

Acorn Pub Lib Dist Regular

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



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March 26, 2021

Acorn Pub Lib 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 the Acorn Pub Lib Dist only in its entirety and only with the permission of Acorn Pub Lib 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, 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 Acorn Pub Lib 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.

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

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	24
- Inactive, Non-Retired Members	21
- Active Members	11
- Total	56
Covered Valuation Payroll ⁽¹⁾	\$ 441,214

Net Pension Liability

Total Pension Liability/(Asset)	\$ 3,064,070
Plan Fiduciary Net Position	3,433,588
Net Pension Liability/(Asset)	\$ (369,518)
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	112.06%
Net Pension Liability as a Percentage of Covered Valuation Payroll	(83.75)%

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 ⁽²⁾	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) \$ (22,911)

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	\$ 14,546	\$ 118,184
Changes in assumptions	3,125	33,711
Net difference between projected and actual earnings on pension plan investments	166,185	463,363
Total	\$ 183,856	\$ 615,258

⁽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, 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

FINANCIAL STATEMENTS

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

Calendar Year Ended December 31, 2020

A. Expense/(Income)

1. Service Cost	\$	46,396
2. Interest on the Total Pension Liability		229,112
3. Current-Period Benefit Changes		0
4. Employee Contributions (made negative for addition here)		(19,855)
5. Projected Earnings on Plan Investments (made negative for addition here)		(223,886)
6. Other Changes in Plan Fiduciary Net Position		94,837
7. Recognition of Outflow (Inflow) of Resources due to Liabilities		(57,569)
8. Recognition of Outflow (Inflow) of Resources due to Assets		(91,946)
9. Total Pension Expense/(Income)	\$	(22,911)

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 150.24 years. Additionally, the total plan membership (active employees and inactive employees) was 57. 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 2.6358 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	\$	(188,753)
2. Assumption Changes (gains) or losses	\$	(54,319)
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}		2.6358
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	\$	(71,611)
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for Assumption Changes	\$	(20,608)
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	\$	(92,219)
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	\$	(117,142)
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for Assumption Changes	\$	(33,711)
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	\$	(150,853)

B. Outflows (Inflows) of Resources due to Assets

1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$	(244,908)
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	\$	(48,982)
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$	(195,926)

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	\$ 44,060	\$ 101,629	\$ (57,569)
2. Due to Assets	86,306	178,252	(91,946)
3. Total	\$ 130,366	\$ 279,881	\$ (149,515)

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	\$ 18,949	\$ 79,976	\$ (61,027)
2. Assumption changes	25,111	21,653	3,458
3. Net difference between projected and actual earnings on pension plan investments	86,306	178,252	(91,946)
4. Total	\$ 130,366	\$ 279,881	\$ (149,515)

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	\$ 14,546	\$ 118,184	\$ (103,638)
2. Assumption changes	3,125	33,711	\$ (30,586)
3. Net difference between projected and actual earnings on pension plan investments	166,185	463,363	(297,178)
4. Total	\$ 183,856	\$ 615,258	\$ (431,402)

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	\$ (170,748)
2022	(93,608)
2023	(118,066)
2024	(48,980)
2025	0
Thereafter	0
Total	\$ (431,402)

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
Deferred Outflow (Inflow) due to Differences Between Expected and Actual Experience on Liabilities					
2014	\$ (74,938)	2.9405	\$ 0	\$ 0	0.0000
2015	(73,747)	2.8782	0	0	0.0000
2016	(39,542)	2.8184	0	0	0.0000
2017	29,024	3.0324	311	0	0.0000
2018	(26,137)	3.1245	(8,365)	(1,042)	0.1245
2019	51,822	2.7805	18,638	14,546	0.7805
2020	(188,753)	2.6358	(71,611)	(117,142)	1.6358
Total			\$ (61,027)	\$ (103,638)	
Deferred Outflow (Inflow) due to Assumption Changes					
2014	\$ 137,945	2.9405	\$ 0	\$ 0	0.0000
2015	(3,272)	2.8782	0	0	0.0000
2016	(3,199)	2.8184	0	0	0.0000
2017	(97,780)	3.0324	(1,045)	0	0.0000
2018	78,458	3.1245	25,111	3,125	0.1245
2019	0	2.7805	0	0	0.7805
2020	(54,319)	2.6358	(20,608)	(33,711)	1.6358
Total			\$ 3,458	\$ (30,586)	
Deferred Outflow (Inflow) due to Differences Between Projected and Actual Earnings on Plan Investments					
2016	\$ 16,074	5.0000	\$ 3,214	\$ 0	0.0000
2017	(300,923)	5.0000	(60,185)	(60,183)	1.0000
2018	415,461	5.0000	83,092	166,185	2.0000
2019	(345,424)	5.0000	(69,085)	(207,254)	3.0000
2020	(244,908)	5.0000	(48,982)	(195,926)	4.0000
Total			\$ (91,946)	\$ (297,178)	

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

A. Total pension liability	
1. Service Cost	\$ 46,396
2. Interest on the Total Pension Liability	229,112
3. Changes of benefit terms	0
4. Difference between expected and actual experience of the Total Pension Liability	(188,753)
5. Changes of assumptions	(54,319)
6. Benefit payments, including refunds of employee contributions	(210,654)
7. Net change in total pension liability	\$ (178,218)
8. Total pension liability – beginning	3,242,288
9. Total pension liability – ending	<u><u>\$ 3,064,070</u></u>
B. Plan fiduciary net position	
1. Contributions – employer	\$ 39,048
2. Contributions – employee	19,855
3. Net investment income	468,794
4. Benefit payments, including refunds of employee contributions	(210,654)
5. Other (Net Transfer)	(94,837)
6. Net change in plan fiduciary net position	\$ 222,206
7. Plan fiduciary net position – beginning	3,211,382
8. Plan fiduciary net position – ending	<u><u>\$ 3,433,588</u></u>
C. Net pension liability/(asset)	<u><u>\$ (369,518)</u></u>
D. Plan fiduciary net position as a percentage of the total pension liability	112.06%
E. Covered Valuation payroll	\$ 441,214
F. Net pension liability as a percentage of covered valuation payroll	(83.75)%

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	\$ 3,397,449	\$ 3,064,070	\$ 2,799,486
Plan Fiduciary Net Position	3,433,588	3,433,588	3,433,588
Net Pension Liability/(Asset)	\$ (36,139)	\$ (369,518)	\$ (634,102)



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
Total Pension Liability										
Service Cost	\$ 46,396	\$ 45,816	\$ 43,704	\$ 37,927	\$ 41,320	\$ 45,113	\$ 45,510			
Interest on the Total Pension Liability	229,112	220,969	219,418	218,832	216,262	215,370	204,264			
Benefit Changes	0	0	0	0	0	0	0			
Difference between Expected and Actual Experience	(188,753)	51,822	(26,137)	29,024	(39,542)	(73,747)	(74,938)			
Assumption Changes	(54,319)	0	78,458	(97,780)	(3,199)	(3,272)	137,945			
Benefit Payments and Refunds	(210,654)	(202,508)	(185,954)	(180,191)	(185,261)	(161,747)	(151,901)			
Net Change in Total Pension Liability	(178,218)	116,099	129,489	7,812	29,580	21,717	160,880			
Total Pension Liability - Beginning	3,242,288	3,126,189	2,996,700	2,988,888	2,959,308	2,937,591	2,776,711			
Total Pension Liability - Ending (a)	\$ 3,064,070	\$ 3,242,288	\$ 3,126,189	\$ 2,996,700	\$ 2,988,888	\$ 2,959,308	\$ 2,937,591			
Plan Fiduciary Net Position										
Employer Contributions	\$ 39,048	\$ 33,400	\$ 52,623	\$ 51,037	\$ 54,067	\$ 55,364	\$ 60,939			
Employee Contributions	19,855	30,283	21,926	20,451	18,279	17,682	18,137			
Pension Plan Net Investment Income	468,794	542,881	(190,878)	495,858	176,177	13,009	155,067			
Benefit Payments and Refunds	(210,654)	(202,508)	(185,954)	(180,191)	(185,261)	(161,747)	(151,901)			
Other	(94,837)	28,738	61,447	(42,444)	(16,718)	57,736	(14,609)			
Net Change in Plan Fiduciary Net Position	222,206	432,794	(240,836)	344,711	46,544	(17,956)	67,633			
Plan Fiduciary Net Position - Beginning	3,211,382	2,778,588	3,019,424	2,674,713	2,628,169	2,646,125	2,578,492			
Plan Fiduciary Net Position - Ending (b)	\$ 3,433,588	\$ 3,211,382	\$ 2,778,588	\$ 3,019,424	\$ 2,674,713	\$ 2,628,169	\$ 2,646,125			
Net Pension Liability/(Asset) - Ending (a) - (b)	(369,518)	30,906	347,601	(22,724)	314,175	331,139	291,466			
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	112.06%	99.05 %	88.88 %	100.76 %	89.49%	88.81 %	90.08 %			
Covered Valuation Payroll	\$ 441,214	\$ 461,956	\$ 487,251	\$ 454,471	\$ 406,209	\$ 392,931	\$ 405,722			
Net Pension Liability as a Percentage of Covered Valuation Payroll	(83.75)%	6.69 %	71.34 %	(5.00)%	77.34%	84.27 %	71.84 %			



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	\$ 61,345	\$ 60,939	\$ 406	\$ 405,722	15.02%
2015	55,364	55,364	0	392,931	14.09%
2016	54,066	54,067	(1)	406,209	13.31%
2017	51,037	51,037	0	454,471	11.23%
2018	52,623	52,623	0	487,251	10.80%
2019	33,399	33,400	(1)	461,956	7.23%
2020	39,047 *	39,048	(1)	441,214	8.85%

* Estimated based on contribution rate of 8.85% and covered valuation payroll of \$441,214.
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)	\$	332,957
2. Employer Contribution Reserve (EAF assets from IMRF)		967,739
3. Annuitant Reserve		2,121,901
4. Miscellaneous Adjustment*		10,991
5. Net Market Value	\$	3,433,588

* 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	\$	39,048
b.) Accelerated payments and Reserve Payments		-
	\$	39,048

2. Member

a.) Wage Reporting	\$	19,855
b.) Member Payments (i.e. ERI, Pension Payments)		-
Sub-total (Amount used for valuation on Schedule of Changes Page 11)	\$	19,855
c.) Voluntary Additional Plan	\$	2,232
Total Member Contributions (a+b+c)	\$	22,087

Total Employer and Member Contributions (1+2)	\$	61,135
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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 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	\$ 441,214				
2021	432,381	\$ 19,457	\$ 22,201	\$ (5,889)	\$ 35,769
2022	416,117	18,725	19,180	(12,642)	25,263
2023	402,628	18,118	18,319	(18,319)	18,118
2024	392,243	17,651	17,924	(17,924)	17,651
2025	381,676	17,175	17,441	(17,441)	17,176
2026	370,186	16,658	16,916	(16,916)	16,659
2027	357,424	16,084	16,333	(16,333)	16,084
2028	340,991	15,345	15,582	(15,582)	15,345
2029	325,327	14,640	14,866	(14,866)	14,640
2030	311,632	14,023	14,210	(14,210)	14,023
2031	299,040	13,457	13,606	(13,606)	13,457
2032	288,880	13,000	13,058	(13,058)	12,999
2033	280,344	12,615	12,588	(12,588)	12,616
2034	271,165	12,202	12,123	(12,123)	12,202
2035	262,083	11,794	11,613	(11,613)	11,793
2036	254,354	11,446	11,169	(11,169)	11,446
2037	247,368	11,132	10,764	(10,764)	11,132
2038	238,469	10,731	10,306	(10,306)	10,731
2039	228,713	10,292	9,749	(9,749)	10,292
2040	221,040	9,947	9,268	(9,268)	9,947
2041	212,580	9,566	8,787	(8,787)	9,566
2042	204,653	9,209	8,338	(8,338)	9,209
2043	198,714	8,942	7,978	0	16,920
2044	191,850	8,633	7,588	0	16,221
2045	184,305	8,294	7,180	0	15,474
2046	178,164	8,017	6,799	0	14,817
2047	173,887	7,825	6,533	0	14,358
2048	150,863	6,789	5,608	0	12,397
2049	109,283	4,918	4,051	0	8,969
2050	83,458	3,756	3,094	0	6,850
2051	76,181	3,428	2,824	0	6,252
2052	60,172	2,708	2,219	0	4,927
2053	41,177	1,853	1,518	0	3,371
2054	35,885	1,615	1,330	0	2,945
2055	25,286	1,138	932	0	2,070
2056	12,921	581	476	0	1,058
2057	9,621	433	359	0	792
2058	8,657	390	324	0	713
2059	5,324	240	197	0	436
2060	1,300	59	48	0	107
2061	331	15	12	0	27
2062	84	4	3	0	7
2063	21	1	1	0	2
2064	5	0	0	0	0
2065	1	0	0	0	0
2066	0	0	0	0	0
2067	0	0	0	0	0
2068	0	0	0	0	0
2069	0	0	0	0	0
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	\$ 3,433,588	\$ 35,769	\$ 221,815	\$ 242,309	\$ 3,489,852
2022	3,489,852	25,263	223,694	245,947	3,537,368
2023	3,537,368	18,118	226,703	249,030	3,577,813
2024	3,577,813	17,651	227,635	251,913	3,619,742
2025	3,619,742	17,175	228,712	254,897	3,663,103
2026	3,663,103	16,658	229,105	258,008	3,708,664
2027	3,708,664	16,084	230,453	261,243	3,755,539
2028	3,755,539	15,345	232,170	264,554	3,803,268
2029	3,803,268	14,640	233,010	267,959	3,852,857
2030	3,852,857	14,023	233,688	271,509	3,904,701
2031	3,904,701	13,457	237,119	275,125	3,956,164
2032	3,956,164	13,000	236,951	278,846	4,011,059
2033	4,011,059	12,615	235,250	282,872	4,071,296
2034	4,071,296	12,202	237,532	287,144	4,133,111
2035	4,133,111	11,794	239,414	291,544	4,197,034
2036	4,197,034	11,446	236,181	296,281	4,268,580
2037	4,268,580	11,132	232,781	301,578	4,348,509
2038	4,348,509	10,731	231,590	307,401	4,435,051
2039	4,435,051	10,292	229,812	313,723	4,529,254
2040	4,529,254	9,947	227,297	320,630	4,632,534
2041	4,632,534	9,566	226,587	328,129	4,743,642
2042	4,743,642	9,209	224,632	336,242	4,864,461
2043	4,864,461	16,920	221,498	345,387	5,005,269
2044	5,005,269	16,221	222,676	355,529	5,154,344
2045	5,154,344	15,474	224,132	366,258	5,311,944
2046	5,311,944	14,817	222,037	377,736	5,482,459
2047	5,482,459	14,358	221,913	390,086	5,664,989
2048	5,664,989	12,397	249,635	402,262	5,830,013
2049	5,830,013	8,969	291,679	412,607	5,959,911
2050	5,959,911	6,850	313,026	421,189	6,074,923
2051	6,074,923	6,252	316,228	429,392	6,194,340
2052	6,194,340	4,927	338,826	437,198	6,297,637
2053	6,297,637	3,371	353,197	444,119	6,391,931
2054	6,391,931	2,945	351,112	451,015	6,494,778
2055	6,494,778	2,070	366,652	457,887	6,588,083
2056	6,588,083	1,058	376,890	464,250	6,676,501
2057	6,676,501	792	373,841	470,760	6,774,212
2058	6,774,212	713	369,599	477,992	6,883,318
2059	6,883,318	436	371,961	485,808	6,997,601
2060	6,997,601	107	372,086	494,078	7,119,700
2061	7,119,700	27	366,987	503,109	7,255,848
2062	7,255,848	7	361,146	513,187	7,407,896
2063	7,407,896	2	354,803	524,436	7,577,531
2064	7,577,531	0	348,051	536,975	7,766,455
2065	7,766,455	0	340,839	550,929	7,976,545
2066	7,976,545	0	333,032	566,438	8,209,951
2067	8,209,951	0	324,587	583,661	8,469,025
2068	8,469,025	0	315,456	602,769	8,756,339
2069	8,756,339	0	305,593	623,951	9,074,696
2070	9,074,696	0	294,978	647,410	9,427,128

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	\$ 9,427,128	\$ 0	\$ 283,623	\$ 673,365	\$ 9,816,871					
2072	9,816,871	0	271,553	702,052	10,247,370					
2073	10,247,370	0	258,803	733,717	10,722,283					
2074	10,722,283	0	245,425	768,625	11,245,483					
2075	11,245,483	0	231,474	807,053	11,821,062					
2076	11,821,062	0	217,022	849,298	12,453,337					
2077	12,453,337	0	202,153	895,667	13,146,852					
2078	13,146,852	0	186,965	946,488	13,906,375					
2079	13,906,375	0	171,593	1,002,101	14,736,883					
2080	14,736,883	0	156,184	1,062,861	15,643,560					
2081	15,643,560	0	140,909	1,129,140	16,631,791					
2082	16,631,791	0	125,953	1,201,319	17,707,156					
2083	17,707,156	0	111,490	1,279,798	18,875,464					
2084	18,875,464	0	97,680	1,364,992	20,142,777					
2085	20,142,777	0	84,659	1,457,336	21,515,454					
2086	21,515,454	0	72,534	1,557,287	23,000,207					
2087	23,000,207	0	61,394	1,665,328	24,604,141					
2088	24,604,141	0	51,306	1,781,973	26,334,808					
2089	26,334,808	0	42,302	1,907,767	28,200,272					
2090	28,200,272	0	34,395	2,043,295	30,209,172					
2091	30,209,172	0	27,566	2,189,183	32,370,789					
2092	32,370,789	0	21,764	2,346,107	34,695,132					
2093	34,695,132	0	16,916	2,514,795	37,193,010					
2094	37,193,010	0	12,937	2,696,032	39,876,106					
2095	39,876,106	0	9,730	2,890,671	42,757,047					
2096	42,757,047	0	7,192	3,099,630	45,849,485					
2097	45,849,485	0	5,220	3,323,902	49,168,167					
2098	49,168,167	0	3,716	3,564,560	52,729,011					
2099	52,729,011	0	2,592	3,822,761	56,549,180					
2100	56,549,180	0	1,769	4,099,753	60,647,164					
2101	60,647,164	0	1,180	4,396,877	65,042,862					
2102	65,042,862	0	768	4,715,580	69,757,674					
2103	69,757,674	0	487	5,057,414	74,814,602					
2104	74,814,602	0	300	5,424,048	80,238,349					
2105	80,238,349	0	180	5,817,274	86,055,443					
2106	86,055,443	0	104	6,239,016	92,294,355					
2107	92,294,355	0	59	6,691,339	98,985,634					
2108	98,985,634	0	32	7,176,457	106,162,060					
2109	106,162,060	0	17	7,696,749	113,858,792					
2110	113,858,792	0	9	8,254,762	122,113,545					
2111	122,113,545	0	4	8,853,232	130,966,773					
2112	130,966,773	0	2	9,495,091	140,461,862					
2113	140,461,862	0	1	10,183,485	150,645,346					
2114	150,645,346	0	0	10,921,788	161,567,133					
2115	161,567,133	0	0	11,713,617	173,280,750					
2116	173,280,750	0	0	12,562,854	185,843,604					
2117	185,843,604	0	0	13,473,661	199,317,265					
2118	199,317,265	0	0	14,450,502	213,767,767					
2119	213,767,767	0	0	15,498,163	229,265,930					
2120	229,265,930	0	0	16,621,780	245,887,710					

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 ^{^(a)-.5}	(g)=(e)*vf ^{^(a)-.5}	(h)=(c)/(1+sdr) ^{^(a)-.5}
2021	\$ 3,433,588	\$ 221,815	\$ 221,815	\$ 0	\$ 214,186	\$ 0	\$ 214,186
2022	3,489,852	223,694	223,694	0	201,399	0	201,399
2023	3,537,368	226,703	226,703	0	190,311	0	190,311
2024	3,577,813	227,635	227,635	0	178,175	0	178,175
2025	3,619,742	228,712	228,712	0	166,917	0	166,917
2026	3,663,103	229,105	229,105	0	155,901	0	155,901
2027	3,708,664	230,453	230,453	0	146,218	0	146,218
2028	3,755,539	232,170	232,170	0	137,349	0	137,349
2029	3,803,268	233,010	233,010	0	128,528	0	128,528
2030	3,852,857	233,688	233,688	0	120,188	0	120,188
2031	3,904,701	237,119	237,119	0	113,709	0	113,709
2032	3,956,164	236,951	236,951	0	105,947	0	105,947
2033	4,011,059	235,250	235,250	0	98,076	0	98,076
2034	4,071,296	237,532	237,532	0	92,333	0	92,333
2035	4,133,111	239,414	239,414	0	86,774	0	86,774
2036	4,197,034	236,181	236,181	0	79,815	0	79,815
2037	4,268,580	232,781	232,781	0	73,349	0	73,349
2038	4,348,509	231,590	231,590	0	68,040	0	68,040
2039	4,435,051	229,812	229,812	0	62,954	0	62,954
2040	4,529,254	227,297	227,297	0	58,056	0	58,056
2041	4,632,534	226,587	226,587	0	53,962	0	53,962
2042	4,743,642	224,632	224,632	0	49,880	0	49,880
2043	4,864,461	221,498	221,498	0	45,860	0	45,860
2044	5,005,269	222,676	222,676	0	42,987	0	42,987
2045	5,154,344	224,132	224,132	0	40,343	0	40,343
2046	5,311,944	222,037	222,037	0	37,264	0	37,264
2047	5,482,459	221,913	221,913	0	34,726	0	34,726
2048	5,664,989	249,635	249,635	0	36,423	0	36,423
2049	5,830,013	291,679	291,679	0	39,681	0	39,681
2050	5,959,911	313,026	313,026	0	39,706	0	39,706
2051	6,074,923	316,228	316,228	0	37,401	0	37,401
2052	6,194,340	338,826	338,826	0	37,365	0	37,365
2053	6,297,637	353,197	353,197	0	36,317	0	36,317
2054	6,391,931	351,112	351,112	0	33,662	0	33,662
2055	6,494,778	366,652	366,652	0	32,775	0	32,775
2056	6,588,083	376,890	376,890	0	31,413	0	31,413
2057	6,676,501	373,841	373,841	0	29,053	0	29,053
2058	6,774,212	369,599	369,599	0	26,781	0	26,781
2059	6,883,318	371,961	371,961	0	25,131	0	25,131
2060	6,997,601	372,086	372,086	0	23,440	0	23,440
2061	7,119,700	366,987	366,987	0	21,556	0	21,556
2062	7,255,848	361,146	361,146	0	19,779	0	19,779
2063	7,407,896	354,803	354,803	0	18,118	0	18,118
2064	7,577,531	348,051	348,051	0	16,571	0	16,571
2065	7,766,455	340,839	340,839	0	15,131	0	15,131
2066	7,976,545	333,032	333,032	0	13,785	0	13,785
2067	8,209,951	324,587	324,587	0	12,527	0	12,527
2068	8,469,025	315,456	315,456	0	11,352	0	11,352
2069	8,756,339	305,593	305,593	0	10,254	0	10,254
2070	9,074,696	294,978	294,978	0	9,228	0	9,228

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.



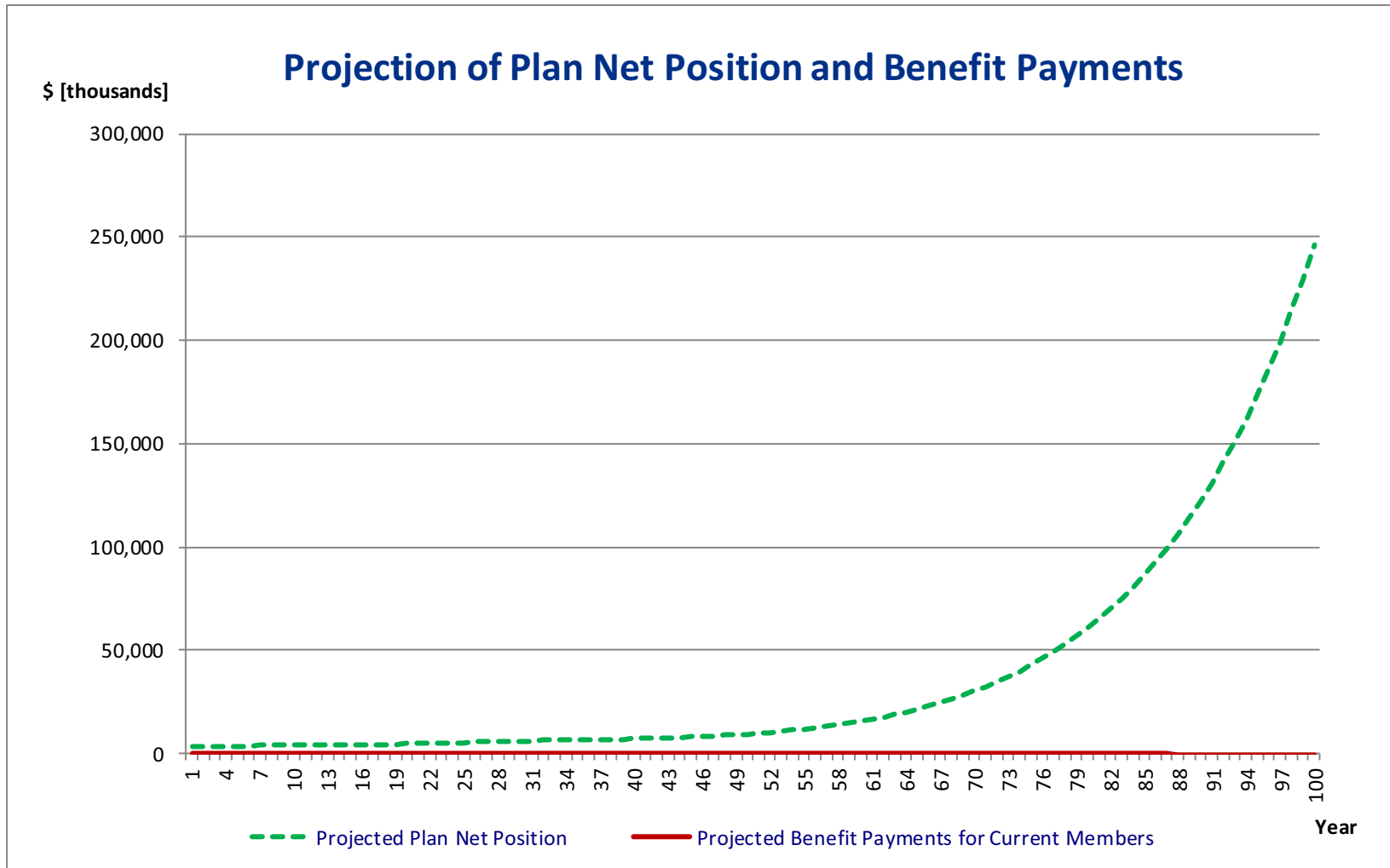
Single Discount Rate Development

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)
2071	\$ 9,427,128	\$ 283,623	\$ 283,623	\$ 0	\$ 8,273	\$ 0	\$ 8,273
2072	9,816,871	271,553	271,553	0	7,386	0	7,386
2073	10,247,370	258,803	258,803	0	6,563	0	6,563
2074	10,722,283	245,425	245,425	0	5,803	0	5,803
2075	11,245,483	231,474	231,474	0	5,103	0	5,103
2076	11,821,062	217,022	217,022	0	4,461	0	4,461
2077	12,453,337	202,153	202,153	0	3,875	0	3,875
2078	13,146,852	186,965	186,965	0	3,341	0	3,341
2079	13,906,375	171,593	171,593	0	2,859	0	2,859
2080	14,736,883	156,184	156,184	0	2,427	0	2,427
2081	15,643,560	140,909	140,909	0	2,041	0	2,041
2082	16,631,791	125,953	125,953	0	1,701	0	1,701
2083	17,707,156	111,490	111,490	0	1,404	0	1,404
2084	18,875,464	97,680	97,680	0	1,147	0	1,147
2085	20,142,777	84,659	84,659	0	927	0	927
2086	21,515,454	72,534	72,534	0	740	0	740
2087	23,000,207	61,394	61,394	0	584	0	584
2088	24,604,141	51,306	51,306	0	455	0	455
2089	26,334,808	42,302	42,302	0	350	0	350
2090	28,200,272	34,395	34,395	0	265	0	265
2091	30,209,172	27,566	27,566	0	198	0	198
2092	32,370,789	21,764	21,764	0	146	0	146
2093	34,695,132	16,916	16,916	0	106	0	106
2094	37,193,010	12,937	12,937	0	75	0	75
2095	39,876,106	9,730	9,730	0	53	0	53
2096	42,757,047	7,192	7,192	0	36	0	36
2097	45,849,485	5,220	5,220	0	25	0	25
2098	49,168,167	3,716	3,716	0	16	0	16
2099	52,729,011	2,592	2,592	0	11	0	11
2100	56,549,180	1,769	1,769	0	7	0	7
2101	60,647,164	1,180	1,180	0	4	0	4
2102	65,042,862	768	768	0	3	0	3
2103	69,757,674	487	487	0	2	0	2
2104	74,814,602	300	300	0	1	0	1
2105	80,238,349	180	180	0	0	0	0
2106	86,055,443	104	104	0	0	0	0
2107	92,294,355	59	59	0	0	0	0
2108	98,985,634	32	32	0	0	0	0
2109	106,162,060	17	17	0	0	0	0
2110	113,858,792	9	9	0	0	0	0
2111	122,113,545	4	4	0	0	0	0
2112	130,966,773	2	2	0	0	0	0
2113	140,461,862	1	1	0	0	0	0
2114	150,645,346	0	0	0	0	0	0
2115	161,567,133	0	0	0	0	0	0
2116	173,280,750	0	0	0	0	0	0
2117	185,843,604	0	0	0	0	0	0
2118	199,317,265	0	0	0	0	0	0
2119	213,767,767	0	0	0	0	0	0
2120	229,265,930	0	0	0	0	0	0
Totals					\$ 3,421,089	\$ -	\$ 3,421,089

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

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

Glossary of Terms (Continued)

<i>Amortization Payment</i>	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
<i>Amortization Method</i>	The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be “open” (meaning, reset each year) or “closed” (the number of years remaining will decline each year).
<i>Cost-of-Living Adjustments</i>	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
<i>Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)</i>	A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.
<i>Covered Valuation Payroll</i>	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.
<i>Deferred Inflows and Outflows</i>	The deferred inflows and outflows of pension resources are amounts used under GASB Statement No. 68 in developing the annual pension expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in pension expense should be included in the deferred inflows or outflows of resources.
<i>Discount Rate</i>	For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically: <ol style="list-style-type: none">1. The benefit payments to be made while the pension plans’ fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period; and2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.
<i>Entry Age Actuarial Cost Method (EAN)</i>	The EAN is a funding method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit 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.