,779	-	N/A	N/A
2013	4,359,914	4,359,914	-	N/A	N/A
2014	4,969,527	4,969,527	-	N/A	N/A
2015	4,832,505	4,832,505	-	N/A	N/A
2016	4,811,421	4,811,421	-	N/A	N/A
2017	5,040,672	5,040,672	-	N/A	N/A
2018	5,166,749	5,166,749	-	N/A	N/A
2019	5,671,414	5,671,414	-	N/A	N/A

We do not compute a dollar amount for the Actuarially Determined Contribution. It is our understanding that employers contribute the Actuarially Determined Contribution. The amount shown in this column, therefore, matches the actual contributions.



Paid Service

Notes to Schedule of Contributions

Valuation Date: December 31, 2017
Notes Actuarially determined contribution rates are calculated as of December 31, which is one year prior to the beginning of the fiscal year in which contributions are reported.

Methods and Assumptions Used to Determine Contribution Rates for Fiscal Year 2019:

Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percentage of Payroll, Closed
Remaining Amortization Period	17.0 years beginning January 1, 2019
Asset Valuation Method	5-Year smoothed market; 20% corridor
Wage Inflation	3.25%
Price Inflation	2.50%
Salary Increases	3.75% to 18.25%, including inflation
Investment Rate of Return	7.50%, as adopted by the Board
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2017 valuation pursuant to an experience study of the period 2012 - 2016.
Mortality	RP-2014 Healthy Annuitant, Disabled Retiree and Employee mortality tables for males and females. The tables applied credibility adjustments of 135% for males and 125% for females and were adjusted for fully generational mortality improvements using Scale MP-2016.

Other Information:

Notes There were no changes in benefit provisions or methods in the December 31, 2017 actuarial valuation. There were changes in the assumptions following an experience study of the period 2012-2016.

Volunteer Service

Notes to Schedule of Contributions

Valuation Date: December 31, 2017
Notes Actuarially determined contribution rates are calculated as of December 31, which is one year prior to the beginning of the fiscal year in which contributions are reported.

Methods and Assumptions Used to Determine Contribution Rates for Fiscal Year 2019:

Actuarial Cost Method	Entry Age Normal
Amortization Method	Increasing Dollar, Closed
Remaining Amortization Period	16.0 years beginning January 1, 2019
Asset Valuation Method	5-Year smoothed market; 20% corridor
Price Inflation	2.50%
Investment Rate of Return	7.50%, as adopted by the Board
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2017 valuation pursuant to an experience study of the period 2012 - 2016.
Mortality	RP-2014 Healthy Annuitant, Disabled Retiree and Employee mortality tables for males and females. The tables applied credibility adjustments of 135% for males and 125% for females and were adjusted for fully generational mortality improvements using Scale MP-2016.

Other Information:

Notes There were no changes in benefit provisions or methods in the December 31, 2017 actuarial valuation. There were changes in the assumptions following an experience study of the period 2012-2016.

Schedule of Investment Returns Multiyear Last 10 Fiscal Years

<u>FY Ending December 31,</u>	<u>Annual Return¹</u>
2010	9.57 %
2011	0.20 %
2012	11.17 %
2013	17.33 %
2014	6.80 %
2015	(0.05)%
2016	5.76 %
2017	13.91 %
2018	(3.06)%
2019	18.59 %

¹ Money-weighted annual return determined by GRS. Monthly money-weighted returns are not available.

SECTION D

NOTES TO FINANCIAL STATEMENTS

Long-Term Expected Return on Plan Assets

Information about the assumed rate of investment return is included in the 2012-2016 five-year experience study. The assumed rate of investment return falls within a reasonable range of the long-term expected rate of return.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These real rates of return 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 and by adding expected inflation. Best estimates of arithmetic real returns for the 10-year period from 2019 to 2028 were based on capital market assumptions collected from fourteen national investment consultants. For each major asset class that is included in the pension plan's target asset allocation as of December 31, 2019, these best estimates are summarized in the following table:

Asset Allocation

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>	<u>Allocation-Weighted Long-Term Expected Real Rate of Return</u>
Fixed Income	30%	1.3%	0.40%
Domestic Equity	42%	5.4%	2.27%
Foreign Equity	18%	7.8%	1.40%
Alternative Investments	10%	6.7%	0.67%
Total	<u>100%</u>		<u>4.74%</u>
Expected Inflation			<u>2.25%</u>
Total Return			<u>6.99%</u>

Gabriel, Roeder, Smith & Company does not provide investment advice.

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

	1% Decrease 6.00%	Current Single Discount Rate Assumption 7.00%	1% Increase 8.00%
Paid Service	\$1,231,272,464	\$772,740,914	\$402,972,554
Volunteer Service	65,186,340	41,999,320	23,524,525
Total	\$1,296,458,804	\$814,740,234	\$426,497,079

Summary of Population Statistics

	Paid Service	Volunteer Service
Inactive Plan Members or Beneficiaries Currently Receiving Benefits (Including DROP)	3,553	3,190
Inactive Plan Members Entitled to But Not Yet Receiving Benefits #	5,948	6,554
Active Plan Members	6,509	7,533
Total Plan Members	16,010	17,277

These counts include 1,819 and 2,595 inactive linked records for paid service and volunteer service, respectively. These records will generate separate checks at retirement as well as separate counts.

SECTION E

SUMMARY OF BENEFITS

Arkansas Local Police and Fire Retirement System
Brief Summary as of December 31, 2019 of LOPFI Coverage for
BENEFIT PROGRAM 1 PAID SERVICE
Benefits and Conditions Evaluated and/or Considered
(Section references are to Arkansas Code of 1987, including
amendments from 2019 General Assembly Session)

Voluntary Retirement. Section 24-10-604. A member may retire with an age & service annuity after both (i) completing 5 years (10 years for members hired on or after July 1, 2013) of credited service, and (ii) attaining his normal retirement age. The normal retirement age is age 60 for a member with less than 20 years credited service, age 55 for a member with at least 20 years credited service or any age for a member with 28 or more years of credited service.

Compulsory Retirement. Section 24-10-605. Established by each employer.

Paid Service. Section 24-10-102(13). Covered employment which is half-time employment or more, and for which a minimum dollar amount is paid. For each calendar month in 1981, the minimum is \$500 for the month. For each later calendar year, the \$500 is indexed for inflation (Consumer Price Index). Accordingly, the monthly minimum during 2019 was \$1,448.

Volunteer Service. Section 24-10-102(14). Covered employment which cannot be classified as Paid Service.

Final Average Pay. Section 24-10-102(16)(A). The average of a member's monthly pay during the period of 36 consecutive months of credited Paid Service producing the highest monthly average, which period is contained within the 120 consecutive months of credited Paid Service immediately preceding retirement. Not applicable to Volunteer Service.

Age & Service Annuity. Section 24-10-602. The annuity, payable monthly for life, equals a specified amount multiplied by the member's number of years of credited service. The amount depends upon the conditions related to covered employment:

- A. **Paid Service Not Covered by Social Security.** For each year of such service, 2.94% of the member's final average pay.
- B. **Paid Service Also Covered by Social Security.** For each year of such service, 1.94% of the member's final average pay. In addition, there is a temporary annuity equal to 1.0% of the member's final average pay for each year of service, payable to normal Social Security retirement age.
- C. At time of retirement, the total of A plus B cannot exceed 100% of final average pay.

Early Annuity. Section 24-10-606. A member may retire with an early annuity after both (i) completing 20 years of credited service, and (ii) attaining age 50 or (iii) after completing 25 years of credited paid service. The early annuity amount, payable monthly for life, is computed in the same manner as an age & service annuity, based upon his service and pay record to time of early retirement, but reduced to reflect the fact that his age when payments begin is younger than his normal retirement age. The amount of the reduction is 1/2 of 1% (.005) for each month his age at early retirement is younger than his normal retirement age (age 55 for members with 25 years of credited paid service).

Vested Termination Annuity. Section 24-10-611. If a member leaves LOPFI-covered employment (i) before attaining his early retirement age, and (ii) after completing 5 years (10 years for members hired on or after July 1, 2013) of credited service, he becomes eligible for a vested termination annuity; provided he lives to his normal retirement age and does not withdraw his accumulated contributions. The vested annuity amount, payable monthly for life from his normal retirement age, is computed in the same manner as an age & service annuity, based upon his service and pay record to time of leaving LOPFI coverage.

Non-Duty Disability Annuity. Section 24-10-607(a)(1)(A). A member with 5 or more years (10 or more years for members hired on or after July 1, 2013) of credited service who becomes totally and permanently disabled from other than duty-connected causes receives a non-duty disability annuity computed in the same manner as an age & service annuity, based upon his service and pay record to time of disability.

Duty Disability Annuity. Section 24-10-607(c)(1)(A). A member who becomes totally and permanently disabled from duty-connected causes receives a duty disability annuity computed in the same manner as an age & service annuity, based upon his service and pay record to time of disability. The minimum annuity payable is 65% of the member's final average pay.

Non-Duty Death-in-Service. Paid Member. Section 24-10-608(a)(1). Upon the death, from other than duty-connected causes, of a Paid Service member who had completed 5 years (10 years for members hired on or after July 1, 2013) of paid service, his eligible surviving dependents receive the following benefits:

- (a) The surviving spouse receives an annuity equal to the Option B50 annuity (joint and 50% survivor benefit) computed based upon the deceased member's service (and pay) record to time of death. Minimum of 20% of member's final average pay, or \$125 monthly if greater.
- (b) While a spouse benefit is payable, each dependent child under age 18 (age 23 if full time student) receives 10% of member's final average pay, or \$25 monthly if greater. The totals for 4 or more children cannot exceed 30% of final average pay, or \$125 monthly if greater.
- (c) While no spouse benefit is payable, each dependent child under age 18 (age 23 if full time student) receives 20% of member's final average pay, or \$25 monthly if greater. The total for 3 or more children cannot exceed 50% of final average pay, or \$125 monthly if greater.
- (d) If there is neither spouse nor child at time of member's death, each dependent parent receives 20% of final average pay.

Duty Death-in-Service. Section 24-10-608(b)(1). Upon the death of a Paid Service member from duty-connected causes, regardless of length of service, his eligible surviving dependents receive the same benefits as for Non-Duty Death, except that if credited service at time of death is less than 25 years, credited service is increased to 25 years.

Benefit Changes After Retirement. Section 24-10-612. There is an annual redetermination of monthly benefit amount, beginning the July first following 12 months of retirement. The redetermined amount is 3.0% of the monthly benefit from the preceding July.

Member Contributions. Sections 24-10-404 and 24-10-613. Each member contributes 8.5% of his covered pay if his covered employment is resulting in Paid Service credit and is not covered by Social Security. For other covered employment conditions, each member contributes 2.5% of his covered pay. Individual member deposit accounts do not receive interest credit. If a member leaves LOPFI-covered employment before an annuity is payable on his behalf, the member may choose to have his accumulated contributions refunded to him. If he dies, his accumulated contributions are refunded to his designated beneficiary.

Employer Contributions. Section 24-10-405. Each employer contributes the remainder amounts necessary to finance its employees' participation in LOPFI. Contributions to LOPFI are determined based upon level-rate principles, so that contribution rates do not have to increase over decades of time.

DROP (Deferred Retirement Option Plan). Sections 24-10-701 through 24-10-708. Paid service members who have attained age 55 with at least 20 years of service or members with at least 28 years of service may participate. A participant with 28 years of service will receive 75% of his accrued benefit at time of DROP election while in the DROP, payable into the participant's DROP account (which will be credited with 6% interest annually). A participant with less than 28 years of service will receive 72% of his accrued benefit at time of DROP election while in the DROP, payable into the participant's DROP account (which will be credited with 6% interest annually). The duration of participation in the DROP shall not exceed 7 years. When a member has reached year 6 of participation in the DROP, the amount of the accrued benefit at the time of DROP election shall be redetermined. The redetermined amount shall be the amount of the benefit as of the immediately preceding July 1 increased by 3%. The redetermined amount shall be payable only when the member elects to cease employment and receive a service retirement and shall not be added to the plan account. Employer and employee contributions continue and are used to finance System benefits (i.e., they are not deposited to the participant's DROP account). For additional details please refer to Arkansas Code, Title 24, Chapter 10, Subchapter 7.

Arkansas Local Police and Fire Retirement System
Brief Summary as of December 31, 2019 of LOPFI Coverage for
BENEFIT PROGRAM 2 PAID SERVICE
Benefits and Conditions Evaluated and/or Considered
(Section references are to Arkansas Code of 1987, including
amendments from 2019 General Assembly Session)

The provisions for Benefit Program 2 employers are the same as those for Benefit Program 1 employers with the following exception:

Age & Service Annuity. Section 24-10-602. The annuity, payable monthly for life, equals a specified amount multiplied by the member's number of years of credited service. The amount depends upon the conditions related to covered employment:

A. ***Paid Service Not Covered by Social Security.***

- **Paid Service Before Adoption of Benefit Program 2.** For each year of such service, 2.94% of the member's final average pay.
- **Paid Service After Adoption of Benefit Program 2.** For each year of such service, 3.28% of the member's final average pay.
- At time of retirement, the total cannot exceed 100% of final average pay.

B. ***Paid Service Also Covered by Social Security.***

- **Paid Service Before Adoption of Benefit Program 2.** For each year of such service, 1.94% of the member's final average pay, plus a temporary annuity equal to 1.0% of the member's final average pay for each year of service, payable to normal Social Security retirement age.
- **Paid Service After Adoption of Benefit Program 2.** For each year of such service, 2.94% of the member's final average pay.
- At time of retirement, the total cannot exceed 100% of final average pay.

Arkansas Local Police and Fire Retirement System
Brief Summary as of December 31, 2019 of LOPFI Coverage for
VOLUNTEER SERVICE
Benefits and Conditions Evaluated and/or Considered
(Section references are to Arkansas Code of 1987, including
amendments from 2019 General Assembly Session)

Voluntary Retirement. Section 24-10-604. A member may retire with an age & service annuity after both (i) completing 5 years (10 years for members hired on or after July 1, 2013) of credited service, and (ii) attaining his normal retirement age. The normal retirement age is age 60 for a member with less than 20 years credited service, age 55 for a member with at least 20 years credited service or any age for a member with 28 or more years of credited service.

Compulsory Retirement. Section 24-10-605. Established by each employer.

Paid Service. Section 24-10-102(13). Covered employment which is half-time employment or more, and for which a minimum dollar amount is paid. For each calendar month in 1981, the minimum is \$500 for the month. For each later calendar year, the \$500 is indexed for inflation (Consumer Price Index). Accordingly, the monthly minimum during 2019 was \$1,448.

Volunteer Service. Section 24-10-102(14). Covered employment which cannot be classified as Paid Service.

Age & Service Annuity. Section 24-10-102(16)(A). The annuity, payable monthly for life, equals a specified amount multiplied by the member's number of years of credited service. The amount depends upon the conditions related to covered employment:

Volunteer Service. For each year of Benefit Program 3 Volunteer Service, \$5.00 monthly, to a maximum of \$200 monthly for all volunteer service. Beginning in 2003, each July 1 these amounts are indexed for inflation by any percentage increase in the inflation index for the period from December 2003 to the December immediately preceding July 1, for members retiring in the next 12 months. Accordingly, the basic benefit factor reflected in the December 31, 2019 valuations was \$6.96 monthly. For each year of Benefit Program 4 Volunteer Service, \$10.00 monthly, to a maximum benefit of \$400 monthly for all volunteer service. Beginning in 2013, each July 1 these amounts are indexed for inflation by any percentage increase in the inflation index for the period from December 2011 to the December immediately preceding July 1, for members retiring in the next 12 months. Accordingly, the basic benefit factor reflected in the December 31, 2019 valuations was \$11.27 monthly.

Early Annuity. Section 24-10-606. A member may retire with an early annuity after both (i) completing 20 years of credited service, and (ii) attaining age 50. The early annuity amount, payable monthly for life, is computed in the same manner as an age & service annuity, based upon his service record to time of early retirement, but reduced to reflect the fact that his age when payments begin is younger than his normal retirement age. The amount of the reduction is 1/2 of 1% (.005) for each month his age at early retirement is younger than his normal retirement age.



Vested Termination Annuity. Section 24-10-611. If a member leaves LOPFI-covered employment (i) before attaining his early retirement age, and (ii) after completing 5 years (10 years for members hired on or after July 1, 2013) of credited service, he becomes eligible for a vested termination annuity; provided he lives to his normal retirement age (and does not withdraw any accumulated contributions). The vested annuity amount, payable monthly for life from his normal retirement age, is computed in the same manner as an age & service annuity, based upon his service record to time of leaving LOPFI coverage.

Non-Duty Disability Annuity. Section 24-10-607(a)(1)(A). A member with 5 or more years (10 or more years for members hired on or after July 1, 2013) of credited service who becomes totally and permanently disabled from other than duty-connected causes receives a non-duty disability annuity computed in the same manner as an age & service annuity, based upon his service record to time of disability.

Duty Disability Annuity. Section 24-10-607(c)(1)(A). A member who becomes totally and permanently disabled from duty-connected causes receives a duty disability annuity computed in the same manner as an age & service annuity, based upon his service and pay record to time of disability. If the member had less than 25 years of service at time of disability, credited service is increased to 25 years.

Non-Duty Death-in-Service. Volunteer Member. Section 24-10-609. Upon the death, from other than duty-connected causes, of a Volunteer member who had completed 5 years (10 years for members hired on or after July 1, 2013) of volunteer service, or who was eligible for normal retirement, his eligible surviving dependents receive the following benefits:

- (a) The surviving spouse receives an annuity equal to the Option B50 annuity (joint and 50% survivor benefit) computed based upon the deceased member's service record to time of death.
- (b) Each dependent child under age 18 (age 23 if full time student) receives \$15 monthly. The totals for 3 or more children cannot exceed \$40 monthly.

Duty Death-in-Service. Section 24-10-608(b)(1). Upon the death of a Paid Service member from duty-connected causes, regardless of length of service, his eligible surviving dependents receive the same benefits as for Non-Duty Death, except that if credited service at the time of death is less than 25 years, credited service is increased to 25 years.

Benefit Changes After Retirement. Section 24-10-612. There is an annual redetermination of monthly benefit amount, beginning the July first following 12 months of retirement. The redetermined amount is 3.0% of the monthly benefit from the preceding July.

Member Contributions. For Volunteer Service credit, members do not contribute.

Employer Contributions. Section 24-10-405. Each employer contributes the amounts necessary to finance all employees participation in LOPFI. Contributions to LOPFI are determined based upon level-rate principles, so that contribution rates do not have to increase over decades of time.

SECTION F

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Summary of Assumptions Used for LOPFI GASB Accounting Reports

The actuarial assumptions used in the calculation of the Total Pension Liabilities are shown in this section of the report. The assumptions are established by the Board after consulting with the actuary as outlined in A.C.A. 24-10-205(a)(1) with the exception of the economic assumptions. The economic assumptions for purposes of the GASB Accounting reports were selected by the actuary based on the results of an experience study covering the period from January 1, 2012 through December 31, 2016.

ECONOMIC ASSUMPTIONS

The investment return rate used in this report was 7.00% per year, compounded annually (net after administrative expenses). This rate of return is not the assumed real rate of return. The real rate of return is defined to be the portion of investment return which is more than the wage inflation rate. With a 3.25% wage inflation assumption, the 7.00% investment return rate translates to an assumed real rate of return of 3.75%.

Price inflation was assumed to be 2.50% a year. This assumption was utilized to increase the basic benefit factor for volunteer members.

Pay increase assumptions for individual active members are summarized in Schedule A-5. Part of the assumption for each age is for a merit and/or seniority increase, and the other 3.25% recognizes wage inflation.

Total active member payroll is assumed to increase 3.25% a year, which is the portion of the individual pay increase assumptions attributable to wage inflation.

The number of active members is assumed to continue at the present number for LOPFI plans.

NON-ECONOMIC ASSUMPTIONS

The mortality tables used to measure retired life mortality were the RP-2014 Healthy Annuitant benefit weighted generational mortality tables for males and females. The disability post-retirement mortality tables used were the RP-2014 Disabled Retiree benefit weighted generational mortality tables for males and females. The death-in-service mortality tables used were the RP-2014 Employee benefit weighted generational mortality tables for males and females. Fifty percent of deaths-in-service were assumed to be duty related. The tables applied credibility adjustments of 135% for males and 125% for females and were adjusted for fully generational mortality improvements using Scale MP-2016. Related retired life mortality values are shown in Schedule A-1.

The probabilities of retirement for members eligible to retire are shown in Schedule A-3.

The probabilities of withdrawal from service are summarized in Schedule A-4, and the **probabilities of disability** are summarized in Schedule A-2.



An individual entry age actuarial cost method of valuation was used in determining age & service allowance normal costs and the allocation of actuarial present values between service rendered before and after the valuation date. The entry-age actuarial cost method has the following characteristics:

- (i) the annual normal costs for each individual active member, payable from the member's actual date of employment to the member's projected date of retirement are sufficient to accumulate the actuarial present value of the member's benefit at the time of retirement; and
- (ii) each annual normal cost is: (a) a constant percentage of the member's year by year projected covered pay for paid service plans, or (b) an increasing dollar amount for volunteer service plans.

Differences in the past between assumed experience and actual experience ("actuarial gains and losses") are inevitable and become part of accrued liabilities. In LOPFI, cumulative actuarial losses and gains are the same as unfunded (or overfunded) accrued liabilities.

Unfunded accrued liabilities are amortized to produce contribution amounts (principal and interest) which are (a) level percent of payroll contributions over a period of future years for paid service plans, or (b) increasing dollar amounts for volunteer service plans.

For Benefit Program 3 volunteer service plans, the contribution rates from the December 31, 2002 valuation were developed based on a \$5.00 per month basic benefit factor. This factor is \$6.96 effective July 1, 2019 and is assumed to increase at the assumed rate of price inflation in future years. For Benefit Program 4 volunteer service plans, the contribution rates from the December 31, 2012 valuation were developed based on a \$10.00 per month basic benefit factor. This factor is \$11.27 effective July 1, 2019 and is assumed to increase at the assumed rate of price inflation in future years.

OTHER TECHNICAL ASSUMPTIONS -----

Decrements are assumed to occur at the middle of the valuation year.

The probability of being married, for death-in-service benefits, is assumed to be 90%.

Members who are eligible to participate in the DROP are assumed to participate in the DROP program in such a manner that is the most advantageous to them.

Future service credit is always assumed to accrue at the rate of 1 year of credit every 12 calendar months. Lower service accrual rates (service breaks or less-than-full-time employment) or higher service accrual rates (addition of military credit or reinstatement of prior service) are reflected as they are reported. Any lower or higher accrual rates may result in small financial gains or losses when reported.

The form of benefit payment assumed in the valuation for paid service and volunteer service plans is the Five Year Certain and Life Option. For local plans under LOPFI administration, the assumed form of benefit payment is 100% joint and survivor for police plans and the Life Option for fire plans. For local fire plans under LOPFI administration who have adopted Act 397, the assumed form of benefit payment is 100% joint and survivor.

Employer contribution dollars were assumed to be **paid in equal installments** throughout the employer fiscal year.

Present assets (cash & investments) were used based on a smoothed market value.

The data about persons now covered and about present assets were furnished by the System's administrative staff. Although examined for general reasonableness, the data was not audited by the Actuary.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as: plan experience differing from that anticipated by the economic and demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements.

Schedule A-1

Single Life Retirement Values

Based on the RP-2014 Healthy Annuitant Generational Mortality Tables and 7.00% Interest

Sample Attained Ages	Probability of Dying Next Year*		Value at Retirement \$1.00 Monthly for Life		Future Life Expectancy (years)*					
	Men	Women	Men	Women	2019		2024		2029	
					Men	Women	Men	Women	Men	Women
35	0.172%	0.136%	\$ 163.40	\$ 166.28	46.44	50.12	47.00	50.63	47.56	51.15
40	0.253%	0.207%	159.09	162.94	41.34	45.00	41.88	45.50	42.42	46.01
45	0.361%	0.262%	153.69	158.75	36.39	40.00	36.91	40.49	37.43	40.98
50	0.529%	0.332%	146.93	153.17	31.59	35.06	32.10	35.54	32.60	36.01
55	0.761%	0.465%	138.68	145.82	27.00	30.21	27.48	30.67	27.96	31.13
60	1.069%	0.697%	128.64	136.61	22.62	25.54	23.07	25.97	23.51	26.40
65	1.541%	1.041%	116.63	125.42	18.50	21.12	18.89	21.50	19.29	21.90
70	2.296%	1.607%	102.53	111.86	14.67	16.94	15.00	17.29	15.36	17.65
75	3.643%	2.619%	86.33	95.89	11.17	13.08	11.46	13.40	11.76	13.72
80	6.127%	4.474%	68.81	78.17	8.08	9.64	8.34	9.92	8.59	10.19

* Life expectancies in future years are determined by the fully generational MP-2016 projection scale.

Sample Attained Ages	Benefit Increasing 3.00% Yearly	Portion of Age 55 Lives Still Alive	Sample Attained Ages
55	\$100	100 %	55
60	116	95	60
65	134	89	65
70	156	81	70
75	181	69	75
80	209	54	80



Schedule A-2 Probabilities of Disability Retirement

Paid Service Members

Sample Ages	Percent Becoming Disabled within Next Year	
	Non-Duty	Duty
20	0.07 %	0.12 %
25	0.07	0.12
30	0.10	0.15
35	0.13	0.21
40	0.20	0.32
45	0.31	0.49
50	0.52	0.84
55	0.91	1.45
60	1.36	2.18

Volunteer Service Members

Sample Ages	Percent Becoming Disabled within Next Year	
	Non-Duty	Duty
20	0.04 %	0.00 %
25	0.04	0.00
30	0.04	0.00
35	0.04	0.00
40	0.09	0.01
45	0.12	0.01
50	0.23	0.02
55	0.41	0.04
60	0.65	0.06

Schedule A-3

Probabilities of Retirement for Members Eligible to Retire

Paid Service Members

Retirement Ages	Percents of Active Members Retiring within Next Year		Years of Service	Percents of Active Members Retiring within Next Year
	Early	Normal		
45-49	6 %			
50-54	6			
55		18 %	28	20 %
56		15	29	15
57		15	30	15
58		15	31	15
59		15	32	15
60		20	33	25
61		15	34	100
62		25		
63		25		
64		25		
65		50		
66		60		
67		70		
68		80		
69		90		
70+		100		

A member was assumed eligible for retirement after attaining age 55 with 20 years of service or age 60 with 5 years of service or any age with 28 or more years of service. A member was assumed to retire with 100% probability at 34 or more years of service credit.

A member was assumed eligible for a reduced benefit after attaining age 50 with 20 or more years of service or any age with 25 or more years of paid service credit.

The probabilities of retirement shown above represent ultimate termination of employment (whether or not the member participates in the DROP).

Schedule A-3

Probabilities of Retirement for Members Eligible to Retire (Concluded)

Volunteer Service Members

Retirement Ages	Percents of Active Members Retiring within Next Year	
	Early	Normal
Under 50		18 %
50-54	2.5 %	18
55-59		15
60-64		10
65-69		15
70-74		20
75+		100

A member was assumed to be eligible for retirement after 28 years of service, attaining age 55 with 20 years of service, or age 60 with 5 years of service.

A member was assumed eligible for a reduced benefit after attaining age 50 with 20 or more years of service.

Schedule A-4

Rates of Separation (Excluding Deaths and Disability) from Active Employment Before Retirement

Paid Service Members

Sample Ages	Years of Service	% of Active Members Separating within Next Year
ALL	0	18.00 %
	1	16.00
	2	13.00
	3	11.00
	4	10.00
25	5 & Over	9.42
30		7.92
35		6.07
40		4.84
45		3.87
50		3.08
55		0.88
60		0.00

Volunteer Service Members

Sample Ages	Years of Service	% of Active Members Separating within Next Year
ALL	0	23.00 %
	1	21.00
	2	19.00
	3	17.00
	4	15.00
25	5 & Over	9.50
30		9.50
35		9.50
40		9.50
45		9.50
50		9.50
55		9.50
60		9.50

Schedule A-5

Pay Increase Assumptions for an Individual Paid Service Member

Pay Increase Assumptions for an Individual Member			
Service Years	Merit and Seniority	Base (Economic)	Increase Next Year
1	15.00%	3.25%	18.25%
2	9.00%	3.25%	12.25%
3	4.00%	3.25%	7.25%
4	3.00%	3.25%	6.25%
5	2.00%	3.25%	5.25%
6	1.50%	3.25%	4.75%
7	1.50%	3.25%	4.75%
8	1.50%	3.25%	4.75%
9	1.00%	3.25%	4.25%
10	1.00%	3.25%	4.25%
11	0.50%	3.25%	3.75%
12	0.50%	3.25%	3.75%
13	0.50%	3.25%	3.75%
14	0.50%	3.25%	3.75%
15	0.50%	3.25%	3.75%
16	0.50%	3.25%	3.75%
17	0.50%	3.25%	3.75%
18	0.50%	3.25%	3.75%
19	0.50%	3.25%	3.75%
20+	0.50%	3.25%	3.75%

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 plan’s projected fiduciary net position is not sufficient to pay benefits).

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.00%; the municipal bond rate is 2.75%; and the resulting SDR is 7.00%.

The tables in this section provide background for the development of the Single Discount Rate.

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).

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 Single Discount Rate. It breaks down the benefit payments into present values for funded and unfunded portions and shows the equivalent total at the SDR.

Paid Service
Single Discount Rate Development
Projection of Contributions Beginning January 1, 2020
(Years 1-50)

Year	Projected Payroll for Current Employees	Projected Contributions from Current Employees	Projected Service Cost and Expense Contributions	Projected UAL Contributions	Projected Total Contributions
0	\$ 371,574,513				
1	360,352,710	\$ 24,244,380	\$ 38,830,397	\$ 53,453,255	\$ 116,528,031
2	332,904,147	22,310,722	37,835,229	56,483,368	116,629,318
3	312,101,242	20,862,091	36,921,572	59,037,463	116,821,126
4	294,265,746	19,618,653	35,919,775	61,544,485	117,082,913
5	276,942,671	18,404,622	34,985,800	65,975,266	119,365,688
6	262,635,196	17,414,236	33,931,878	70,570,078	121,916,193
7	248,035,433	16,399,537	32,836,560	75,380,653	124,616,750
8	233,499,265	15,397,382	31,720,236	80,369,819	127,487,437
9	219,251,254	14,423,762	30,595,932	85,523,088	130,542,782
10	205,101,355	13,456,066	29,451,188	88,360,609	131,267,864
11	191,526,883	12,524,028	28,338,262	91,255,568	132,117,857
12	178,850,258	11,655,532	27,296,482	94,222,851	133,174,864
13	166,425,590	10,805,991	26,266,471	97,285,753	134,358,214
14	154,384,290	9,985,081	25,264,427	100,448,167	135,697,674
15	143,121,725	9,224,063	24,318,901	103,713,379	137,256,343
16	132,423,051	8,509,287	23,411,321	107,084,285	139,004,892
17	122,061,075	7,821,039	22,526,859	110,564,524	140,912,422
18	111,909,992	7,147,078	21,651,155	-	28,798,233
19	102,164,440	6,499,452	20,614,346	-	27,113,797
20	92,792,913	5,878,725	19,593,805	-	25,472,530
21	83,543,000	5,271,990	18,554,436	-	23,826,426
22	74,550,190	4,690,969	17,520,669	-	22,211,638
23	66,108,914	4,154,758	16,528,670	-	20,683,428
24	58,028,544	3,643,738	15,562,203	-	19,205,941
25	50,311,884	3,156,459	14,618,432	-	17,774,892
26	42,876,810	2,685,650	13,688,266	-	16,373,916
27	35,565,906	2,220,876	12,752,228	-	14,973,104
28	28,511,119	1,775,685	11,830,641	-	13,606,326
29	22,240,007	1,380,962	10,980,780	-	12,361,742
30	16,943,166	1,050,241	10,216,378	-	11,266,619
31	12,183,771	756,604	9,488,944	-	10,245,548
32	7,833,049	486,954	8,788,297	-	9,275,251
33	4,080,316	254,661	8,138,487	-	8,393,148
34	1,201,405	74,871	7,574,009	-	7,648,880
35	-	-	7,188,158	-	7,188,158
36	-	-	6,931,253	-	6,931,253
37	-	-	6,666,787	-	6,666,787
38	-	-	6,396,427	-	6,396,427
39	-	-	6,121,995	-	6,121,995
40	-	-	5,844,961	-	5,844,961
41	-	-	5,566,644	-	5,566,644
42	-	-	5,288,397	-	5,288,397
43	-	-	5,011,390	-	5,011,390
44	-	-	4,736,588	-	4,736,588
45	-	-	4,464,734	-	4,464,734
46	-	-	4,196,524	-	4,196,524
47	-	-	3,932,725	-	3,932,725
48	-	-	3,674,043	-	3,674,043
49	-	-	3,421,157	-	3,421,157
50	-	-	3,174,769	-	3,174,769



Paid Service
Single Discount Rate Development
Projection of Contributions Beginning January 1, 2020
(Years 51-100)

Year	Projected Payroll for Current Employees	Projected Contributions from Current Employees	Projected Service Cost and Expense Contributions	Projected UAL Contributions	Projected Total Contributions
51	\$ -	\$ -	\$ 2,935,546	\$ -	\$ 2,935,546
52	-	-	2,704,092	-	2,704,092
53	-	-	2,480,956	-	2,480,956
54	-	-	2,266,638	-	2,266,638
55	-	-	2,061,583	-	2,061,583
56	-	-	1,866,182	-	1,866,182
57	-	-	1,680,770	-	1,680,770
58	-	-	1,505,633	-	1,505,633
59	-	-	1,341,007	-	1,341,007
60	-	-	1,187,068	-	1,187,068
61	-	-	1,043,938	-	1,043,938
62	-	-	911,672	-	911,672
63	-	-	790,252	-	790,252
64	-	-	679,583	-	679,583
65	-	-	579,490	-	579,490
66	-	-	489,707	-	489,707
67	-	-	409,882	-	409,882
68	-	-	339,584	-	339,584
69	-	-	278,303	-	278,303
70	-	-	225,464	-	225,464
71	-	-	180,437	-	180,437
72	-	-	142,552	-	142,552
73	-	-	111,109	-	111,109
74	-	-	85,398	-	85,398
75	-	-	64,707	-	64,707
76	-	-	48,340	-	48,340
77	-	-	35,628	-	35,628
78	-	-	25,943	-	25,943
79	-	-	18,708	-	18,708
80	-	-	13,413	-	13,413
81	-	-	9,612	-	9,612
82	-	-	6,933	-	6,933
83	-	-	5,074	-	5,074
84	-	-	3,797	-	3,797
85	-	-	2,919	-	2,919
86	-	-	2,310	-	2,310
87	-	-	1,875	-	1,875
88	-	-	1,553	-	1,553
89	-	-	1,302	-	1,302
90	-	-	1,097	-	1,097
91	-	-	924	-	924
92	-	-	773	-	773
93	-	-	640	-	640
94	-	-	522	-	522
95	-	-	416	-	416
96	-	-	322	-	322
97	-	-	239	-	239
98	-	-	166	-	166
99	-	-	102	-	102
100	-	-	47	-	47

Paid Service
Single Discount Rate Development
Projection of Plan Fiduciary Net Position Beginning January 1, 2020
(Years 1-50)

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	\$ 2,111,731,002	\$ 116,528,031	\$ 103,758,295	\$ 3,589,943	\$ 148,137,029	\$ 2,269,047,824
2	2,269,047,824	116,629,318	109,685,627	3,857,381	158,939,542	2,431,073,676
3	2,431,073,676	116,821,126	120,457,273	4,132,825	169,907,842	2,593,212,546
4	2,593,212,546	117,082,913	132,279,018	4,408,461	180,850,323	2,754,458,303
5	2,754,458,303	119,365,688	131,157,950	4,682,579	192,245,214	2,930,228,676
6	2,930,228,676	121,916,193	143,471,808	4,981,389	204,202,921	3,107,894,593
7	3,107,894,593	124,616,750	156,356,813	5,283,421	216,278,716	3,287,149,825
8	3,287,149,825	127,487,437	169,944,100	5,588,155	228,447,360	3,467,552,367
9	3,467,552,367	130,542,782	183,684,449	5,894,839	240,697,335	3,649,213,196
10	3,649,213,196	131,267,864	198,212,871	6,203,662	252,928,021	3,828,992,548
11	3,828,992,548	132,117,857	212,760,568	6,509,287	265,030,749	4,006,871,299
12	4,006,871,299	133,174,864	226,828,913	6,811,681	277,024,162	4,183,429,731
13	4,183,429,731	134,358,214	241,303,521	7,111,831	288,915,598	4,358,288,191
14	4,358,288,191	135,697,674	255,921,945	7,409,090	300,688,559	4,531,343,390
15	4,531,343,390	137,256,343	269,697,985	7,703,284	312,371,925	4,703,570,389
16	4,703,570,389	139,004,892	283,353,938	7,996,070	324,008,030	4,875,233,303
17	4,875,233,303	140,912,422	296,883,969	8,287,897	335,614,485	5,046,588,343
18	5,046,588,343	28,798,233	309,636,321	8,579,200	343,302,901	5,100,473,957
19	5,100,473,957	27,113,797	322,194,854	8,670,806	346,581,670	5,143,303,763
20	5,143,303,763	25,472,530	334,833,407	8,743,616	349,085,910	5,174,285,181
21	5,174,285,181	23,826,426	347,249,673	8,796,285	350,768,939	5,192,834,588
22	5,192,834,588	22,211,638	359,613,161	8,827,819	351,585,347	5,198,190,594
23	5,198,190,594	20,683,428	370,782,149	8,836,924	351,523,068	5,190,778,018
24	5,190,778,018	19,205,941	381,124,394	8,824,323	350,597,928	5,170,633,170
25	5,170,633,170	17,774,892	391,727,026	8,790,076	348,774,911	5,136,665,871
26	5,136,665,871	16,373,916	401,788,738	8,732,332	346,004,779	5,088,523,495
27	5,088,523,495	14,973,104	410,998,265	8,650,490	342,272,547	5,026,120,391
28	5,026,120,391	13,606,326	419,675,724	8,544,405	337,562,378	4,949,068,966
29	4,949,068,966	12,361,742	426,278,019	8,413,417	331,903,289	4,858,642,561
30	4,858,642,561	11,266,619	431,908,809	8,259,692	325,347,305	4,755,087,984
31	4,755,087,984	10,245,548	436,004,562	8,083,650	317,928,482	4,639,173,801
32	4,639,173,801	9,275,251	438,342,454	7,886,595	309,707,441	4,511,927,444
33	4,511,927,444	8,393,148	439,186,925	7,670,277	300,748,231	4,374,211,621
34	4,374,211,621	7,648,880	437,253,084	7,436,160	291,157,110	4,228,328,366
35	4,228,328,366	7,188,158	432,231,201	7,188,158	281,110,756	4,077,207,921
36	4,077,207,921	6,931,253	426,304,538	6,931,253	270,736,249	3,921,639,632
37	3,921,639,632	6,666,787	419,128,657	6,666,787	260,093,377	3,762,604,353
38	3,762,604,353	6,396,427	410,682,320	6,396,427	249,251,530	3,601,173,562
39	3,601,173,562	6,121,995	401,237,288	6,121,995	238,276,359	3,438,212,633
40	3,438,212,633	5,844,961	390,939,571	5,844,961	227,223,419	3,274,496,481
41	3,274,496,481	5,566,644	379,820,556	5,566,644	216,145,872	3,110,821,797
42	3,110,821,797	5,288,397	368,039,165	5,288,397	205,094,018	2,947,876,651
43	2,947,876,651	5,011,390	355,758,795	5,011,390	194,110,402	2,786,228,257
44	2,786,228,257	4,736,588	343,143,162	4,736,588	183,229,093	2,626,314,188
45	2,626,314,188	4,464,734	330,249,360	4,464,734	172,478,759	2,468,543,588
46	2,468,543,588	4,196,524	317,064,251	4,196,524	161,888,491	2,313,367,828
47	2,313,367,828	3,932,725	303,653,441	3,932,725	151,487,627	2,161,202,013
48	2,161,202,013	3,674,043	290,060,635	3,674,043	141,303,722	2,012,445,101
49	2,012,445,101	3,421,157	276,298,039	3,421,157	131,364,282	1,867,511,344
50	1,867,511,344	3,174,769	262,416,107	3,174,769	121,696,569	1,726,791,806



Paid Service
Single Discount Rate Development
Projection of Plan Fiduciary Net Position Beginning January 1, 2020
(Years 51-100)

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	\$ 1,726,791,806	\$ 2,935,546	\$ 248,475,544	\$ 2,935,546	\$ 112,325,869	\$ 1,590,642,131
52	1,590,642,131	2,704,092	234,531,310	2,704,092	103,275,186	1,459,386,007
53	1,459,386,007	2,480,956	220,634,809	2,480,956	94,565,408	1,333,316,606
54	1,333,316,606	2,266,638	206,835,955	2,266,638	86,215,342	1,212,695,993
55	1,212,695,993	2,061,583	193,183,802	2,061,583	78,241,643	1,097,753,834
56	1,097,753,834	1,866,182	179,724,549	1,866,182	70,658,798	988,688,083
57	988,688,083	1,680,770	166,500,533	1,680,770	63,479,208	885,666,759
58	885,666,759	1,505,633	153,552,549	1,505,633	56,713,230	788,827,440
59	788,827,440	1,341,007	140,921,130	1,341,007	50,369,100	698,275,410
60	698,275,410	1,187,068	128,646,913	1,187,068	44,452,790	614,081,287
61	614,081,287	1,043,938	116,771,643	1,043,938	38,967,806	536,277,450
62	536,277,450	911,672	105,338,484	911,672	33,914,930	464,853,897
63	464,853,897	790,252	94,390,871	790,252	29,291,968	399,754,994
64	399,754,994	679,583	83,972,051	679,583	25,093,536	340,876,479
65	340,876,479	579,490	74,124,592	579,490	21,310,871	288,062,758
66	288,062,758	489,707	64,887,171	489,707	17,931,752	241,107,339
67	241,107,339	409,882	56,292,573	409,882	14,940,596	199,755,363
68	199,755,363	339,584	48,366,530	339,584	12,318,678	163,707,511
69	163,707,511	278,303	41,126,246	278,303	10,044,452	132,625,716
70	132,625,716	225,464	34,580,035	225,464	8,093,969	106,139,650
71	106,139,650	180,437	28,726,803	180,437	6,441,342	83,854,189
72	83,854,189	142,552	23,555,135	142,552	5,059,307	65,358,361
73	65,358,361	111,109	19,044,241	111,109	3,919,810	50,233,930
74	50,233,930	85,398	15,165,600	85,398	2,994,557	38,062,887
75	38,062,887	64,707	11,883,049	64,707	2,255,530	28,435,368
76	28,435,368	48,340	9,153,190	48,340	1,675,532	20,957,710
77	20,957,710	35,628	6,926,119	35,628	1,228,726	15,260,317
78	15,260,317	25,943	5,146,608	25,943	891,137	11,004,846
79	11,004,846	18,708	3,756,160	18,708	641,097	7,889,784
80	7,889,784	13,413	2,695,270	13,413	459,546	5,654,060
81	5,654,060	9,612	1,905,766	9,612	330,210	4,078,504
82	4,078,504	6,933	1,333,169	6,933	239,624	2,984,958
83	2,984,958	5,074	928,653	5,074	176,994	2,233,299
84	2,233,299	3,797	650,157	3,797	133,960	1,717,102
85	1,717,102	2,919	462,823	2,919	104,272	1,358,552
86	1,358,552	2,310	339,056	2,310	83,432	1,102,928
87	1,102,928	1,875	257,961	1,875	68,329	913,295
88	913,295	1,553	204,454	1,553	56,896	765,737
89	765,737	1,302	168,145	1,302	47,816	645,408
90	645,408	1,097	142,216	1,097	40,285	543,477
91	543,477	924	122,459	924	33,830	454,848
92	454,848	773	106,442	773	28,177	376,583
93	376,583	640	92,811	640	23,167	306,939
94	306,939	522	80,780	522	18,706	244,865
95	244,865	416	69,950	416	14,734	189,648
96	189,648	322	60,092	322	11,208	140,764
97	140,764	239	51,087	239	8,096	97,773
98	97,773	166	42,884	166	5,369	60,257
99	60,257	102	35,445	102	2,998	27,811
100	27,811	47	28,768	47	957	-



Paid Service
Single Discount Rate Development
Present Values of Projected Benefits Beginning January 1, 2020
(Years 1-50)

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Projected Benefit Payments	Unfunded Portion of Projected 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 All Benefit Payments using Single Discount Rate (SDR)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ^{^(a)-.5}	(g)=(e)*vf ^{^(a)-.5}	(h)=(c)/((1+SDR) ^{^(a)-.5})
1	\$ 2,111,731,002	\$ 103,758,295	\$ 103,758,295	\$ -	\$ 100,306,930	\$ -	\$ 100,306,930
2	2,269,047,824	109,685,627	109,685,627	-	99,100,091	-	99,100,091
3	2,431,073,676	120,457,273	120,457,273	-	101,712,325	-	101,712,325
4	2,593,212,546	132,279,018	132,279,018	-	104,387,318	-	104,387,318
5	2,754,458,303	131,157,950	131,157,950	-	96,731,433	-	96,731,433
6	2,930,228,676	143,471,808	143,471,808	-	98,890,778	-	98,890,778
7	3,107,894,593	156,356,813	156,356,813	-	100,721,516	-	100,721,516
8	3,287,149,825	169,944,100	169,944,100	-	102,312,279	-	102,312,279
9	3,467,552,367	183,684,449	183,684,449	-	103,349,952	-	103,349,952
10	3,649,213,196	198,212,871	198,212,871	-	104,228,375	-	104,228,375
11	3,828,992,548	212,760,568	212,760,568	-	104,559,013	-	104,559,013
12	4,006,871,299	226,828,913	226,828,913	-	104,180,148	-	104,180,148
13	4,183,429,731	241,303,521	241,303,521	-	103,577,742	-	103,577,742
14	4,358,288,191	255,921,945	255,921,945	-	102,665,974	-	102,665,974
15	4,531,343,390	269,697,985	269,697,985	-	101,114,380	-	101,114,380
16	4,703,570,389	283,353,938	283,353,938	-	99,284,328	-	99,284,328
17	4,875,233,303	296,883,969	296,883,969	-	97,219,731	-	97,219,731
18	5,046,588,343	309,636,321	309,636,321	-	94,762,343	-	94,762,343
19	5,100,473,957	322,194,854	322,194,854	-	92,154,960	-	92,154,960
20	5,143,303,763	334,833,407	334,833,407	-	89,504,551	-	89,504,551
21	5,174,285,181	347,249,673	347,249,673	-	86,750,983	-	86,750,983
22	5,192,834,588	359,613,161	359,613,161	-	83,962,306	-	83,962,306
23	5,198,190,594	370,782,149	370,782,149	-	80,906,575	-	80,906,575
24	5,190,778,018	381,124,394	381,124,394	-	77,722,716	-	77,722,716
25	5,170,633,170	391,727,026	391,727,026	-	74,658,796	-	74,658,796
26	5,136,665,871	401,788,738	401,788,738	-	71,566,772	-	71,566,772
27	5,088,523,495	410,998,265	410,998,265	-	68,417,922	-	68,417,922
28	5,026,120,391	419,675,724	419,675,724	-	65,291,999	-	65,291,999
29	4,949,068,966	426,278,019	426,278,019	-	61,980,528	-	61,980,528
30	4,858,642,561	431,908,809	431,908,809	-	58,690,880	-	58,690,880
31	4,755,087,984	436,004,562	436,004,562	-	55,371,440	-	55,371,440
32	4,639,173,801	438,342,454	438,342,454	-	52,026,491	-	52,026,491
33	4,511,927,444	439,186,925	439,186,925	-	48,716,562	-	48,716,562
34	4,374,211,621	437,253,084	437,253,084	-	45,329,020	-	45,329,020
35	4,228,328,366	432,231,201	432,231,201	-	41,877,021	-	41,877,021
36	4,077,207,921	426,304,538	426,304,538	-	38,600,759	-	38,600,759
37	3,921,639,632	419,128,657	419,128,657	-	35,468,226	-	35,468,226
38	3,762,604,353	410,682,320	410,682,320	-	32,479,875	-	32,479,875
39	3,601,173,562	401,237,288	401,237,288	-	29,656,906	-	29,656,906
40	3,438,212,633	390,939,571	390,939,571	-	27,005,387	-	27,005,387
41	3,274,496,481	379,820,556	379,820,556	-	24,520,847	-	24,520,847
42	3,110,821,797	368,039,165	368,039,165	-	22,205,843	-	22,205,843
43	2,947,876,651	355,758,795	355,758,795	-	20,060,654	-	20,060,654
44	2,786,228,257	343,143,162	343,143,162	-	18,083,439	-	18,083,439
45	2,626,314,188	330,249,360	330,249,360	-	16,265,367	-	16,265,367
46	2,468,543,588	317,064,251	317,064,251	-	14,594,371	-	14,594,371
47	2,313,367,828	303,653,441	303,653,441	-	13,062,688	-	13,062,688
48	2,161,202,013	290,060,635	290,060,635	-	11,661,633	-	11,661,633
49	2,012,445,101	276,298,039	276,298,039	-	10,381,607	-	10,381,607
50	1,867,511,344	262,416,107	262,416,107	-	9,214,961	-	9,214,961

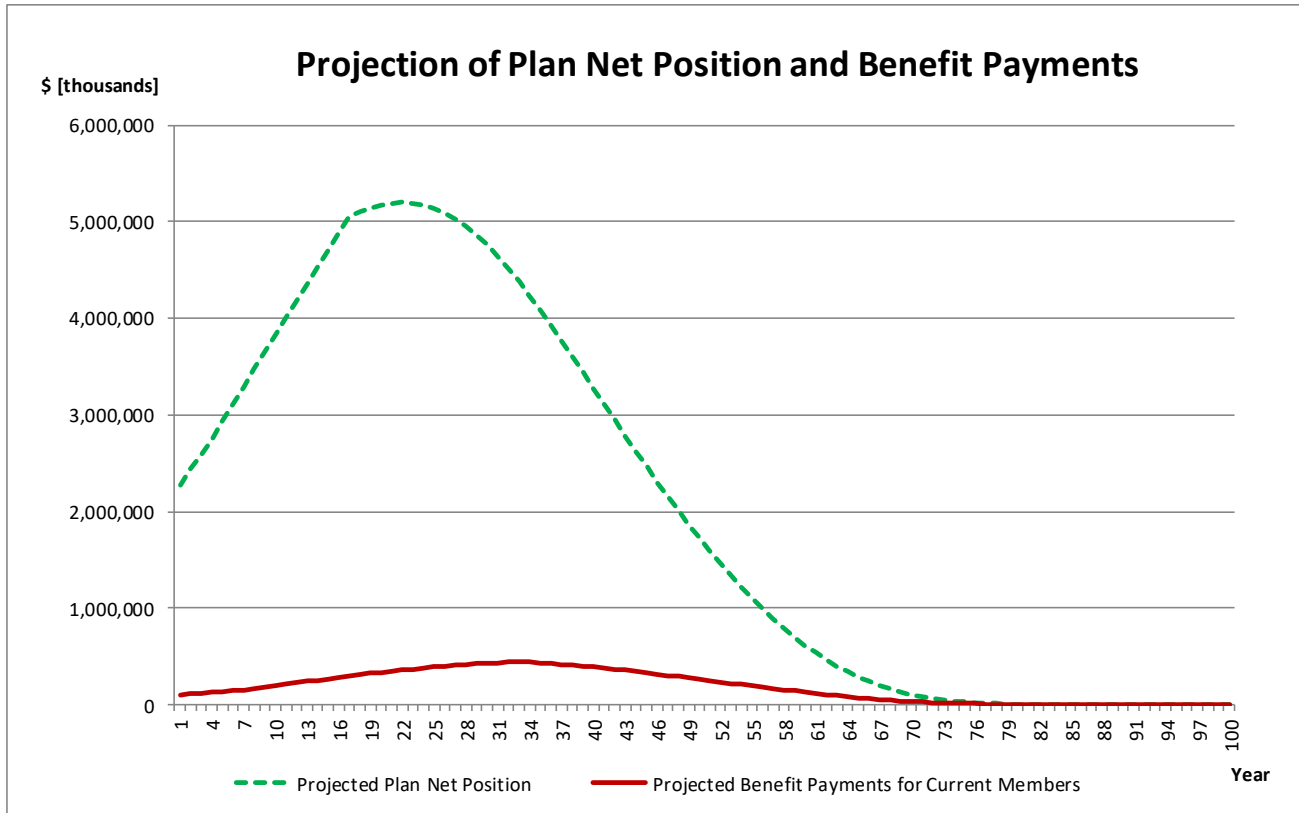


Paid Service
Single Discount Rate Development
Present Values of Projected Benefits Beginning January 1, 2020
(Years 51-100)

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Projected Benefit Payments	Unfunded Portion of Projected 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 All Benefit Payments using Single Discount Rate (SDR)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ^{((a)-.5)}	(g)=(e)*vf ^{^(a)-.5)}	(h)=(c)/(1+SDR) ^{^(a)-.5)}
51	\$ 1,726,791,806	\$ 248,475,544	\$ 248,475,544	\$ -	\$ 8,154,604	\$ -	\$ 8,154,604
52	1,590,642,131	234,531,310	234,531,310	-	7,193,434	-	7,193,434
53	1,459,386,007	220,634,809	220,634,809	-	6,324,493	-	6,324,493
54	1,333,316,606	206,835,955	206,835,955	-	5,541,074	-	5,541,074
55	1,212,695,993	193,183,802	193,183,802	-	4,836,763	-	4,836,763
56	1,097,753,834	179,724,549	179,724,549	-	4,205,404	-	4,205,404
57	988,688,083	166,500,533	166,500,533	-	3,641,096	-	3,641,096
58	885,666,759	153,552,549	153,552,549	-	3,138,266	-	3,138,266
59	788,827,440	140,921,130	140,921,130	-	2,691,691	-	2,691,691
60	698,275,410	128,646,913	128,646,913	-	2,296,490	-	2,296,490
61	614,081,287	116,771,643	116,771,643	-	1,948,134	-	1,948,134
62	536,277,450	105,338,484	105,338,484	-	1,642,422	-	1,642,422
63	464,853,897	94,390,871	94,390,871	-	1,375,447	-	1,375,447
64	399,754,994	83,972,051	83,972,051	-	1,143,576	-	1,143,576
65	340,876,479	74,124,592	74,124,592	-	943,428	-	943,428
66	288,062,758	64,887,171	64,887,171	-	771,830	-	771,830
67	241,107,339	56,292,573	56,292,573	-	625,792	-	625,792
68	199,755,363	48,366,530	48,366,530	-	502,504	-	502,504
69	163,707,511	41,126,246	41,126,246	-	399,328	-	399,328
70	132,625,716	34,580,035	34,580,035	-	313,800	-	313,800
71	106,139,650	28,726,803	28,726,803	-	243,630	-	243,630
72	83,854,189	23,555,135	23,555,135	-	186,701	-	186,701
73	65,358,361	19,044,241	19,044,241	-	141,072	-	141,072
74	50,233,930	15,165,600	15,165,600	-	104,991	-	104,991
75	38,062,887	11,883,049	11,883,049	-	76,884	-	76,884
76	28,435,368	9,153,190	9,153,190	-	55,347	-	55,347
77	20,957,710	6,926,119	6,926,119	-	39,141	-	39,141
78	15,260,317	5,146,608	5,146,608	-	27,182	-	27,182
79	11,004,846	3,756,160	3,756,160	-	18,540	-	18,540
80	7,889,784	2,695,270	2,695,270	-	12,433	-	12,433
81	5,654,060	1,905,766	1,905,766	-	8,216	-	8,216
82	4,078,504	1,333,169	1,333,169	-	5,372	-	5,372
83	2,984,958	928,653	928,653	-	3,497	-	3,497
84	2,233,299	650,157	650,157	-	2,288	-	2,288
85	1,717,102	462,823	462,823	-	1,522	-	1,522
86	1,358,552	339,056	339,056	-	1,042	-	1,042
87	1,102,928	257,961	257,961	-	741	-	741
88	913,295	204,454	204,454	-	549	-	549
89	765,737	168,145	168,145	-	422	-	422
90	645,408	142,216	142,216	-	334	-	334
91	543,477	122,459	122,459	-	268	-	268
92	454,848	106,442	106,442	-	218	-	218
93	376,583	92,811	92,811	-	178	-	178
94	306,939	80,780	80,780	-	145	-	145
95	244,865	69,950	69,950	-	117	-	117
96	189,648	60,092	60,092	-	94	-	94
97	140,764	51,087	51,087	-	75	-	75
98	97,773	42,884	42,884	-	59	-	59
99	60,257	35,445	35,445	-	45	-	45
100	27,811	28,768	28,768	-	34	-	34
Totals	\$	3,355,917,453	\$	-	\$	3,355,917,453	\$



Paid Service



Volunteer Service

Single Discount Rate Development

Projection of Contributions Beginning January 1, 2020 (Years 1-50)

Year	Projected Number of Current Employees	Projected Contributions from Current Employees	Projected Service Cost and Expense Contributions	Projected UAL Contributions	Projected Total Contributions
0	7,533				
1	6,649	\$ -	\$ 2,611,200	\$ 2,918,547	\$ 5,529,747
2	5,961	-	2,350,071	2,991,511	5,341,581
3	5,391	-	2,136,342	2,353,765	4,490,107
4	4,899	-	1,962,113	2,380,545	4,342,658
5	4,462	-	1,809,017	2,405,750	4,214,767
6	4,067	-	1,673,678	2,429,184	4,102,862
7	3,704	-	1,551,395	3,384,620	4,936,015
8	3,368	-	1,442,505	3,469,235	4,911,741
9	3,056	-	1,340,415	3,555,966	4,896,381
10	2,772	-	1,242,017	3,644,865	4,886,883
11	2,510	-	1,160,603	3,735,987	4,896,590
12	2,270	-	1,083,147	3,829,387	4,912,534
13	2,050	-	1,013,992	3,925,121	4,939,114
14	1,849	-	951,548	4,023,249	4,974,798
15	1,666	-	894,788	4,123,831	5,018,619
16	1,495	-	840,098	4,226,926	5,067,024
17	1,341	-	794,394	4,332,600	5,126,994
18	1,200	-	751,180	3,093,592	3,844,772
19	1,071	-	712,159	3,170,932	3,883,091
20	954	-	676,192	3,250,205	3,926,397
21	847	-	642,353	3,331,460	3,973,814
22	748	-	611,037	3,414,747	4,025,783
23	660	-	580,734	3,500,115	4,080,849
24	578	-	556,709	3,587,618	4,144,327
25	504	-	533,418	3,677,309	4,210,727
26	435	-	513,815	3,769,241	4,283,057
27	374	-	491,655	3,863,473	4,355,128
28	318	-	473,021	3,960,059	4,433,080
29	271	-	456,956	4,059,061	4,516,016
30	230	-	444,453	4,160,537	4,604,990
31	196	-	430,853	-	430,853
32	166	-	416,100	-	416,100
33	141	-	397,077	-	397,077
34	119	-	381,182	-	381,182
35	101	-	367,295	-	367,295
36	84	-	351,200	-	351,200
37	70	-	335,831	-	335,831
38	58	-	319,303	-	319,303
39	48	-	304,380	-	304,380
40	39	-	290,078	-	290,078
41	31	-	276,168	-	276,168
42	25	-	262,643	-	262,643
43	20	-	248,470	-	248,470
44	15	-	234,854	-	234,854
45	11	-	222,379	-	222,379
46	9	-	208,319	-	208,319
47	6	-	195,297	-	195,297
48	5	-	183,955	-	183,955
49	3	-	172,129	-	172,129
50	2	-	159,844	-	159,844



Volunteer Service
Single Discount Rate Development
Projection of Contributions Beginning January 1, 2020
(Years 51-100)

Year	Projected Number of Current Employees	Projected Contributions from Current Employees	Projected Service Cost and Expense Contributions	Projected UAL Contributions	Projected Total Contributions
51	2	\$ -	\$ 148,314	\$ -	\$ 148,314
52	1	-	137,524	-	137,524
53	1	-	127,065	-	127,065
54	-	-	116,956	-	116,956
55	-	-	107,221	-	107,221
56	-	-	97,881	-	97,881
57	-	-	88,958	-	88,958
58	-	-	80,467	-	80,467
59	-	-	72,425	-	72,425
60	-	-	64,844	-	64,844
61	-	-	57,733	-	57,733
62	-	-	51,099	-	51,099
63	-	-	44,945	-	44,945
64	-	-	39,271	-	39,271
65	-	-	34,073	-	34,073
66	-	-	29,343	-	29,343
67	-	-	25,070	-	25,070
68	-	-	21,238	-	21,238
69	-	-	17,831	-	17,831
70	-	-	14,828	-	14,828
71	-	-	12,206	-	12,206
72	-	-	9,938	-	9,938
73	-	-	7,999	-	7,999
74	-	-	6,358	-	6,358
75	-	-	4,988	-	4,988
76	-	-	3,857	-	3,857
77	-	-	2,938	-	2,938
78	-	-	2,202	-	2,202
79	-	-	1,623	-	1,623
80	-	-	1,175	-	1,175
81	-	-	836	-	836
82	-	-	584	-	584
83	-	-	402	-	402
84	-	-	273	-	273
85	-	-	183	-	183
86	-	-	123	-	123
87	-	-	83	-	83
88	-	-	58	-	58
89	-	-	41	-	41
90	-	-	30	-	30
91	-	-	23	-	23
92	-	-	18	-	18
93	-	-	15	-	15
94	-	-	12	-	12
95	-	-	9	-	9
96	-	-	7	-	7
97	-	-	5	-	5
98	-	-	4	-	4
99	-	-	2	-	2
100	-	-	1	-	1



Volunteer Service Single Discount Rate Development Projection of Plan Fiduciary Net Position Beginning January 1, 2020 (Years 1-50)

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	\$ 94,385,517	\$ 5,529,747	\$ 4,026,573	\$ 160,455	\$ 6,653,187	\$ 102,381,423
2	102,381,423	5,341,581	4,517,410	174,048	7,189,069	110,220,615
3	110,220,615	4,490,107	5,022,829	187,375	7,690,666	117,191,184
4	117,191,184	4,342,658	5,541,326	199,225	8,155,284	123,948,574
5	123,948,574	4,214,767	6,111,118	210,713	8,603,900	130,445,411
6	130,445,411	4,102,862	6,672,200	221,757	9,035,143	136,689,459
7	136,689,459	4,936,015	7,226,333	232,372	9,481,461	143,648,230
8	143,648,230	4,911,741	7,803,985	244,202	9,947,457	150,459,241
9	150,459,241	4,896,381	8,389,994	255,781	10,403,138	157,112,985
10	157,112,985	4,886,883	9,013,218	267,092	10,846,740	163,566,297
11	163,566,297	4,896,590	9,643,563	278,063	11,276,739	169,818,000
12	169,818,000	4,912,534	10,296,714	288,691	11,692,068	175,837,196
13	175,837,196	4,939,114	10,960,284	298,923	12,091,142	181,608,244
14	181,608,244	4,974,798	11,612,432	308,734	12,473,566	187,135,443
15	187,135,443	5,018,619	12,251,555	318,130	12,839,664	192,424,040
16	192,424,040	5,067,024	12,856,682	327,121	13,190,400	197,497,661
17	197,497,661	5,126,994	13,461,179	335,746	13,526,521	202,354,251
18	202,354,251	3,844,772	14,074,990	344,002	13,800,959	205,580,990
19	205,580,990	3,883,091	14,681,254	349,488	14,007,100	208,440,439
20	208,440,439	3,926,397	15,280,736	354,349	14,187,958	210,919,709
21	210,919,709	3,973,814	15,839,760	358,564	14,343,758	213,038,956
22	213,038,956	4,025,783	16,372,821	362,166	14,475,428	214,805,180
23	214,805,180	4,080,849	16,847,484	365,169	14,584,523	216,257,899
24	216,257,899	4,144,327	17,310,156	367,638	14,672,393	217,396,826
25	217,396,826	4,210,727	17,766,258	369,575	14,738,642	218,210,362
26	218,210,362	4,283,057	18,166,141	370,958	14,784,272	218,740,591
27	218,740,591	4,355,128	18,519,678	371,859	14,811,672	219,015,854
28	219,015,854	4,433,080	18,813,306	372,327	14,823,503	219,086,804
29	219,086,804	4,516,016	19,053,206	372,448	14,823,065	219,000,231
30	219,000,231	4,604,990	19,258,479	372,300	14,813,008	218,787,450
31	218,787,450	430,853	19,408,677	371,939	14,649,334	214,087,022
32	214,087,022	416,100	19,493,263	363,948	14,317,161	208,963,072
33	208,963,072	397,077	19,504,345	355,237	13,957,748	203,458,315
34	203,458,315	381,182	19,468,722	345,879	13,573,416	197,598,312
35	197,598,312	367,295	19,379,477	335,917	13,166,152	191,416,365
36	191,416,365	351,200	19,217,450	325,408	12,738,798	184,963,505
37	184,963,505	335,831	18,998,913	314,438	12,294,466	178,280,450
38	178,280,450	319,303	18,725,154	303,077	11,835,894	171,407,417
39	171,407,417	304,380	18,402,280	291,393	11,365,780	164,383,903
40	164,383,903	290,078	18,036,398	279,453	10,886,642	157,244,772
41	157,244,772	276,168	17,625,071	267,316	10,400,994	150,029,547
42	150,029,547	262,643	17,165,533	255,050	9,911,697	142,783,304
43	142,783,304	248,470	16,662,464	242,732	9,421,706	135,548,284
44	135,548,284	234,854	16,129,744	230,432	8,933,539	128,356,501
45	128,356,501	222,379	15,579,830	218,206	8,449,027	121,229,871
46	121,229,871	208,319	15,014,680	206,091	7,969,542	114,186,961
47	114,186,961	195,297	14,436,586	194,118	7,496,393	107,247,947
48	107,247,947	183,955	13,848,094	182,322	7,030,927	100,432,413
49	100,432,413	172,129	13,250,880	170,735	6,574,380	93,757,307
50	93,757,307	159,844	12,646,147	159,387	6,127,898	87,239,514



Volunteer Service
Single Discount Rate Development
Projection of Plan Fiduciary Net Position Beginning January 1, 2020
(Years 51-100)

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	\$ 87,239,514	\$ 148,314	\$ 12,035,827	\$ 148,307	\$ 5,692,637	\$ 80,896,332
52	80,896,332	137,524	11,422,065	137,524	5,269,732	74,743,999
53	74,743,999	127,065	10,806,686	127,065	4,860,243	68,797,557
54	68,797,557	116,956	10,191,670	116,956	4,465,154	63,071,041
55	63,071,041	107,221	9,579,118	107,221	4,085,374	57,577,297
56	57,577,297	97,881	8,971,053	97,881	3,721,734	52,327,978
57	52,327,978	88,958	8,369,463	88,958	3,374,982	47,333,497
58	47,333,497	80,467	7,776,446	80,467	3,045,773	42,602,824
59	42,602,824	72,425	7,194,195	72,425	2,734,660	38,143,289
60	38,143,289	64,844	6,624,891	64,844	2,442,081	33,960,479
61	33,960,479	57,733	6,070,616	57,733	2,168,355	30,058,218
62	30,058,218	51,099	5,533,490	51,099	1,913,679	26,438,407
63	26,438,407	44,945	5,015,658	44,945	1,678,110	23,100,859
64	23,100,859	39,271	4,519,229	39,271	1,461,562	20,043,192
65	20,043,192	34,073	4,046,194	34,073	1,263,802	17,260,800
66	17,260,800	29,343	3,598,248	29,343	1,084,447	14,747,000
67	14,747,000	25,070	3,176,765	25,070	922,984	12,493,218
68	12,493,218	21,238	2,782,897	21,238	778,771	10,489,093
69	10,489,093	17,831	2,417,614	17,831	651,051	8,722,530
70	8,722,530	14,828	2,081,627	14,828	538,952	7,179,856
71	7,179,856	12,206	1,775,288	12,206	441,506	5,846,073
72	5,846,073	9,938	1,498,617	9,938	357,661	4,705,118
73	4,705,118	7,999	1,251,279	7,999	286,304	3,740,143
74	3,740,143	6,358	1,032,569	6,358	226,281	2,933,855
75	2,933,855	4,988	841,390	4,988	176,419	2,268,885
76	2,268,885	3,857	676,274	3,857	135,553	1,728,164
77	1,728,164	2,938	535,482	2,938	102,547	1,295,228
78	1,295,228	2,202	417,121	2,202	76,314	954,420
79	954,420	1,623	319,199	1,623	55,826	691,048
80	691,048	1,175	239,639	1,175	40,128	491,538
81	491,538	836	176,286	836	28,342	343,593
82	343,593	584	126,939	584	19,684	236,338
83	236,338	402	89,409	402	13,467	160,396
84	160,396	273	61,592	273	9,108	107,912
85	107,912	183	41,544	183	6,124	72,493
86	72,493	123	27,519	123	4,128	49,101
87	49,101	83	18,003	83	2,818	33,916
88	33,916	58	11,741	58	1,970	24,145
89	24,145	41	7,743	41	1,424	17,825
90	17,825	30	5,256	30	1,067	13,636
91	13,636	23	3,734	23	826	10,728
92	10,728	18	2,803	18	654	8,579
93	8,579	15	2,219	15	524	6,884
94	6,884	12	1,830	12	419	5,472
95	5,472	9	1,549	9	330	4,253
96	4,253	7	1,326	7	252	3,179
97	3,179	5	1,135	5	184	2,228
98	2,228	4	964	4	123	1,386
99	1,386	2	809	2	69	646
100	646	1	668	1	22	-



Volunteer Service

Single Discount Rate Development

Present Values of Projected Benefits Beginning January 1, 2020 (Years 1-50)

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Projected Benefit Payments	Unfunded Portion of Projected 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 All Benefit Payments using Single Discount Rate (SDR)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ^{(a)-.5}	(g)=(e)*vf ^{(a)-.5}	(h)=(c)/(1+SDR) ^{(a)-.5}
1	\$ 94,385,517	\$ 4,026,573	\$ 4,026,573	\$ -	\$ 3,892,635	\$ -	\$ 3,892,635
2	102,381,423	4,517,410	4,517,410	-	4,081,444	-	4,081,444
3	110,220,615	5,022,829	5,022,829	-	4,241,202	-	4,241,202
4	117,191,184	5,541,326	5,541,326	-	4,372,910	-	4,372,910
5	123,948,574	6,111,118	6,111,118	-	4,507,063	-	4,507,063
6	130,445,411	6,672,200	6,672,200	-	4,598,945	-	4,598,945
7	136,689,459	7,226,333	7,226,333	-	4,655,040	-	4,655,040
8	143,648,230	7,803,985	7,803,985	-	4,698,271	-	4,698,271
9	150,459,241	8,389,994	8,389,994	-	4,720,626	-	4,720,626
10	157,112,985	9,013,218	9,013,218	-	4,739,516	-	4,739,516
11	163,566,297	9,643,563	9,643,563	-	4,739,231	-	4,739,231
12	169,818,000	10,296,714	10,296,714	-	4,729,173	-	4,729,173
13	175,837,196	10,960,284	10,960,284	-	4,704,620	-	4,704,620
14	181,608,244	11,612,432	11,612,432	-	4,658,458	-	4,658,458
15	187,135,443	12,251,555	12,251,555	-	4,593,317	-	4,593,317
16	192,424,040	12,856,682	12,856,682	-	4,504,850	-	4,504,850
17	197,497,661	13,461,179	13,461,179	-	4,408,093	-	4,408,093
18	202,354,251	14,074,990	14,074,990	-	4,307,567	-	4,307,567
19	205,580,990	14,681,254	14,681,254	-	4,199,168	-	4,199,168
20	208,440,439	15,280,736	15,280,736	-	4,084,704	-	4,084,704
21	210,919,709	15,839,760	15,839,760	-	3,957,138	-	3,957,138
22	213,038,956	16,372,821	16,372,821	-	3,822,718	-	3,822,718
23	214,805,180	16,847,484	16,847,484	-	3,676,208	-	3,676,208
24	216,257,899	17,310,156	17,310,156	-	3,530,061	-	3,530,061
25	217,396,826	17,766,258	17,766,258	-	3,386,050	-	3,386,050
26	218,210,362	18,166,141	18,166,141	-	3,235,760	-	3,235,760
27	218,740,591	18,519,678	18,519,678	-	3,082,928	-	3,082,928
28	219,015,854	18,813,306	18,813,306	-	2,926,923	-	2,926,923
29	219,086,804	19,053,206	19,053,206	-	2,770,323	-	2,770,323
30	219,000,231	19,258,479	19,258,479	-	2,616,981	-	2,616,981
31	218,787,450	19,408,677	19,408,677	-	2,464,851	-	2,464,851
32	214,087,022	19,493,263	19,493,263	-	2,313,639	-	2,313,639
33	208,963,072	19,504,345	19,504,345	-	2,163,508	-	2,163,508
34	203,458,315	19,468,722	19,468,722	-	2,018,278	-	2,018,278
35	197,598,312	19,379,477	19,379,477	-	1,877,594	-	1,877,594
36	191,416,365	19,217,450	19,217,450	-	1,740,090	-	1,740,090
37	184,963,505	18,998,913	18,998,913	-	1,607,759	-	1,607,759
38	178,280,450	18,725,154	18,725,154	-	1,480,927	-	1,480,927
39	171,407,417	18,402,280	18,402,280	-	1,360,179	-	1,360,179
40	164,383,903	18,036,398	18,036,398	-	1,245,921	-	1,245,921
41	157,244,772	17,625,071	17,625,071	-	1,137,858	-	1,137,858
42	150,029,547	17,165,533	17,165,533	-	1,035,692	-	1,035,692
43	142,783,304	16,662,464	16,662,464	-	939,569	-	939,569
44	135,548,284	16,129,744	16,129,744	-	850,028	-	850,028
45	128,356,501	15,579,830	15,579,830	-	767,334	-	767,334
46	121,229,871	15,014,680	15,014,680	-	691,121	-	691,121
47	114,186,961	14,436,586	14,436,586	-	621,039	-	621,039
48	107,247,947	13,848,094	13,848,094	-	556,750	-	556,750
49	100,432,413	13,250,880	13,250,880	-	497,888	-	497,888
50	93,757,307	12,646,147	12,646,147	-	444,080	-	444,080



Volunteer Service

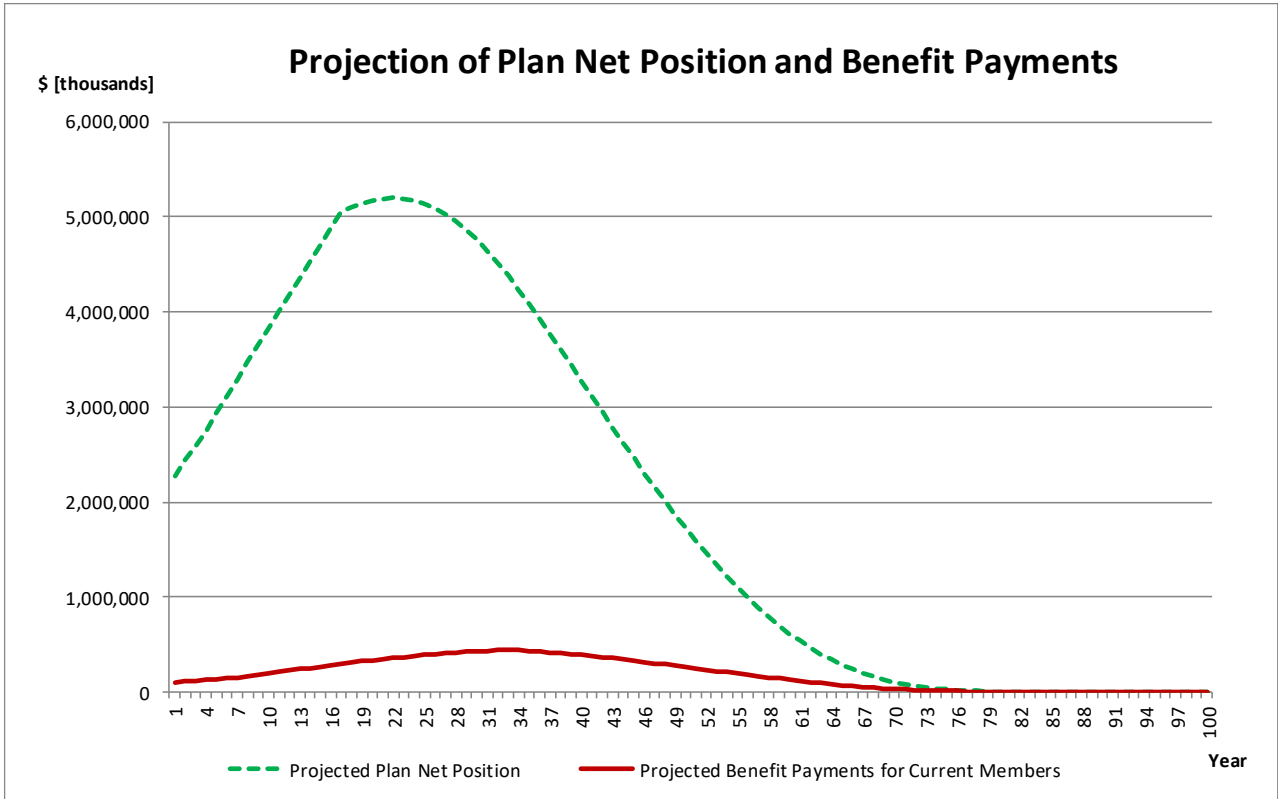
Single Discount Rate Development

Present Values of Projected Benefits Beginning January 1, 2020 (Years 51-100)

Year	Projected Plan Net Position	Projected Benefit Payments	Funded Portion of Projected Benefit Payments	Unfunded Portion of Projected 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 All Benefit Payments using Single Discount Rate (SDR)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v^(a)-.5	(g)=(e)*vf^(a)-.5	(h)=(c)/(1+SDR)^(a)-.5
51	\$ 87,239,514	\$ 12,035,827	\$ 12,035,827	\$ -	\$ 394,998	\$ -	\$ 394,998
52	80,896,332	11,422,065	11,422,065	-	350,332	-	350,332
53	74,743,999	10,806,686	10,806,686	-	309,773	-	309,773
54	68,797,557	10,191,670	10,191,670	-	273,032	-	273,032
55	63,071,041	9,579,118	9,579,118	-	239,833	-	239,833
56	57,577,297	8,971,053	8,971,053	-	209,915	-	209,915
57	52,327,978	8,369,463	8,369,463	-	183,027	-	183,027
58	47,333,497	7,776,446	7,776,446	-	158,933	-	158,933
59	42,602,824	7,194,195	7,194,195	-	137,414	-	137,414
60	38,143,289	6,624,891	6,624,891	-	118,262	-	118,262
61	33,960,479	6,070,616	6,070,616	-	101,278	-	101,278
62	30,058,218	5,533,490	5,533,490	-	86,277	-	86,277
63	26,438,407	5,015,658	5,015,658	-	73,087	-	73,087
64	23,100,859	4,519,229	4,519,229	-	61,545	-	61,545
65	20,043,192	4,046,194	4,046,194	-	51,498	-	51,498
66	17,260,800	3,598,248	3,598,248	-	42,801	-	42,801
67	14,747,000	3,176,765	3,176,765	-	35,315	-	35,315
68	12,493,218	2,782,897	2,782,897	-	28,913	-	28,913
69	10,489,093	2,417,614	2,417,614	-	23,475	-	23,475
70	8,722,530	2,081,627	2,081,627	-	18,890	-	18,890
71	7,179,856	1,775,288	1,775,288	-	15,056	-	15,056
72	5,846,073	1,498,617	1,498,617	-	11,878	-	11,878
73	4,705,118	1,251,279	1,251,279	-	9,269	-	9,269
74	3,740,143	1,032,569	1,032,569	-	7,148	-	7,148
75	2,933,855	841,390	841,390	-	5,444	-	5,444
76	2,268,885	676,274	676,274	-	4,089	-	4,089
77	1,728,164	535,482	535,482	-	3,026	-	3,026
78	1,295,228	417,121	417,121	-	2,203	-	2,203
79	954,420	319,199	319,199	-	1,576	-	1,576
80	691,048	239,639	239,639	-	1,105	-	1,105
81	491,538	176,286	176,286	-	760	-	760
82	343,593	126,939	126,939	-	511	-	511
83	236,338	89,409	89,409	-	337	-	337
84	160,396	61,592	61,592	-	217	-	217
85	107,912	41,544	41,544	-	137	-	137
86	72,493	27,519	27,519	-	85	-	85
87	49,101	18,003	18,003	-	52	-	52
88	33,916	11,741	11,741	-	32	-	32
89	24,145	7,743	7,743	-	19	-	19
90	17,825	5,256	5,256	-	12	-	12
91	13,636	3,734	3,734	-	8	-	8
92	10,728	2,803	2,803	-	6	-	6
93	8,579	2,219	2,219	-	4	-	4
94	6,884	1,830	1,830	-	3	-	3
95	5,472	1,549	1,549	-	3	-	3
96	4,253	1,326	1,326	-	2	-	2
97	3,179	1,135	1,135	-	2	-	2
98	2,228	964	964	-	1	-	1
99	1,386	809	809	-	1	-	1
100	646	668	668	-	1	-	1
Totals					\$ 151,217,615	\$ -	\$ 151,217,615



Volunteer Service



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.

Glossary of Terms

Entry Age Actuarial Cost Method (EAN)

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 age(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.

GASB

The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.

Fiduciary Net Position

The fiduciary net position is the market value of the assets of the trust dedicated to the defined benefit provisions.

Long-Term Expected Rate of Return

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.

Money-Weighted Rate of Return

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.

Multiple-Employer Defined Benefit Pension Plan

A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.

Municipal Bond Rate

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.

Net Pension Liability (NPL)

The NPL is the liability of employers and non-employer contribution entities to plan members for benefits provided through a defined benefit pension plan.

Non-Employer Contribution Entities

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.

Normal Cost

The actuarial present value of the pension trust benefits allocated to the current year by the actuarial cost method.

Glossary of Terms

<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.
<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.