

# Arlington Hgts SD 25 Regular

GASB Statement No. 68 Employer Reporting  
Accounting Schedules  
December 31, 2020



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March 26, 2021

Arlington Hgts SD 25  
Illinois Municipal Retirement Fund

Ladies and Gentlemen:

The accounting schedules submitted in this report are required under the Governmental Accounting Standards Board (GASB) Statement No. 68 "Accounting and Financial Reporting for Pensions."

Our calculations for this report were prepared for the purpose of complying with the requirements of GASB Statement No. 68. These calculations have been made on a basis that is consistent with our understanding of these accounting standards. These results are subject to review by the fund's auditor and may be revised.

Our calculation of the liability associated with the benefits described in this report was performed for the purpose of satisfying the requirements of GASB Statement No. 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 No. 68 may produce significantly different results. This report may be provided to parties other than the Arlington Hgts SD 25 only in its entirety and only with the permission of Arlington Hgts SD 25. GRS is not responsible for unauthorized use of this report.

This report is based upon information, furnished to us by the Illinois Municipal Retirement Fund (IMRF), concerning retirement and ancillary benefits, active members, deferred vested members, retirees and beneficiaries, and financial data. If your understanding of this information is different than ours, please let us know and do not use or distribute this report until those differences have been resolved to your satisfaction. This information was checked for internal consistency, but it was not audited.

This report complements the actuarial valuation report that was provided to the IMRF and should be considered in conjunction with that report. Please see the actuarial valuation report as of December 31, 2020 for additional discussions of the nature of actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions.

To the best of our knowledge, the information contained in this report is accurate, and fairly represents the GASB 68 information related to Arlington Hgts SD 25. 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.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

Mark Buis and Francois Pieterse are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the Academy of Actuaries to render the actuarial opinions herein.

The signing actuaries are independent of the plan sponsor.

Respectfully submitted,



Mark Buis, FSA, EA, FCA, MAAA



Francois Pieterse, ASA, FCA, MAAA

MB/FP:bd



## **SECTION A**

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### **EXECUTIVE SUMMARY**

# Executive Summary as of December 31, 2020

Actuarial Valuation Date	December 31, 2020
Measurement Date of the Net Pension Liability	December 31, 2020
Fiscal Year End	June 30, 2021

## Membership

Number of	
- Retirees and Beneficiaries	322
- Inactive, Non-Retired Members	305
- Active Members	262
- Total	889
Covered Valuation Payroll <sup>(1)</sup>	\$ 8,117,039

## Net Pension Liability

Total Pension Liability/(Asset)	\$ 52,672,869
Plan Fiduciary Net Position	51,890,041
Net Pension Liability/(Asset)	\$ 782,828
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	98.51%
Net Pension Liability as a Percentage of Covered Valuation Payroll	9.64%

## Development of the Single Discount Rate as of December 31, 2020

Long-Term Expected Rate of Investment Return	7.25%
Long-Term Municipal Bond Rate <sup>(2)</sup>	2.00%
Last year ending December 31 in the 2021 to 2120 projection period for which projected benefit payments are fully funded	2120
Resulting Single Discount Rate based on the above development	7.25%

Single Discount Rate calculated using December 31, 2019 Measurement Date 7.25%

**Total Pension Expense/(Income)** \$ 91,837

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

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ 986,697	\$ 0
Changes in assumptions	0	270,307
Net difference between projected and actual earnings on pension plan investments	2,267,629	6,341,886
<b>Total</b>	<b>\$ 3,254,326</b>	<b>\$ 6,612,193</b>

<sup>(1)</sup> Does not necessarily represent Covered Employee Payroll as defined in GASB Statement No. 68.

<sup>(2)</sup> 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, 2020. 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 state and local government employers (as well as certain non-employers) that contribute to a Defined Benefit (DB) pension plan administered through a trust or equivalent arrangement, Governmental Accounting Standards Board (GASB) Statement No. 68 establishes standards for pension accounting and financial reporting. Under GASB Statement No. 68, the employer must 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 is not included in this report if it is not actuarial in nature, such as the notes to the financial statements regarding accounting policies and investments. As a result, the retirement fund and/or plan sponsor is responsible for preparing and disclosing the non-actuarial information needed to comply with these accounting standards.

## Financial Statements

GASB Statement No. 68 requires state and local government employers that contribute to DB pension plans to recognize the net pension liability and the pension expense on their financial statements, along with the related deferred outflows of resources and deferred inflows of resources. The net pension liability is the difference between the total pension liability and the plan's fiduciary net position. In traditional actuarial terms, this is analogous to the accrued liability less the market value of assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement).

Paragraph 57 of GASB Statement No. 68 says, "Contributions to the pension plan from the employer subsequent to the measurement date of the collective net pension liability and before the end of the employer's reporting period should be reported as a deferred outflow of resources related to pensions." The information contained in this report does not incorporate any contributions made to IMRF subsequent to the measurement date of December 31, 2020.

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 certain changes in the liability and investment experience.

## 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 of resources and inflows of resources related to pensions.

In addition, GASB Statement No. 68 requires the notes of the financial statements for the employers to include certain additional information, including (page numbers refer to page numbers from this report unless specified otherwise):

- A description of the types of benefits provided by the plan, as well as automatic or ad hoc COLAs (please see pages B-1 - B-5 of the December 31, 2020 Annual Actuarial Valuation report dated March 15, 2021);
- The number and classes of employees covered by the benefit terms (page 1);
- For the current year, sources of changes in the net pension liability (page 11);
- Significant assumptions and methods used to calculate the total pension liability (page 16);
- Inputs to the single discount rate (page 17);
- Certain information about mortality assumptions and the dates of experience studies (page 14 and page 16);
- The date of the valuation used to determine the total pension liability (page 1);
- Information about changes of assumptions or other inputs and benefit terms (pages 14 and 16);
- The basis for determining contributions to the plan, including a description of the plan's funding policy, as well as member and employer contribution requirements (please see page A-3, B-5 and Section D of the December 31, 2020 Annual Actuarial Valuation report dated March 15, 2021, as well as page 14);
- The total pension liability, fiduciary net position, net pension liability, and the pension plan's fiduciary net position as a percentage of the total pension liability (page 11);
- 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 (page 11); and
- A description of the fund that administers the pension plan (to be provided by IMRF).

## Required Supplementary Information

The financial statements of employers also include required supplementary information showing the 10-year fiscal history of:

- Sources of changes in the net pension liability (page 12);
- 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 (page 12); and
- Comparison of actual employer contributions to the actuarially determined contributions based on the plan's funding policy (page 13).

These tables may be built prospectively as the information becomes available.

## Timing of the Valuation

An actuarial valuation to determine the total pension liability is required to be performed at least every two years. For the employer's financial reporting purposes, the net pension liability and pension expense should be measured as of the employer's "measurement date" which may not be earlier than the fiscal year-end date, consistently applied from period to period. 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, 2020 and a measurement date of December 31, 2020.

## 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 7.25%, the municipal bond rate is 2.00% (based on the daily rate closest to but not later than the measurement date of the "20-Year Municipal GO AA Index" described on page 1), and the resulting Single Discount Rate is 7.25%.

## Other Observations

### 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 7.25% on the actuarial value of assets), it is expected that:

- (1) The employer normal cost as a percentage of pay will decrease to the level of Tier 2 normal cost as time passes, as the majority of the active population will consist of Tier 2 members.
- (2) The unfunded liability will increase in dollar amount for several years before it begins to decrease.
- (3) The funded status of the plan will increase gradually towards a 100% funded ratio.

This funding policy results in a crossover date in 2120 and a discount rate of 7.25%. 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.

### Limitations of Funded Status Measurements

Unless otherwise indicated, a funded ratio measurement presented in this report is based upon the actuarial accrued liability and the market value of assets. Unless otherwise indicated, with regard to any funded status 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, in other words, of transferring the obligations to an unrelated third party in an arm's length market value type transaction.
- (2) The measurement is dependent upon the actuarial cost method which, in combination with the plan's amortization policy, affects the timing and amounts of future contributions. The amount of future contributions will most certainly differ from those assumed in this report due to future actual experience differing from assumed experience based upon actuarial assumptions. A funded ratio measurement in this report of 100% is not synonymous with no required future contributions. If the funded ratio were 100%, the plan would still require future normal cost contributions (i.e., contributions to cover the cost of the active membership accruing an additional year of service credit).

## 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**

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**FINANCIAL STATEMENTS**

# Pension Expense/(Income) Under GASB Statement No. 68

## Calendar Year Ended December 31, 2020

### A. Expense/(Income)

1. Service Cost	\$	837,511
2. Interest on the Total Pension Liability		3,577,522
3. Current-Period Benefit Changes		0
4. Employee Contributions (made negative for addition here)		(365,677)
5. Projected Earnings on Plan Investments (made negative for addition here)		(3,321,709)
6. Other Changes in Plan Fiduciary Net Position		(344,528)
7. Recognition of Outflow (Inflow) of Resources due to Liabilities		952,287
8. Recognition of Outflow (Inflow) of Resources due to Assets		(1,243,569)
<b>9. Total Pension Expense/(Income)</b>	<b>\$</b>	<b>91,837</b>

### Recognition of Deferred Outflows and Inflows of Resources

Differences between expected and actual experience and changes in assumptions are recognized in pension expense using a systematic and rational method over a closed period equal to the average of the expected remaining service lives of all employees that are provided with a retirement benefit through the pension plan (active employees and inactive employees) determined as of the beginning of the measurement period.

At the beginning of the current measurement period, the expected remaining service lives of all active employees in the plan was approximately 2,253.91 years. Additionally, the total plan membership (active employees and inactive employees) was 858. As a result, the average of the expected remaining service lives for purposes of recognizing the applicable deferred outflows and inflows of resources established in the current measurement period is 2.6269 years.

Additionally, differences between projected and actual earnings on pension plan investments should be recognized in pension expense using a systematic and rational method over a closed five-year period. For this purpose, the deferred outflows and inflows of resources are recognized in the pension expense as a level dollar amount over the closed period identified above.

# Statement of Outflows and Inflows Arising from Current Reporting Period Calendar Year Ended December 31, 2020

## A. Outflows (Inflows) of Resources due to Liabilities

1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	\$	1,225,134
2. Assumption Changes (gains) or losses	\$	(436,455)
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}		2.6269
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	\$	466,380
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for Assumption Changes	\$	(166,148)
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	\$	300,232
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	\$	758,754
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for Assumption Changes	\$	(270,307)
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	\$	488,447

## B. Outflows (Inflows) of Resources due to Assets

1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$	(3,367,053)
2. Recognition period for Assets {in years}		5.0000
3. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Assets	\$	(673,411)
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$	(2,693,642)

*Please note that employer contributions made after the measurement date have not been reported as deferred outflows of resources. These employer contributions must be separately accounted for by the employer.*



# Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods Calendar Year Ended December 31, 2020

## 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	\$ 1,124,286	\$ 171,999	\$ 952,287
2. Due to Assets	1,176,112	2,419,681	(1,243,569)
<b>3. Total</b>	<b>\$ 2,300,398</b>	<b>\$ 2,591,680</b>	<b>\$ (291,282)</b>

## 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	\$ 824,407	\$ 0	\$ 824,407
2. Assumption changes	299,879	171,999	127,880
3. Net difference between projected and actual earnings on pension plan investments	1,176,112	2,419,681	(1,243,569)
<b>4. Total</b>	<b>\$ 2,300,398</b>	<b>\$ 2,591,680</b>	<b>\$ (291,282)</b>

## 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	\$ 986,697	\$ 0	\$ 986,697
2. Assumption changes	0	270,307	\$ (270,307)
3. Net difference between projected and actual earnings on pension plan investments	2,267,629	6,341,886	(4,074,257)
<b>4. Total</b>	<b>\$ 3,254,326</b>	<b>\$ 6,612,193</b>	<b>\$ (3,357,867)</b>

## 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
2021	\$ (757,689)
2022	(302,371)
2023	(1,624,398)
2024	(673,409)
2025	0
Thereafter	0
<b>Total</b>	<b>\$ (3,357,867)</b>

## Recognition of Deferred Outflows and Inflows of Resources Reporting Date - December 31, 2020

Year Established	Initial Amount	Initial Recognition Period	Current Year Recognition	Remaining Recognition	Remaining Recognition Period
<b>Deferred Outflow (Inflow) due to Differences Between Expected and Actual Experience on Liabilities</b>					
2014	\$ 347,151	3.0847	\$ 0	\$ 0	0.0000
2015	265,732	3.0759	0	0	0.0000
2016	(35,527)	3.0673	0	0	0.0000
2017	711,424	3.0127	2,998	0	0.0000
2018	193,364	2.6732	48,696	0	0.0000
2019	840,609	2.7441	306,333	227,943	0.7441
2020	1,225,134	2.6269	466,380	758,754	1.6269
<b>Total</b>			<b>\$ 824,407</b>	<b>\$ 986,697</b>	
<b>Deferred Outflow (Inflow) due to Assumption Changes</b>					
2014	\$ 1,806,494	3.0847	\$ 0	\$ 0	0.0000
2015	94,426	3.0759	0	0	0.0000
2016	(194,112)	3.0673	0	0	0.0000
2017	(1,388,230)	3.0127	(5,851)	0	0.0000
2018	1,190,789	2.6732	299,879	0	0.0000
2019	0	2.7441	0	0	0.7441
2020	(436,455)	2.6269	(166,148)	(270,307)	1.6269
<b>Total</b>			<b>\$ 127,880</b>	<b>\$ (270,307)</b>	
<b>Deferred Outflow (Inflow) due to Differences Between Projected and Actual Earnings on Plan Investments</b>					
2016	\$ 211,489	5.0000	\$ 42,297	\$ 0	0.0000
2017	(3,976,403)	5.0000	(795,281)	(795,279)	1.0000
2018	5,669,074	5.0000	1,133,815	2,267,629	2.0000
2019	(4,754,943)	5.0000	(950,989)	(2,852,965)	3.0000
2020	(3,367,053)	5.0000	(673,411)	(2,693,642)	4.0000
<b>Total</b>			<b>\$ (1,243,569)</b>	<b>\$ (4,074,257)</b>	

## Schedule of Changes in Net Pension Liability and Related Ratios Current Period Calendar Year Ended December 31, 2020

<b>A. Total pension liability</b>	
1. Service Cost	\$ 837,511
2. Interest on the Total Pension Liability	3,577,522
3. Changes of benefit terms	0
4. Difference between expected and actual experience of the Total Pension Liability	1,225,134
5. Changes of assumptions	(436,455)
6. Benefit payments, including refunds of employee contributions	(2,914,449)
7. Net change in total pension liability	\$ 2,289,263
8. Total pension liability – beginning	50,383,606
9. Total pension liability – ending	<u><u>\$ 52,672,869</u></u>
<b>B. Plan fiduciary net position</b>	
1. Contributions – employer	\$ 973,463
2. Contributions – employee	365,677
3. Net investment income	6,688,762
4. Benefit payments, including refunds of employee contributions	(2,914,449)
5. Other (Net Transfer)	344,528
6. Net change in plan fiduciary net position	\$ 5,457,981
7. Plan fiduciary net position – beginning	46,432,060
8. Plan fiduciary net position – ending	<u><u>\$ 51,890,041</u></u>
<b>C. Net pension liability/(asset)</b>	<u><u>\$ 782,828</u></u>
<b>D. Plan fiduciary net position as a percentage of the total pension liability</b>	<b>98.51%</b>
<b>E. Covered Valuation payroll</b>	<b>\$ 8,117,039</b>
<b>F. Net pension liability as a percentage of covered valuation payroll</b>	<b>9.64%</b>

### Sensitivity of Net Pension Liability/(Asset) to the Single Discount Rate Assumption

	1% Decrease 6.25%	Current Single Discount Rate Assumption 7.25%	1% Increase 8.25%
Total Pension Liability	\$ 58,226,701	\$ 52,672,869	\$ 48,157,892
Plan Fiduciary Net Position	51,890,041	51,890,041	51,890,041
Net Pension Liability/(Asset)	\$ 6,336,660	\$ 782,828	\$ (3,732,149)



# Schedules of Required Supplementary Information

## Multiyear Schedule of Changes in Net Pension Liability and Related Ratios

Last 10 Calendar Years  
(schedule to be built prospectively from 2014)

Calendar year ending December 31,	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
<b>Total Pension Liability</b>										
Service Cost	\$ 837,511	\$ 826,609	\$ 777,672	\$ 848,202	\$ 866,048	\$ 869,695	\$ 915,435			
Interest on the Total Pension Liability	3,577,522	3,418,240	3,324,644	3,251,677	3,120,202	2,969,300	2,690,242			
Benefit Changes	0	0	0	0	0	0	0			
Difference between Expected and Actual Experience	1,225,134	840,609	193,364	711,424	(35,527)	265,732	347,151			
Assumption Changes	(436,455)	0	1,190,789	(1,388,230)	(194,112)	94,426	1,806,494			
Benefit Payments and Refunds	(2,914,449)	(2,873,366)	(2,509,401)	(2,320,450)	(2,115,056)	(2,021,132)	(1,798,506)			
<b>Net Change in Total Pension Liability</b>	2,289,263	2,212,092	2,977,068	1,102,623	1,641,555	2,178,021	3,960,816			
<b>Total Pension Liability - Beginning</b>	50,383,606	48,171,514	45,194,446	44,091,823	42,450,268	40,272,247	36,311,431			
<b>Total Pension Liability - Ending (a)</b>	\$ 52,672,869	\$ 50,383,606	\$ 48,171,514	\$ 45,194,446	\$ 44,091,823	\$ 42,450,268	\$ 40,272,247			
<b>Plan Fiduciary Net Position</b>										
Employer Contributions	\$ 973,463	\$ 813,477	\$ 912,384	\$ 919,875	\$ 943,309	\$ 896,167	\$ 916,975			
Employee Contributions	365,677	367,632	351,229	365,413	348,069	348,858	346,070			
Pension Plan Net Investment Income	6,688,762	7,616,869	(2,448,992)	6,780,945	2,489,530	180,413	2,091,460			
Benefit Payments and Refunds	(2,914,449)	(2,873,366)	(2,509,401)	(2,320,450)	(2,115,056)	(2,021,132)	(1,798,506)			
Other	344,528	372,955	543,908	(743,786)	384,179	358,469	360,607			
<b>Net Change in Plan Fiduciary Net Position</b>	5,457,981	6,297,567	(3,150,872)	5,001,997	2,050,031	(237,225)	1,916,606			
<b>Plan Fiduciary Net Position - Beginning</b>	46,432,060	40,134,493	43,285,365	38,283,368	36,233,337	36,470,562	34,553,956			
<b>Plan Fiduciary Net Position - Ending (b)</b>	\$ 51,890,041	\$ 46,432,060	\$ 40,134,493	\$ 43,285,365	\$ 38,283,368	\$ 36,233,337	\$ 36,470,562			
<b>Net Pension Liability/(Asset) - Ending (a) - (b)</b>	782,828	3,951,546	8,037,021	1,909,081	5,808,455	6,216,931	3,801,685			
<b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b>	98.51%	92.16 %	83.32 %	95.78 %	86.83%	85.35 %	90.56 %			
<b>Covered Valuation Payroll</b>	\$ 8,117,039	\$ 7,992,929	\$ 7,804,690	\$ 7,779,557	\$ 7,734,843	\$ 7,633,456	\$ 7,545,460			
<b>Net Pension Liability as a Percentage of Covered Valuation Payroll</b>	9.64%	49.44 %	102.98 %	24.54 %	75.09%	81.44 %	50.38 %			



# Multiyear Schedule of Contributions

## Last 10 Calendar Years

<u>Calendar Year Ending December 31,</u>	<u>Actuarially Determined Contribution</u>	<u>Actual Contribution</u>	<u>Contribution Deficiency (Excess)</u>	<u>Covered Valuation Payroll</u>	<u>Actual Contribution as a % of Covered Valuation Payroll</u>
2014	\$ 909,982	\$ 916,975	\$ (6,993)	\$ 7,545,460	12.15%
2015	896,168	896,167	1	7,633,456	11.74%
2016	931,275	943,309	(12,034)	7,734,843	12.20%
2017	908,652	919,875	(11,223)	7,779,557	11.82%
2018	898,320	912,384	(14,064)	7,804,690	11.69%
2019	805,687	813,477	(7,790)	7,992,929	10.18%
2020	973,233 *	973,463	(230)	8,117,039	11.99%

\* Estimated based on contribution rate of 11.99% and covered valuation payroll of \$8,117,039.  
This number should be verified by the auditor.

# Notes to Schedule of Contributions

## Summary of Actuarial Methods and Assumptions Used in the Calculation of the 2020 Contribution Rate\*

### Valuation Date:

Notes Actuarially determined contribution rates are calculated as of December 31 each year, which is 12 months prior to the beginning of the calendar year in which contributions are reported.

### Methods and Assumptions Used to Determine 2020 Contribution Rates:

Actuarial Cost Method	Aggregate Entry Age Normal
Amortization Method	Level Percentage of Payroll, Closed
Remaining Amortization Period	Non-Taxing bodies: 10-year rolling period. Taxing bodies (Regular, SLEP and ECO groups): 23-year closed period Early Retirement Incentive Plan liabilities: a period up to 10 years selected by the Employer upon adoption of ERI. SLEP supplemental liabilities attributable to Public Act 94-712 were financed over 18 years for most employers (three employers were financed over 27 years and four others were financed over 28 years).
Asset Valuation Method	5-Year smoothed market; 20% corridor
Wage growth	3.25%
Price Inflation	2.50%
Salary Increases	3.35% to 14.25% including inflation
Investment Rate of Return	7.25%
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 2014-2016.
Mortality	For non-disabled retirees, IMRF specific mortality rates were used with fully generational projection scale MP-2017 (base year 2015). The IMRF specific rates were developed from the RP-2014 Blue Collar Healthy Annuitant Mortality Table with adjustments to match current IMRF experience. For disabled retirees, IMRF specific mortality rates were used with fully generational projection scale MP-2017 (base year 2015). The IMRF specific rates were developed from the RP-2014 Disabled Retirees Mortality Table applying the same adjustments that were applied for non-disabled lives. For active members, IMRF specific mortality rates were used with fully generational projection scale MP-2017 (base year 2015). The IMRF specific rates were developed from the RP-2014 Employee Mortality Table with adjustments to match current IMRF experience.

### Other Information:

Notes There were no benefit changes during the year.

\* Based on Valuation Assumptions used in the December 31, 2018 actuarial valuation.



# Development of Market Value of Assets

## Market Value of Assets as of December 31, 2020

1. Employee Contribution Reserve (MDF Assets from IMRF)	\$	6,943,015
2. Employer Contribution Reserve (EAF assets from IMRF)		13,401,011
3. Annuitant Reserve		31,379,907
4. Miscellaneous Adjustment*		166,108
<b>5. Net Market Value</b>	<b>\$</b>	<b>51,890,041</b>

\* Includes an adjustment factor of 0.003211435 on Items 1 through 3 to ensure that Market Value of Assets for all employers balances to the total Market Value of IMRF. Miscellaneous adjustments are due to various items such as suspended annuity reserve, disability benefit reserve, death benefit reserve, supplemental benefit reserve, employers with no assets, etc.

## Schedule of Contributions

### Total Contributions

#### 1. Employer

a.) Wage Reporting	\$	973,463
b.) Accelerated payments and Reserve Payments		-
	<b>\$</b>	<b>973,463</b>

#### 2. Member

a.) Wage Reporting	\$	365,388
b.) Member Payments (i.e. ERI, Pension Payments)		289
<b>Sub-total (Amount used for valuation on Schedule of Changes Page 11)</b>	<b>\$</b>	<b>365,677</b>
c.) Voluntary Additional Plan	\$	113,811
<b>Total Member Contributions (a+b+c)</b>	<b>\$</b>	<b>479,488</b>

**Total Employer and Member Contributions (1+2)** **\$ 1,452,951**



## SECTION C

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### CALCULATION OF THE SINGLE DISCOUNT RATE

## Calculation of the Single Discount Rate

GASB Statement No. 68 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total Pension Liability. This rate considers the ability of the fund to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As long as assets are projected to be on hand in a future year, the assumed valuation discount rate is used. In years where assets are not projected to be sufficient to meet benefit payments, the use of a “risk-free” rate is required, as described in the following paragraph.

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

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.25%; the municipal bond rate is 2.00%; and the resulting single discount rate is 7.25%.

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).

Expected Contributions are developed based on the following:

- Member Contributions for current members
- Normal Cost contributions for current members
- Unfunded Liability contributions for current members

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

# Single Discount Rate Development Projection of Contributions

Year	Payroll for Current Employees	Contributions from Current Employees	Normal Cost Contributions	UAL Contributions	Total Contributions
2020	\$ 8,117,039				
2021	7,802,128	\$ 351,096	\$ 456,794	\$ 385,155	\$ 1,193,045
2022	7,156,434	322,040	372,412	294,950	989,401
2023	6,610,508	297,473	338,787	192,037	828,297
2024	6,123,397	275,553	312,615	74,716	662,884
2025	5,693,221	256,195	288,969	(1,778)	543,386
2026	5,317,091	239,269	268,305	(1,823)	505,751
2027	4,976,411	223,939	250,132	(1,869)	472,202
2028	4,668,274	210,072	233,263	(1,915)	441,421
2029	4,387,050	197,417	217,481	(1,963)	412,935
2030	4,121,019	185,446	203,073	(2,012)	386,507
2031	3,867,139	174,021	189,037	(2,062)	360,997
2032	3,619,906	162,896	175,881	(2,114)	336,663
2033	3,376,914	151,961	163,076	(2,167)	312,870
2034	3,143,281	141,448	150,553	(2,221)	289,780
2035	2,895,613	130,303	137,834	(2,277)	265,860
2036	2,632,869	118,479	124,289	(2,334)	240,434
2037	2,382,715	107,222	111,305	(2,392)	216,135
2038	2,149,234	96,715	99,338	(2,452)	193,602
2039	1,941,783	87,380	88,792	(2,513)	173,660
2040	1,748,709	78,692	79,101	(2,576)	155,217
2041	1,566,575	70,496	70,090	(2,640)	137,946
2042	1,404,879	63,220	62,163	(2,706)	122,677
2043	1,260,466	56,721	55,152	0	111,873
2044	1,135,549	51,100	49,126	0	100,226
2045	1,027,297	46,228	43,835	0	90,063
2046	928,463	41,781	38,977	0	80,757
2047	832,953	37,483	34,310	0	71,793
2048	750,885	33,790	30,411	0	64,201
2049	675,934	30,417	26,909	0	57,326
2050	581,559	26,170	22,865	0	49,035
2051	502,909	22,631	19,624	0	42,255
2052	450,599	20,277	17,450	0	37,727
2053	392,991	17,685	15,025	0	32,710
2054	335,022	15,076	12,743	0	27,819
2055	264,078	11,884	9,966	0	21,850
2056	201,408	9,063	7,581	0	16,644
2057	162,044	7,292	6,068	0	13,360
2058	114,104	5,135	4,261	0	9,396
2059	62,123	2,796	2,326	0	5,122
2060	29,820	1,342	1,128	0	2,470
2061	15,138	681	586	0	1,267
2062	4,850	218	193	0	411
2063	1,920	86	84	0	170
2064	1,042	47	51	0	98
2065	705	32	38	0	69
2066	474	21	28	0	49
2067	312	14	18	0	32
2068	241	11	14	0	25
2069	108	5	6	0	11
2070	0	0	0	0	0

The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.



# Single Discount Rate Development Projection of Contributions (Concluded)

Year	Payroll for Current Employees	Contributions from Current Employees	Normal Cost Contributions	UAL Contributions	Total Contributions
2071	\$ 0	\$ 0	\$ 0	\$ 0	0
2072	0	0	0	0	0
2073	0	0	0	0	0
2074	0	0	0	0	0
2075	0	0	0	0	0
2076	0	0	0	0	0
2077	0	0	0	0	0
2078	0	0	0	0	0
2079	0	0	0	0	0
2080	0	0	0	0	0
2081	0	0	0	0	0
2082	0	0	0	0	0
2083	0	0	0	0	0
2084	0	0	0	0	0
2085	0	0	0	0	0
2086	0	0	0	0	0
2087	0	0	0	0	0
2088	0	0	0	0	0
2089	0	0	0	0	0
2090	0	0	0	0	0
2091	0	0	0	0	0
2092	0	0	0	0	0
2093	0	0	0	0	0
2094	0	0	0	0	0
2095	0	0	0	0	0
2096	0	0	0	0	0
2097	0	0	0	0	0
2098	0	0	0	0	0
2099	0	0	0	0	0
2100	0	0	0	0	0
2101	0	0	0	0	0
2102	0	0	0	0	0
2103	0	0	0	0	0
2104	0	0	0	0	0
2105	0	0	0	0	0
2106	0	0	0	0	0
2107	0	0	0	0	0
2108	0	0	0	0	0
2109	0	0	0	0	0
2110	0	0	0	0	0
2111	0	0	0	0	0
2112	0	0	0	0	0
2113	0	0	0	0	0
2114	0	0	0	0	0
2115	0	0	0	0	0
2116	0	0	0	0	0
2117	0	0	0	0	0
2118	0	0	0	0	0
2119	0	0	0	0	0
2120	0	0	0	0	0

The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.



# Single Discount Rate Development Projection of Plan Fiduciary Net Position

Year	Projected				
	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Investment Earnings at 7.25%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)=(a)+(b)-(c)+(d)
2021	\$ 51,890,041	\$ 1,193,045	\$ 3,280,029	\$ 3,687,698	\$ 53,490,755
2022	53,490,755	989,402	3,444,408	3,790,643	54,826,391
2023	54,826,391	828,297	3,602,501	3,876,108	55,928,295
2024	55,928,295	662,884	3,743,704	3,945,076	56,792,552
2025	56,792,552	543,386	3,878,512	3,998,677	57,456,102
2026	57,456,102	505,751	4,002,445	4,041,030	58,000,439
2027	58,000,439	472,203	4,127,226	4,074,855	58,420,271
2028	58,420,271	441,420	4,239,380	4,100,202	58,722,514
2029	58,722,514	412,935	4,351,360	4,117,112	58,901,200
2030	58,901,200	386,507	4,458,486	4,125,310	58,954,532
2031	58,954,532	360,996	4,555,690	4,124,806	58,884,645
2032	58,884,645	336,662	4,638,915	4,115,909	58,698,300
2033	58,698,300	312,870	4,717,926	4,098,737	58,391,982
2034	58,391,982	289,780	4,796,175	4,072,920	57,958,507
2035	57,958,507	265,860	4,883,167	4,037,543	57,378,743
2036	57,378,743	240,434	4,963,409	3,991,747	56,647,515
2037	56,647,515	216,135	5,025,569	3,935,653	55,773,734
2038	55,773,734	193,602	5,067,295	3,870,015	54,770,056
2039	54,770,056	173,660	5,090,703	3,795,705	53,648,718
2040	53,648,718	155,218	5,098,462	3,713,475	52,418,948
2041	52,418,948	137,946	5,084,981	3,624,181	51,096,094
2042	51,096,094	122,676	5,051,445	3,528,925	49,696,251
2043	49,696,251	111,873	5,018,555	3,428,223	48,217,791
2044	48,217,791	100,226	4,963,096	3,322,595	46,677,516
2045	46,677,516	90,063	4,877,429	3,213,614	45,103,765
2046	45,103,765	80,757	4,783,406	3,102,535	43,503,651
2047	43,503,651	71,793	4,681,827	2,989,825	41,883,442
2048	41,883,442	64,201	4,560,118	2,876,424	40,263,949
2049	40,263,949	57,326	4,449,400	2,762,709	38,634,585
2050	38,634,585	49,035	4,342,037	2,648,109	36,989,692
2051	36,989,692	42,255	4,198,534	2,533,724	35,367,137
2052	35,367,137	37,727	4,061,618	2,420,803	33,764,049
2053	33,764,049	32,710	3,931,862	2,309,022	32,173,919
2054	32,173,919	27,819	3,798,170	2,198,325	30,601,893
2055	30,601,893	21,850	3,680,798	2,088,321	29,031,265
2056	29,031,265	16,644	3,541,328	1,979,232	27,485,814
2057	27,485,814	13,360	3,401,972	1,872,034	25,969,236
2058	25,969,236	9,396	3,284,346	1,766,130	24,460,415
2059	24,460,415	5,122	3,172,113	1,660,585	22,954,009
2060	22,954,009	2,470	3,029,814	1,556,345	21,483,010
2061	21,483,010	1,267	2,884,274	1,454,838	20,054,842
2062	20,054,842	411	2,736,721	1,356,520	18,675,051
2063	18,675,051	170	2,582,304	1,261,977	17,354,894
2064	17,354,894	98	2,431,310	1,171,640	16,095,323
2065	16,095,323	69	2,284,100	1,085,563	14,896,855
2066	14,896,855	49	2,141,145	1,003,765	13,759,524
2067	13,759,524	32	2,002,716	926,238	12,683,078
2068	12,683,078	25	1,869,103	852,955	11,666,954
2069	11,666,954	11	1,740,947	783,849	10,709,868
2070	10,709,868	0	1,618,231	718,831	9,810,468

The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.



# Single Discount Rate Development

## Projection of Plan Fiduciary Net Position (Concluded)

Year	Projected Beginning Plan Net Position		Projected Total Contributions		Projected Benefit Payments		Projected Investment Earnings at 7.25%		Projected Ending Plan Net Position	
	(a)	(b)	(c)	(d)	(e)=(a)+(b)-(c)+(d)					
2071	\$ 9,810,468	\$ 0	\$ 1,501,272	\$ 657,790	\$ 8,966,985					
2072	8,966,985	0	1,390,303	600,590	8,177,272					
2073	8,177,272	0	1,285,374	547,073	7,438,971					
2074	7,438,971	0	1,186,429	497,070	6,749,613					
2075	6,749,613	0	1,093,355	450,406	6,106,663					
2076	6,106,663	0	1,005,961	406,905	5,507,608					
2077	5,507,608	0	923,977	366,393	4,950,024					
2078	4,950,024	0	847,097	328,707	4,431,634					
2079	4,431,634	0	774,953	293,693	3,950,374					
2080	3,950,374	0	707,154	261,216	3,504,436					
2081	3,504,436	0	643,343	231,158	3,092,252					
2082	3,092,252	0	583,194	203,417	2,712,475					
2083	2,712,475	0	526,443	177,905	2,363,936					
2084	2,363,936	0	472,908	154,542	2,045,571					
2085	2,045,571	0	422,451	133,258	1,756,377					
2086	1,756,377	0	374,990	113,982	1,495,369					
2087	1,495,369	0	330,492	96,644	1,261,521					
2088	1,261,521	0	288,959	81,169	1,053,730					
2089	1,053,730	0	250,413	67,477	870,794					
2090	870,794	0	214,885	55,479	711,388					
2091	711,388	0	182,419	45,079	574,047					
2092	574,047	0	153,049	36,167	457,166					
2093	457,166	0	126,788	28,629	359,007					
2094	359,007	0	103,615	22,338	277,729					
2095	277,729	0	83,447	17,163	211,445					
2096	211,445	0	66,158	12,974	158,261					
2097	158,261	0	51,582	9,637	116,316					
2098	116,316	0	39,501	7,026	83,841					
2099	83,841	0	29,670	5,022	59,193					
2100	59,193	0	21,827	3,514	40,880					
2101	40,880	0	15,703	2,404	27,581					
2102	27,581	0	11,032	1,607	18,156					
2103	18,156	0	7,557	1,047	11,646					
2104	11,646	0	5,041	665	7,269					
2105	7,269	0	3,270	411	4,410					
2106	4,410	0	2,059	246	2,598					
2107	2,598	0	1,257	144	1,484					
2108	1,484	0	743	81	822					
2109	822	0	425	44	441					
2110	441	0	235	24	230					
2111	230	0	126	12	116					
2112	116	0	65	6	57					
2113	57	0	33	3	28					
2114	28	0	16	1	13					
2115	13	0	8	1	6					
2116	6	0	4	0	3					
2117	3	0	2	0	1					
2118	1	0	1	0	0					
2119	0	0	0	0	0					
2120	0	0	0	0	0					

The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.



# Single Discount Rate Development

## Present Values of Projected Benefits

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v <sup>^(a)-.5</sup>	(g)=(e)*vf <sup>^(a)-.5</sup>	(h)=(c)/(1+sdr) <sup>^(a)-.5</sup>
2021	\$ 51,890,041	\$ 3,280,029	\$ 3,280,029	\$ 0	\$ 3,167,226	\$ 0	\$ 3,167,226
2022	53,490,755	3,444,408	3,444,408	0	3,101,121	0	3,101,121
2023	54,826,391	3,602,501	3,602,501	0	3,024,202	0	3,024,202
2024	55,928,295	3,743,704	3,743,704	0	2,930,292	0	2,930,292
2025	56,792,552	3,878,512	3,878,512	0	2,830,592	0	2,830,592
2026	57,456,102	4,002,445	4,002,445	0	2,723,581	0	2,723,581
2027	58,000,439	4,127,226	4,127,226	0	2,618,640	0	2,618,640
2028	58,420,271	4,239,380	4,239,380	0	2,507,971	0	2,507,971
2029	58,722,514	4,351,360	4,351,360	0	2,400,203	0	2,400,203
2030	58,901,200	4,458,486	4,458,486	0	2,293,047	0	2,293,047
2031	58,954,532	4,555,690	4,555,690	0	2,184,653	0	2,184,653
2032	58,884,645	4,638,915	4,638,915	0	2,074,185	0	2,074,185
2033	58,698,300	4,717,926	4,717,926	0	1,966,912	0	1,966,912
2034	58,391,982	4,796,175	4,796,175	0	1,864,367	0	1,864,367
2035	57,958,507	4,883,167	4,883,167	0	1,769,867	0	1,769,867
2036	57,378,743	4,963,409	4,963,409	0	1,677,343	0	1,677,343
2037	56,647,515	5,025,569	5,025,569	0	1,583,543	0	1,583,543
2038	55,773,734	5,067,295	5,067,295	0	1,488,756	0	1,488,756
2039	54,770,056	5,090,703	5,090,703	0	1,394,529	0	1,394,529
2040	53,648,718	5,098,462	5,098,462	0	1,302,242	0	1,302,242
2041	52,418,948	5,084,981	5,084,981	0	1,211,001	0	1,211,001
2042	51,096,094	5,051,445	5,051,445	0	1,121,692	0	1,121,692
2043	49,696,251	5,018,555	5,018,555	0	1,039,057	0	1,039,057
2044	48,217,791	4,963,096	4,963,096	0	958,112	0	958,112
2045	46,677,516	4,877,429	4,877,429	0	877,924	0	877,924
2046	45,103,765	4,783,406	4,783,406	0	802,798	0	802,798
2047	43,503,651	4,681,827	4,681,827	0	732,634	0	732,634
2048	41,883,442	4,560,118	4,560,118	0	665,350	0	665,350
2049	40,263,949	4,449,400	4,449,400	0	605,311	0	605,311
2050	38,634,585	4,342,037	4,342,037	0	550,774	0	550,774
2051	36,989,692	4,198,534	4,198,534	0	496,569	0	496,569
2052	35,367,137	4,061,618	4,061,618	0	447,903	0	447,903
2053	33,764,049	3,931,862	3,931,862	0	404,283	0	404,283
2054	32,173,919	3,798,170	3,798,170	0	364,137	0	364,137
2055	30,601,893	3,680,798	3,680,798	0	329,030	0	329,030
2056	29,031,265	3,541,328	3,541,328	0	295,163	0	295,163
2057	27,485,814	3,401,972	3,401,972	0	264,380	0	264,380
2058	25,969,236	3,284,346	3,284,346	0	237,985	0	237,985
2059	24,460,415	3,172,113	3,172,113	0	214,315	0	214,315
2060	22,954,009	3,029,814	3,029,814	0	190,863	0	190,863
2061	21,483,010	2,884,274	2,884,274	0	169,413	0	169,413
2062	20,054,842	2,736,721	2,736,721	0	149,880	0	149,880
2063	18,675,051	2,582,304	2,582,304	0	131,863	0	131,863
2064	17,354,894	2,431,310	2,431,310	0	115,760	0	115,760
2065	16,095,323	2,284,100	2,284,100	0	101,399	0	101,399
2066	14,896,855	2,141,145	2,141,145	0	88,628	0	88,628
2067	13,759,524	2,002,716	2,002,716	0	77,294	0	77,294
2068	12,683,078	1,869,103	1,869,103	0	67,261	0	67,261
2069	11,666,954	1,740,947	1,740,947	0	58,414	0	58,414
2070	10,709,868	1,618,231	1,618,231	0	50,626	0	50,626

The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.



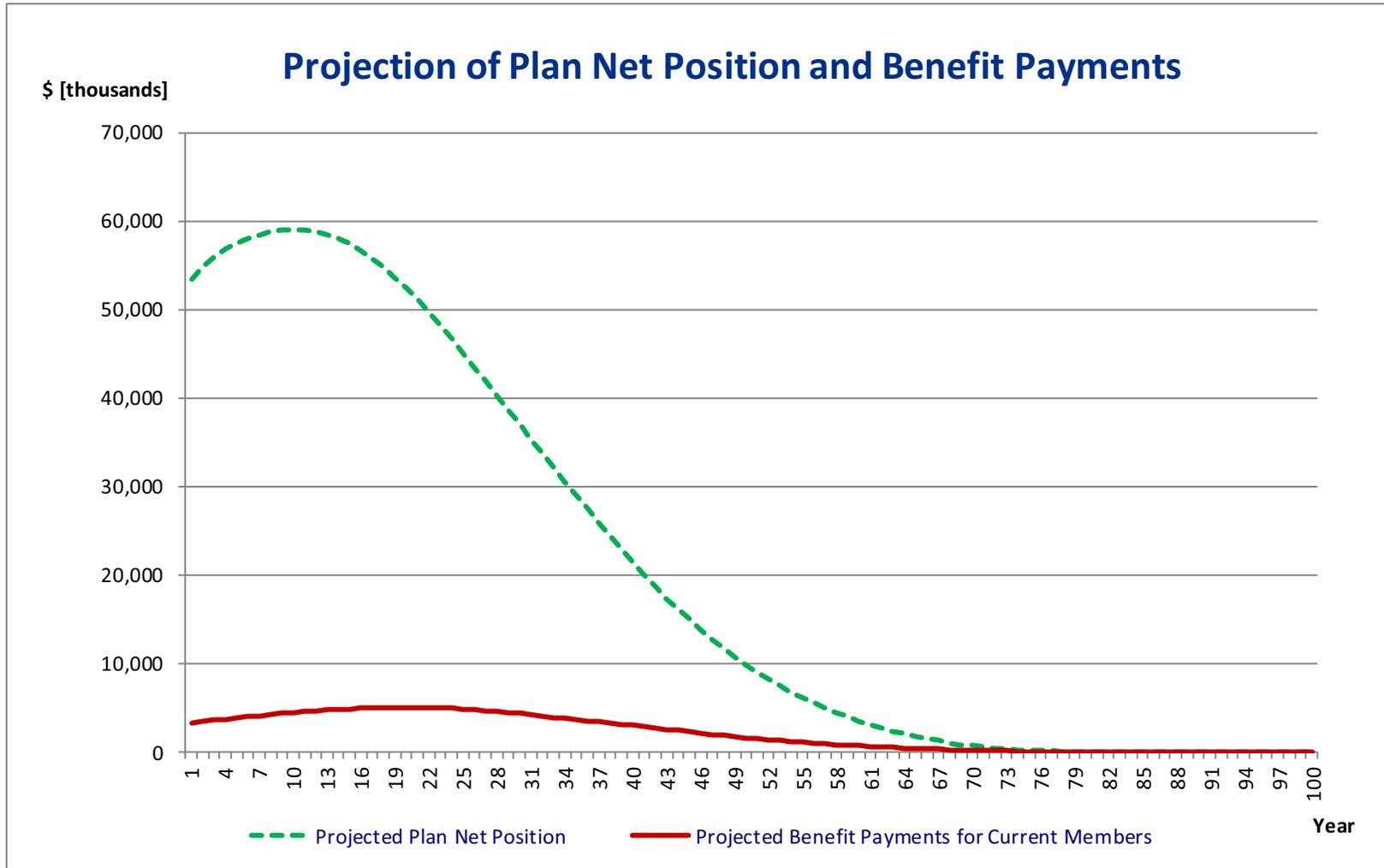
# Single Discount Rate Development

## Present Values of Projected Benefits (Concluded)

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v <sup>a</sup> ((a)-.5)	(g)=(e)*vf <sup>a</sup> ((a)-.5)	(h)=(c)/(1+sdr) <sup>a</sup> ((a)-.5)
2071	\$ 9,810,468	\$ 1,501,272	\$ 1,501,272	\$ 0	\$ 43,792	\$ 0	\$ 43,792
2072	8,966,985	1,390,303	1,390,303	0	37,814	0	37,814
2073	8,177,272	1,285,374	1,285,374	0	32,597	0	32,597
2074	7,438,971	1,186,429	1,186,429	0	28,053	0	28,053
2075	6,749,613	1,093,355	1,093,355	0	24,105	0	24,105
2076	6,106,663	1,005,961	1,005,961	0	20,679	0	20,679
2077	5,507,608	923,977	923,977	0	17,710	0	17,710
2078	4,950,024	847,097	847,097	0	15,139	0	15,139
2079	4,431,634	774,953	774,953	0	12,913	0	12,913
2080	3,950,374	707,154	707,154	0	10,987	0	10,987
2081	3,504,436	643,343	643,343	0	9,320	0	9,320
2082	3,092,252	583,194	583,194	0	7,877	0	7,877
2083	2,712,475	526,443	526,443	0	6,630	0	6,630
2084	2,363,936	472,908	472,908	0	5,553	0	5,553
2085	2,045,571	422,451	422,451	0	4,625	0	4,625
2086	1,756,377	374,990	374,990	0	3,828	0	3,828
2087	1,495,369	330,492	330,492	0	3,146	0	3,146
2088	1,261,521	288,959	288,959	0	2,565	0	2,565
2089	1,053,730	250,413	250,413	0	2,072	0	2,072
2090	870,794	214,885	214,885	0	1,658	0	1,658
2091	711,388	182,419	182,419	0	1,312	0	1,312
2092	574,047	153,049	153,049	0	1,027	0	1,027
2093	457,166	126,788	126,788	0	793	0	793
2094	359,007	103,615	103,615	0	604	0	604
2095	277,729	83,447	83,447	0	454	0	454
2096	211,445	66,158	66,158	0	335	0	335
2097	158,261	51,582	51,582	0	244	0	244
2098	116,316	39,501	39,501	0	174	0	174
2099	83,841	29,670	29,670	0	122	0	122
2100	59,193	21,827	21,827	0	84	0	84
2101	40,880	15,703	15,703	0	56	0	56
2102	27,581	11,032	11,032	0	37	0	37
2103	18,156	7,557	7,557	0	23	0	23
2104	11,646	5,041	5,041	0	15	0	15
2105	7,269	3,270	3,270	0	9	0	9
2106	4,410	2,059	2,059	0	5	0	5
2107	2,598	1,257	1,257	0	3	0	3
2108	1,484	743	743	0	2	0	2
2109	822	425	425	0	1	0	1
2110	441	235	235	0	0	0	0
2111	230	126	126	0	0	0	0
2112	116	65	65	0	0	0	0
2113	57	33	33	0	0	0	0
2114	28	16	16	0	0	0	0
2115	13	8	8	0	0	0	0
2116	6	4	4	0	0	0	0
2117	3	2	2	0	0	0	0
2118	1	1	1	0	0	0	0
2119	0	0	0	0	0	0	0
2120	0	0	0	0	0	0	0
<b>Totals</b>					\$ 58,019,455	\$ -	\$ 58,019,455

The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.





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## **SECTION D**

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### **GLOSSARY OF TERMS**

# Glossary of Terms

<b><i>Actuarial Accrued Liability (AAL)</i></b>	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."
<b><i>Actuarial Assumptions</i></b>	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.
<b><i>Accrued Service</i></b>	Service credited under the fund which was rendered before the date of the actuarial valuation.
<b><i>Actuarial Equivalent</i></b>	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.
<b><i>Actuarial Cost Method</i></b>	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.
<b><i>Actuarial Gain (Loss)</i></b>	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.
<b><i>Actuarial Present Value (APV)</i></b>	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.
<b><i>Actuarial Valuation</i></b>	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.
<b><i>Actuarial Valuation Date</i></b>	The date as of which an actuarial valuation is performed.
<b><i>Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC)</i></b>	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 (Continued)

<b><i>Amortization Payment</i></b>	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
<b><i>Amortization Method</i></b>	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).
<b><i>Cost-of-Living Adjustments</i></b>	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
<b><i>Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)</i></b>	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.
<b><i>Covered Valuation Payroll</i></b>	The earnings of covered employees for the year ended on the valuation date, which is typically only the pensionable pay and does not include pay above any pay cap. It is not necessarily the same as payroll actually paid because it excludes all pay for people who exited during the year.
<b><i>Deferred Inflows and Outflows</i></b>	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.
<b><i>Discount Rate</i></b>	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"><li>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; and</li><li>2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.</li></ol>
<b><i>Entry Age Actuarial Cost Method (EAN)</i></b>	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.

## Glossary of Terms (Continued)

<b><i>GASB</i></b>	The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.
<b><i>Fiduciary Net Position</i></b>	The fiduciary net position is the value of the assets of the trust.
<b><i>Long-Term Expected Rate of Return</i></b>	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.
<b><i>Money-Weighted Rate of Return</i></b>	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. 68, money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense.
<b><i>Multiple-Employer Defined Benefit Pension Plan</i></b>	A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.
<b><i>Municipal Bond Rate</i></b>	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.
<b><i>Net Pension Liability (NPL)</i></b>	The NPL is the liability of employers and non-employer contribution entities to plan members for benefits provided through a defined benefit pension plan.
<b><i>Non-Employer Contribution Entities</i></b>	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 statement plan members are not considered non-employer contribution entities.
<b><i>Normal Cost</i></b>	The actuarial present value of the pension trust benefits allocated to the current year by the actuarial cost method.
<b><i>Other Postemployment Benefits (OPEB)</i></b>	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.
<b><i>Real Rate of Return</i></b>	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
<b><i>Service Cost</i></b>	The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.

## Glossary of Terms (Concluded)

### ***Total Pension Expense***

The total pension expense is the sum of the following items that are recognized at the end of the employer's fiscal year:

1. Service Cost;
2. Interest on the Total Pension Liability;
3. Current-Period Benefit Changes;
4. Employee Contributions (made negative for addition here);
5. Projected Earnings on Plan Investments (made negative for addition here);
6. Pension Plan Administrative Expense;
7. Other Changes in Plan Fiduciary Net Position;
8. Recognition of Outflow (Inflow) of Resources due to Liabilities;  
and
9. Recognition of Outflow (Inflow) of Resources due to Assets.

### ***Total Pension Liability (TPL)***

The TPL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.

### ***Unfunded Actuarial Accrued Liability (UAAL)***

The UAAL is the difference between actuarial accrued liability and valuation assets.

### ***Valuation Assets***

The valuation assets are the assets used in determining the unfunded liability of the plan. For purposes of the GASB Statement No. 68, the valuation asset is equal to the market value of assets.