

Police and Firemen's Retirement System of New Jersey

**Governmental Accounting Standards Board
Statements 67 and 68 Actuarial Valuation as of June
30, 2021**



This report has been prepared at the request of the Board of Trustees to assist the sponsors of the System in preparing their financial report for their liabilities associated with the Police and Firemen's Retirement System of New Jersey. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Board of Trustees and may only be provided to other parties in its entirety. The measurements shown in this actuarial valuation may not be applicable for other purposes.

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March 23, 2022

Police and Firemen's Retirement System of New Jersey
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Dear Board Members:

We are pleased to submit this Governmental Accounting Standards Board Statements 67 and 68 (GASB 67 and 68) Actuarial Valuation based on a June 30, 2021 measurement date for employer reporting as of June 30, 2021. It contains various information that will need to be disclosed in order for Police and Firemen's Retirement System of New Jersey employers to comply with GASB 67 and 68.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist the sponsors in preparing their financial report for their liabilities associated with the Police and Firemen's Retirement System of New Jersey. The census and financial information on which our calculations were based were provided by the Division of Pensions and Benefits. That assistance is gratefully acknowledged.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and changes in plan provisions or applicable law.

The actuarial calculations were completed under the supervision of Jonathan Scarpa, FSA, EA, MAAA. I am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of my knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in my opinion, the assumptions as approved by the Board are reasonably related to the experience of and expectations for Police and Firemen's Retirement System of New Jersey.

We look forward to reviewing this report with you and to answering any questions.

Sincerely,

Segal



Frank Santasiero, FSA, FCA, EA, MAAA
Vice President and Actuary



Jonathan Scarpa, FSA, EA, MAAA,
Vice President and Actuary

Table of Contents

Section 1: Actuarial Valuation Summary	5
Purpose and basis	5
Highlights of the valuation	5
Summary of key valuation results	7
Important information about actuarial valuations	9
Section 2: GASB 67/68 Information.....	11
General information about the pension plan	11
Net pension liability.....	12
Determination of discount rate and investment rates of return	14
Discount rate sensitivity	15
Schedule of changes in Net Pension Liability – Last two fiscal years.....	16
Deferred outflows and inflows of resources	20
Schedule of recognition of change in total Net Pension Liability	24
Pension expense	32
Schedule of reconciliation of Net Pension Liability	35
Schedule of contributions – Last ten fiscal years	36
Section 3: Actuarial Assumptions and Methods and Appendices	38
Exhibit I: Actuarial Assumptions, Actuarial Cost Method and Models.....	38
Appendix A: Projection of Plan Fiduciary Net Position for use in the Calculation of Discount Rate as of June 30, 2021	43
Appendix B: Development of Blended Discount Rate as of June 30, 2021	48
Appendix C: Definition of Terms	53

Actuarial Valuation Summary

Purpose and basis

This report has been prepared by Segal to present certain disclosure information required by Governmental Accounting Standards Board Statements 67 and 68 (GASB 67/68) for employer reporting as of June 30, 2021. This valuation is based on:

- The benefit provisions of Police and Firemen's Retirement System of New Jersey (PFRS), as administered by the Board;
- The characteristics of covered active members, terminated vested members, and retired members and beneficiaries as of June 30, 2020, provided by the Division of Pensions and Benefits (DPB);
- The draft assets of the Plan as of June 30, 2021, provided by the Division of Pensions and Benefits;
- Economic assumptions regarding future salary increases and investment earnings adopted by the Board for the June 30, 2020 valuation; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc. adopted by the Board for the June 30, 2020 valuation.

Highlights of the valuation

1. It is important to note that GASB 67 and 68 only define pension liability and expense for financial reporting purposes, and do not apply to contribution amounts for pension funding purposes. Employers and plans should develop and adopt funding policies under current practices, if no policy currently exists.
2. When measuring pension liability GASB uses the same actuarial cost method (Entry Age method) and the same discount rate (expected return on assets) as the PFRS uses for funding as of July 1, 2021.
3. The NPL is equal to the difference between the TPL and the Plan Fiduciary Net Position. The Plan Fiduciary Net Position is equal to the market value of assets and therefore, the NPL measure is very similar to an Unfunded Actuarial Accrued Liability (UAAL) on a market value basis.
4. The NPL was measured as of June 30, 2021 and June 30, 2020 and determined based upon the results of the actuarial valuations as of June 30, 2020 and June 30, 2019, respectively.

Section 1: Actuarial Valuation Summary

5. The Total NPL decreased from \$19.2 billion as of June 30, 2020 to \$13.4 billion as of June 30, 2021 primarily as a result of favorable investment experience during the year ended June 30, 2021. Changes in these values during the last two fiscal years ending June 30, 2020 and June 30, 2021 can be found in Section 2.
6. The discount rate used to measure the TPL and NPL as of June 30, 2021 and June 30, 2020 was 7.00%. However, for GASB purposes, the mortality improvement scale was updated from MP-2020 as of June 30, 2020 to MP-2021 as of June 30, 2021 based on guidance from the Division of Pensions and Benefits. The detailed calculations used in the derivation of the discount rate can be found in Appendix A of Section 3. Various other information that is required to be disclosed can be found throughout Section 2.
7. It is important to note that this actuarial valuation is based on plan draft assets as of June 30, 2021. The Plan's actuarial status does not reflect short-term fluctuations of the market, but rather is based on the market values on the last day of the Plan Year. While it is impossible to determine how the market will perform over the next several months, and how that will affect the results of next year's valuation, Segal is available to prepare projections of potential outcomes upon request.

Section 1: Actuarial Valuation Summary

Summary of key valuation results

Measurement Date		State	
		June 30, 2021	June 30, 2020
Disclosure elements for fiscal year ending June 30:	• Service cost	\$114,937,795	\$110,796,017
	• Total Pension Liability	5,783,590,022	5,717,806,071
	• Plan Fiduciary Net Position	1,719,018,257	1,418,796,120
	• Net Pension Liability	4,064,571,765	4,299,009,951
	• Pension expense	133,596,375	232,607,740
Schedule of contributions for fiscal year ending June 30:	• Actuarially determined contributions	\$580,358,818	\$553,805,478
	• Actual contributions	455,058,559	389,535,212
	• Contribution deficiency / (excess)	125,300,259	164,270,266
Demographic data for plan year ending June 30:	• Number of retired members and beneficiaries	6,937	6,803
	• Number of vested terminated members	13	13
	• Number of active members	6,688	6,875
	• Number of non-contributing active members	426	364
Key assumptions as of June 30:	• Investment rate of return	7.00%	7.00%
	• Inflation rate	2.75%	2.75%

Measurement Date		Local Employers	
		June 30, 2021	June 30, 2020
Disclosure elements for fiscal year ending June 30:	• Service cost	\$768,655,563	\$779,629,640
	• Total Pension Liability	41,189,084,817	40,919,980,447
	• Plan Fiduciary Net Position	31,824,235,230	25,993,331,725
	• Net Pension Liability	9,364,849,587	14,926,648,722
	• Pension expense	-742,955,825	949,220,570
Schedule of contributions for fiscal year ending June 30:	• Actuarially determined contributions	\$1,145,293,322	\$1,038,351,129
	• Actual contributions	1,145,293,322	1,038,351,129
	• Contribution deficiency / (excess)	0	0
Demographic data for plan year ending June 30:	• Number of retired members and beneficiaries	39,634	38,734
	• Number of vested terminated members	54	52

Section 1: Actuarial Valuation Summary

Measurement Date		Local Employers	
		June 30, 2021	June 30, 2020
	• Number of active members	34,150	34,164
	• Number of non-contributing active members	1,168	1,117
Key assumptions as of June 30:	• Investment rate of return	7.00%	7.00%
	• Inflation rate	2.75%	2.75%

Measurement Date		Total	
		June 30, 2021	June 30, 2020
Disclosure elements for fiscal year ending June 30:	• Service cost	\$883,593,358	\$890,425,657
	• Total Pension Liability	46,972,674,839	46,637,786,518
	• Plan Fiduciary Net Position	33,543,253,487	27,412,127,845
	• Net Pension Liability	13,429,421,352	19,225,658,673
	• Pension expense	-609,359,450	1,181,828,310
Schedule of contributions for fiscal year ending June 30:	• Actuarially determined contributions	\$1,725,652,140	\$1,592,156,607
	• Actual contributions	1,600,351,881	1,427,886,341
	• Contribution deficiency / (excess)	125,300,259	164,270,266
Demographic data for plan year ending June 30:	• Number of retired members and beneficiaries	46,571	45,537
	• Number of vested terminated members	67	65
	• Number of active members	40,838	41,039
	• Number of non-contributing active members	1,594	1,481
Key assumptions as of June 30:	• Investment rate of return	7.00%	7.00%
	• Inflation rate	2.75%	2.75%

Section 1: Actuarial Valuation Summary

Important information about actuarial valuations

In order to prepare a valuation, Segal relies on a number of input items. These include:

Plan of benefits	Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan description in this report (as well as the plan summary included in our funding valuation report) to confirm that Segal has correctly interpreted the plan of benefits.
Participant data	An actuarial valuation for a plan is based on data provided to the actuary by the DPB. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
Assets	The valuation is based on the market value of assets as of the valuation date, as provided by the DPB.
Actuarial assumptions	In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The forecasted benefits are then discounted to a present value, typically based on an estimate of the rate of return that will be achieved on the plan's assets or, if there are no assets, a rate of return based on a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another rating scale). There is a reasonable range for each assumption used in the projection and the results may vary materially based on which assumptions are selected. It is important for any user of an actuarial valuation to understand this concept. Actuarial assumptions are periodically reviewed to ensure that future valuations reflect emerging plan experience. While future changes in actuarial assumptions may have a significant impact on the reported results, that does not mean that the previous assumptions were unreasonable.
Models	<p>Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are presented to meet regulatory, legislative and client requirements. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility and user control. The client team programs the assumptions and the plan provisions, validates the models, and reviews test lives and results, under the supervision of the responsible actuary.</p> <p>The blended discount rate used for calculating total pension liability is based on a model developed by our Actuarial Technology and Systems unit, comprised of both actuaries and programmers. The model allows the client team, under the supervision of the responsible actuary, control over the entry of future expected contribution income, benefit payments and administrative expenses. The projection of fiduciary net position and the discounting of benefits is part of the model.</p>

Section 1: Actuarial Valuation Summary

The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

The valuation is prepared at the request of the Board to assist the sponsors of the System in preparing items related to the pension plan in their financial reports. Segal is not responsible for the use or misuse of its report, particularly by any other party.

An actuarial valuation is a measurement of the plan's assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

If the Board is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.

Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The Board should look to their other advisors for expertise in these areas.

As Segal has no discretionary authority with respect to the management or assets of the PFRS, it is not a fiduciary in its capacity as actuaries and consultants with respect to the PFRS.

GASB 67/68 Information

General information about the pension plan

Plan Description

Plan membership. At June 30, 2020, pension plan membership consisted of the following:

	State	Local Employers	Total
Retired members or beneficiaries currently receiving benefits	6,937	39,634	46,571
Vested terminated members entitled to but not yet receiving benefits	13	54	67
Active members	6,688	34,150	40,838
Non-contributing active members	426	1,168	1,594
Total	14,064	75,006	89,070

Benefits provided. The GASB 67 results as of June 30, 2021 are based on the same plan of benefits as disclosed in the Cheiron actuarial valuation as of July 1, 2020, updated to reflect the following plan amendments:

- The early retirement window as defined in State Assembly bill S1017 granting enhanced benefits to certain participants who retire by December 31, 2022.
- The extended eligibility of the accidental death benefit under draft legislation provided in Assembly Bill 1660 amending and supplementing P.L. 1954 c. 84 and P.L. 1944 c. 255 of the Police and Firemen's Retirement System of New Jersey, payable to beneficiaries of retirants who die after enactment of the legislation.

Section 2: GASB 67/68 Information

Net pension liability

Measurement Date	State	
	June 30, 2021	June 30, 2020
Total Pension Liability	\$5,783,590,022	\$5,717,806,071
Plan Fiduciary Net Position	1,719,018,257	1,418,796,120
Net Pension Liability	4,064,571,765	4,299,009,951
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	29.72%	24.81%

Measurement Date	Local Employers	
	June 30, 2021	June 30, 2020
Total Pension Liability	\$41,189,084,817	\$40,919,980,447
Plan Fiduciary Net Position	31,824,235,230	25,993,331,725
Net Pension Liability	9,364,849,587	14,926,648,722
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	77.26%	63.52%

Measurement Date	Total	
	June 30, 2021	June 30, 2020
Total Pension Liability	\$46,972,674,839	\$46,637,786,518
Plan Fiduciary Net Position	33,543,253,487	27,412,127,845
Net Pension Liability	13,429,421,352	19,225,658,673
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	71.41%	58.78%

The Net Pension Liability (NPL) for the plan was measured as of June 30, 2021 and 2020. Plan Fiduciary Net Position (plan assets) was valued as of the measurement dates and the Total Pension Liability (TPL) was determined from actuarial valuations as of June 30, 2020 and 2019, respectively.

Section 2: GASB 67/68 Information

Actuarial assumptions. The TPL as of June 30, 2021 and 2020, that were measured by actuarial valuations as of June 30, 2020 and 2019, respectively, used the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.75%
Salary increases	Varies by service
Investment rate of return	7.00%, net of pension plan investment expense, including inflation
Other assumptions	See Section 3 for a complete description of all actuarial assumptions. These assumptions were developed by the prior actuary in the analysis of actuarial experience study for the period July 1, 2013 through June 30, 2018.

Detailed information regarding all actuarial assumptions can be found in Section 3, Exhibit I.

Section 2: GASB 67/68 Information

Determination of discount rate and investment rates of return

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocation (approved by the Board) and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return ¹
Domestic equity	30%	6.65%
Foreign equity	12%	7.40%
Emerging market equity	8%	9.30%
Private equity	10%	10.65%
Fixed income	30%	0.50%
Real estate	7%	3.75%
Infrastructure	3%	5.85%
Total	100.00%	

Discount rate. The discount rates used to measure the Total Pension Liability (TPL) was 7.00% as of June 30, 2021 and June 30, 2020. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that Local employer contributions and State contributions will be made at the actuarially determined contribution amounts. The assumption that the State is paying 100% of the actuarially determined contribution is based on the State making the full contribution for the fiscal year ending June 30, 2022 contribution. For this purpose, only Local employer and State contributions that are intended to fund benefits for current plan members and their beneficiaries are included. Projected Local employer and State contributions that are intended to fund the service costs for future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the Plan Fiduciary Net Position (FNP) was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term

Section 2: GASB 67/68 Information

expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the TPL as of both June 30, 2021 and June 30, 2020.

Discount rate sensitivity

Sensitivity of the Net Pension Liability to changes in the discount rate. The following presents the Net Pension Liability (NPL) of the PFRS as of June 30, 2021, calculated using the discount rate of 7.00%, as well as what the PFRS's NPL would be if it were calculated using a discount rate that is 1-percentage-point lower (6.00%) or 1-percentage-point higher (8.00%) than the current rate.

Net Pension Liability	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
State	\$4,757,269,091	\$4,064,571,765	\$3,487,891,690
Local Employers	\$14,220,231,140	\$9,364,849,587	\$5,323,268,782
Total	\$18,977,500,231	\$13,429,421,352	\$8,811,160,472

Section 2: GASB 67/68 Information

Schedule of changes in Net Pension Liability – Last two fiscal years

Measurement Date	State	
	June 30, 2021	June 30, 2020
Total Pension Liability		
Service cost	\$114,221,562	\$110,796,017
Interest	395,779,623	385,255,412
Change of benefit terms	20,671,563	0
Differences between expected and actual experience	-115,283,258	-6,336,996
Changes of assumptions	6,460,485	-110,173,087
Benefit payments	-356,471,910	-345,035,730
Transfers from other systems – employer	<u>-116,382</u>	<u>-17,881</u>
Transfers from other systems – member	522,268	547,759
Net change in Total Pension Liability	\$65,783,951	\$35,035,494
Total Pension Liability – beginning	<u>5,717,806,071</u>	<u>5,682,770,577</u>
Total Pension Liability – ending	<u>\$5,783,590,022</u>	<u>\$5,717,806,071</u>
Plan Fiduciary Net Position		
Contributions – employer (appropriations)	\$263,557,056	\$223,147,251
Contributions – employer (lottery)	13,260,000	12,180,000
Employer contribution – delayed enrollments	36,986	52,058
Employer contribution – delayed appropriations	0	-73,561
Employer contribution – retroactive	0	0
Employer contribution - additional	0	0
Contributions – member	51,571,527	54,985,258
Net investment income	330,564,509	-6,135,015
Benefit payments, including transfers from other systems	-356,066,024	-344,505,852
Administrative expense	-2,701,917	-1,936,833
Net change in Plan Fiduciary Net Position	\$300,222,137	-\$62,286,694
Plan Fiduciary Net Position – beginning	<u>1,418,796,120</u>	<u>1,481,082,814</u>
Plan Fiduciary Net Position – ending	\$1,719,018,257	\$1,418,796,120
Net Pension Liability – ending	<u>\$4,064,571,765</u>	<u>\$4,299,009,951</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	29.72%	24.81%
Covered payroll	\$539,845,476	\$487,025,462
Plan Net Pension Liability as percentage of covered payroll	752.91%	882.71%

Section 2: GASB 67/68 Information

Measurement Date	Local Employers	
	June 30, 2021	June 30, 2020
Total Pension Liability		
Service cost	\$764,496,999	\$779,629,640
Interest	2,830,623,074	2,746,268,128
Change of benefit terms	126,762,778	0
Differences between expected and actual experience	-1,005,184,014	73,846,139
Changes of assumptions	46,415,457	-782,586,271
Benefit payments	-2,495,912,852	-2,380,529,988
Transfers from other systems – employer	<u>154,443</u>	<u>80,266</u>
Transfers from other systems – member	1,748,485	1,740,784
Net change in Total Pension Liability	\$269,104,370	\$438,448,698
Total Pension Liability – beginning	<u>40,919,980,447</u>	<u>40,481,531,749</u>
Total Pension Liability – ending	<u>\$41,189,084,817</u>	<u>\$40,919,980,447</u>
Plan Fiduciary Net Position		
Contributions – employer (appropriations)	\$1,165,754,089	\$1,117,170,854
Contributions – employer (paid by State on behalf of locals)	178,577,000	154,309,000
Employer contribution – delayed enrollments	149,307	113,646
Employer contribution – delayed appropriations	966,820	677,397
Employer contribution – retroactive	4,652,327	5,230,213
Employer contribution - additional	355,901	997,622
Contributions – member	367,886,668	361,447,921
Net investment income	6,622,162,496	431,678,371
Benefit payments, including transfers from other systems	-2,494,009,924	-2,378,708,938
Administrative expense	-15,591,179	-10,922,492
Net change in Plan Fiduciary Net Position	\$5,830,903,505	-\$318,006,406
Plan Fiduciary Net Position – beginning	<u>25,993,331,725</u>	<u>26,311,338,131</u>
Plan Fiduciary Net Position – ending	\$31,824,235,230	\$25,993,331,725
Net Pension Liability – ending	<u>\$9,364,849,587</u>	<u>\$14,926,648,722</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	77.26%	63.52%
Covered payroll	\$3,603,060,315	\$3,450,951,747
Plan Net Pension Liability as percentage of covered payroll	259.91%	432.54%

Section 2: GASB 67/68 Information

Measurement Date	Total	
	June 30, 2021	June 30, 2020
Total Pension Liability		
Service cost	\$878,718,561	\$890,425,657
Interest	3,226,402,697	3,131,523,540
Change of benefit terms	147,434,341	0
Differences between expected and actual experience	-1,120,467,272	67,509,143
Changes of assumptions	52,875,942	-892,759,358
Benefit payments	-2,852,384,762	-2,725,565,718
Transfers from other systems – employer	<u>38,061</u>	<u>62,385</u>
Transfers from other systems – member	2,270,753	2,288,543
Net change in Total Pension Liability	\$334,888,321	\$473,484,192
Total Pension Liability – beginning	<u>46,637,786,518</u>	<u>46,164,302,326</u>
Total Pension Liability – ending	<u>\$46,972,674,839</u>	<u>\$46,637,786,518</u>
Plan Fiduciary Net Position		
Contributions – employer (appropriations)	\$1,429,311,145	\$1,340,318,105
Contributions – employer (lottery)	13,260,000	12,180,000
Contributions – employer (paid by State on behalf of locals)	178,577,000	154,309,000
Employer contribution – delayed enrollments	186,293	165,704
Employer contribution – delayed appropriations	966,820	603,836
Employer contribution – retroactive	4,652,327	5,230,213
Employer contribution - additional	355,901	997,622
Contributions – member	419,458,195	416,433,179
Net investment income	6,952,727,005	425,543,356
Benefit payments, including transfers from other systems	-2,850,075,948	-2,723,214,790
Administrative expense	-18,293,096	-12,859,325
Net change in Plan Fiduciary Net Position	\$6,131,125,642	-\$380,293,100
Plan Fiduciary Net Position – beginning	<u>27,412,127,845</u>	<u>27,792,420,945</u>
Plan Fiduciary Net Position – ending	<u>\$33,543,253,487</u>	<u>\$27,412,127,845</u>
Net Pension Liability – ending	<u>\$13,429,421,352</u>	<u>\$19,225,658,673</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	71.41%	58.78%
Covered payroll	\$4,142,905,791	\$3,937,977,209
Plan Net Pension Liability as percentage of covered payroll	324.15%	488.21%

Section 2: GASB 67/68 Information

Notes to Schedule:

Benefit changes: The following plan amendments are reflected in the Net Pension Liabilities as of June 30, 2021 shown above:

- The early retirement window as defined in State Assembly bill S1017 granting enhanced benefits to certain participants who retire by December 31, 2022.
- The extended eligibility of the accidental death benefit under draft legislation provided in Assembly Bill 1660 amending and supplementing P.L. 1954 c. 84 and P.L. 1944 c. 255 of the Police and Firemen's Retirement System of New Jersey, payable to beneficiaries of retirants who die after enactment of the legislation.

Section 2: GASB 67/68 Information

Deferred outflows and inflows of resources

Measurement Date	State	
	June 30, 2021	June 30, 2020
Deferred Outflows of Resources		
Changes of assumptions or other inputs	\$5,413,405	\$3,144,071
Net difference between projected and actual earnings on pension plan investments	0	104,174,751
Difference between expected and actual experience in the Total Pension Liability	<u>0</u>	<u>0</u>
Total Deferred Outflows of Resources	\$5,413,405	\$107,318,822
Deferred Inflows of Resources		
Changes of assumptions or other inputs	\$322,442,800	\$510,391,759
Net difference between projected and actual earnings on pension plan investments	105,675,257	0
Difference between expected and actual experience in the Total Pension Liability	<u>146,487,860</u>	<u>74,939,056</u>
Total Deferred Inflows of Resources	\$574,605,917	\$585,330,815
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:		
Reporting Date under GASB 68 Year Ended June 30:		
2021	N/A	-\$187,791,439
2022	-\$208,805,427	-144,221,377
2023	-144,879,156	-80,295,106
2024	-112,515,398	-47,931,348
2025	-82,356,773	-17,772,723
2026	-17,637,403	0
Thereafter	-2,998,355	0

Section 2: GASB 67/68 Information

Measurement Date	Local Employers	
	June 30, 2021	June 30, 2020
Deferred Outflows of Resources		
Changes of assumptions or other inputs	\$38,892,692	\$32,516,441
Net difference between projected and actual earnings on pension plan investments	0	757,637,371
Difference between expected and actual experience in the Total Pension Liability	83,388,564	130,268,813
Total Deferred Outflows of Resources	\$122,281,256	\$920,422,625
Deferred Inflows of Resources		
Changes of assumptions or other inputs	\$2,190,519,410	\$3,464,128,297
Net difference between projected and actual earnings on pension plan investments	3,114,667,493	0
Difference between expected and actual experience in the Total Pension Liability	875,560,941	46,373,050
Total Deferred Inflows of Resources	\$6,180,747,844	\$3,510,501,347
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:		
Reporting Date under GASB 68 Year Ended June 30:		
2021	N/A	-\$1,208,700,565
2022	-\$1,939,546,350	-815,726,399
2023	-1,455,907,848	-332,087,897
2024	-1,249,270,910	-125,450,959
2025	-1,231,932,853	-108,112,902
2026	-155,391,986	0
Thereafter	-26,416,641	0

Section 2: GASB 67/68 Information

Measurement Date	Total	
	June 30, 2021	June 30, 2020
Deferred Outflows of Resources		
Changes of assumptions or other inputs	\$44,306,097	\$35,660,512
Net difference between projected and actual earnings on pension plan investments	0	861,812,122
Difference between expected and actual experience in the Total Pension Liability	68,451,114	130,268,813
Total Deferred Outflows of Resources	\$112,757,211	\$1,027,741,447
Deferred Inflows of Resources		
Changes of assumptions or other inputs	\$2,512,962,210	\$3,974,520,056
Net difference between projected and actual earnings on pension plan investments	3,220,342,750	0
Difference between expected and actual experience in the Total Pension Liability	1,007,111,351	121,312,106
Total Deferred Inflows of Resources	\$6,740,416,311	\$4,095,832,162
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:		
Reporting Date under GASB 68 Year Ended June 30:		
2021	N/A	-\$1,396,492,004
2022	-\$2,148,351,777	-959,947,776
2023	-1,600,787,004	-412,383,003
2024	-1,361,786,308	-173,382,307
2025	-1,314,289,626	-125,885,625
2026	-173,029,389	0
Thereafter	-29,414,996	0

Section 2: GASB 67/68 Information

There are changes in the total Net Pension Liability (NPL) during the measurement period ended June 30, 2021. The net effect of the change on the NPL and deferred outflows of resources and deferred inflows of resources is recognized over the average of the expected remaining service lives of all employees that are provided with pensions through the PFRS which is 6.17 years determined as of June 30, 2020 (the beginning of the measurement period ending June 30, 2021). This is described in Paragraph 33a. of GASB 67.

The average of the expected service lives of all employees is determined by:

- Calculating each active employee's expected remaining service life as the present value of \$1 per year of future service at zero percent interest.
- Setting the remaining service life to zero for each nonactive or retired member.
- Dividing the sum of the above amounts by the total number of active employee, nonactive and retired members.

Section 2: GASB 67/68 Information

Schedule of recognition of change in total Net Pension Liability

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Differences between Expected and Actual Experience on Total Pension Liability

State									
Reporting Date for Employer under GASB 68 Year Ended June 30	Differences between Expected and Actual Experience	Initial Recognition Period (Years)	Recognition Year						
			2021	2022	2023	2024	2025	2026	Thereafter
2016	-\$18,752,806	5.58	-\$1,949,219	\$0	\$0	\$0	\$0	\$0	\$0
2017	-32,607,990	5.59	-5,833,272	-3,441,633	0	0	0	0	0
2018	-24,201,658	5.73	-4,223,675	-4,223,675	-3,083,280	0	0	0	0
2019	-70,860,849	5.92	-11,969,738	-11,969,738	-11,969,738	-11,012,159	0	0	0
2020	-6,336,996	5.90	-1,074,067	-1,074,067	-1,074,067	-1,074,067	-966,661	0	0
2021	-115,283,258	6.17	<u>-18,684,483</u>	<u>-18,684,483</u>	<u>-18,684,483</u>	<u>-18,684,483</u>	<u>-18,684,483</u>	<u>-18,684,483</u>	<u>-3,176,360</u>
Net increase (decrease) in pension expense			-\$43,734,454	-\$39,393,596	-\$34,811,568	-\$30,770,709	-\$19,651,144	-\$18,684,483	-\$3,176,360

Local Employers									
Reporting Date for Employer under GASB 68 Year Ended June 30	Differences between Expected and Actual Experience	Initial Recognition Period (Years)	Recognition Year						
			2021	2022	2023	2024	2025	2026	Thereafter
2016	-\$16,163,826	5.58	-\$1,680,113	\$0	\$0	\$0	\$0	\$0	\$0
2017	121,972,934	5.59	21,819,845	12,873,708	0	0	0	0	0
2018	71,877,745	5.73	12,544,109	12,544,109	9,157,198	0	0	0	0
2019	-67,495,453	5.92	-11,401,259	-11,401,259	-11,401,259	-10,489,160	0	0	0
2020	73,846,139	5.90	12,516,295	12,516,295	12,516,295	12,516,295	11,264,664	0	0
2021	-1,005,184,014	6.17	<u>-162,914,751</u>	<u>-162,914,751</u>	<u>-162,914,751</u>	<u>-162,914,751</u>	<u>-162,914,751</u>	<u>-162,914,751</u>	<u>-27,695,508</u>
Net increase (decrease) in pension expense			-\$129,115,874	-\$136,381,898	-\$152,642,517	-\$160,887,616	-\$151,650,087	-\$162,914,751	-\$27,695,508

Section 2: GASB 67/68 Information

Reporting Date for Employer under GASB 68 Year Ended June 30	Differences between Expected and Actual Experience	Initial Recognition Period (Years)	Total							
			Recognition Year							
			2021	2022	2023	2024	2025	2026	Thereafter	
2016	-\$34,916,632	5.58	-\$3,629,332	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2017	89,364,943	5.59	15,986,573	9,432,075	0	0	0	0	0	0
2018	47,676,087	5.73	8,320,434	8,320,434	6,073,918	0	0	0	0	0
2019	-138,356,302	5.92	-23,370,997	-23,370,997	-23,370,997	-21,501,319	0	0	0	0
2020	67,509,143	5.90	11,442,228	11,442,228	11,442,228	11,442,228	10,298,003	0	0	0
2021	-1,120,467,272	6.17	<u>-181,599,234</u>	<u>-30,871,868</u>						
Net increase (decrease) in pension expense			-\$172,850,328	-\$175,775,494	-\$187,454,085	-\$191,658,325	-\$171,301,231	-\$181,599,234	-\$181,599,234	-\$30,871,868

Section 2: GASB 67/68 Information

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Assumption Changes

State									
Reporting Date for Employer under GASB 68 Year Ended June 30	Assumption Changes	Initial Recognition Period (Years)	Recognition Year						
			2021	2022	2023	2024	2025	2026	Thereafter
2016	\$30,248,142	5.58	\$3,144,071	\$0	\$0	\$0	\$0	\$0	\$0
2017	-455,421,302	5.59	-81,470,716	-48,067,725	0	0	0	0	0
2018	-264,067,892	5.73	-46,085,147	-46,085,147	-33,642,156	0	0	0	0
2019	-246,980,571	5.92	-41,719,691	-41,719,691	-41,719,691	-38,382,113	0	0	0
2020	-110,173,087	5.90	-18,673,405	-18,673,405	-18,673,405	-18,673,405	-16,806,062	0	0
2021	6,460,485	6.17	<u>1,047,080</u>	<u>1,047,080</u>	<u>1,047,080</u>	<u>1,047,080</u>	<u>1,047,080</u>	<u>1,047,080</u>	<u>178,005</u>
Net increase (decrease) in pension expense			-\$183,757,808	-\$153,498,888	-\$92,988,172	-\$56,008,438	-\$15,758,982	\$1,047,080	\$178,005

Local Employers									
Reporting Date for Employer under GASB 68 Year Ended June 30	Assumption Changes	Initial Recognition Period (Years)	Recognition Year						
			2021	2022	2023	2024	2025	2026	Thereafter
2016	\$312,830,597	5.58	\$32,516,441	\$0	\$0	\$0	\$0	\$0	\$0
2017	-3,079,132,668	5.59	-550,828,742	-324,988,960	0	0	0	0	0
2018	-1,805,559,030	5.73	-315,106,288	-315,106,288	-230,027,593	0	0	0	0
2019	-1,628,190,127	5.92	-275,032,116	-275,032,116	-275,032,116	-253,029,548	0	0	0
2020	-782,586,271	5.90	-132,641,741	-132,641,741	-132,641,741	-132,641,741	-119,377,566	0	0
2021	46,415,457	6.17	<u>7,522,765</u>	<u>7,522,765</u>	<u>7,522,765</u>	<u>7,522,765</u>	<u>7,522,765</u>	<u>7,522,765</u>	<u>1,278,867</u>
Net increase (decrease) in pension expense			-\$1,233,569,681	-\$1,040,246,340	-\$630,178,685	-\$378,148,524	-\$111,854,801	\$7,522,765	\$1,278,867

Section 2: GASB 67/68 Information

Reporting Date for Employer under GASB 68 Year Ended June 30	Assumption Changes	Initial Recognition Period (Years)	Total						
			Recognition Year						
			2021	2022	2023	2024	2025	2026	Thereafter
2016	\$343,078,739	5.58	\$35,660,512	\$0	\$0	\$0	\$0	\$0	\$0
2017	-3,534,553,970	5.59	-632,299,458	-373,056,685	0	0	0	0	0
2018	-2,069,626,923	5.73	-361,191,435	-361,191,435	-263,669,749	0	0	0	0
2019	-1,875,170,697	5.92	-316,751,807	-316,751,807	-316,751,807	-291,411,661	0	0	0
2020	-892,759,358	5.90	-151,315,146	-151,315,146	-151,315,146	-151,315,146	-136,183,628	0	0
2021	52,875,942	6.17	<u>8,569,845</u>	<u>8,569,845</u>	<u>8,569,845</u>	<u>8,569,845</u>	<u>8,569,845</u>	<u>8,569,845</u>	<u>1,456,872</u>
Net increase (decrease) in pension expense			-\$1,417,327,489	-\$1,193,745,228	-\$723,166,857	-\$434,156,962	-\$127,613,783	\$8,569,845	\$1,456,872

Section 2: GASB 67/68 Information

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Differences between Projected and Actual Earnings on Pension Plan Investments

State									
Reporting Date for Employer under GASB 68 Year Ended June 30	Differences between Projected and Actual Earnings	Initial Recognition Period (Years)	Recognition Year						
			2021	2022	2023	2024	2025	2026	Thereafter
2016	\$165,898,165	5.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2017	-44,851,415	5.00	-8,970,283	0	0	0	0	0	0
2018	5,832,360	5.00	1,166,472	1,166,473	0	0	0	0	0
2019	43,284,165	5.00	8,656,833	8,656,833	8,656,833	0	0	0	0
2020	106,051,988	5.00	21,210,398	21,210,398	21,210,398	21,210,396	0	0	0
2021	-234,733,236	5.00	<u>-46,946,648</u>	<u>-46,946,647</u>	<u>-46,946,647</u>	<u>-46,946,647</u>	<u>-46,946,647</u>	<u>0</u>	<u>0</u>
Net increase (decrease) in pension expense			-\$24,883,228	-\$15,912,943	-\$17,079,416	-\$25,736,251	-\$46,946,647	\$0	\$0

Local Employers									
Reporting Date for Employer under GASB 68 Year Ended June 30	Differences between Projected and Actual Earnings	Initial Recognition Period (Years)	Recognition Year						
			2021	2022	2023	2024	2025	2026	Thereafter
2016	\$1,844,585,650	5.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2017	-1,034,584,265	5.00	-206,916,851	0	0	0	0	0	0
2018	-449,157,320	5.00	-89,831,464	-89,831,466	0	0	0	0	0
2019	185,740,615	5.00	37,148,123	37,148,123	37,148,123	0	0	0	0
2020	1,290,965,979	5.00	258,193,196	258,193,196	258,193,196	258,193,195	0	0	0
2021	-4,842,139,825	5.00	<u>-968,427,965</u>	<u>-968,427,965</u>	<u>-968,427,965</u>	<u>-968,427,965</u>	<u>-968,427,965</u>	<u>0</u>	<u>0</u>
Net increase (decrease) in pension expense			-\$969,834,961	-\$762,918,112	-\$673,086,646	-\$710,234,770	-\$968,427,965	\$0	\$0

Section 2: GASB 67/68 Information

Reporting Date for Employer under GASB 68 Year Ended June 30	Differences between Projected and Actual Earnings	Initial Recognition Period (Years)	Total						
			Recognition Year						
			2021	2022	2023	2024	2025	2026	Thereafter
2016	\$2,010,483,815	5.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2017	-1,079,435,680	5.00	-215,887,134	0	0	0	0	0	0
2018	-443,324,960	5.00	-88,664,992	-88,664,993	0	0	0	0	0
2019	229,024,780	5.00	45,804,956	45,804,956	45,804,956	0	0	0	0
2020	1,397,017,967	5.00	279,403,594	279,403,594	279,403,594	279,403,591	0	0	0
2021	-5,076,873,062	5.00	<u>-1,015,374,614</u>	<u>-1,015,374,612</u>	<u>-1,015,374,612</u>	<u>-1,015,374,612</u>	<u>-1,015,374,612</u>	<u>0</u>	<u>0</u>
Net increase (decrease) in pension expense			-\$994,718,190	-\$778,831,055	-\$690,166,062	-\$735,971,021	-\$1,015,374,612	\$0	\$0

Section 2: GASB 67/68 Information

Total Increase (Decrease) in Pension Expense

Reporting Date for Employer under GASB 68 Year Ended June 30	Total Increase (Decrease) in Pension Expense	State							
		Recognition Year							
		2021	2022	2023	2024	2025	2026	Thereafter	
2016	\$177,393,501	\$1,194,852	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2017	-532,880,708	-96,274,271	-51,509,358	0	0	0	0	0	0
2018	-282,437,190	-49,142,350	-49,142,349	-36,725,436	0	0	0	0	0
2019	-274,557,255	-45,032,596	-45,032,596	-45,032,596	-49,394,272	0	0	0	0
2020	-10,458,095	1,462,926	1,462,926	1,462,926	1,462,924	-17,772,723	0	0	
2021	-343,556,009	<u>-64,584,051</u>	<u>-64,584,050</u>	<u>-64,584,050</u>	<u>-64,584,050</u>	<u>-64,584,050</u>	<u>-17,637,403</u>	<u>-2,998,355</u>	
Net increase (decrease) in pension expense		-\$252,375,490	-\$208,805,427	-\$144,879,156	-\$112,515,398	-\$82,356,773	-\$17,637,403	-\$2,998,355	

Reporting Date for Employer under GASB 68 Year Ended June 30	Total Increase (Decrease) in Pension Expense	Local Employers							
		Recognition Year							
		2021	2022	2023	2024	2025	2026	Thereafter	
2016	\$2,141,252,421	\$30,836,328	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2017	-3,991,743,999	-735,925,748	-312,115,252	0	0	0	0	0	0
2018	-2,182,838,606	-392,393,643	-392,393,645	-220,870,395	0	0	0	0	0
2019	-1,509,944,965	-249,285,252	-249,285,252	-249,285,252	-263,518,708	0	0	0	0
2020	582,225,847	138,067,750	138,067,750	138,067,750	138,067,749	-108,112,902	0	0	
2021	-5,800,908,382	<u>-1,123,819,951</u>	<u>-1,123,819,951</u>	<u>-1,123,819,951</u>	<u>-1,123,819,951</u>	<u>-1,123,819,951</u>	<u>-155,391,986</u>	<u>-26,416,641</u>	
Net increase (decrease) in pension expense		-\$2,332,520,516	-\$1,939,546,350	-\$1,455,907,848	-\$1,249,270,910	-\$1,231,932,853	-\$155,391,986	-\$26,416,641	

Section 2: GASB 67/68 Information

Reporting Date for Employer under GASB 68 Year Ended June 30	Total Increase (Decrease) in Pension Expense	Total						
		Recognition Year						
		2021	2022	2023	2024	2025	2026	Thereafter
2016	\$2,318,645,922	\$32,031,180	\$0	\$0	\$0	\$0	\$0	\$0
2017	-4,524,624,707	-832,200,019	-363,624,610	0	0	0	0	0
2018	-2,465,275,796	-441,535,993	-441,535,994	-257,595,831	0	0	0	0
2019	-1,784,502,220	-294,317,848	-294,317,848	-294,317,848	-312,912,980	0	0	0
2020	571,767,752	139,530,676	139,530,676	139,530,676	139,530,673	-125,885,625	0	0
2021	-6,144,464,392	<u>-1,188,404,003</u>	<u>-1,188,404,001</u>	<u>-1,188,404,001</u>	<u>-1,188,404,001</u>	<u>-1,188,404,001</u>	<u>-173,029,389</u>	<u>-29,414,996</u>
Net increase (decrease) in pension expense		-\$2,584,896,007	-\$2,148,351,777	-\$1,600,787,004	-\$1,361,786,308	-\$1,314,289,626	-\$173,029,389	-\$29,414,996

Section 2: GASB 67/68 Information

Pension expense

Measurement Date	State	
	June 30, 2021	June 30, 2020
Components of Pension Expense		
Service cost	\$114,221,562	\$110,796,017
Interest on the Total Pension Liability	395,779,623	385,255,412
Current-period benefit changes	20,671,563	- -
Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	-18,684,483	-1,074,067
Expensed portion of current-period changes of assumptions or other inputs	1,047,080	-18,673,405
Member contributions	-51,571,527	-54,985,258
Projected earnings on plan investments	-95,831,273	-99,916,973
Expensed portion of current-period differences between actual and projected earnings on plan investments	-46,946,648	21,210,398
Administrative expense	2,701,917	1,936,833
Recognition of beginning of year deferred outflows of resources as pension expense	34,177,774	95,500,738
Recognition of beginning of year deferred inflows of resources as pension expense	<u>-221,969,213</u>	<u>-207,441,955</u>
Pension Expense	\$133,596,375	\$232,607,740

Section 2: GASB 67/68 Information

Measurement Date	Local Employers	
	June 30, 2021	June 30, 2020
Components of Pension Expense		
Service cost	\$764,496,999	\$779,629,640
Interest on the Total Pension Liability	2,830,623,074	2,746,268,128
Current-period benefit changes	126,762,778	- -
Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	-162,914,751	12,516,295
Expensed portion of current-period changes of assumptions or other inputs	7,522,765	-132,641,741
Member contributions	-367,886,668	-361,447,921
Projected earnings on plan investments	-1,780,022,671	-1,722,644,350
Expensed portion of current-period differences between actual and projected earnings on plan investments	-968,427,965	258,193,196
Administrative expense	15,591,179	10,922,492
Recognition of beginning of year deferred outflows of resources as pension expense	374,738,009	827,247,104
Recognition of beginning of year deferred inflows of resources as pension expense	<u>-1,583,438,574</u>	<u>-1,468,822,273</u>
Pension Expense	<u>-\$742,955,825</u>	<u>\$949,220,570</u>

Section 2: GASB 67/68 Information

Measurement Date	Total	
	June 30, 2021	June 30, 2020
Components of Pension Expense		
Service cost	\$878,718,561	\$890,425,657
Interest on the Total Pension Liability	3,226,402,697	3,131,523,540
Current-period benefit changes	147,434,341	- -
Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	-181,599,234	11,442,228
Expensed portion of current-period changes of assumptions or other inputs	8,569,845	-151,315,146
Member contributions	-419,458,195	-416,433,179
Projected earnings on plan investments	-1,875,853,943	-1,822,561,323
Expensed portion of current-period differences between actual and projected earnings on plan investments	-1,015,374,614	279,403,594
Administrative expense	18,293,096	12,859,325
Recognition of beginning of year deferred outflows of resources as pension expense	396,618,297	911,524,423
Recognition of beginning of year deferred inflows of resources as pension expense	<u>-1,793,110,301</u>	<u>-1,665,040,809</u>
Pension Expense	<u>-\$609,359,450</u>	<u>\$1,181,828,310</u>

Section 2: GASB 67/68 Information

Schedule of reconciliation of Net Pension Liability

Measurement Date	State	
	June 30, 2021	June 30, 2020
Beginning Net Pension Liability	\$4,299,009,951	\$4,201,687,763
Pension expense	133,596,375	232,607,740
State contributions	-276,854,042	-235,305,748
New net deferred inflows/outflows	-278,971,958	-11,921,021
Recognition of prior deferred inflows/outflows	<u>187,791,439</u>	<u>111,941,217</u>
Ending Net Pension Liability	\$4,064,571,765	\$4,299,009,951

Measurement Date	Local Employers	
	June 30, 2021	June 30, 2020
Beginning Net Pension Liability	\$14,926,648,722	\$14,170,193,618
Pension expense	-742,955,825	949,220,570
Local Employer contributions	-1,350,455,444	-1,278,498,732
New net deferred inflows/outflows	-4,677,088,431	444,158,097
Recognition of prior deferred inflows/outflows	<u>1,208,700,565</u>	<u>641,575,169</u>
Ending Net Pension Liability	\$9,364,849,587	\$14,926,648,722

Measurement Date	Total	
	June 30, 2021	June 30, 2020
Beginning Net Pension Liability	\$19,225,658,673	\$18,371,881,381
Pension expense	-609,359,450	1,181,828,310
State and Local Employer contributions	-1,627,309,486	-1,513,804,480
New net deferred inflows/outflows	-4,956,060,389	432,237,076
Recognition of prior deferred inflows/outflows	<u>1,396,492,004</u>	<u>753,516,386</u>
Ending Net Pension Liability	\$13,429,421,352	\$19,225,658,673

Section 2: GASB 67/68 Information

Schedule of contributions – Last ten fiscal years

Year Ended June 30	Actuarially Determined Contributions	Contributions in Relation to the Actuarially Determined Contributions	Total		
			Contribution Deficiency / (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
2012	\$1,238,132,402	\$826,461,015	\$411,671,387	\$3,649,416,297	22.65%
2013	1,279,412,723	895,743,379	383,669,344	3,656,218,573	24.50%
2014	1,150,719,106	880,431,697	270,287,409	3,678,910,266	23.93%
2015	1,217,110,411	941,950,336	275,160,075	3,682,677,356	25.58%
2016	1,311,849,713	986,654,840	325,194,873	3,695,509,355	26.70%
2017	1,335,659,737	1,046,327,392	289,332,345	3,726,807,562	28.08%
2018	1,424,767,509	1,236,395,284	188,372,225	3,803,348,329	32.51%
2019	1,545,236,051	1,332,222,254	213,013,797	3,870,718,707	34.42%
2020	1,592,156,607	1,427,886,341	164,270,266	3,937,977,209	36.26%
2021	1,725,652,140	1,600,351,881	125,300,259	4,016,767,909	39.84%

See accompanying notes to this schedule on next page.

Section 2: GASB 67/68 Information

Notes to Schedule:

Methods and assumptions used to establish the “actuarially determined contribution”:

Valuation date	Actuarially determined contribution rates are calculated as of June 30, two years prior to the end of the fiscal year in which contributions are reported
Actuarial cost method	Projected Unit Credit Actuarial Cost Method
Amortization method	Level dollar
Remaining amortization period	Open 30-year period
Asset valuation method	The market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between actual and expected returns on a market value basis and is recognized over a five-year period. The deferred return is further adjusted, if necessary, so that the actuarial value of assets will stay within 20% of the market value of assets.
Actuarial assumptions:	
Investment rate of return	7.00%, net of pension plan investment expense, including inflation.
Inflation rate	2.75%
Real across-the-board salary increase	3.25%
Other assumptions	Same as those used in the July 1, 2020 funding actuarial valuation.

Actuarial Assumptions and Methods and Appendices

Exhibit I: Actuarial Assumptions, Actuarial Cost Method and Models

Mortality Rates:

Employee: 105.6% of PubS-2010 amount-weighted mortality table for males and 102.5% of PubS-2010 amount-weighted mortality table for females, with MP-2021 mortality projection

Healthy Annuitant: 96.7% of PubS-2010 amount-weighted mortality table for males and 96.0% of PubS-2010 amount-weighted mortality table for females, with MP-2021 mortality projection

Disabled: 152.0% of PubS-2010 amount-weighted mortality table for males and 109.3% of PubS-2010 amount-weighted mortality table for females, with MP-2021 mortality projection

Section 3: Actuarial Assumptions and Methods and Appendices

Termination Rates before Retirement:

Age	Rate (%)			
	Mortality ¹		Ordinary Disability	Accidental Disability
	Male	Female		
20	0.04	0.02	0.03	0.02
30	0.06	0.04	0.11	0.10
40	0.08	0.06	0.35	0.40
50	0.12	0.09	0.24	0.28
60	0.29	0.18	0.50	0.16
70	0.75	0.41	–	–
80	2.58	1.72	–	–
90	2.67	1.77	–	–

¹ Mortality rates shown for current year (as of June 30, 2020).

Service	Withdrawal Rate ²	Service	Withdrawal Rate ²	Service	Withdrawal Rate ²
0	2.00	7	1.40	14	0.35
1	2.00	8	1.00	15	0.30
2	1.90	9	0.80	16	0.25
3	1.80	10	0.80	17	0.20
4	1.70	11	0.50	18	0.15
5	1.60	12	0.45	19	0.10
6	1.50	13	0.40	20+	0.00

² Withdrawal rates do not apply at or beyond early retirement age.

Retirement Rates:

For those with less than 25 years of service:

Age	Retirement Probability
40-49	2.00%
50-57	3.00

Section 3: Actuarial Assumptions and Methods and Appendices

58	3.50
59	4.25
60	5.00
61	8.00
62	10.00
63	12.00
64	14.00
65 and older	100.00

For those with 25 years of service:

Age	Retirement Probability
48 and younger	45.00%
49-54	50.00
55-59	55.00
60	60.00
61	65.00
62	70.00
63	75.00
64	90.00
65 and older	100.00

For those with 26 or more years of service:

Age	Retirement Probability
53 and younger	22.00%
54-59	24.00
60	26.00
61	28.00
62-63	30.00

Section 3: Actuarial Assumptions and Methods and Appendices

	64	40.00
	65 and older	100.00
Retirement Age for Inactive Vested Participants:	Age 55	
Unknown Data for Members:	Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.	
Percent Married:	90%	
Age of Spouse:	Females three years younger than males	
Net Investment Return:	7.00%, net of investment expenses	
Cost-of-Living Adjustments (COLAs) for Retirees:	No future COLAs are assumed. Previously granted COLAs are included in the data.	
Salary Increases:	Service	Rate (%)
	0-1	15.25
	2	12.75
	3	10.75
	4	10.25
	5	9.25
	6	8.25
	7	7.25
	8	5.75
	9	5.25
	10	4.75
	11	4.25
	12	3.75
	13+	3.25
Actuarial Cost Method:	Entry Age Actuarial Cost Method. Entry Age is the age at date of initiation or, if date is unknown, current age minus years of service. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by salary, with Normal Cost determined using the plan of benefits applicable to each participant.	

Section 3: Actuarial Assumptions and Methods and Appendices

Expected Remaining Service Lives:	<p>The average of the expected service lives of all employees is determined by:</p> <ul style="list-style-type: none">• Calculating each active employee's expected remaining service life as the present value of \$1 per year of future service at zero percent interest.• Setting the remaining service life to zero for each nonactive or retired member.• Dividing the sum of the above amounts by the total number of active employee, nonactive, and retired members.
Models	<p>Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are presented to meet regulatory, legislative and client requirements. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility and user control. The client team programs the assumptions and the plan provisions, validates the models, and reviews test lives and results, under the supervision of the responsible actuary.</p> <p>The blended discount rate used for calculating total pension liability is based on a model developed by our Actuarial Technology and Systems unit, comprised of both actuaries and programmers. The model allows the client team, under the supervision of the responsible actuary, control over the entry of future expected contribution income, benefit payments and administrative expenses. The projection of fiduciary net position and the discounting of benefits is part of the model.</p>

Section 3: Actuarial Assumptions and Methods and Appendices

Appendix A: Projection of Plan Fiduciary Net Position (\$in thousands) for use in the Calculation of Discount Rate as of June 30, 2021

Year Beginning June 30	Projected Beginning Plan Fiduciary Net Position (a)	Projected Employee Contributions (b)	Projected State Contributions (c)	Projected Local Employer Contributions (d)	Projected Lottery Contributions (e)	Projected Benefit Payments (f)	Projected Administrative Expenses (g)	Projected Investment Earnings (h)	Projected Ending Plan Fiduciary Net Position (f) = (a) + (b) + (c) + (d) + (e) – (f) – (g) + (h)
2021	\$33,543,253	\$382,195	\$581,116	\$1,127,145	\$13,161	\$2,896,612	\$18,796	\$2,215,905	\$34,947,368
2022	34,947,368	370,619	606,424	1,256,765	13,236	3,042,436	19,313	2,302,528	36,435,190
2023	36,435,190	363,452	608,352	1,550,223	13,388	3,171,975	19,844	2,386,522	38,165,307
2024	38,165,307	356,653	604,725	1,490,912	13,511	3,282,169	20,390	2,506,539	39,835,089
2025	39,835,089	349,626	602,666	1,419,316	13,622	3,386,967	20,951	2,623,199	41,435,600
2026	41,435,600	342,931	601,213	1,351,042	13,759	3,483,059	21,527	2,735,168	42,975,126
2027	42,975,126	335,406	599,529	1,287,912	13,879	3,574,332	22,119	2,842,730	44,458,132
2028	44,458,132	325,548	597,918	1,229,536	14,015	3,670,389	22,727	2,945,840	45,877,873
2029	45,877,873	314,837	591,556	1,173,351	14,281	3,769,530	23,352	3,044,147	47,223,163
2030	47,223,163	301,232	577,732	1,104,316	14,424	3,873,501	23,994	3,137,446	48,460,818
2031	48,460,818	286,927	563,299	1,038,485	14,569	3,982,133	24,654	3,222,838	49,580,150
2032	49,580,150	272,556	549,137	970,910	14,715	4,085,000	25,332	3,300,245	50,577,381
2033	50,577,381	257,961	534,762	906,137	14,862	4,182,391	26,029	3,369,136	51,451,820
2034	51,451,820	245,653	521,259	845,190	15,011	4,266,756	26,744	3,429,789	52,215,221
2035	52,215,221	235,703	506,345	787,877	15,161	4,329,613	27,480	3,483,275	52,886,490
2036	52,886,490	224,993	493,202	736,813	15,313	4,381,645	28,236	3,530,383	53,477,312
2037	53,477,312	211,814	481,621	692,401	15,466	4,437,019	29,012	3,571,347	53,983,932
2038	53,983,932	195,632	468,425	649,418	15,621	4,501,169	29,810	3,605,887	54,387,935
2039	54,387,935	177,519	454,017	603,424	15,777	4,572,778	30,630	3,633,040	54,668,303
2040	54,668,303	157,343	439,908	551,729	15,935	4,648,280	31,472	3,651,636	54,805,102

Section 3: Actuarial Assumptions and Methods and Appendices

2041	54,805,102	135,846	424,742	497,587	16,095	4,726,294	32,337	3,660,149	54,780,890
2042	54,780,890	112,824	410,198	439,721	16,256	4,805,411	33,227	3,657,510	54,578,761
2043	54,578,761	90,485	394,270	381,077	16,419	4,880,556	34,140	3,642,584	54,188,897
2044	54,188,897	68,083	376,625	320,863	16,583	4,947,614	35,079	3,614,833	53,603,191
2045	53,603,191	48,604	359,473	262,472	16,749	4,999,362	36,044	3,573,928	52,829,010
2046	52,829,010	35,964	342,917	205,165	16,916	5,016,574	37,035	3,521,236	51,897,598
2047	51,897,598	27,613	327,229	155,972	-	4,996,336	38,054	3,457,996	50,832,019
2048	50,832,019	20,950	316,341	122,957	-	4,953,776	39,100	3,386,073	49,685,462
2049	49,685,462	15,748	306,952	101,852	-	4,897,287	40,175	3,308,433	48,480,986
2050	48,480,986	11,635	298,356	86,332	-	4,829,388	41,280	3,226,902	47,233,543
2051	47,233,543	8,480	290,450	74,948	-	4,751,518	42,415	3,142,547	45,956,034
2052	45,956,034	6,081	283,131	66,803	-	4,665,223	43,582	3,056,252	44,659,496
2053	44,659,496	4,262	276,327	61,310	-	4,571,821	44,780	2,968,768	43,353,561
2054	43,353,561	2,920	269,896	57,982	-	4,472,313	46,012	2,880,751	42,046,785
2055	42,046,785	1,918	263,855	56,329	-	4,367,734	47,277	2,792,786	40,746,661
2056	40,746,661	1,221	258,129	56,031	-	4,258,653	48,577	2,705,390	39,460,202
2057	39,460,202	738	252,659	56,782	-	4,145,775	49,913	2,619,042	38,193,734
2058	38,193,734	423	247,442	58,382	-	4,029,628	51,286	2,534,174	36,953,241
2059	36,953,241	217	242,431	60,647	-	3,910,792	52,696	2,451,192	35,744,241
2060	35,744,241	95	237,617	63,429	-	3,789,706	54,145	2,370,473	34,572,003
2061	34,572,003	42	232,968	66,594	-	3,666,705	55,634	2,292,379	33,441,647
2062	33,441,647	14	228,483	70,051	-	3,542,304	57,164	2,217,254	32,357,981
2063	32,357,981	4	224,142	73,753	-	3,416,845	58,736	2,145,425	31,325,723
2064	31,325,723	1	219,938	77,612	-	3,290,664	60,351	2,077,214	30,349,473
2065	30,349,473	-	148,992	81,595	-	3,164,062	62,011	2,011,178	29,365,165
2066	29,365,165	-	-	-	-	3,037,276	63,716	1,947,027	28,211,199
2067	28,211,199	-	-	-	-	2,910,528	65,469	1,870,624	27,105,826
2068	27,105,826	-	-	-	-	2,784,021	67,269	1,797,613	26,052,149

Section 3: Actuarial Assumptions and Methods and Appendices

2069	26,052,149	-	-	-	-	2,657,946	69,119	1,728,203	25,053,287
2070	25,053,287	-	-	-	-	2,532,494	71,020	1,662,607	24,112,380
2071	24,112,380	-	-	-	-	2,407,843	72,973	1,601,038	23,232,602
2072	23,232,602	-	-	-	-	2,284,174	74,979	1,543,712	22,417,161
2073	22,417,161	-	-	-	-	2,161,659	77,041	1,490,847	21,669,307
2074	21,669,307	-	-	-	-	2,040,471	79,160	1,442,664	20,992,341
2075	20,992,341	-	-	-	-	1,920,777	81,337	1,399,390	20,389,616
2076	20,389,616	-	-	-	-	1,802,749	83,574	1,361,252	19,864,545
2077	19,864,545	-	-	-	-	1,686,560	85,872	1,328,483	19,420,596
2078	19,420,596	-	-	-	-	1,572,396	88,233	1,301,320	19,061,287
2079	19,061,287	-	-	-	-	1,460,462	90,660	1,280,001	18,790,166
2080	18,790,166	-	-	-	-	1,350,987	93,153	1,264,767	18,610,793
2081	18,610,793	-	-	-	-	1,244,224	95,715	1,255,858	18,526,712
2082	18,526,712	-	-	-	-	1,140,446	98,347	1,253,512	18,541,431
2083	18,541,431	-	-	-	-	1,039,956	101,051	1,257,965	18,658,389
2084	18,658,389	-	-	-	-	943,073	103,830	1,269,446	18,880,931
2085	18,880,931	-	-	-	-	850,127	106,686	1,288,177	19,212,295
2086	19,212,295	-	-	-	-	761,448	109,620	1,314,373	19,655,601
2087	19,655,601	-	-	-	-	677,345	112,634	1,348,243	20,213,865
2088	20,213,865	-	-	-	-	598,105	101,602	1,390,481	20,904,639
2089	20,904,639	-	-	-	-	523,974	89,716	1,441,846	21,732,795
2090	21,732,795	-	-	-	-	455,149	78,596	1,502,615	22,701,665
2091	22,701,665	-	-	-	-	391,765	68,272	1,573,015	23,814,643
2092	23,814,643	-	-	-	-	333,905	58,765	1,653,282	25,075,254
2093	25,075,254	-	-	-	-	281,587	50,086	1,743,659	26,487,240
2094	26,487,240	-	-	-	-	234,768	42,238	1,844,412	28,054,646
2095	28,054,646	-	-	-	-	193,339	35,215	1,955,826	29,781,918
2096	29,781,918	-	-	-	-	157,132	29,001	2,078,220	31,674,005

Section 3: Actuarial Assumptions and Methods and Appendices

2097	31,674,005	-	-	-	-	125,911	23,570	2,211,949	33,736,473
2098	33,736,473	-	-	-	-	99,384	18,887	2,357,414	35,975,615
2099	35,975,615	-	-	-	-	77,200	14,908	2,515,069	38,398,577
2100	38,398,577	-	-	-	-	58,960	11,580	2,685,432	41,013,469
2101	41,013,469	-	-	-	-	44,233	8,844	2,869,085	43,829,477
2102	43,829,477	-	-	-	-	32,572	6,635	3,066,691	46,856,961
2103	46,856,961	-	-	-	-	23,525	4,886	3,278,993	50,107,543
2104	50,107,543	-	-	-	-	16,656	3,529	3,506,822	53,594,179
2105	53,594,179	-	-	-	-	11,558	2,498	3,751,101	57,331,224
2106	57,331,224	-	-	-	-	7,862	1,734	4,012,850	61,334,478
2107	61,334,478	-	-	-	-	5,248	1,179	4,293,189	65,621,240
2108	65,621,240	-	-	-	-	3,444	787	4,593,339	70,210,347
2109	70,210,347	-	-	-	-	2,232	517	4,914,628	75,122,227
2110	75,122,227	-	-	-	-	1,436	335	5,258,494	80,378,950
2111	80,378,950	-	-	-	-	926	215	5,626,487	86,004,295
2112	86,004,295	-	-	-	-	606	139	6,020,275	92,023,825
2113	92,023,825	-	-	-	-	407	91	6,441,650	98,464,978
2114	98,464,978	-	-	-	-	284	61	6,892,536	105,357,169
2115	105,357,169	-	-	-	-	206	43	7,374,993	112,731,914
2116	112,731,914	-	-	-	-	155	31	7,891,227	120,622,955
2117	120,622,955	-	-	-	-	120	23	8,443,602	129,066,413
2118	129,066,413	-	-	-	-	95	18	9,034,645	138,100,945
2119	138,100,945	-	-	-	-	75	14	9,667,063	147,767,919
2120	147,767,919	-	-	-	-	59	11	10,343,752	158,111,600
2121	158,111,600	-	-	-	-	46	9	11,067,810	169,179,355
2122	169,179,355	-	-	-	-	36	7	11,842,553	181,021,866
2123	181,021,866	-	-	-	-	27	5	12,671,529	193,693,363
2124	193,693,363	-	-	-	-	20	4	13,558,535	207,251,874

Section 3: Actuarial Assumptions and Methods and Appendices

2125	207,251,874	-	-	-	-	14	3	14,507,631	221,759,487
2126	221,759,487	-	-	-	-	10	2	15,523,164	237,282,639
2127	237,282,639	-	-	-	-	7	2	16,609,784	253,892,415
2128	253,892,415	-	-	-	-	4	1	17,772,469	271,664,878
2129	271,664,878	-	-	-	-	3	1	19,016,541	290,681,416
2130	290,681,416	-	-	-	-	2	-	20,347,699	311,029,113

Notes

1. Amounts may not total exactly due to rounding.
2. Column (a): None of the projected beginning Plan Fiduciary Net Position amounts shown have been adjusted for the time value of money.
3. Columns (b-e): Projected State and Local contributions include normal cost rates applied to closed group projected payroll (based on covered active members as of June 30, 2020), plus contributions to the unfunded actuarial accrued liability. It is assumed that 1.2% of the proceeds from the Lottery Enterprise are contributed for a period of 30 years from the first contribution. 100% of the actuarially determined State contribution is assumed to be made on a quarterly basis for each fiscal year based on the actual payment made during the June 30, 2022 fiscal year. 100% of the actuarially determined contribution is assumed to be paid by Local Employees on April 1, for the fiscal year 21 months after the actuarial valuation for which that contribution is determined.
4. Column (f): Projected benefit payments have been determined in accordance with paragraph 39 of GASB Statement No. 67. The demographic assumptions used are consistent with those approved by the Board of Trustees on January 13, 2020 and are based on the experience study for the period July 1, 2013 – June 30, 2018 conducted by the prior actuary.
5. Column (g): Projected administrative expenses in the year ending June 30, 2022 are calculated assuming a 2.75% increase from the actual amount for the year ended June 30, 2021, limited to 15% of the prior year's projected benefit payments. Administrative expenses are assumed to occur halfway through the year, on average.
6. Column (h): Projected investment earnings are based on the assumed investment rate of return of 7.00% per annum and reflect the assumed timing of benefit payments, which is halfway through the year, on average.
7. As illustrated in this Exhibit, the Plan Fiduciary Net Position was projected to be available to make all projected future benefit payments for current Plan members. In other words, there is no projected "cross-over date" when projected benefits are not covered by projected assets. Therefore, the long-term expected rate of return on Plan investments of 7.00% per annum was applied to all periods of projected benefit payments to determine the Total Pension Liability as of June 30, 2021 shown earlier in this report, pursuant to paragraph 44 of GASB Statement No. 67.

Appendix B: Development of Blended Discount Rate as of June 30, 2021

Year Beginning June 30:	Projected Beginning Plan Fiduciary Net Position	Funded Benefit Payments	Unfunded Benefit Payments	Discounted Funded Benefit Payments	Discounted Unfunded Benefit Payments	Discounted at Blended Rate
2021	33,543,253	\$2,896,612	-	\$2,800,261	-	\$2,800,261
2022	34,947,368	3,042,436	-	2,748,817	-	2,748,817
2023	36,435,190	3,171,975	-	2,678,368	-	2,678,368
2024	38,165,307	3,282,169	-	2,590,107	-	2,590,107
2025	39,835,089	3,386,967	-	2,497,952	-	2,497,952
2026	41,435,600	3,483,059	-	2,400,767	-	2,400,767
2027	42,975,126	3,574,332	-	2,302,503	-	2,302,503
2028	44,458,132	3,670,389	-	2,209,702	-	2,209,702
2029	45,877,873	3,769,530	-	2,120,924	-	2,120,924
2030	47,223,163	3,873,501	-	2,036,844	-	2,036,844
2031	48,460,818	3,982,133	-	1,956,979	-	1,956,979
2032	49,580,150	4,085,000	-	1,876,198	-	1,876,198
2033	50,577,381	4,182,391	-	1,795,260	-	1,795,260
2034	51,451,820	4,266,756	-	1,711,657	-	1,711,657
2035	52,215,221	4,329,613	-	1,623,246	-	1,623,246
2036	52,886,490	4,381,645	-	1,535,284	-	1,535,284
2037	53,477,312	4,437,019	-	1,452,978	-	1,452,978
2038	53,983,932	4,501,169	-	1,377,556	-	1,377,556
2039	54,387,935	4,572,778	-	1,307,917	-	1,307,917
2040	54,668,303	4,648,280	-	1,242,535	-	1,242,535
2041	54,805,102	4,726,294	-	1,180,737	-	1,180,737
2042	54,780,890	4,805,411	-	1,121,965	-	1,121,965
2043	54,578,761	4,880,556	-	1,064,963	-	1,064,963
2044	54,188,897	4,947,614	-	1,008,967	-	1,008,967

Section 3: Actuarial Assumptions and Methods and Appendices

2045	53,603,191	4,999,362	-	952,823	-	952,823
2046	52,829,010	5,016,574	-	893,554	-	893,554
2047	51,897,598	4,996,336	-	831,728	-	831,728
2048	50,832,019	4,953,776	-	770,695	-	770,695
2049	49,685,462	4,897,287	-	712,062	-	712,062
2050	48,480,986	4,829,388	-	656,252	-	656,252
2051	47,233,543	4,751,518	-	603,430	-	603,430
2052	45,956,034	4,665,223	-	553,711	-	553,711
2053	44,659,496	4,571,821	-	507,127	-	507,127
2054	43,353,561	4,472,313	-	463,634	-	463,634
2055	42,046,785	4,367,734	-	423,171	-	423,171
2056	40,746,661	4,258,653	-	385,610	-	385,610
2057	39,460,202	4,145,775	-	350,831	-	350,831
2058	38,193,734	4,029,628	-	318,694	-	318,694
2059	36,953,241	3,910,792	-	289,061	-	289,061
2060	35,744,241	3,789,706	-	261,786	-	261,786
2061	34,572,003	3,666,705	-	236,719	-	236,719
2062	33,441,647	3,542,304	-	213,727	-	213,727
2063	32,357,981	3,416,845	-	192,670	-	192,670
2064	31,325,723	3,290,664	-	173,416	-	173,416
2065	30,349,473	3,164,062	-	155,836	-	155,836
2066	29,365,165	3,037,276	-	139,805	-	139,805
2067	28,211,199	2,910,528	-	125,206	-	125,206
2068	27,105,826	2,784,021	-	111,929	-	111,929
2069	26,052,149	2,657,946	-	99,870	-	99,870
2070	25,053,287	2,532,494	-	88,931	-	88,931
2071	24,112,380	2,407,843	-	79,022	-	79,022
2072	23,232,602	2,284,174	-	70,059	-	70,059

Section 3: Actuarial Assumptions and Methods and Appendices

2073	22,417,161	2,161,659	-	61,964	-	61,964
2074	21,669,307	2,040,471	-	54,664	-	54,664
2075	20,992,341	1,920,777	-	48,091	-	48,091
2076	20,389,616	1,802,749	-	42,183	-	42,183
2077	19,864,545	1,686,560	-	36,882	-	36,882
2078	19,420,596	1,572,396	-	32,136	-	32,136
2079	19,061,287	1,460,462	-	27,896	-	27,896
2080	18,790,166	1,350,987	-	24,117	-	24,117
2081	18,610,793	1,244,224	-	20,758	-	20,758
2082	18,526,712	1,140,446	-	17,782	-	17,782
2083	18,541,431	1,039,956	-	15,154	-	15,154
2084	18,658,389	943,073	-	12,843	-	12,843
2085	18,880,931	850,127	-	10,820	-	10,820
2086	19,212,295	761,448	-	9,057	-	9,057
2087	19,655,601	677,345	-	7,530	-	7,530
2088	20,213,865	598,105	-	6,214	-	6,214
2089	20,904,639	523,974	-	5,088	-	5,088
2090	21,732,795	455,149	-	4,130	-	4,130
2091	22,701,665	391,765	-	3,323	-	3,323
2092	23,814,643	333,905	-	2,647	-	2,647
2093	25,075,254	281,587	-	2,086	-	2,086
2094	26,487,240	234,768	-	1,625	-	1,625
2095	28,054,646	193,339	-	1,251	-	1,251
2096	29,781,918	157,132	-	950	-	950
2097	31,674,005	125,911	-	712	-	712
2098	33,736,473	99,384	-	525	-	525
2099	35,975,615	77,200	-	381	-	381
2100	38,398,577	58,960	-	272	-	272

Section 3: Actuarial Assumptions and Methods and Appendices

2101	41,013,469	44,233	-	191	-	191
2102	43,829,477	32,572	-	131	-	131
2103	46,856,961	23,525	-	89	-	89
2104	50,107,543	16,656	-	59	-	59
2105	53,594,179	11,558	-	38	-	38
2106	57,331,224	7,862	-	24	-	24
2107	61,334,478	5,248	-	15	-	15
2108	65,621,240	3,444	-	9	-	9
2109	70,210,347	2,232	-	6	-	6
2110	75,122,227	1,436	-	3	-	3
2111	80,378,950	926	-	2	-	2
2112	86,004,295	606	-	1	-	1
2113	92,023,825	407	-	1	-	1
2114	98,464,978	284	-	1	-	1
2115	105,357,169	206	-	-	-	-
2116	112,731,914	155	-	-	-	-
2117	120,622,955	120	-	-	-	-
2118	129,066,413	95	-	-	-	-
2119	138,100,945	75	-	-	-	-
2120	147,767,919	59	-	-	-	-
2121	158,111,600	46	-	-	-	-
2122	169,179,355	36	-	-	-	-
2123	181,021,866	27	-	-	-	-
2124	193,693,363	20	-	-	-	-
2125	207,251,874	14	-	-	-	-
2126	221,759,487	10	-	-	-	-
2127	237,282,639	7	-	-	-	-
2128	253,892,415	4	-	-	-	-

Section 3: Actuarial Assumptions and Methods and Appendices

2129	271,664,878	3	-	-	-	-
2130	290,681,416	2	-	-	-	-
Total				\$55,755,497		\$55,755,497

Section 3: Actuarial Assumptions and Methods and Appendices

Appendix C: Definition of Terms

Definitions of certain terms as they are used in Statement 68. The terms may have different meanings in other contexts.

Active Employees:	Individuals employed at the end of the reporting or measurement period, as applicable.
Actual Contributions:	Cash contributions recognized as additions to a pension Plan Fiduciary Net Position.
Actuarial Present Value of Projected Benefit Payments:	Projected benefit payments discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment.
Actuarial Valuation:	The determination, as of a point in time (the actuarial valuation date), of the service cost, Total Pension Liability, and related actuarial present value of projected benefit payments for pensions performed in conformity with Actuarial Standards of Practice unless otherwise specified by the GASB.
Actuarial Valuation Date:	The date as of which an actuarial valuation is performed.
Actuarially Determined Contribution:	A target or recommended contribution to a defined benefit pension plan for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.
Closed Period:	A specific number of years that is counted from one date and declines to zero with the passage of time. For example, if the recognition period initially is five years on a closed basis, four years remain after the first year, three years after the second year, and so forth.
Collective Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions:	Deferred outflows of resources and deferred inflows of resources related to pensions arising from certain changes in the collective Net Pension Liability.
Collective Pension Expense:	Pension expense arising from certain changes in the collective Net Pension Liability.
Contributions:	Additions to a pension Plan Fiduciary Net Position for amounts from employers, non-employer contributing entities (for example, state government contributions to a local government pension plan), or employees. Contributions can result from cash receipts by the pension plan or from recognition by the pension plan of a receivable from one of these sources.
Cost-of-Living Adjustments:	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
Covered Payroll:	The payroll of employees that are provided with pensions through the pension plan.
Defined Benefit Pension Plans:	Pension plans that are used to provide defined benefit pensions.
Defined Benefit Pensions:	Pensions for which the income or other benefits that the employee will receive at or after

Section 3: Actuarial Assumptions and Methods and Appendices

	<p>separation from employment are defined by the benefit terms. The pensions may be stated as a specified dollar amount or as an amount that is calculated based on one or more factors such as age, years of service, and compensation. (A pension that does not meet the criteria of a defined contribution pension is classified as a defined benefit pension for purposes of Statement 68.)</p>
Discount Rate:	<p>The single rate of return that, when applied to all projected benefit payments, results in an actuarial present value of projected benefit payments equal to the total of the following:</p> <ol style="list-style-type: none">1. The actuarial present value of benefit payments projected to be made in future periods in which (a) the amount of the pension Plan Fiduciary Net Position is projected (under the requirements of Statement 68) to be greater than the benefit payments that are projected to be made in that period and (b) pension plan assets up to that point are expected to be invested using a strategy to achieve the long-term expected rate of return, calculated using the long-term expected rate of return on pension plan investments.2. The actuarial present value of projected benefit payments not included in (1), calculated using the municipal bond rate.
Entry Age Actuarial Cost Method:	<p>A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age(s). The portion of this actuarial present value allocated to a valuation year is called 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 called the actuarial accrued liability.</p>
Inactive Employees:	<p>Terminated individuals that have accumulated benefits but are not yet receiving them, and retirees or their beneficiaries currently receiving benefits.</p>
Measurement Period:	<p>The period between the prior and the current measurement dates.</p>
Net Pension Liability (NPL):	<p>The liability of employers and non-employer contributing entities to employees for benefits provided through a defined benefit pension plan.</p>
Other Postemployment Benefits:	<p>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 postemployment benefits do not include termination benefits.</p>
Pension Plans:	<p>Arrangements through which pensions are determined, assets dedicated for pensions are accumulated and managed and benefits are paid as they come due.</p>
Pensions:	<p>Retirement income and, if provided through a pension plan, postemployment benefits other than retirement income (such as death benefits, life insurance, and disability benefits). Pensions do not include postemployment healthcare benefits and termination benefits.</p>
Plan Fiduciary Net Position:	<p>Market value of assets.</p>

Section 3: Actuarial Assumptions and Methods and Appendices

Plan Members:	Individuals that are covered under the terms of a pension plan. Plan members generally include (1) employees in active service (active plan members) and (2) terminated employees who have accumulated benefits but are not yet receiving them and retirees or their beneficiaries currently receiving benefits (inactive plan members).
Projected Benefit Payments:	All benefits estimated to be payable through the pension plan to current active and inactive employees as a result of their past service and their expected future service.
Public Employee Retirement System:	A special-purpose government that administers one or more pension plans; also may administer other types of employee benefit plans, including postemployment healthcare plans and deferred compensation plans.
Real Rate of Return:	The rate of return on an investment after adjustment to eliminate inflation.
Service Costs:	The portions of the actuarial present value of projected benefit payments that are attributed to valuation years.
Termination Benefits:	Inducements offered by employers to active employees to hasten the termination of services, or payments made in consequence of the early termination of services. Termination benefits include early-retirement incentives, severance benefits, and other termination-related benefits.
Total Pension Liability (TPL):	The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service in conformity with the requirements of Statement 68.