

# Alsip Merrionette Pk Lib Dist Regular

GASB Statement No. 68 Employer Reporting

Accounting Schedules

December 31, 2020



# Table of Contents

## Page

### **Certification Letter**

#### **Section A      Executive Summary**

Executive Summary.....	1
Discussion.....	2 - 4
Other Observations.....	5 - 6

#### **Section B      Financial Statements**

Pension Expense/(Income) Under GASB Statement No. 68 .....	7
Statement of Outflows and Inflows Arising from Current Reporting Period .....	8
Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods ....	9
Recognition of Deferred Outflows and Inflows of Resources.....	10
Schedule of Changes in Net Pension Liability and Related Ratios Current Period .....	11
Sensitivity of Net Pension Liability/(Asset) to the Single Discount Rate Assumption .....	11
Multiyear Schedule of Changes in Net Pension Liability and Related Ratios .....	12
Multiyear Schedule of Contributions.....	13
Notes to Schedule of Contributions.....	14
Development of Market Value of Assets .....	15
Schedule of Contributions .....	15
Summary of Actuarial Methods and Assumptions Used in the Calculation of the Total Pension Liability .....	16

#### **Section C      Calculation of the Single Discount Rate**

Calculation of the Single Discount Rate .....	17
Projection of Contributions.....	18 - 19
Projection of Plan Fiduciary Net Position .....	20 - 21
Present Values of Projected Benefits.....	22 - 23
Projection of Plan Net Position and Benefit Payments .....	24

#### **Section D      Glossary of Terms .....**

25 - 28



March 26, 2021

Alsip Merrionette Pk 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 Alsip Merrionette Pk Lib Dist only in its entirety and only with the permission of Alsip Merrionette Pk 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.

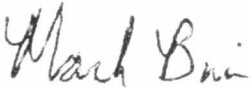
To the best of our knowledge, the information contained in this report is accurate, and fairly represents the GASB 68 information related to Alsip Merrionette Pk Lib Dist. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as with the Actuarial 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

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### EXECUTIVE SUMMARY

# Executive Summary as of December 31, 2020

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

## Membership

Number of	
- Retirees and Beneficiaries	27
- Inactive, Non-Retired Members	22
- Active Members	20
- Total	69
Covered Valuation Payroll <sup>(1)</sup>	\$ 1,005,054

## Net Pension Liability

Total Pension Liability/(Asset)	\$ 5,505,344
Plan Fiduciary Net Position	5,576,671
Net Pension Liability/(Asset)	\$ (71,327)
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	101.30%
Net Pension Liability as a Percentage of Covered Valuation Payroll	(7.10)%

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

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

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

**Total Pension Expense/(Income)** \$ (67,380)

## 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	\$ 30,973	\$ 306
Changes in assumptions	0	43,381
Net difference between projected and actual earnings on pension plan investments	229,345	633,607
<b>Total</b>	<b>\$ 260,318</b>	<b>\$ 677,294</b>

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

<sup>(2)</sup> Source: Fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of December 31, 2020. In describing this index, Fidelity notes that the municipal curves are constructed using option-adjusted analytics of a diverse population of over 10,000 tax exempt securities.

# Discussion

## Accounting Standard

For state and local government employers (as well as certain non-employers) that contribute to a Defined Benefit (DB) pension plan administered through a trust or equivalent arrangement, Governmental Accounting Standards Board (GASB) Statement No. 68 establishes standards for pension accounting and financial reporting. Under GASB Statement No. 68, the employer must account for and disclose the net pension liability, pension expense, and other information associated with providing retirement benefits to their employees (and former employees) on their basic financial statements.

The following discussion provides a summary of the information that is required to be disclosed under these accounting standards. A number of these disclosure items are provided in this report. However, certain information is not included in this report if it is not actuarial in nature, such as the notes to the financial statements regarding accounting policies and investments. As a result, the retirement fund and/or plan sponsor is responsible for preparing and disclosing the non-actuarial information needed to comply with these accounting standards.

## Financial Statements

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

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

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

## Notes to Financial Statements

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

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

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

## Required Supplementary Information

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

- Sources of changes in the net pension liability (page 12);
- Information about the components of the net pension liability and related ratios, including the pension plan's fiduciary net position as a percentage of the total pension liability, and the net pension liability as a percent of covered-employee payroll (page 12); and
- Comparison of actual employer contributions to the actuarially determined contributions based on the plan's funding policy (page 13).

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

## Timing of the Valuation

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

The total pension liability shown in this report is based on an actuarial valuation performed as of December 31, 2020 and a measurement date of December 31, 2020.

## Single Discount Rate

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

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

## Other Observations

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

Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 7.25% on the actuarial value of assets), it is expected that:

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

This funding policy results in a crossover date in 2120 and a discount rate of 7.25%. The projections in this report are strictly for the purposes of determining the GASB discount rate and are different from a funding projection for the ongoing plan.

### Limitations of Assets as a Percent of Total Pension Liability Measurements

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

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

### Limitations of Funded Status Measurements

Unless otherwise indicated, a funded ratio measurement presented in this report is based upon the actuarial accrued liability and the market value of assets. Unless otherwise indicated, with regard to any funded status measurements presented in this report:

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

## **Limitation of Project Scope**

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

## **SECTION B**

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### **FINANCIAL STATEMENTS**

## Pension Expense/(Income) Under GASB Statement No. 68 Calendar Year Ended December 31, 2020

### A. Expense/(Income)

1. Service Cost	\$	99,158
2. Interest on the Total Pension Liability		380,645
3. Current-Period Benefit Changes		0
4. Employee Contributions (made negative for addition here)		(48,332)
5. Projected Earnings on Plan Investments (made negative for addition here)		(355,195)
6. Other Changes in Plan Fiduciary Net Position		(36,276)
7. Recognition of Outflow (Inflow) of Resources due to Liabilities		19,218
8. Recognition of Outflow (Inflow) of Resources due to Assets		(126,598)
9. Total Pension Expense/(Income)	\$	(67,380)

### 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 197.80 years. Additionally, the total plan membership (active employees and inactive employees) was 67. 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 2.9522 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	\$ (462)
2. Assumption Changes (gains) or losses	\$ (65,602)
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}	2.9522
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	\$ (156)
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for Assumption Changes	\$ (22,221)
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	\$ (22,377)
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	\$ (306)
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for Assumption Changes	\$ (43,381)
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	\$ (43,687)

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

1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$ (334,356)
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	\$ (66,871)
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$ (267,485)

*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	\$ 74,542	\$ 55,324	\$ 19,218
2. Due to Assets	119,948	246,546	(126,598)
3. Total	\$ 194,490	\$ 301,870	\$ (107,380)

## 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	\$ 30,132	\$ 33,103	\$ (2,971)
2. Assumption changes	44,410	22,221	22,189
3. Net difference between projected and actual earnings on pension plan investments	119,948	246,546	(126,598)
4. Total	\$ 194,490	\$ 301,870	\$ (107,380)

## 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	\$ 30,973	\$ 306	\$ 30,667
2. Assumption changes	0	43,381	\$ (43,381)
3. Net difference between projected and actual earnings on pension plan investments	229,345	633,607	(404,262)
4. Total	\$ 260,318	\$ 677,294	\$ (416,976)

## 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	\$ (124,120)
2022	(65,889)
2023	(160,095)
2024	(66,872)
2025	0
Thereafter	0
Total	\$ (416,976)

# Recognition of Deferred Outflows and Inflows of Resources

## Reporting Date - December 31, 2020

Year Established	Initial Amount	Initial Recognition Period	Current Year Recognition	Remaining Recognition	Remaining Recognition Period
<b>Deferred Outflow (Inflow) due to Differences Between Expected and Actual Experience on Liabilities</b>					
2014	\$ 45,280	3.2519	\$ 0	\$ 0	0.0000
2015	35,073	3.2940	0	0	0.0000
2016	26,227	3.3349	0	0	0.0000
2017	(115,776)	2.9178	0	0	0.0000
2018	(104,289)	2.9236	(32,947)	0	0.0000
2019	91,237	3.0279	30,132	30,973	1.0279
2020	(462)	2.9522	(156)	(306)	1.9522
<b>Total</b>			<b>\$ (2,971)</b>	<b>\$ 30,667</b>	
<b>Deferred Outflow (Inflow) due to Assumption Changes</b>					
2014	\$ 183,111	3.2519	\$ 0	\$ 0	0.0000
2015	5,578	3.2940	0	0	0.0000
2016	(11,516)	3.3349	0	0	0.0000
2017	(154,375)	2.9178	0	0	0.0000
2018	140,580	2.9236	44,410	0	0.0000
2019	0	3.0279	0	0	1.0279
2020	(65,602)	2.9522	(22,221)	(43,381)	1.9522
<b>Total</b>			<b>\$ 22,189</b>	<b>\$ (43,381)</b>	
<b>Deferred Outflow (Inflow) due to Differences Between Projected and Actual Earnings on Plan Investments</b>					
2016	\$ 26,388	5.0000	\$ 5,276	\$ 0	0.0000
2017	(432,266)	5.0000	(86,453)	(86,454)	1.0000
2018	573,361	5.0000	114,672	229,345	2.0000
2019	(466,112)	5.0000	(93,222)	(279,668)	3.0000
2020	(334,356)	5.0000	(66,871)	(267,485)	4.0000
<b>Total</b>			<b>\$ (126,598)</b>	<b>\$ (404,262)</b>	

# 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	\$	99,158
2. Interest on the Total Pension Liability		380,645
3. Changes of benefit terms		0
4. Difference between expected and actual experience of the Total Pension Liability		(462)
5. Changes of assumptions		(65,602)
6. Benefit payments, including refunds of employee contributions		(218,194)
7. Net change in total pension liability	\$	195,545
8. Total pension liability – beginning		5,309,799
9. Total pension liability – ending	\$	<u>5,505,344</u>

## B. Plan fiduciary net position

1. Contributions – employer	\$	109,350
2. Contributions – employee		48,332
3. Net investment income		689,551
4. Benefit payments, including refunds of employee contributions		(218,194)
5. Other (Net Transfer)		36,276
6. Net change in plan fiduciary net position	\$	665,315
7. Plan fiduciary net position – beginning		4,911,356
8. Plan fiduciary net position – ending	\$	<u>5,576,671</u>

## C. Net pension liability/(asset)

	\$	<u>(71,327)</u>
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## D. Plan fiduciary net position as a percentage of the total pension liability

101.30%

## E. Covered Valuation payroll

\$ 1,005,054

## F. Net pension liability as a percentage of covered valuation payroll

(7.10)%

## 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	\$ 6,157,070	\$ 5,505,344	\$ 4,999,230
Plan Fiduciary Net Position	5,576,671	5,576,671	5,576,671
Net Pension Liability/(Asset)	\$ 580,399	\$ (71,327)	\$ (577,441)



# Schedules of Required Supplementary Information

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

Last 10 Calendar Years

(schedule to be built prospectively from 2014)

Calendar year ending December 31,	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
<b>Total Pension Liability</b>										
Service Cost	\$ 99,158	\$ 91,410	\$ 83,336	\$ 83,677	\$ 97,592	\$ 88,511	\$ 89,003			
Interest on the Total Pension Liability	380,645	356,876	349,605	352,926	334,517	315,641	284,241			
Benefit Changes	0	0	0	0	0	0	0			
Difference between Expected and Actual Experience	(462)	91,237	(104,289)	(115,776)	26,227	35,073	45,280			
Assumption Changes	(65,602)	0	140,580	(154,375)	(11,516)	5,578	183,111			
Benefit Payments and Refunds	(218,194)	(212,901)	(211,566)	(209,566)	(198,095)	(179,626)	(174,571)			
<b>Net Change in Total Pension Liability</b>	195,545	326,622	257,666	(43,114)	243,725	265,177	427,064			
<b>Total Pension Liability - Beginning</b>	5,309,799	4,983,177	4,725,511	4,768,625	4,524,900	4,259,723	3,832,659			
<b>Total Pension Liability - Ending (a)</b>	\$ 5,505,344	\$ 5,309,799	\$ 4,983,177	\$ 4,725,511	\$ 4,768,625	\$ 4,524,900	\$ 4,259,723			
<b>Plan Fiduciary Net Position</b>										
Employer Contributions	\$ 109,350	\$ 90,164	\$ 108,428	\$ 97,054	\$ 108,974	\$ 110,794	\$ 100,218			
Employee Contributions	48,332	44,755	40,788	37,521	36,565	39,854	34,928			
Pension Plan Net Investment Income	689,551	768,771	(235,083)	730,762	262,082	19,042	218,328			
Benefit Payments and Refunds	(218,194)	(212,901)	(211,566)	(209,566)	(198,095)	(179,626)	(174,571)			
Other	36,276	13,931	(74,960)	(188,358)	59,082	29,998	45,191			
<b>Net Change in Plan Fiduciary Net Position</b>	665,315	704,720	(372,393)	467,413	268,608	20,062	224,094			
<b>Plan Fiduciary Net Position - Beginning</b>	4,911,356	4,206,636	4,579,029	4,111,616	3,843,008	3,822,946	3,598,852			
<b>Plan Fiduciary Net Position - Ending (b)</b>	\$ 5,576,671	\$ 4,911,356	\$ 4,206,636	\$ 4,579,029	\$ 4,111,616	\$ 3,843,008	\$ 3,822,946			
<b>Net Pension Liability/(Asset) - Ending (a) - (b)</b>	(71,327)	398,443	776,541	146,482	657,009	681,892	436,777			
<b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b>	101.30%	92.50 %	84.42 %	96.90 %	86.22%	84.93 %	89.75 %			
<b>Covered Valuation Payroll</b>	\$ 1,005,054	\$ 991,889	\$ 897,579	\$ 833,790	\$ 812,561	\$ 885,645	\$ 800,174			
<b>Net Pension Liability as a Percentage of Covered Valuation Payroll</b>	(7.10)%	40.17 %	86.52 %	17.57 %	80.86%	76.99 %	54.59 %			



# 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
2014	\$ 95,861	\$ 100,218	\$ (4,357)	\$ 800,174	12.52%
2015	110,794	110,794	0	885,645	12.51%
2016	99,620	108,974	(9,354)	812,561	13.41%
2017	97,053	97,054	(1)	833,790	11.64%
2018	108,428	108,428	0	897,579	12.08%
2019	90,163	90,164	(1)	991,889	9.09%
2020	109,350 *	109,350	0	1,005,054	10.88%

\* Estimated based on contribution rate of 10.88% and covered valuation payroll of \$1,005,054.  
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)	\$	1,151,756
2. Employer Contribution Reserve (EAF assets from IMRF)		2,356,586
3. Annuitant Reserve		2,050,477
4. Miscellaneous Adjustment*		17,852
<b>5. Net Market Value</b>	\$	<b>5,576,671</b>

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

## Schedule of Contributions

### Total Contributions

#### 1. Employer

a.) Wage Reporting	\$	109,350
b.) Accelerated payments and Reserve Payments		-
	\$	<b>109,350</b>

#### 2. Member

a.) Wage Reporting	\$	45,228
b.) Member Payments (i.e. ERI, Pension Payments)		3,104

#### Sub-total (Amount used for valuation on Schedule of Changes Page 11)

\$ **48,332**

c.) Voluntary Additional Plan

\$ 40,042

#### Total Member Contributions (a+b+c)

\$ **88,374**

#### Total Employer and Member Contributions (1+2)

\$ **197,724**

# 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	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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A detailed description of the actuarial assumptions and methods can be found in the December 31, 2020 Illinois Municipal Retirement Fund annual actuarial valuation report.

## **SECTION C**

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### **CALCULATION OF THE SINGLE DISCOUNT RATE**

## Calculation of the Single Discount Rate

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

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

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

The tables in this section provide background for the development of the single discount rate.

The **Projection of Contributions** table shows the development of expected contributions in future years. Normal Cost contributions for future hires are not included (nor are their liabilities).

Expected Contributions are developed based on the following:

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

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

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

# Single Discount Rate Development

## Projection of Contributions

Year	Payroll for Current Employees	Contributions from Current Employees	Normal Cost Contributions	UAL Contributions	Total Contributions
2020	\$ 1,005,054				
2021	959,379	\$ 43,172	\$ 57,820	\$ 25,598	\$ 126,590
2022	879,917	39,596	48,508	15,509	103,614
2023	811,660	36,525	44,104	4,044	84,672
2024	748,115	33,665	40,577	(8,980)	65,262
2025	689,593	31,032	37,266	(17,626)	50,672
2026	642,150	28,897	34,449	(18,067)	45,278
2027	603,027	27,136	32,111	(18,518)	40,730
2028	567,167	25,523	29,978	(18,981)	36,519
2029	531,327	23,910	27,873	(19,456)	32,327
2030	498,153	22,417	25,837	(19,942)	28,312
2031	472,413	21,259	24,222	(20,441)	25,040
2032	450,063	20,253	22,854	(20,952)	22,155
2033	429,411	19,324	21,593	(21,475)	19,441
2034	413,697	18,616	20,598	(20,598)	18,617
2035	403,082	18,139	19,910	(19,910)	18,139
2036	394,706	17,762	19,341	(19,341)	17,761
2037	382,172	17,198	18,651	(18,651)	17,198
2038	367,813	16,552	17,841	(17,841)	16,552
2039	356,673	16,050	17,160	(17,160)	16,050
2040	346,661	15,600	16,575	(16,575)	15,600
2041	338,033	15,212	16,062	(16,062)	15,212
2042	329,998	14,850	15,615	(15,615)	14,850
2043	316,368	14,237	14,908	0	29,144
2044	293,757	13,219	13,726	0	26,945
2045	272,688	12,271	12,553	0	24,824
2046	256,256	11,532	11,569	0	23,100
2047	240,041	10,802	10,671	0	21,472
2048	220,478	9,922	9,605	0	19,526
2049	198,547	8,935	8,512	0	17,447
2050	180,694	8,131	7,640	0	15,771
2051	149,239	6,716	6,192	0	12,907
2052	116,472	5,241	4,798	0	10,039
2053	104,923	4,722	4,332	0	9,054
2054	99,029	4,456	4,040	0	8,496
2055	94,763	4,264	3,782	0	8,046
2056	88,252	3,971	3,443	0	7,415
2057	58,185	2,618	2,241	0	4,860
2058	21,663	975	845	0	1,820
2059	8,272	372	349	0	721
2060	4,257	192	207	0	399
2061	2,776	125	153	0	278
2062	1,989	90	117	0	207
2063	1,475	66	89	0	155
2064	895	40	54	0	94
2065	430	19	25	0	45
2066	332	15	20	0	35
2067	257	12	16	0	28
2068	199	9	12	0	21
2069	89	4	5	0	9
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 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)
2021	\$ 5,576,671	\$ 126,590	\$ 268,895	\$ 399,240	\$ 5,833,606
2022	5,833,606	103,613	296,606	416,063	6,056,676
2023	6,056,676	84,672	321,055	430,690	6,250,983
2024	6,250,983	65,262	344,799	443,240	6,414,687
2025	6,414,687	50,672	367,746	453,772	6,551,385
2026	6,551,385	45,279	387,697	462,780	6,671,747
2027	6,671,747	40,729	404,795	470,735	6,778,416
2028	6,778,416	36,519	422,748	477,679	6,869,867
2029	6,869,867	32,327	441,323	483,499	6,944,369
2030	6,944,369	28,312	458,774	488,136	7,002,043
2031	7,002,043	25,040	475,366	491,609	7,043,327
2032	7,043,327	22,155	488,317	494,039	7,071,204
2033	7,071,204	19,441	497,686	495,629	7,088,588
2034	7,088,588	18,616	504,227	496,627	7,099,604
2035	7,099,604	18,139	506,487	497,328	7,108,585
2036	7,108,585	17,762	506,909	497,951	7,117,389
2037	7,117,389	17,198	514,190	498,310	7,118,707
2038	7,118,707	16,552	518,745	498,220	7,114,733
2039	7,114,733	16,050	524,433	497,712	7,104,062
2040	7,104,062	15,600	528,919	496,762	7,087,505
2041	7,087,505	15,212	524,380	495,710	7,074,047
2042	7,074,047	14,850	518,348	494,936	7,065,484
2043	7,065,484	29,144	518,280	494,827	7,071,175
2044	7,071,175	26,945	537,141	494,489	7,055,469
2045	7,055,469	24,824	550,366	492,804	7,022,731
2046	7,022,731	23,100	548,486	490,436	6,987,782
2047	6,987,782	21,472	545,539	487,949	6,951,665
2048	6,951,665	19,526	550,881	485,071	6,905,381
2049	6,905,381	17,447	554,944	481,497	6,849,380
2050	6,849,380	15,771	549,672	477,565	6,793,044
2051	6,793,044	12,907	567,851	472,731	6,710,831
2052	6,710,831	10,039	574,182	466,443	6,613,131
2053	6,613,131	9,054	563,281	459,713	6,518,616
2054	6,518,616	8,496	550,520	453,295	6,429,888
2055	6,429,888	8,046	536,785	447,335	6,348,485
2056	6,348,485	7,415	528,951	441,690	6,268,638
2057	6,268,638	4,860	564,150	434,557	6,143,904
2058	6,143,904	1,820	588,130	424,551	5,982,146
2059	5,982,146	721	580,853	413,044	5,815,058
2060	5,815,058	399	568,399	401,362	5,648,420
2061	5,648,420	278	555,652	389,730	5,482,777
2062	5,482,777	207	544,227	378,126	5,316,882
2063	5,316,882	155	533,793	366,468	5,149,712
2064	5,149,712	94	524,291	354,684	4,980,200
2065	4,980,200	45	514,651	342,736	4,808,330
2066	4,808,330	35	504,994	330,619	4,633,991
2067	4,633,991	28	495,337	318,324	4,457,005
2068	4,457,005	21	485,416	305,845	4,277,455
2069	4,277,455	9	475,182	293,192	4,095,474
2070	4,095,474	0	463,901	280,400	3,911,973

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	\$ 3,911,973	\$ 0	\$ 451,415	\$ 267,541	\$ 3,728,098
2072	3,728,098	0	437,586	254,702	3,545,214
2073	3,545,214	0	422,242	241,990	3,364,962
2074	3,364,962	0	405,286	229,525	3,189,202
2075	3,189,202	0	386,718	217,444	3,019,928
2076	3,019,928	0	366,626	205,887	2,859,189
2077	2,859,189	0	345,167	194,998	2,709,019
2078	2,709,019	0	322,580	184,915	2,571,354
2079	2,571,354	0	299,148	175,769	2,447,975
2080	2,447,975	0	275,185	167,677	2,340,467
2081	2,340,467	0	251,061	160,742	2,250,148
2082	2,250,148	0	227,118	155,047	2,178,076
2083	2,178,076	0	203,675	150,657	2,125,058
2084	2,125,058	0	181,034	147,619	2,091,644
2085	2,091,644	0	159,438	145,966	2,078,171
2086	2,078,171	0	139,112	145,713	2,084,772
2087	2,084,772	0	120,223	146,864	2,111,413
2088	2,111,413	0	102,856	149,414	2,157,971
2089	2,157,971	0	87,060	153,352	2,224,263
2090	2,224,263	0	72,857	158,664	2,310,070
2091	2,310,070	0	60,244	165,334	2,415,160
2092	2,415,160	0	49,199	173,347	2,539,308
2093	2,539,308	0	39,662	182,687	2,682,333
2094	2,682,333	0	31,529	193,346	2,844,151
2095	2,844,151	0	24,689	205,322	3,024,784
2096	3,024,784	0	19,019	218,619	3,224,384
2097	3,224,384	0	14,394	233,255	3,443,245
2098	3,443,245	0	10,685	249,255	3,681,815
2099	3,681,815	0	7,768	266,655	3,940,702
2100	3,940,702	0	5,520	285,504	4,220,686
2101	4,220,686	0	3,830	305,863	4,522,720
2102	4,522,720	0	2,590	327,805	4,847,935
2103	4,847,935	0	1,705	351,415	5,197,645
2104	5,197,645	0	1,091	376,790	5,573,345
2105	5,573,345	0	677	404,043	5,976,711
2106	5,976,711	0	407	433,297	6,409,601
2107	6,409,601	0	237	464,688	6,874,051
2108	6,874,051	0	134	498,364	7,372,281
2109	7,372,281	0	73	534,488	7,906,696
2110	7,906,696	0	39	573,234	8,479,892
2111	8,479,892	0	20	614,791	9,094,663
2112	9,094,663	0	10	659,363	9,754,016
2113	9,754,016	0	5	707,166	10,461,177
2114	10,461,177	0	2	758,435	11,219,610
2115	11,219,610	0	1	813,422	12,033,031
2116	12,033,031	0	0	872,395	12,905,425
2117	12,905,425	0	0	935,643	13,841,068
2118	13,841,068	0	0	1,003,477	14,844,546
2119	14,844,546	0	0	1,076,230	15,920,775
2120	15,920,775	0	0	1,154,256	17,075,032

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	\$ 5,576,671	\$ 268,895	\$ 268,895	\$ 0	\$ 259,648	\$ 0	\$ 259,648
2022	5,833,606	296,606	296,606	0	267,045	0	267,045
2023	6,056,676	321,055	321,055	0	269,517	0	269,517
2024	6,250,983	344,799	344,799	0	269,883	0	269,883
2025	6,414,687	367,746	367,746	0	268,386	0	268,386
2026	6,551,385	387,697	387,697	0	263,820	0	263,820
2027	6,671,747	404,795	404,795	0	256,834	0	256,834
2028	6,778,416	422,748	422,748	0	250,093	0	250,093
2029	6,869,867	441,323	441,323	0	243,433	0	243,433
2030	6,944,369	458,774	458,774	0	235,952	0	235,952
2031	7,002,043	475,366	475,366	0	227,959	0	227,959
2032	7,043,327	488,317	488,317	0	218,340	0	218,340
2033	7,071,204	497,686	497,686	0	207,486	0	207,486
2034	7,088,588	504,227	504,227	0	196,003	0	196,003
2035	7,099,604	506,487	506,487	0	183,572	0	183,572
2036	7,108,585	506,909	506,909	0	171,306	0	171,306
2037	7,117,389	514,190	514,190	0	162,020	0	162,020
2038	7,118,707	518,745	518,745	0	152,406	0	152,406
2039	7,114,733	524,433	524,433	0	143,661	0	143,661
2040	7,104,062	528,919	528,919	0	135,096	0	135,096
2041	7,087,505	524,380	524,380	0	124,882	0	124,882
2042	7,074,047	518,348	518,348	0	115,101	0	115,101
2043	7,065,484	518,280	518,280	0	107,306	0	107,306
2044	7,071,175	537,141	537,141	0	103,693	0	103,693
2045	7,055,469	550,366	550,366	0	99,064	0	99,064
2046	7,022,731	548,486	548,486	0	92,052	0	92,052
2047	6,987,782	545,539	545,539	0	85,368	0	85,368
2048	6,951,665	550,881	550,881	0	80,377	0	80,377
2049	6,905,381	554,944	554,944	0	75,496	0	75,496
2050	6,849,380	549,672	549,672	0	69,724	0	69,724
2051	6,793,044	567,851	567,851	0	67,161	0	67,161
2052	6,710,831	574,182	574,182	0	63,319	0	63,319
2053	6,613,131	563,281	563,281	0	57,918	0	57,918
2054	6,518,616	550,520	550,520	0	52,779	0	52,779
2055	6,429,888	536,785	536,785	0	47,984	0	47,984
2056	6,348,485	528,951	528,951	0	44,087	0	44,087
2057	6,268,638	564,150	564,150	0	43,842	0	43,842
2058	6,143,904	588,130	588,130	0	42,616	0	42,616
2059	5,982,146	580,853	580,853	0	39,244	0	39,244
2060	5,815,058	568,399	568,399	0	35,806	0	35,806
2061	5,648,420	555,652	555,652	0	32,637	0	32,637
2062	5,482,777	544,227	544,227	0	29,805	0	29,805
2063	5,316,882	533,793	533,793	0	27,258	0	27,258
2064	5,149,712	524,291	524,291	0	24,963	0	24,963
2065	4,980,200	514,651	514,651	0	22,847	0	22,847
2066	4,808,330	504,994	504,994	0	20,903	0	20,903
2067	4,633,991	495,337	495,337	0	19,117	0	19,117
2068	4,457,005	485,416	485,416	0	17,468	0	17,468
2069	4,277,455	475,182	475,182	0	15,944	0	15,944
2070	4,095,474	463,901	463,901	0	14,513	0	14,513

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.



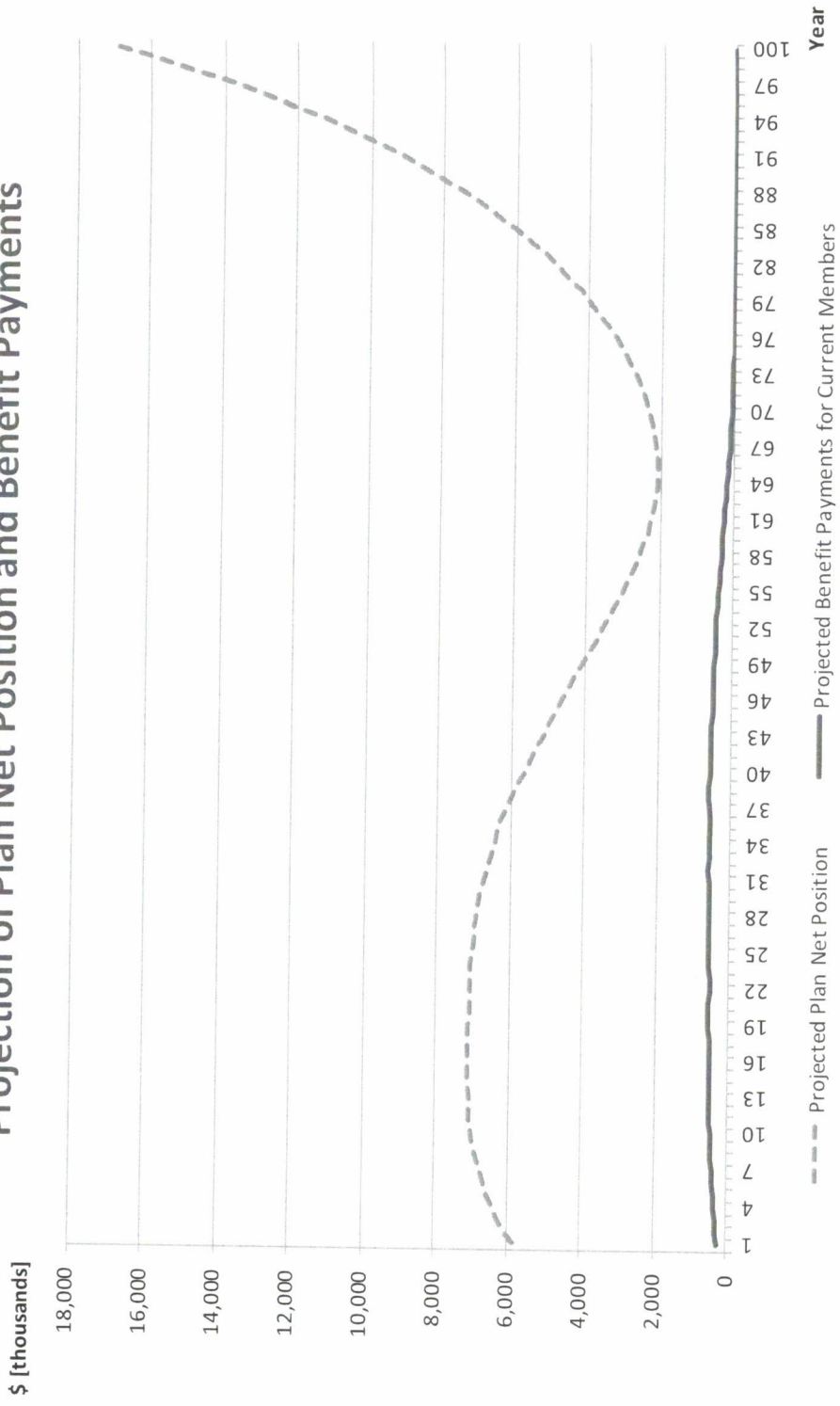
# Single Discount Rate Development

## 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)-.5)	(g)=(e)*vf^((a)-.5)	(h)=(c)/(1+sdr)^((a)-.5)
2071	\$ 3,911,973	\$ 451,415	\$ 451,415	\$ 0	\$ 13,168	\$ 0	\$ 13,168
2072	3,728,098	437,586	437,586	0	11,902	0	11,902
2073	3,545,214	422,242	422,242	0	10,708	0	10,708
2074	3,364,962	405,286	405,286	0	9,583	0	9,583
2075	3,189,202	386,718	386,718	0	8,526	0	8,526
2076	3,019,928	366,626	366,626	0	7,537	0	7,537
2077	2,859,189	345,167	345,167	0	6,616	0	6,616
2078	2,709,019	322,580	322,580	0	5,765	0	5,765
2079	2,571,354	299,148	299,148	0	4,985	0	4,985
2080	2,447,975	275,185	275,185	0	4,275	0	4,275
2081	2,340,467	251,061	251,061	0	3,637	0	3,637
2082	2,250,148	227,118	227,118	0	3,068	0	3,068
2083	2,178,076	203,675	203,675	0	2,565	0	2,565
2084	2,125,058	181,034	181,034	0	2,126	0	2,126
2085	2,091,644	159,438	159,438	0	1,746	0	1,746
2086	2,078,171	139,112	139,112	0	1,420	0	1,420
2087	2,084,772	120,223	120,223	0	1,144	0	1,144
2088	2,111,413	102,856	102,856	0	913	0	913
2089	2,157,971	87,060	87,060	0	720	0	720
2090	2,224,263	72,857	72,857	0	562	0	562
2091	2,310,070	60,244	60,244	0	433	0	433
2092	2,415,160	49,199	49,199	0	330	0	330
2093	2,539,308	39,662	39,662	0	248	0	248
2094	2,682,333	31,529	31,529	0	184	0	184
2095	2,844,151	24,689	24,689	0	134	0	134
2096	3,024,784	19,019	19,019	0	96	0	96
2097	3,224,384	14,394	14,394	0	68	0	68
2098	3,443,245	10,685	10,685	0	47	0	47
2099	3,681,815	7,768	7,768	0	32	0	32
2100	3,940,702	5,520	5,520	0	21	0	21
2101	4,220,686	3,830	3,830	0	14	0	14
2102	4,522,720	2,590	2,590	0	9	0	9
2103	4,847,935	1,705	1,705	0	5	0	5
2104	5,197,645	1,091	1,091	0	3	0	3
2105	5,573,345	677	677	0	2	0	2
2106	5,976,711	407	407	0	1	0	1
2107	6,409,601	237	237	0	1	0	1
2108	6,874,051	134	134	0	0	0	0
2109	7,372,281	73	73	0	0	0	0
2110	7,906,696	39	39	0	0	0	0
2111	8,479,892	20	20	0	0	0	0
2112	9,094,663	10	10	0	0	0	0
2113	9,754,016	5	5	0	0	0	0
2114	10,461,177	2	2	0	0	0	0
2115	11,219,610	1	1	0	0	0	0
2116	12,033,031	0	0	0	0	0	0
2117	12,905,425	0	0	0	0	0	0
2118	13,841,068	0	0	0	0	0	0
2119	14,844,546	0	0	0	0	0	0
2120	15,920,775	0	0	0	0	0	0
Totals	\$ 6,158,330	\$ -	\$ 6,158,330				

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.

## Projection of Plan Net Position and Benefit Payments



*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.*

## **SECTION D**

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### **GLOSSARY OF TERMS**

## Glossary of Terms

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

## Glossary of Terms (Continued)

<b><i>Amortization Payment</i></b>	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
<b><i>Amortization Method</i></b>	The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be “open” (meaning, reset each year) or “closed” (the number of years remaining will decline each year).
<b><i>Cost-of-Living Adjustments</i></b>	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
<b><i>Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)</i></b>	A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.
<b><i>Covered Valuation Payroll</i></b>	The earnings of covered employees for the year ended on the valuation date, which is typically only the pensionable pay and does not include pay above any pay cap. It is not necessarily the same as payroll actually paid because it excludes all pay for people who exited during the year.
<b><i>Deferred Inflows and Outflows</i></b>	The deferred inflows and outflows of pension resources are amounts used under GASB Statement No. 68 in developing the annual pension expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in pension expense should be included in the deferred inflows or outflows of resources.
<b><i>Discount Rate</i></b>	<p>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:</p> <ol style="list-style-type: none"><li>1. The benefit payments to be made while the pension plans’ fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period; and</li><li>2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.</li></ol>
<b><i>Entry Age Actuarial Cost Method (EAN)</i></b>	The EAN is a funding method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit age(s). The portion of the actuarial present value allocated to a valuation year is the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.

## Glossary of Terms (Continued)

<b><i>GASB</i></b>	The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.
<b><i>Fiduciary Net Position</i></b>	The fiduciary net position is the value of the assets of the trust.
<b><i>Long-Term Expected Rate of Return</i></b>	The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.
<b><i>Money-Weighted Rate of Return</i></b>	The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For purposes of GASB Statement No. 68, money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense.
<b><i>Multiple-Employer Defined Benefit Pension Plan</i></b>	A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.
<b><i>Municipal Bond Rate</i></b>	The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.
<b><i>Net Pension Liability (NPL)</i></b>	The NPL is the liability of employers and non-employer contribution entities to plan members for benefits provided through a defined benefit pension plan.
<b><i>Non-Employer Contribution Entities</i></b>	Non-employer contribution entities are entities that make contributions to a pension plan that is used to provide pensions to the employees of other entities. For purposes of the GASB Accounting statement plan members are not considered non-employer contribution entities.
<b><i>Normal Cost</i></b>	The actuarial present value of the pension trust benefits allocated to the current year by the actuarial cost method.
<b><i>Other Postemployment Benefits (OPEB)</i></b>	All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment healthcare benefits regardless of the manner in which they are provided. Other post-employment benefits do not include termination benefits.
<b><i>Real Rate of Return</i></b>	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
<b><i>Service Cost</i></b>	The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.

## Glossary of Terms (Concluded)

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

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

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

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

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

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

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

### ***Valuation Assets***

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