

Arlington Heights Park Dist Regular

GASB Statement No. 68 Employer Reporting

Accounting Schedules

December 31, 2021



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March 24, 2022

Arlington Heights Park Dist
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 Arlington Heights Park Dist only in its entirety and only with the permission of Arlington Heights Park Dist. 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, 2021 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 Statement No. 68 information related to Arlington Heights Park Dist. 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. If you have reason to believe that the information provided in this report is inaccurate, or is in any way incomplete, or if you need further information in order to make an informed decision on the subject matter of this report, please contact IMRF.

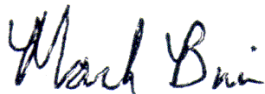
This report was prepared during the recent and still-developing COVID-19 pandemic, which is likely to influence demographic, economic, and health care experience, at least in the short term. Results in this report are developed based on available data without adjustment. We will continue to monitor these developments and their impact on the Plan. Actual experience will be reflected in each subsequent report, as experience emerges.

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 contained herein.

The signing actuaries are independent of the plan sponsor.

Respectfully submitted,
Gabriel, Roeder, Smith & Company



Mark Buis, FSA, EA, FCA, MAAA



Francois Pieterse, ASA, FCA, MAAA

MB/FP:bd



SECTION A

EXECUTIVE SUMMARY

Executive Summary as of December 31, 2021

Actuarial Valuation Date	December 31, 2021
Measurement Date of the Net Pension Liability	December 31, 2021
Fiscal Year End	April 30, 2022

Membership

Number of	
- Retirees and Beneficiaries	193
- Inactive, Non-Retired Members	188
- Active Members	101
- Total	482
Covered Valuation Payroll ⁽¹⁾	\$ 5,880,190

Net Pension Liability

Total Pension Liability/(Asset)	\$ 59,864,418
Plan Fiduciary Net Position	64,745,178
Net Pension Liability/(Asset)	\$ (4,880,760)
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	108.15%
Net Pension Liability as a Percentage of Covered Valuation Payroll	(83.00)%

Development of the Single Discount Rate as of December 31, 2021

Long-Term Expected Rate of Investment Return	7.25%
Long-Term Municipal Bond Rate ⁽²⁾	1.84%
Last year ending December 31 in the 2022 to 2121 projection period for which projected benefit payments are fully funded	2121
Resulting Single Discount Rate based on the above development	7.25%
Single Discount Rate calculated using December 31, 2020 Measurement Date	7.25%

Total Pension Expense/(Income) \$ (2,023,605)

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	\$ 322,366	\$ 313,937
Changes in assumptions	0	135,998
Net difference between projected and actual earnings on pension plan investments	1,246,507	8,787,363
Total	\$ 1,568,873	\$ 9,237,298

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

⁽²⁾ 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, 2021. 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, 2021.

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 to B-5 of the December 31, 2021 Annual Actuarial Valuation report dated March 11, 2022);
- 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 (pages 14 and 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, 2021 Annual Actuarial Valuation report dated March 11, 2022, 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, 2021 and a measurement date of December 31, 2021.

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 1.84% (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 2121 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, if 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

FINANCIAL STATEMENTS

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

Calendar Year Ended December 31, 2021

A. Expense/(Income)

1. Service Cost	\$	565,633
2. Interest on the Total Pension Liability		4,178,772
3. Current-Period Benefit Changes		0
4. Employee Contributions (made negative for addition here)		(264,609)
5. Projected Earnings on Plan Investments (made negative for addition here)		(4,059,857)
6. Other Changes in Plan Fiduciary Net Position		234,473
7. Recognition of Outflow (Inflow) of Resources due to Liabilities		(107,660)
8. Recognition of Outflow (Inflow) of Resources due to Assets		(2,570,357)
9. Total Pension Expense/(Income)	\$	(2,023,605)

Recognition of Deferred Outflows and Inflows of Resources

Differences between expected and actual experience and changes in assumptions are recognized in the 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 1,115 years. Additionally, the total plan membership (active employees and inactive employees) was 478. 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 2.3336 years.

Additionally, differences between projected and actual earnings on pension plan investments should be recognized in the 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, 2021

A. Outflows (Inflows) of Resources due to Liabilities

1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	\$ (547,828)
2. Assumption Changes (gains) or losses	\$ 0
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}	2.3336
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	\$ (234,757)
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for Assumption Changes	\$ 0
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	\$ (234,757)
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	\$ (313,071)
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for Assumption Changes	\$ 0
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	\$ (313,071)

B. Outflows (Inflows) of Resources due to Assets

1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$ (5,674,531)
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	\$ (1,134,906)
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$ (4,539,625)

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, 2021

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	\$ 455,762	\$ 563,422	\$ (107,660)
2. Due to Assets	1,246,506	3,816,863	(2,570,357)
3. Total	\$ 1,702,268	\$ 4,380,285	\$ (2,678,017)

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	\$ 334,094	\$ 422,478	\$ (88,384)
2. Assumption changes	121,668	140,944	\$ (19,276)
3. Net difference between projected and actual earnings on pension plan investments	1,246,506	3,816,863	(2,570,357)
4. Total	\$ 1,702,268	\$ 4,380,285	\$ (2,678,017)

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	\$ 322,366	\$ 313,937	\$ 8,429
2. Assumption changes	0	135,998	\$ (135,998)
3. Net difference between projected and actual earnings on pension plan investments	1,246,507	8,787,363	(7,540,856)
4. Total	\$ 1,568,873	\$ 9,237,298	\$ (7,668,425)

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
2022	\$ (1,702,679)
2023	(2,978,247)
2024	(1,852,592)
2025	(1,134,907)
2026	0
Thereafter	0
Total	\$ (7,668,425)

Recognition of Deferred Outflows and Inflows of Resources

Reporting Date - December 31, 2021

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					
2014	\$ 0	1.0000	\$ 0	\$ 0	0.0000
2015	281,872	3.3234	0	0	0.0000
2016	2,343,249	3.2458	0	0	0.0000
2017	(445,945)	3.1371	0	0	0.0000
2018	(372,427)	3.2678	(30,520)	0	0.0000
2019	(472,469)	3.0055	(157,201)	(866)	0.0055
2020	990,554	2.9649	334,094	322,366	0.9649
2021	(547,828)	2.3336	(234,757)	(313,071)	1.3336
Total			\$ (88,384)	\$ 8,429	
Deferred Outflow (Inflow) due to Assumption Changes					
2014	\$ 0	1.0000	\$ 0	\$ 0	0.0000
2015	58,964	3.3234	0	0	0.0000
2016	(187,209)	3.2458	0	0	0.0000
2017	(1,631,419)	3.1371	0	0	0.0000
2018	1,484,631	3.2678	121,668	0	0.0000
2019	0	3.0055	0	0	0.0055
2020	(417,886)	2.9649	(140,944)	(135,998)	0.9649
2021	0	2.3336	0	0	1.3336
Total			\$ (19,276)	\$ (135,998)	
Deferred Outflow (Inflow) due to Differences Between Projected and Actual Earnings on Plan Investments					
2017	\$ (4,584,668)	5.0000	\$ (916,932)	\$ 0	0.0000
2018	6,232,531	5.0000	1,246,506	1,246,507	1.0000
2019	(5,236,687)	5.0000	(1,047,337)	(2,094,676)	2.0000
2020	(3,588,438)	5.0000	(717,688)	(2,153,062)	3.0000
2021	(5,674,531)	5.0000	(1,134,906)	(4,539,625)	4.0000
Total			\$ (2,570,357)	\$ (7,540,856)	

Schedule of Changes in Net Pension Liability and Related Ratios Current Period Calendar Year Ended December 31, 2021

A. Total pension liability		
1. Service Cost	\$	565,633
2. Interest on the Total Pension Liability		4,178,772
3. Changes of benefit terms		0
4. Difference between expected and actual experience of the Total Pension Liability		(547,828)
5. Changes of assumptions		0
6. Benefit payments, including refunds of employee contributions		(3,375,151)
7. Net change in total pension liability	\$	821,426
8. Total pension liability – beginning		59,042,992
9. Total pension liability – ending	\$	59,864,418
B. Plan fiduciary net position		
1. Contributions – employer	\$	1,370,552
2. Contributions – employee		264,609
3. Net investment income		9,734,388
4. Benefit payments, including refunds of employee contributions		(3,375,151)
5. Other (Net Transfer)		(234,473)
6. Net change in plan fiduciary net position	\$	7,759,925
7. Plan fiduciary net position – beginning		56,985,253
8. Plan fiduciary net position – ending	\$	64,745,178
C. Net pension liability/(asset)	\$	(4,880,760)
D. Plan fiduciary net position as a percentage of the total pension liability		108.15%
E. Covered Valuation payroll⁽¹⁾	\$	5,880,190
F. Net pension liability as a percentage of covered valuation payroll		(83.00)%

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

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	\$ 66,249,225	\$ 59,864,418	\$ 54,813,695
Plan Fiduciary Net Position	64,745,178	64,745,178	64,745,178
Net Pension Liability/(Asset)	\$ 1,504,047	\$ (4,880,760)	\$ (9,931,483)



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,	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Total Pension Liability										
Service Cost	\$ 565,633	\$ 682,946	\$ 686,506	\$ 680,303	\$ 680,014	\$ 809,218	\$ 789,221			
Interest on the Total Pension Liability	4,178,772	4,034,978	3,956,534	3,892,570	3,923,085	3,609,206	3,429,032			
Benefit Changes	0	0	0	0	0	0	0			
Difference between Expected and Actual Experience	(547,828)	990,554	(472,469)	(372,427)	(445,945)	2,343,249	281,872			
Assumption Changes	0	(417,886)	0	1,484,631	(1,631,419)	(187,209)	58,964			
Benefit Payments and Refunds	(3,375,151)	(3,121,986)	(3,051,641)	(2,980,797)	(2,884,700)	(2,151,447)	(2,040,059)			
Net Change in Total Pension Liability	821,426	2,168,606	1,118,930	2,704,280	(358,965)	4,423,017	2,519,030			
Total Pension Liability - Beginning	59,042,992	56,874,386	55,755,456	53,051,176	53,410,141	48,987,124	46,468,094			
Total Pension Liability - Ending (a)	\$ 59,864,418	\$ 59,042,992	\$ 56,874,386	\$ 55,755,456	\$ 53,051,176	\$ 53,410,141	\$ 48,987,124			
Plan Fiduciary Net Position										
Employer Contributions	\$ 1,370,552	\$ 1,360,264	\$ 970,075	\$ 1,241,350	\$ 954,971	\$ 1,118,470	\$ 1,105,091			
Employee Contributions	264,609	306,429	308,723	322,335	332,779	349,656	350,591			
Pension Plan Net Investment Income	9,734,388	7,227,911	8,356,691	(2,713,779)	7,663,304	2,641,923	199,453			
Benefit Payments and Refunds	(3,375,151)	(3,121,986)	(3,051,641)	(2,980,797)	(2,884,700)	(2,151,447)	(2,040,059)			
Other	(234,473)	570,725	274,195	579,007	(1,155,125)	184,143	483,935			
Net Change in Plan Fiduciary Net Position	7,759,925	6,343,343	6,858,043	(3,551,884)	4,911,229	2,142,745	99,011			
Plan Fiduciary Net Position - Beginning	56,985,253	50,641,910	43,783,867	47,335,751	42,424,522	40,281,777	40,182,766			
Plan Fiduciary Net Position - Ending (b)	\$ 64,745,178	\$ 56,985,253	\$ 50,641,910	\$ 43,783,867	\$ 47,335,751	\$ 42,424,522	\$ 40,281,777			
Net Pension Liability/(Asset) - Ending (a) - (b)	(4,880,760)	2,057,739	6,232,476	11,971,589	5,715,425	10,985,619	8,705,347			
Plan Fiduciary Net Position as a Percentage										
of Total Pension Liability	108.15%	96.51 %	89.04 %	78.53 %	89.23 %	79.43%	82.23 %			
Covered Valuation Payroll⁽¹⁾	\$ 5,880,190	\$ 6,765,780	\$ 6,860,507	\$ 7,081,289	\$ 7,016,964	\$ 7,767,307	\$ 7,574,305			
Net Pension Liability as a Percentage										
of Covered Valuation Payroll	(83.00)%	30.41 %	90.85 %	169.06 %	81.45 %	141.43%	114.93 %			

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



Multiyear Schedule of Contributions

Last 10 Calendar Years

Calendar Year Ending December 31,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Valuation Payroll	Actual Contribution as a % of Covered Valuation Payroll
2015	\$ 1,105,091	\$ 1,105,091	\$ 0	\$ 7,574,305	14.59%
2016	1,118,492	1,118,470	22	7,767,307	14.40%
2017	962,727	954,971	7,756	7,016,964	13.61%
2018	1,241,350	1,241,350	0	7,081,289	17.53%
2019	970,076	970,075	1	6,860,507	14.14%
2020	1,110,264	1,360,264	(250,000)	6,765,780	20.11%
2021	895,553 *	1,370,552	(474,999)	5,880,190	23.31%

* Estimated based on contribution rate of 15.23% and covered valuation payroll of \$5,880,190.
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 2021 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 2021 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): 22-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 17 years for most employers (five employers were financed over 18 years; one employer was financed over 19 years; two employers were financed over 20 years; three employers were financed over 26 years; four employers were financed over 27 years and one employer was 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, 2019 actuarial valuation.



Development of Market Value of Assets

Market Value of Assets as of December 31, 2021

1. Employee Contribution Reserve (MDF Assets from IMRF)	\$	8,171,888
2. Employer Contribution Reserve (EAF assets from IMRF)		18,821,553
3. Annuitant Reserve		37,833,894
4. Miscellaneous Adjustment*		(82,157)
5. Net Market Value	\$	64,745,178

* Includes an adjustment factor of (0.0012673150) on Items 1 through 3 to ensure that Market Value of Assets for all employers balance 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	\$	895,552
b.) Accelerated payments and Reserve Payments		475,000
Total Employer Contributions (a+b)	\$	1,370,552

2. Member

a.) Wage Reporting	\$	264,609
b.) Member Payments (i.e., ERI, Pension Payments)		-
Sub-total (Amount used for valuation on Schedule of Changes Page 11)	\$	264,609

c.) Voluntary Additional Plan	\$	30,209
Total Member Contributions (a+b+c)	\$	294,818

Total Employer and Member Contributions (1+2)	\$	1,665,370
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Summary of Actuarial Methods and Assumptions Used in the Calculation of the Total Pension Liability

Methods and Assumptions Used to Determine Total Pension Liability:

Actuarial Cost Method	Entry Age Normal
Asset Valuation Method	Market Value of Assets
Price Inflation	2.25%
Salary Increases	2.85% to 13.75%
Investment Rate of Return ¹	7.25%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2020 valuation pursuant to an experience study of the period 2017-2019.
Mortality	For non-disabled retirees, the Pub-2010, Amount-Weighted, below-median income, General, Retiree, Male (adjusted 106%) and Female (adjusted 105%) tables, and future mortality improvements projected using scale MP-2020. For disabled retirees, the Pub-2010, Amount-Weighted, below-median income, General, Disabled Retiree, Male and Female (both unadjusted) tables, and future mortality improvements projected using scale MP-2020. For active members, the Pub-2010, Amount-Weighted, below-median income, General, Employee, Male and Female (both unadjusted) tables, and future mortality improvements projected using scale MP-2020.

Other Information:

Notes	There were no benefit changes during the year.
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¹ *There were no changes in the investment rate of return since the December 31, 2020 valuation. There were no other changes to the methods and assumptions used to determine the Total Pension Liability.*

A detailed description of the actuarial assumptions and methods can be found in the December 31, 2021 IMRF annual actuarial valuation report.

SECTION C

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 1.84%; 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 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
2021	\$ 5,880,190				
2022	5,826,896	\$ 262,210	\$ 312,652	\$ 220,708	\$ 795,570
2023	5,418,169	243,818	291,261	19,262	554,340
2024	5,079,022	228,556	268,479	(209,427)	287,608
2025	4,793,220	215,695	253,371	(253,371)	215,695
2026	4,542,092	204,394	239,192	(239,192)	204,394
2027	4,309,117	193,910	226,065	(226,065)	193,911
2028	4,093,055	184,188	213,915	(213,915)	184,188
2029	3,883,109	174,740	201,783	(201,783)	174,740
2030	3,693,714	166,217	190,838	(190,838)	166,217
2031	3,498,282	157,423	179,696	(179,696)	157,423
2032	3,283,674	147,765	167,692	(167,692)	147,765
2033	3,082,082	138,694	156,169	(156,169)	138,694
2034	2,875,601	129,402	144,562	(144,562)	129,402
2035	2,672,811	120,276	133,037	(133,037)	120,276
2036	2,489,609	112,032	122,679	(122,679)	112,032
2037	2,324,198	104,589	113,371	(113,371)	104,589
2038	2,176,361	97,936	105,077	(105,077)	97,936
2039	2,034,014	91,531	97,394	(97,394)	91,531
2040	1,911,907	86,036	90,405	(90,405)	86,036
2041	1,807,462	81,336	84,567	(84,567)	81,336
2042	1,700,513	76,523	78,547	(78,547)	76,523
2043	1,580,948	71,143	72,080	0	143,223
2044	1,463,699	65,866	65,860	0	131,727
2045	1,352,488	60,862	60,048	0	120,910
2046	1,235,997	55,620	54,138	0	109,758
2047	1,111,355	50,011	47,904	0	97,915
2048	960,757	43,234	40,743	0	83,977
2049	826,448	37,190	34,718	0	71,908
2050	740,743	33,333	30,970	0	64,304
2051	669,632	30,133	27,597	0	57,731
2052	592,902	26,681	24,081	0	50,761
2053	523,379	23,552	20,997	0	44,549
2054	458,831	20,647	18,224	0	38,872
2055	370,940	16,692	14,586	0	31,278
2056	259,767	11,690	10,163	0	21,852
2057	181,217	8,155	7,108	0	15,262
2058	142,635	6,419	5,623	0	12,041
2059	103,188	4,643	4,057	0	8,701
2060	72,257	3,252	2,848	0	6,100
2061	50,402	2,268	1,997	0	4,265
2062	27,875	1,254	1,104	0	2,359
2063	8,989	404	363	0	768
2064	3,535	159	160	0	320
2065	1,703	77	87	0	164
2066	911	41	52	0	93
2067	509	23	30	0	53
2068	224	10	14	0	24
2069	1	0	0	0	0
2070	0	0	0	0	0
2071	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
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
2121	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 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)
2022	\$ 64,745,178	\$ 795,570	\$ 3,508,893	\$ 4,597,388	\$ 66,629,243
2023	66,629,243	554,340	3,663,758	4,719,876	68,239,702
2024	68,239,702	287,607	3,816,882	4,821,681	69,532,108
2025	69,532,108	215,695	3,964,253	4,907,570	70,691,120
2026	70,691,120	204,394	4,102,388	4,986,276	71,779,402
2027	71,779,402	193,910	4,228,297	5,060,319	72,805,334
2028	72,805,334	184,188	4,409,887	5,127,885	73,707,520
2029	73,707,520	174,740	4,550,436	5,187,951	74,519,775
2030	74,519,775	166,217	4,703,401	5,241,088	75,223,679
2031	75,223,679	157,423	4,874,882	5,285,701	75,791,921
2032	75,791,921	147,765	5,019,361	5,321,409	76,241,734
2033	76,241,734	138,694	5,129,509	5,349,774	76,600,693
2034	76,600,693	129,402	5,233,677	5,371,758	76,868,176
2035	76,868,176	120,276	5,338,290	5,387,099	77,037,261
2036	77,037,261	112,032	5,412,168	5,396,433	77,133,559
2037	77,133,559	104,589	5,466,128	5,401,228	77,173,247
2038	77,173,247	97,936	5,508,637	5,402,354	77,164,901
2039	77,164,901	91,531	5,545,839	5,400,196	77,110,788
2040	77,110,788	86,036	5,560,472	5,395,556	77,031,908
2041	77,031,908	81,336	5,583,261	5,388,858	76,918,841
2042	76,918,841	76,523	5,582,661	5,380,511	76,793,214
2043	76,793,214	143,223	5,587,205	5,373,616	76,722,848
2044	76,722,848	131,727	5,559,898	5,369,078	76,663,755
2045	76,663,755	120,910	5,501,313	5,366,495	76,649,847
2046	76,649,847	109,758	5,446,208	5,367,052	76,680,449
2047	76,680,449	97,915	5,380,771	5,371,180	76,768,772
2048	76,768,772	83,977	5,342,380	5,378,454	76,888,823
2049	76,888,823	71,908	5,281,178	5,388,908	77,068,462
2050	77,068,462	64,304	5,186,390	5,405,036	77,351,411
2051	77,351,411	57,731	5,066,572	5,429,584	77,772,154
2052	77,772,154	50,761	4,974,866	5,463,105	78,311,154
2053	78,311,154	44,549	4,865,076	5,505,872	78,996,500
2054	78,996,500	38,872	4,752,647	5,559,362	79,842,086
2055	79,842,086	31,278	4,668,739	5,623,385	80,828,010
2056	80,828,010	21,852	4,596,664	5,697,095	81,950,293
2057	81,950,293	15,262	4,468,188	5,782,802	83,280,169
2058	83,280,169	12,041	4,331,870	5,883,958	84,844,299
2059	84,844,299	8,701	4,198,496	6,001,989	86,656,493
2060	86,656,493	6,100	4,058,956	6,138,250	88,741,887
2061	88,741,887	4,265	3,908,269	6,294,743	91,132,626
2062	91,132,626	2,359	3,766,650	6,473,047	93,841,382
2063	93,841,382	768	3,613,001	6,674,848	96,903,996
2064	96,903,996	320	3,444,736	6,902,864	100,362,444
2065	100,362,444	164	3,276,568	7,159,586	104,245,626
2066	104,245,626	93	3,109,917	7,447,049	108,582,851
2067	108,582,851	53	2,945,198	7,767,363	113,405,069
2068	113,405,069	24	2,783,754	8,122,723	118,744,062
2069	118,744,062	0	2,624,996	8,515,453	124,634,520
2070	124,634,520	0	2,469,689	8,948,043	131,112,873
2071	131,112,873	0	2,318,282	9,423,116	138,217,707

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)
2072	\$ 138,217,707	\$ 0	\$ 2,170,949	\$ 9,943,464	\$ 145,990,222
2073	145,990,222	0	2,027,522	10,512,079	154,474,780
2074	154,474,780	0	1,887,986	11,132,180	163,718,974
2075	163,718,974	0	1,752,307	11,807,216	173,773,883
2076	173,773,883	0	1,620,468	12,540,892	184,694,308
2077	184,694,308	0	1,492,531	13,337,180	196,538,956
2078	196,538,956	0	1,368,674	14,200,328	209,370,610
2079	209,370,610	0	1,249,139	15,134,880	223,256,351
2080	223,256,351	0	1,134,211	16,145,690	238,267,829
2081	238,267,829	0	1,024,231	17,237,939	254,481,537
2082	254,481,537	0	919,575	18,417,160	271,979,122
2083	271,979,122	0	820,614	19,689,260	290,847,768
2084	290,847,768	0	727,680	21,060,546	311,180,634
2085	311,180,634	0	641,052	22,537,764	333,077,346
2086	333,077,346	0	560,908	24,128,130	356,644,568
2087	356,644,568	0	487,354	25,839,374	381,996,589
2088	381,996,589	0	420,421	27,679,779	409,255,947
2089	409,255,947	0	360,021	29,658,234	438,554,159
2090	438,554,159	0	305,961	31,784,280	470,032,478
2091	470,032,478	0	257,965	34,068,167	503,842,680
2092	503,842,680	0	215,687	36,520,912	540,147,905
2093	540,147,905	0	178,747	39,154,357	579,123,514
2094	579,123,514	0	146,746	41,981,228	620,957,997
2095	620,957,997	0	119,264	45,015,207	665,853,939
2096	665,853,939	0	95,883	48,270,996	714,029,053
2097	714,029,053	0	76,193	51,764,393	765,717,252
2098	765,717,252	0	59,796	55,512,371	821,169,827
2099	821,169,827	0	46,297	59,533,164	880,656,693
2100	880,656,693	0	35,327	63,846,352	944,467,719
2101	944,467,719	0	26,533	68,472,965	1,012,914,150
2102	1,012,914,150	0	19,590	73,435,578	1,086,330,138
2103	1,086,330,138	0	14,197	78,758,429	1,165,074,370
2104	1,165,074,370	0	10,085	84,467,533	1,249,531,818
2105	1,249,531,818	0	7,011	90,590,807	1,340,115,614
2106	1,340,115,614	0	4,763	97,158,212	1,437,269,064
2107	1,437,269,064	0	3,157	104,201,895	1,541,467,802
2108	1,541,467,802	0	2,039	111,756,343	1,653,222,106
2109	1,653,222,106	0	1,281	119,858,557	1,773,079,383
2110	1,773,079,383	0	782	128,548,227	1,901,626,829
2111	1,901,626,829	0	463	137,867,929	2,039,494,295
2112	2,039,494,295	0	265	147,863,327	2,187,357,356
2113	2,187,357,356	0	147	158,583,403	2,345,940,612
2114	2,345,940,612	0	79	170,080,692	2,516,021,224
2115	2,516,021,224	0	41	182,411,537	2,698,432,720
2116	2,698,432,720	0	21	195,636,371	2,894,069,071
2117	2,894,069,071	0	10	209,820,007	3,103,889,068
2118	3,103,889,068	0	5	225,031,957	3,328,921,020
2119	3,328,921,020	0	2	241,346,774	3,570,267,792
2120	3,570,267,792	0	1	258,844,415	3,829,112,206
2121	3,829,112,206	0	0	277,610,635	4,106,722,840

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		Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of	Present Value of	Present Value of
	Beginning Plan Net Position	Projected Benefit Payments			Funded Benefit Payments using Expected Return Rate (v)	Unfunded Benefit Payments using Municipal Bond Rate (vf)	Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ^a ((a)-.5)	(g)=(e)*vf ^a ((a)-.5)	(h)=(c)/(1+sdr) ^a ((a)-.5)
2022	\$ 64,745,178	\$ 3,508,893	\$ 3,508,893	\$ 0	\$ 3,388,219	\$ 0	\$ 3,388,219
2023	66,629,243	3,663,758	3,663,758	0	3,298,608	0	3,298,608
2024	68,239,702	3,816,882	3,816,882	0	3,204,169	0	3,204,169
2025	69,532,108	3,964,253	3,964,253	0	3,102,921	0	3,102,921
2026	70,691,120	4,102,388	4,102,388	0	2,993,980	0	2,993,980
2027	71,779,402	4,228,297	4,228,297	0	2,877,268	0	2,877,268
2028	72,805,334	4,409,887	4,409,887	0	2,797,983	0	2,797,983
2029	73,707,520	4,550,436	4,550,436	0	2,691,989	0	2,691,989
2030	74,519,775	4,703,401	4,703,401	0	2,594,388	0	2,594,388
2031	75,223,679	4,874,882	4,874,882	0	2,507,204	0	2,507,204
2032	75,791,921	5,019,361	5,019,361	0	2,407,004	0	2,407,004
2033	76,241,734	5,129,509	5,129,509	0	2,293,543	0	2,293,543
2034	76,600,693	5,233,677	5,233,677	0	2,181,929	0	2,181,929
2035	76,868,176	5,338,290	5,338,290	0	2,075,098	0	2,075,098
2036	77,037,261	5,412,168	5,412,168	0	1,961,600	0	1,961,600
2037	77,133,559	5,466,128	5,466,128	0	1,847,233	0	1,847,233
2038	77,173,247	5,508,637	5,508,637	0	1,735,756	0	1,735,756
2039	77,164,901	5,545,839	5,545,839	0	1,629,350	0	1,629,350
2040	77,110,788	5,560,472	5,560,472	0	1,523,216	0	1,523,216
2041	77,031,908	5,583,261	5,583,261	0	1,426,069	0	1,426,069
2042	76,918,841	5,582,661	5,582,661	0	1,329,525	0	1,329,525
2043	76,793,214	5,587,205	5,587,205	0	1,240,660	0	1,240,660
2044	76,722,848	5,559,898	5,559,898	0	1,151,138	0	1,151,138
2045	76,663,755	5,501,313	5,501,313	0	1,062,013	0	1,062,013
2046	76,649,847	5,446,208	5,446,208	0	980,303	0	980,303
2047	76,680,449	5,380,771	5,380,771	0	903,053	0	903,053
2048	76,768,772	5,342,380	5,342,380	0	836,000	0	836,000
2049	76,888,823	5,281,178	5,281,178	0	770,557	0	770,557
2050	77,068,462	5,186,390	5,186,390	0	705,573	0	705,573
2051	77,351,411	5,066,572	5,066,572	0	642,679	0	642,679
2052	77,772,154	4,974,866	4,974,866	0	588,388	0	588,388
2053	78,311,154	4,865,076	4,865,076	0	536,506	0	536,506
2054	78,996,500	4,752,647	4,752,647	0	488,679	0	488,679
2055	79,842,086	4,668,739	4,668,739	0	447,600	0	447,600
2056	80,828,010	4,596,664	4,596,664	0	410,900	0	410,900
2057	81,950,293	4,468,188	4,468,188	0	372,415	0	372,415
2058	83,280,169	4,331,870	4,331,870	0	336,646	0	336,646
2059	84,844,299	4,198,496	4,198,496	0	304,225	0	304,225
2060	86,656,493	4,058,956	4,058,956	0	274,232	0	274,232
2061	88,741,887	3,908,269	3,908,269	0	246,202	0	246,202
2062	91,132,626	3,766,650	3,766,650	0	221,240	0	221,240
2063	93,841,382	3,613,001	3,613,001	0	197,870	0	197,870
2064	96,903,996	3,444,736	3,444,736	0	175,902	0	175,902
2065	100,362,444	3,276,568	3,276,568	0	156,004	0	156,004
2066	104,245,626	3,109,917	3,109,917	0	138,060	0	138,060
2067	108,582,851	2,945,198	2,945,198	0	121,909	0	121,909
2068	113,405,069	2,783,754	2,783,754	0	107,438	0	107,438
2069	118,744,062	2,624,996	2,624,996	0	94,462	0	94,462
2070	124,634,520	2,469,689	2,469,689	0	82,865	0	82,865
2071	131,112,873	2,318,282	2,318,282	0	72,527	0	72,527

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.



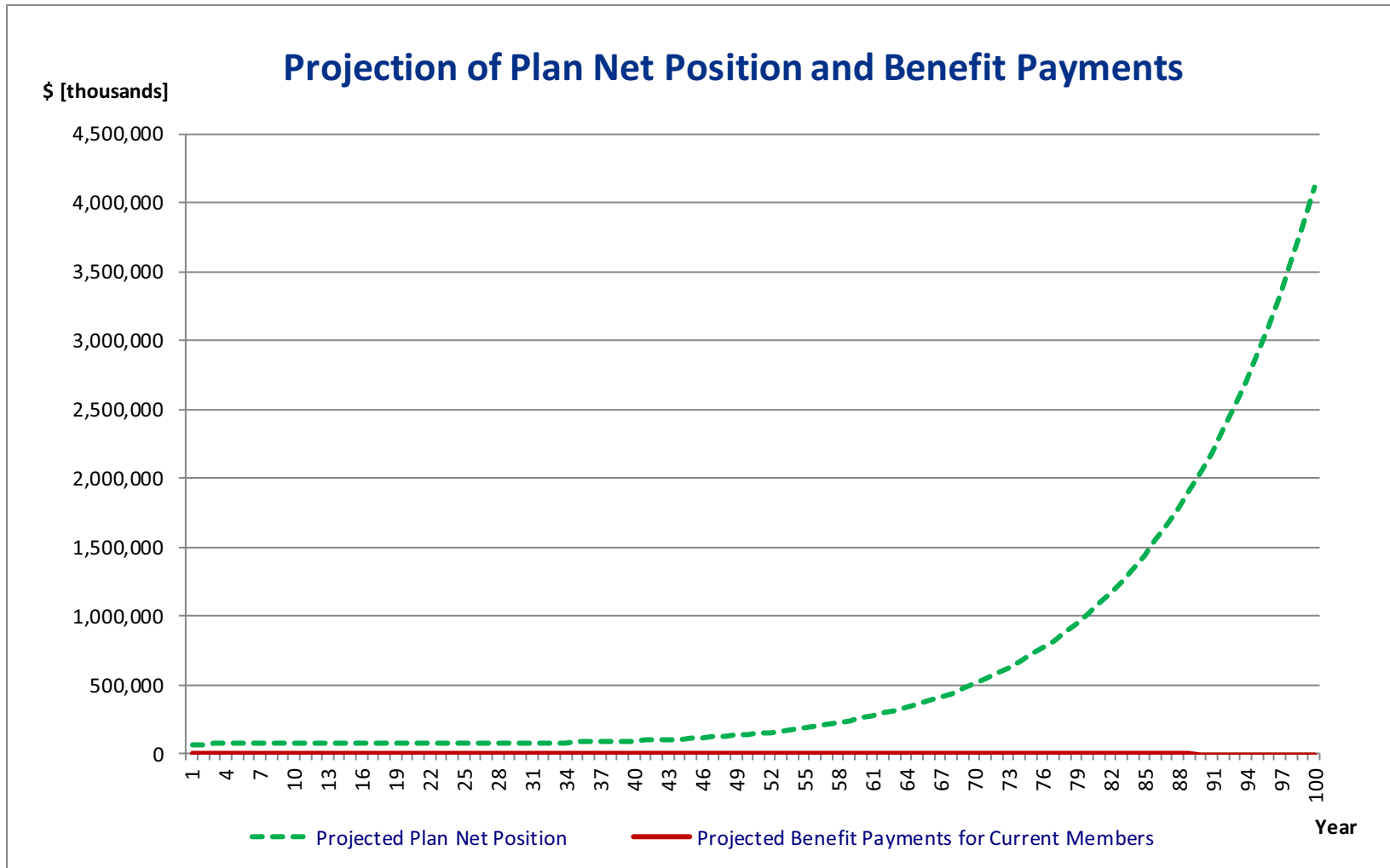
Single Discount Rate Development

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 ^a ((a)-.5)	(g)=(e)*vf ^a ((a)-.5)	(h)=(c)/(1+sdr) ^a ((a)-.5)
2072	\$ 138,217,707	\$ 2,170,949	\$ 2,170,949	\$ 0	\$ 63,327	\$ 0	\$ 63,327
2073	145,990,222	2,027,522	2,027,522	0	55,145	0	55,145
2074	154,474,780	1,887,986	1,887,986	0	47,878	0	47,878
2075	163,718,974	1,752,307	1,752,307	0	41,434	0	41,434
2076	173,773,883	1,620,468	1,620,468	0	35,726	0	35,726
2077	184,694,308	1,492,531	1,492,531	0	30,681	0	30,681
2078	196,538,956	1,368,674	1,368,674	0	26,233	0	26,233
2079	209,370,610	1,249,139	1,249,139	0	22,324	0	22,324
2080	223,256,351	1,134,211	1,134,211	0	18,900	0	18,900
2081	238,267,829	1,024,231	1,024,231	0	15,913	0	15,913
2082	254,481,537	919,575	919,575	0	13,321	0	13,321
2083	271,979,122	820,614	820,614	0	11,084	0	11,084
2084	290,847,768	727,680	727,680	0	9,165	0	9,165
2085	311,180,634	641,052	641,052	0	7,528	0	7,528
2086	333,077,346	560,908	560,908	0	6,141	0	6,141
2087	356,644,568	487,354	487,354	0	4,975	0	4,975
2088	381,996,589	420,421	420,421	0	4,002	0	4,002
2089	409,255,947	360,021	360,021	0	3,195	0	3,195
2090	438,554,159	305,961	305,961	0	2,532	0	2,532
2091	470,032,478	257,965	257,965	0	1,990	0	1,990
2092	503,842,680	215,687	215,687	0	1,552	0	1,552
2093	540,147,905	178,747	178,747	0	1,199	0	1,199
2094	579,123,514	146,746	146,746	0	918	0	918
2095	620,957,997	119,264	119,264	0	696	0	696
2096	665,853,939	95,883	95,883	0	521	0	521
2097	714,029,053	76,193	76,193	0	386	0	386
2098	765,717,252	59,796	59,796	0	283	0	283
2099	821,169,827	46,297	46,297	0	204	0	204
2100	880,656,693	35,327	35,327	0	145	0	145
2101	944,467,719	26,533	26,533	0	102	0	102
2102	1,012,914,150	19,590	19,590	0	70	0	70
2103	1,086,330,138	14,197	14,197	0	47	0	47
2104	1,165,074,370	10,085	10,085	0	31	0	31
2105	1,249,531,818	7,011	7,011	0	20	0	20
2106	1,340,115,614	4,763	4,763	0	13	0	13
2107	1,437,269,064	3,157	3,157	0	8	0	8
2108	1,541,467,802	2,039	2,039	0	5	0	5
2109	1,653,222,106	1,281	1,281	0	3	0	3
2110	1,773,079,383	782	782	0	2	0	2
2111	1,901,626,829	463	463	0	1	0	1
2112	2,039,494,295	265	265	0	0	0	0
2113	2,187,357,356	147	147	0	0	0	0
2114	2,345,940,612	79	79	0	0	0	0
2115	2,516,021,224	41	41	0	0	0	0
2116	2,698,432,720	21	21	0	0	0	0
2117	2,894,069,071	10	10	0	0	0	0
2118	3,103,889,068	5	5	0	0	0	0
2119	3,328,921,020	2	2	0	0	0	0
2120	3,570,267,792	1	1	0	0	0	0
2121	3,829,112,206	0	0	0	0	0	0
Totals					\$ 63,960,803	\$ -	\$ 63,960,803

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

GLOSSARY OF TERMS

Glossary of Terms

Actuarial Accrued Liability (AAL)

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."

Actuarial Assumptions

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.

Accrued Service

Service credited under the fund which was rendered before the date of the actuarial valuation.

Actuarial Equivalent

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.

Actuarial Cost Method

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.

Actuarial Gain (Loss)

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.

Actuarial Present Value (APV)

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.

Actuarial Valuation

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.

Actuarial Valuation Date

The date as of which an actuarial valuation is performed.

Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC)

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)

Amortization Payment

The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.

Amortization Method

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).

Cost-of-Living Adjustments

Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.

Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)

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.

Covered Valuation Payroll

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.

Deferred Inflows and Outflows

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.

Discount Rate

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:

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
2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.

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.

Glossary of Terms (Continued)

<i>GASB</i>	The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.
<i>Fiduciary Net Position</i>	The fiduciary net position is the value of the assets of the trust.
<i>Long-Term Expected Rate of Return</i>	The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.
<i>Money-Weighted Rate of Return</i>	The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For purposes of GASB Statement No. 68, money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense.
<i>Multiple-Employer Defined Benefit Pension Plan</i>	A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.
<i>Municipal Bond Rate</i>	The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.
<i>Net Pension Liability (NPL)</i>	The NPL is the liability of employers and non-employer contribution entities to plan members for benefits provided through a defined benefit pension plan.
<i>Non-Employer Contribution Entities</i>	Non-employer contribution entities are entities that make contributions to a pension plan that is used to provide pensions to the employees of other entities. For purposes of the GASB Accounting statement plan members are not considered non-employer contribution entities.
<i>Normal Cost</i>	The actuarial present value of the pension trust benefits allocated to the current year by the actuarial cost method.
<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.

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.