

The experience and dedication you deserve



GASB STATEMENT NO. 68 REPORT FOR THE

GEORGIA PUBLIC SCHOOL EMPLOYEES RETIREMENT SYSTEM PREPARED AS OF JUNE 30, 2020





The experience and dedication you deserve

February 26, 2021

Board of Trustees Georgia Public School Employees Retirement System Two Northside 75, Suite 300 Atlanta, GA 30318-7701

Members of the Board:

Presented in this report is information to assist the Georgia Public School Employees Retirement System (PSERS) in meeting the requirements of the Governmental Accounting Standards Board (GASB) Statement No. 68 and to identify the information to be provided by the actuary, Cavanaugh Macdonald Consulting (CMC). The information is presented for the period ending June 30, 2020 (the Measurement Date).

GASB Statement Number 68 established accounting and financial reporting requirements for governmental employers that provide pension benefits to their employees through a trust.

The annual actuarial valuation used as a basis for much of the information presented in this report, including the Net Pension Liability, was performed as of June 30, 2019. The valuation was based upon data, furnished by the Retirement System staff, for active, inactive and retired members along with pertinent financial information.

We note that as we are preparing this report, the world is in the midst of a pandemic. We have considered available information, but do not believe that there is yet sufficient data to warrant the modification of any of our assumptions prior to the next experience study.

In order to prepare the results in this report we have utilized appropriate actuarial models that were developed for this purpose. These models use assumptions about future contingent events along with recognized actuarial approaches to develop the needed results.



Board of Trustees February 26, 2021 Page 2

The actuarial calculations were performed by qualified actuaries according to generally accepted actuarial procedures and methods. The calculations are based on the current provisions of the System, and on actuarial assumptions that are internally consistent and individually reasonable based on the actual experience of the System. In addition, the calculations were completed in compliance with the laws governing the System and, in our opinion, meet the requirements of GASB 68. The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

These results are only for financial reporting and may not be appropriate for funding purposes or other types of analysis. Calculations for purposes other than satisfying the requirements of GASB 67 and GASB 68 may produce significantly different results. Future actuarial results may differ significantly from the current results presented in this report due to such factors as changes in plan experience or changes in economic or demographic assumptions.

Sincerely yours,

Edward J. Koebel, EA, FCA, MAAA Chief Executive Officer

Edward J. Worbel

Ben Mobley, ASA, FCA, MAAA Senior Actuary Cathy Turcot

Principal and Managing Director



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REPORT OF THE ANNUAL GASB STATEMENT NO. 68 REQUIRED INFORMATION FOR THE EMPLOYERS PARTCIPATING IN THE GEORGIA PUBLIC SCHOOL EMPLOYEES RETIREMENT SYSTEM

PREPARED AS OF JUNE 30, 2020

SECTION I – INTRODUCTION

The Governmental Accounting Standards Board issued Statement No. 68 (GASB 68), "Accounting and Financial Reporting For Pensions" in June 2012. The Georgia Public School Employees Retirement System (PSERS) is a cost-sharing multiple employer defined benefit pension plan.

This report, prepared as of June 30, 2020 (the Measurement Date), presents information to assist the employers participating in PSERS in meeting the requirements of GASB 68 for the fiscal year ending June 30, 2021 (Reporting Date). Much of the material provided in this report is based on the data, assumptions and results of the annual actuarial valuation of PSERS as of June 30, 2019. The results of that valuation were detailed in a report dated April 16, 2020.

The NPL shown in the GASB Statement No. 67 Report for the Georgia Public School Employees Retirement System prepared as of June 30, 2020 and submitted August 26, 2020 is the collective NPL used for purposes of GASB 68. Please refer to that report for the derivation of the collective NPL.

Pension Expense (PE) includes amounts for service cost (the normal cost under the Entry Age Normal actuarial cost method for the year), interest on the Total Pension Liability (TPL), changes in benefit structure, amortization of increases/decreases in liability due to actuarial experience and actuarial assumption changes, and amortization of investment gains/losses. The actuarial experience and assumption change impacts are amortized over the average expected remaining service life of the Plan membership as of the Measurement Date, and investment gains/losses are amortized over five years. The development of the collective PE is shown in Section IV.

The unamortized portions of each year's experience, assumption changes and investment gains/losses are used to develop deferred inflows and outflows, which also must be included in the employer's and non-employer contributing entities' financial statements. The development of the collective deferred inflows and outflows is shown in Section III.

These collective amounts have been allocated based on employer contributions made to PSERS during the measurement period to determine the proportionate share associated with each participating employer. The State makes all contributions to PSERS on behalf of employees of the participating districts. Therefore, these employers are considered to be in a special funding situation as defined by GASB 68 and the State is treated as a non-employer contributing entity in PSERS. Since the districts do not contribute directly to the PSERS, there is no NPL or deferred inflows or outflows to report in the financial statements of the districts, However, the notes to the financial statements must disclose the portion of the non-employer contributing entities' total proportionate share of the collective NPL that is associated with the employer, In addition, each district must recognize the total PE associated with the district as well as revenue in an amount equal to the non-employer contributing entities' total proportionate share of the collective PE associated with the district.



Schedule A of this report shows the total amount of employer contributions from the State as support provided to the districts for the year ending June 30, 2020. Schedule A also shows the proportionate share percentages that have been determined based on these contributions.

Based on these percentages we have determined the proportionate share amounts of the NPL associated with each participating employer and the employer PE and revenue for State support for each participating employer. These amounts are shown in Schedule B.

Section II of this report is a summary of the principal results of the collective amounts under GASB 68. Section III provides the results of all the necessary calculations, presented in the order laid out in GASB 68 for note disclosure and Section V shows the Required Supplementary Information (RSI).



SECTION II - SUMMARY OF COLLECTIVE AMOUNTS (\$ IN THOUSANDS)

	2020
Valuation Date (VD):	June 30, 2019
Measurement Date (MD):	June 30, 2020
Reporting Date (RD):	June 30, 2021
Single Equivalent Interest Rate (SEIR):	
Long-Term Expected Rate of Return	7.30%
Municipal Bond Index Rate at Measurement Date	2.19%
Fiscal Year in which Plan's Fiduciary Net Position is projected to be depleted from future benefit payments for current members	N/A
Single Equivalent Interest Rate	7.30%
Net Pension Liability:	
Total Pension Liability (TPL)	\$1,134,724
Fiduciary Net Position (FNP)	<u>958,248</u>
Net Pension Liability (NPL = TPL – FNP)	\$ 176,476
FNP as a percentage of TPL	84.45%
Collective Pension Expense (PE):	\$35,513
Deferred Outflows of Resources:	\$3,526
Deferred Inflows of Resources:	\$7,730



SECTION III -NOTES TO FINANCIAL STATEMENTS

The material presented herein will follow the order presented in GASB 68. Paragraph numbers are provided for ease of reference. Amounts are shown in aggregate. Please refer to Schedule B of this report for the proportionate share of certain pension amounts as required by GASB 68.

Paragraphs 77 and 78(a)-(f): These paragraphs require information to be disclosed regarding the actuarial assumptions used to measure the TPL. The complete set of actuarial assumptions utilized in developing the TPL are outlined in Schedule D. The key actuarial assumptions are summarized below:

Inflation 2.75 percent

Salary increases, including inflation N/A

Investment Rate of Return 7.30 percent, net of pension plan investment expense,

including inflation

Post-Retirement Benefit Increases 1.50 percent, semi-annually

Post-retirement mortality rates were based on the RP-2000 Blue-Collar Mortality Table projected to 2025 with projection scale BB (set forward 3 years for males and 2 years for females) for the period after service retirements and for dependent beneficiaries. The RP-2000 Disabled Mortality projected to 2025 with projection scale BB (set forward 5 years for both males and females) was used for death after disability retirement. There is a margin for future mortality improvement in the tables used by the System. Based on the results of the most recent experience study adopted by the Board on December 17, 2015, the numbers of expected future deaths are 9-11% less than the actual number of deaths that occurred during the study period for healthy retirees and 9-11% less than expected under the selected table for disabled retirees. Rates of mortality in active service were based on the RP-2000 Employee Mortality Table projected to 2025 with projection scale BB.

The actuarial assumptions used in the June 30, 2019 valuation were based on the results of an actuarial experience study for the period July 1, 2009 – June 30, 2014, with the exception of the assumed investment rate of return. Subsequent to the June 30, 2017 Measurement Date, the Board adopted a new funding policy. Because of this new funding policy, the assumed investment rate of return was reduced from 7.50% to 7.40% for the June 30, 2017 actuarial valuation and further reduced from 7.40% to 7.30% for the June 30, 2018 actuarial valuation. The assumed investment rate of return remained at 7.30% for the June 30, 2019 actuarial valuation.



The long-term expected rate of return on pension plan investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected nominal returns, net of pension plan investment expense and the assumed rate of inflation) are developed for each major asset class. These ranges 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 and by adding expected inflation.

The most recent target asset allocation and best estimates of arithmetic real rates of return for each major asset class based on the most recent experience study are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return*
Fixed Income	30.0%	-0.1%
US Large Stocks	46.2%	8.9%
US Small Stocks	1.3%	13.2%
Int'l Developed Mkt Stocks	12.4%	8.9%
Int'l Emerging Mkt Stocks	5.1%	10.9%
Alternatives	5.0%	12.0%
Total	100.0%	

^{*}Net of inflation.

Discount rate. The discount rate used to measure the total pension liability was 7.30 percent. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Paragraph 78 (g): This paragraph requires disclosure of the sensitivity of the NPL to changes in the discount rate. The following presents the NPL of the System, calculated using the discount rate of 7.30 percent, as well as what the System's NPL would be if it were calculated using a discount rate that is 1-percentage-point lower (6.30 percent) or 1-percentage-point higher (8.30 percent) than the current rate (\$ thousands):

	1%	Current	1%
	Decrease	Discount Rate	Increase
	(6.30%)	(7.30%)	(8.30%)
System's Net Pension Liability	\$300,027	\$176,476	\$72,356



Paragraph 80(a): This paragraph requires disclosure of the employer's proportionate share of the collective NPL and if an employer has a special funding situation the portion of the non-employer contributing entities' proportional share of the collective NPL that is associated with the employer. These amounts are shown in Schedule B.

Paragraph 80(b): This paragraph requires disclosure of the employer's proportion (percentage) of the collective NPL and the changes in proportion since the prior measurement date. 100% of the collective NPL is allocated to the State.

Paragraph 80(c): June 30, 2019 is the actuarial valuation date upon which the TPL is based. An expected TPL is determined as of June 30, 2020 using standard roll forward techniques. The procedure used to determine the TPL as of June 30, 2020 is shown on page 7 of the GASB 67 report for PSERS submitted on August 26, 2020.

Paragraph 80(d) and (e): Since the previous measurement date, the monthly benefit accrual rate has been increased from \$15.25 to \$15.50 per year of creditable service effective June 30, 2019 for members retiring after August 1, 2012.

Paragraph 80(f): Not applicable.

Paragraph 80(g): Please see Section IV of this report for the development of the collective pension expense. The PE for each employer is shown in Schedule B.

Paragraph 80(h): Since certain expense items are amortized over closed periods each year, the deferred portions of these items must be tracked annually. If the amounts serve to reduce collective pension expense they are labeled deferred inflows. If they will increase collective pension expense they are labeled deferred outflows. The amortization of these amounts is accomplished on a level dollar basis, with no interest included in the deferred amounts. Experience gains/losses and the impact of changes in actuarial assumptions, if any, are amortized over the average expected remaining service life of the active and inactive Plan members at the beginning of the fiscal year. Investment gains and losses are amortized over a fixed five year period.

The table below provides a summary of the collective deferred inflows and outflows as of the Measurement Date. 100% of these amounts are allocated to the State.

	Collective Deferred Outflows of Resources (\$ thousands)	Collective Deferred Inflows of Resources (\$ thousands)
Differences between expected and actual experience	\$0	\$7,730
Changes of actuarial assumptions	0	0
Net difference between projected and actual earnings on plan investments	3,526	0
Total	<u>\$3,526</u>	<u>\$7,730</u>

The following tables show the components of the collective deferred outflows of resources and the collective deferred inflows of resources by year.



Collective Deferred Outflows and Inflows for Differences between Expected and Actual Experience (\$ thousands)

Year	Initial Balance of Losses / Deferred Outflow	Initial Balance of Gains / Deferred Inflow	Amortization Period	Beginning Balance Deferred Outflows (a)	Beginning Balance Deferred Inflows (b)	Losses / Deferred Outflows (c)	Gains / Deferred Inflows (d)	Amounts Recognized in Pension Expense / Deferred Outflow (e)	Amounts Recognized in Pension Expense / Deferred Inflow (f)	Ending Balance Deferred Outflows (a) + (c) - (e)	Ending Balance Deferred Inflows (b) + (d) - (f)
2020	\$0	\$12,220	2.2	\$0	\$0	\$0	\$12,220	\$0	\$5,555	\$0	\$6,665
2019	0	8,159	2.3	0	4,612	0	0	0	3,547	0	1,065
2018	0	3,943	2.4	0	657	0	0	0	657	0	0
2017	0	3,665	2.3	0	0	0	0	0	0	0	0
2016	0	9,483	1.9	0	0	0	0	0	0	0	0
Total				\$0	\$5,269	\$0	\$12,220			\$0	\$7,730



Collective Deferred Outflows and Inflows for Differences from Assumption Changes (\$ thousands) **Amounts Amounts** Initial Initial Recognized Recognized **Beginning** Balance of **Balance of Beginning** in Pension in Pension **Ending** Ending **Balance** Balance Losses / Gains / Gains / Expense / Expense / **Balance Balance** Losses / Deferred Deferred Deferred **Deferred** Amortization Deferred Deferred Deferred Deferred Deferred **Deferred** Outflow Inflow Period Outflows Inflows **Outflows** Inflows Outflow Inflow Outflows Inflows (b) (d) (e) (f) Year (a) (c) (a) + (c) - (e)(b) + (d) - (f)\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 2020 2.2 \$0 2019 0 2.3 0 0 0 0 0 0 0 0 0 2018 0 2.4 0 0 0 0 0 0 21,354 3,558 3,558 2017 0 2.3 0 0 0 0 0 0 33,215 0 2016 0 1.9 0 0 0 0 0 0

\$0

\$0

\$0

\$3,558

Total

\$0

\$0



Collective Deferred Outflows and Inflows for Differences in Investment Experience (\$ thousands)

Year	Initial Balance of Losses / Deferred Outflow	Initial Balance of Gains / Deferred Inflow	Amortization Period	Beginning Balance Deferred Outflows (a)	Beginning Balance Deferred Inflows (b)	Losses / Deferred Outflows (c)	Gains / Deferred Inflows (d)	Amounts Recognized in Pension Expense / Deferred Outflow (e)	Amounts Recognized in Pension Expense / Deferred Inflow (f)	Ending Balance Deferred Outflows (a) + (c) - (e)	Ending Balance Deferred Inflows (b) + (d) - (f)
2020	\$17,609	\$0	5.0	\$0	\$0	\$17,609	\$0	\$3,522	\$0	\$14,087	\$0
2019	4,971	0	5.0	3,977	0	0	0	994	0	2,983	0
2018	0	14,524	5.0	0	8,714	0	0	0	2,905	0	5,809
2017	0	38,683	5.0	0	15,472	0	0	0	7,737	0	7,735
2016	50,833	0	5.0	10,165	0	0	0	10,165	0	0	0
Total				\$14,142	\$24,186	\$17,609	\$0			\$17,070	\$13,544
Net diffe	erence betweer	n projected and	actual earnings	on investments	s					\$3,526	



Year	Amortization Period	Beginning Balance	Additions	Deductions	Ending Balance
Deferred Outflows of Resources:					
Difference between expected and actual experience					
2020	2.2	\$0	\$0	\$0	\$0
2019	2.3	0	0	0	
2018	2.4	0	0	0	(
2017	2.3	0	0	0	(
2016	1.9	0	0	0	(
Difference between expected and actual assumptions	1.0	Ŭ	Ŭ	Ŭ	`
2020	2.2	\$0	\$0	\$0	\$0
2019	2.3	0	0	0	Ψ(
2018	2.4	3,558	0	3.558	(
		,		-,	(
2017	2.3	0	0	0	(
2016	1.9	U	U	U	(
Difference between projected and actual earnings	F 0	A C	047.000	#0.500	01100
2020	5.0	\$0	\$17,609	\$3,522	\$14,08
2019	5.0	0	3,977	994	2,98
2018	5.0	0	(8,714)	(2,905)	(5,80
2017	5.0	0	(15,472)	(7,737)	(7,73
2016	5.0	0	10,165	10,165	(
Subtotal					\$3,526
Total Deferred Outflows of Resources		\$3,558	\$7,565	\$7,597	\$3,526
	Amortization	Beginning			Ending
/ ear	Period	Balance	Additions	Deductions	Balance
Deferred Inflows of Resources:					
Difference between expected and actual experience					
Difference between expected and actual experience 2020	2.2	\$0	\$12,220	\$5,555	\$6,66
	2.2 2.3	\$0 4,612	\$12,220 0	\$5,555 3,547	. ,
2020		•	. ,	. ,	1,06
2020 2019 2018	2.3 2.4	4,612 657	0	3,547 657	1,06
2020 2019 2018 2017	2.3 2.4 2.3	4,612	0	3,547	1,06
2020 2019 2018 2017 2016	2.3 2.4	4,612 657 0	0 0 0	3,547 657 0	1,06
2020 2019 2018 2017 2016 Difference between expected and actual assumptions	2.3 2.4 2.3 1.9	4,612 657 0	0 0 0 0	3,547 657 0	1,06
2020 2019 2018 2017 2016 Difference between expected and actual assumptions 2020	2.3 2.4 2.3 1.9	4,612 657 0 0	0 0 0 0	3,547 657 0 0	1,06
2020 2019 2018 2017 2016 Difference between expected and actual assumptions 2020 2019	2.3 2.4 2.3 1.9 2.2 2.3	4,612 657 0 0 \$0	0 0 0 0 0 \$0	3,547 657 0 0 \$0	1,06
2020 2019 2018 2017 2016 Difference between expected and actual assumptions 2020 2019 2018	2.3 2.4 2.3 1.9 2.2 2.3 2.4	4,612 657 0 0 \$0 0	0 0 0 0 0 \$0 0	3,547 657 0 0 \$0 0	1,06
2020 2019 2018 2017 2016 Difference between expected and actual assumptions 2020 2019 2018 2017	2.3 2.4 2.3 1.9 2.2 2.3 2.4 2.3	4,612 657 0 0 \$0 0	0 0 0 0 \$0 0	3,547 657 0 0 \$0 0	1,063
2020 2019 2018 2017 2016 Difference between expected and actual assumptions 2020 2019 2018 2017 2016	2.3 2.4 2.3 1.9 2.2 2.3 2.4	4,612 657 0 0 \$0 0	0 0 0 0 0 \$0 0	3,547 657 0 0 \$0 0	1,063
2020 2019 2018 2017 2016 Difference between expected and actual assumptions 2020 2019 2018 2017 2016 Difference between expected and actual assumptions	2.3 2.4 2.3 1.9 2.2 2.3 2.4 2.3 1.9	4,612 657 0 0 \$0 0 0	0 0 0 0 \$0 0 0	3,547 657 0 0 \$0 0 0 0	\$(
2020 2019 2018 2017 2016 Difference between expected and actual assumptions 2020 2019 2018 2017 2016 Difference between expected and actual assumptions 2020	2.3 2.4 2.3 1.9 2.2 2.3 2.4 2.3 1.9	4,612 657 0 0 \$0 0 0 0 0	0 0 0 0 \$0 0 0	3,547 657 0 0 \$0 0 0 0 0	1,06:
2020 2019 2018 2017 2016 Difference between expected and actual assumptions 2020 2019 2018 2017 2016 Difference between projected and actual earnings 2020 2019	2.3 2.4 2.3 1.9 2.2 2.3 2.4 2.3 1.9 5.0 5.0	4,612 657 0 0 \$0 0 0 0 0 \$0 0 (3,977)	0 0 0 0 \$0 0 0 0 0	3,547 657 0 0 \$0 0 0 0 0 0 0 (3,977)	1,06:
2020 2019 2018 2017 2016 Difference between expected and actual assumptions 2020 2019 2018 2017 2016 Difference between projected and actual earnings 2020 2019 2018	2.3 2.4 2.3 1.9 2.2 2.3 2.4 2.3 1.9 5.0 5.0	4,612 657 0 0 \$0 0 0 0 0 0 0 (3,977) 8,714	0 0 0 0 \$0 0 0 0	3,547 657 0 0 \$0 0 0 0 0 0 0 (3,977) 8,714	1,06
2020 2019 2018 2017 2016 Difference between expected and actual assumptions 2020 2019 2018 2017 2016 Difference between projected and actual earnings 2020 2019 2018 2010 2019 2018 2019	2.3 2.4 2.3 1.9 2.2 2.3 2.4 2.3 1.9 5.0 5.0 5.0	4,612 657 0 0 \$0 0 0 0 0 0 (3,977) 8,714 15,472	0 0 0 0 \$0 0 0 0 0	3,547 657 0 0 \$0 0 0 0 0 0 (3,977) 8,714 15,472	1,066
2020 2019 2018 2017 2016 Difference between expected and actual assumptions 2020 2019 2018 2017 2016 Difference between projected and actual earnings 2020 2019 2018 2017 2016	2.3 2.4 2.3 1.9 2.2 2.3 2.4 2.3 1.9 5.0 5.0	4,612 657 0 0 \$0 0 0 0 0 0 0 (3,977) 8,714	0 0 0 0 \$0 0 0 0	3,547 657 0 0 \$0 0 0 0 0 0 0 (3,977) 8,714	1,06
2020 2019 2018 2017 2016 Difference between expected and actual assumptions 2020 2019 2018 2017 2016 Difference between projected and actual earnings 2020 2019 2018 2010 2019 2018 2019	2.3 2.4 2.3 1.9 2.2 2.3 2.4 2.3 1.9 5.0 5.0 5.0	4,612 657 0 0 \$0 0 0 0 0 0 (3,977) 8,714 15,472	0 0 0 0 \$0 0 0 0 0	3,547 657 0 0 \$0 0 0 0 0 0 (3,977) 8,714 15,472	\$6,668 1,068 (((((((((((((((((((



Paragraph 80(i): Collective amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in the collective pension expense as follows. 100% of these amounts are allocated to the State.

Deferred Amounts to be Recognized in Fiscal Years Following the Reporting Date (\$ thousands):				
Year 1	\$(12,744)			
Year 2	502			
Year 3	4,517			
Year 4	3,521			
Year 5	0			
Thereafter	0			

Paragraph 80(j): The amount of revenue recognized for the support provided by non-employer contributing entities for the participating employers is provided in Schedule B.



SECTION IV - COLLECTIVE PENSION EXPENSE

As noted earlier, the collective Pension Expense (PE) consists of a number of different items. GASB 68 refers to the first as Service Cost which is the Normal Cost using the Entry Age Normal actuarial funding method. The second item is interest on the beginning Total Pension Liability (TPL) and the cash flow during the year at the 7.30% rate of return in effect as of the previous measurement date.

The next three items refer to any changes that occurred in the TPL due to:

- benefit changes, or
- actual versus expected experience, or
- · changes in actuarial assumptions.

Benefit changes, which are reflected immediately in PE, can be positive, if there is a benefit improvement for existing Plan members, or negative if there is a benefit reduction. For the year ended June 30, 2019, the monthly benefit accrual rate was increased from \$15.25 to \$15.50 per year of creditable service for members retiring after August 1, 2012.

The next item to be recognized is the portion of current year changes in TPL due to actual versus expected Plan experience for the year. The portion to recognize in the current year is determined by spreading the total change over the average expected remaining service life of the entire Plan membership determined at the beginning of the year. The average expected remaining service life of active members is the average number of years the active members are expected to remain active. For the year ended June 30, 2020 this number of years for the active members is 6.6. The average expected remaining service life of the inactive members is zero. The number of years to use for the amortization is the weighted average for all active and inactive members, or 2.2 years.

The last item under changes in TPL are changes in actuarial assumptions. The portion to recognize in the current year is determined by spreading the total change over the average expected remaining service life of the entire Plan membership, or 2.2 years.

Member contributions for the year and projected earnings on the Fiduciary Net Position (FNP), again at the discount rate used to calculate the liabilities, are subtracted from the amount determined thus far. One-fifth of current period differences between projected and actual investment earnings on the FNP are recognized in the pension expense.

The current year portions of previously determined experience, assumption and earnings amounts, recognized as deferred outflows and inflows (see Section III) are included also. Deferred outflows are added to the PE while deferred inflows are subtracted from the PE. Finally, administrative expenses and other miscellaneous items are included.

The calculation of the Collective Pension Expense determined as of the measurement date is shown in the following table:



Collective Pension Expense Determined as of the Measurement Date (\$ thousands)	
Service Cost at end of year	\$14,017
Interest on the TPL and net cash flow	78,414
Current-period benefit changes	13,680
Expensed portion of current-period difference between expected and actual experience in the total pension liability	(5,555)
Expensed portion of current-period changes of assumptions	0
Member contributions	(2,338)
Projected earnings on plan investments	(67,522)
Expensed portion of current-period differences between projected and actual earnings on plan investments	3,522
Administrative expense	1,424
Other	0
Recognition of beginning deferred outflows and inflows of resources as pension expense	(129)
Collective Pension Expense	<u>\$35,513</u>



SECTION V - REQUIRED SUPPLEMENTARY INFORMATION

Paragraph 82:

Changes of assumptions. In 2010 and later, the expectation of retired life mortality was changed to the RP-2000 Mortality Tables rather than the 1994 Group Annuity Mortality Table, which was used prior to 2010. In 2010, rates of withdrawal, retirement, disability and mortality were adjusted to more closely reflect actual experience.

On December 17, 2015, the Board adopted recommended changes to the economic and demographic assumptions utilized by the System. Primary among the changes were the updates to rates of mortality, retirement and withdrawal. The expectation of retired life mortality was changed to the RP-2000 Blue Collar Mortality Table projected to 2025 with projection scale BB (set forward 3 years for males and 2 years for females).

On March 15, 2018, the Board adopted a new funding policy. Because of this new funding policy, the assumed investment rate of return was reduced from 7.50% to 7.40% for June 30, 2017 actuarial valuation. In addition, based on the Board's new funding policy, the assumed investment rate of return was further reduced by 0.10% from 7.40% to 7.30% as of the June 30, 2018 Measurement Date. The assumed investment rate of return remained at 7.30% for the June 30, 2019 valuation.

Changes of benefit terms.

- The member contribution rate was increased from \$4 to \$10 per month for members joining the System on or after July 1, 2012.
- The monthly benefit accrual rate was increased from \$14.75 to \$15.00 per year of creditable service effective July 1, 2017.
- The monthly benefit accrual rate was increased from \$15.00 to \$15.25 per year of creditable service effective July 1, 2018 for members retiring after August 1, 2012.
- The monthly benefit accrual rate was increased from \$15.25 to \$15.50 per year of creditable service effective July 1, 2019 for members retiring after August 1, 2012.

Method and assumptions used in calculations of actuarially determined contributions. The actuarially determined contribution rates in the schedule of employer contributions are calculated as of June 30, three years prior to the end of the fiscal year in which contributions are reported (June 30, 2020) employer contributions are based on June 30, 2017 valuation). The following actuarial methods and assumptions were used to determine the most recent contribution rate reported in that schedule:

> Actuarial cost method Entry age

Level dollar, closed Amortization method

Remaining amortization period 21.2 years

Asset valuation method 5-year smoothed market

Inflation

Salary increase

N/A Investment rate of return 7.40 percent, net of pension plan investment

2.75 percent

expense, including inflation

Post-Retirement Benefit Increases 1.50 percent, semi-annually



SCHEDULE A

GEORGIA PUBLIC SCHOOL EMPLOYEES RETIREMENT SYSTEM Schedule of Employer Allocations as of June 30, 2020

Employers	2020 State Pension Support Provided To The Districts	Employer Allocation Percentage
Atlanta Metropolitan College	\$ 936	0.002879%
Appling County Schools	61,744	0.190005%
Atkinson County Schools	33,679	0.103639%
Bacon County Schools	37,420	0.115154%
Baker County Schools	8,420	0.025910%
Baldwin County Schools	104,778	0.322432%
Banks County Schools	67,357	0.207278%
Barrow County Schools	253,524	0.780170%
Bartow County Schools	299,364	0.921234%
Ben Hill County Schools	66,421	0.204399%
Berrien County Schools	54,260	0.166974%
Bibb County Schools	585,632	1.802165%
Bleckley County Schools	75,776	0.233187%
Brantley County Schools	94,487	0.290765%
Brooks County Schools	51,453	0.158337%
Bryan County Schools	179,619	0.552741%
Bulloch County Schools	265,686	0.817596%
Burke County Schools	119,746	0.368494%
Butts County Schools	83,261	0.256218%
Calhoun County Schools	18,710	0.057577%
Camden County Schools	203,006	0.624712%
Candler County Schools	38,356	0.118033%
Carroll County Schools	239,492	0.736988%
Catoosa County Board of Education	288,138	0.886688%
Charlton County Schools	36,485	0.112275%
Chatham County Schools	861,608	2.651428%
Chattahoochee County Schools	16,839	0.051819%
Chattooga County Schools	47,711	0.146822%
Cherokee County Schools	668,892	2.058383%
Clarke County Schools	399,464	1.229272%
Clay County Schools	9,355	0.028789%
Clayton County Schools	1,115,132	3.431598%
Clinch County Schools	26,194	0.080608%
Cobb County Schools	2,173,199	6.687587%
Coffee County Schools	127,230	0.391525%
Colquitt County Schools	189,909	0.584408%
Columbia County Schools	597,793	1.839590%
Cook County Schools	70,163	0.215914%



Employers	2020 State Pension Support Provided To The Districts	Employer Allocation Percentage
Coweta County Schools	\$ 586,567	1.805044%
Crawford County Schools	50,518	0.155458%
Crisp County Schools	98,229	0.302280%
Dade County Schools	45,840	0.141064%
Dawson County Schools	84,196	0.259097%
Decatur County Schools	135,649	0.417434%
Dekalb County Schools	1,983,289	6.103178%
Dodge County Schools	69,228	0.213035%
Dooly County Schools	47,711	0.146822%
Dougherty County Schools	349,882	1.076693%
Douglas County Schools	460,273	1.416398%
Early County Schools	46,776	0.143943%
Echols County Schools	13,097	0.040304%
Effingham County Schools	219,846	0.676532%
Elbert County Schools	63,615	0.195762%
Emanuel County Schools	92,616	0.285007%
Evans County Schools	42,098	0.129549%
Fannin County Schools	82,325	0.253339%
Fayette County Schools	360,173	1.108360%
Floyd County Schools	145,005	0.446223%
Forsyth County Schools	970,127	2.985375%
Franklin County Schools	88,874	0.273491%
Gilmer County Schools	77,648	0.238945%
Glascock County Schools	18,710	0.057577%
Glynn County Schools	327,430	1.007600%
Gordon County Schools	94,487	0.290765%
Grady County Schools	89,809	0.276370%
Greene County Schools	51,453	0.158337%
Gwinnett County Schools	3,264,009	10.044336%
Habersham County Schools	188,974	0.581529%
Hall County Schools	462,144	1.422156%
Hancock County Schools	38,356	0.118033%
Haralson County Schools	45,840	0.141064%
Harris County Schools	116,004	0.356978%
Hart County Schools	103,842	0.319553%
Heard County Schools	38,356	0.118033%
Henry County Schools	501,435	1.543068%
Houston County Schools	757,766	2.331875%
Irwin County Schools	23,388	0.071971%
Jackson County Schools	206,749	0.636228%
Jasper County Schools	64,550	0.198641%
Jeff Davis County Schools	64,550	0.198641%



Employers	2020 State Pension Support Provided To The Districts	Employer Allocation Percentage
Jefferson County Schools	\$ 72,035	0.221672%
Jenkins County Schools	29,001	0.089245%
Johnson County Schools	29,001	0.089245%
Jones County Schools	118,810	0.365615%
Lamar County Schools	59,873	0.184247%
Lanier County Schools	30,872	0.095002%
Laurens County Schools	163,715	0.503800%
Lee County Schools	154,360	0.475012%
Liberty County Schools	267,557	0.823353%
Lincoln County Schools	43,033	0.132427%
Long County Schools	87,938	0.270613%
Lowndes County Schools	246,975	0.760018%
Lumpkin County Schools	102,906	0.316674%
Macon County Schools	39,292	0.120912%
Madison County Schools	98,229	0.302280%
Marion County Schools	32,743	0.100760%
Mcduffie County Schools	101,036	0.310917%
Mcintosh County Schools	33,679	0.103639%
Meriwether County Schools	98,229	0.302280%
Miller County Schools	29,001	0.089245%
Mitchell County Schools	46,776	0.143943%
Monroe County Schools	139,392	0.428950%
Montgomery County Schools	22,452	0.069093%
Morgan County Schools	63,615	0.195762%
Murray County Schools	101,036	0.310917%
Muscogee County Schools	715,668	2.202326%
Newton County Schools	443,434	1.364579%
Oconee County Schools	164,650	0.506679%
Oglethorpe County Schools	65,486	0.201520%
Paulding County Schools	524,823	1.615039%
Peach County Schools	55,195	0.169853%
Pickens County Schools	90,745	0.279249%
Pierce County Schools	65,486	0.201520%
Pike County Schools	38,356	0.118033%
Polk County Schools	103,842	0.319553%
Pulaski County Schools	37,420	0.115154%
Putnam County Schools	87,003	0.267734%
Quitman County Schools	10,291	0.031667%
Rabun County Schools	72,970	0.224551%
Randolph County Schools	18,710	0.057577%
Richmond County Schools	700,700	2.156264%
Rockdale County Schools	362,979	1.116997%



Employers	2020 State Pension Support Provided To The Districts	Employer Allocation Percentage
Schley County Schools	\$ 20,581	0.063335%
Screven County Schools	49,582	0.152579%
Seminole County Schools	39,292	0.120912%
Spalding County Schools	246,040	0.757140%
Stephens County Schools	97,293	0.299401%
Stewart County Schools	12,162	0.037425%
Sumter County Schools	124,423	0.382888%
Talbot County Schools	18,710	0.057577%
Taliaferro County Schools	6,549	0.020152%
Tattnall County Schools	72,035	0.221672%
Taylor County Schools	37,420	0.115154%
Telfair County Schools	41,163	0.126670%
Terrell County Schools	43,033	0.132427%
Thomas County Schools	131,907	0.405919%
Tift County Schools	97,293	0.299401%
Toombs County Schools	45,840	0.141064%
Towns County Schools	36,485	0.112275%
Treutlen County Schools	20,581	0.063335%
Troup County Schools	426,594	1.312759%
Turner County Schools	28,065	0.086366%
Twiggs County Schools	22,452	0.069093%
Union County Schools	74,841	0.230309%
Upson County Schools	139,392	0.428950%
Walker County Schools	252,589	0.777292%
Walton County Schools	328,365	1.010479%
Ware County Schools	159,973	0.492285%
Warren County Schools	18,710	0.057577%
Washington County Board of Education	60,808	0.187126%
Wayne County Schools	135,649	0.417434%
Webster County Schools	2,807	0.008637%
Wheeler County Schools	25,259	0.077729%
White County Board of Education	70,163	0.215914%
Whitfield County Schools	186,167	0.572893%
Wilcox County Schools	30,872	0.095002%
Wilkes County Schools	49,582	0.152579%
Wilkinson County Schools	38,356	0.118033%
Worth County Schools	59,873	0.184247%
City of Bremen Schools (Haralson)	17,775	0.054698%
City of Buford Schools (Gwinnett)	85,132	0.261976%
City of Calhoun Schools (Gordon)	29,001	0.089245%
City of Carrollton Schools (Carroll)	83,261	0.256218%
City of Cartersville Schools (Bartow)	50,518	0.155458%



Employers	2020 State Pension Support Provided To The Districts	Employer Allocation Percentage
City of Chickamauga Schools (West)	\$ 21,517	0.066214%
City of Commerce Schools (Jackson)	22,452	0.069093%
City of Dalton Schools (Whitfield)	80,454	0.247582%
City of Decatur Schools (Dekalb)	114,133	0.351221%
City of Dublin Schools (Laurens)	46,776	0.143943%
City of Gainesville Schools (Hall)	126,294	0.388646%
City of Jefferson Schools (Jackson)	46,776	0.143943%
City of Marietta Schools (Cobb)	95,422	0.293643%
City of Pelham Schools (Mitchell)	24,323	0.074850%
City of Rome Schools (Floyd)	108,519	0.333947%
City of Social Circle Schools (Walton)	25,259	0.077729%
City of Thomasville Schools (Thomas)	28,065	0.086366%
City of Trion Schools (Chattooga)	21,517	0.066214%
City of Valdosta Schools (Lowndes)	189,909	0.584408%
City of Vidalia Schools (Toomb)	40,227	0.123791%
Scintilla Charter Academy	1,871	0.005758%
School for Arts Infused Learning	3,742	0.011515%
Furlow Charter School	1,871	0.005758%
Georgia Magnet Charter School	936	0.002879%
Georgia Military College	22,452	0.069093%
Kipp Metro Atlanta Collaborative Inc	43,969	0.135306%
The Globe Academy	936	0.002879%
Total State of Georgia	\$ 32,496,000	100.000000%



SCHEDULE B GEORGIA PUBLIC SCHOOL EMPLOYEES RETIREMENT SYSTEM Schedule of Pension Amounts by Employer as of June 30, 2020

Employers	State's Proportionate Share Of the Net Pension Liability Associated with the District	Employer Pension Expense and Revenue for State Support
Atlanta Metropolitan College	\$ 5,081	\$ 1,022
Appling County Schools	335,313	67,476
Atkinson County Schools	182,898	36,805
Bacon County Schools	203,219	40,895
Baker County Schools	45,725	9,201
Baldwin County Schools	569,015	114,505
Banks County Schools	365,796	73,611
Barrow County Schools	1,376,813	277,062
Bartow County Schools	1,625,757	327,158
Ben Hill County Schools	360,715	72,588
Berrien County Schools	294,669	59,297
Bibb County Schools	3,180,389	640,003
Bleckley County Schools	411,519	82,812
Brantley County Schools	513,130	103,259
Brooks County Schools	279,427	56,230
Bryan County Schools	975,455	196,295
Bulloch County Schools	1,442,861	290,353
Burke County Schools	650,303	130,863
Butts County Schools	452,163	90,991
Calhoun County Schools	101,610	20,447
Camden County Schools	1,102,467	221,854
Candler County Schools	208,300	41,917
Carroll County Schools	1,300,607	261,727
Catoosa County Board of Education	1,564,792	314,890
Charlton County Schools	198,138	39,872
Chatham County Schools	4,679,134	941,602
Chattahoochee County Schools	91,448	18,402
Chattooga County Schools	259,106	52,141
Cherokee County Schools	3,632,552	730,994
Clarke County Schools	2,169,370	436,551
Clay County Schools	50,806	10,224
Clayton County Schools	6,055,946	1,218,663
Clinch County Schools	142,254	28,626
Cobb County Schools	11,801,984	2,374,964
Coffee County Schools	690,948	139,042
Colquitt County Schools	1,031,340	207,541
Columbia County Schools	3,246,435	653,294
Cook County Schools	381,036	76,678



Employers	State's Proportionate Share Of the Net Pension Liability Associated with the District	Employer Pension Expense and Revenue for State Support
Coweta County Schools \$	3,185,469 \$	641,025
Crawford County Schools	274,346	55,208
Crisp County Schools	533,452	107,349
Dade County Schools	248,944	50,096
Dawson County Schools	457,244	92,013
Decatur County Schools	736,671	148,243
Dekalb County Schools	10,770,643	2,167,423
Dodge County Schools	375,956	75,655
Dooly County Schools	259,106	52,141
Dougherty County Schools	1,900,105	382,366
Douglas County Schools	2,499,603	503,005
Early County Schools	254,025	51,118
Echols County Schools	71,127	14,313
Effingham County Schools	1,193,917	240,257
Elbert County Schools	345,473	69,521
Emanuel County Schools	502,969	101,215
Evans County Schools	228,623	46,007
Fannin County Schools	447,083	89,968
Fayette County Schools	1,955,989	393,612
Floyd County Schools	787,477	158,467
Forsyth County Schools	5,268,470	1,060,196
Franklin County Schools	482,646	97,125
Gilmer County Schools	421,681	84,857
Glascock County Schools	101,610	20,447
Glynn County Schools	1,778,172	357,829
Gordon County Schools	513,130	103,259
Grady County Schools	487,727	98,147
Greene County Schools	279,427	56,230
Gwinnett County Schools	17,725,840	3,567,047
Habersham County Schools	1,026,259	206,518
Hall County Schools	2,509,764	505,050
Hancock County Schools	208,300	41,917
Haralson County Schools	248,944	50,096
Harris County Schools	629,980	126,774
Hart County Schools	563,934	113,483
Heard County Schools	208,300	41,917
Henry County Schools	2,723,145	547,990
Houston County Schools	4,115,200	828,119
Irwin County Schools	127,012	25,559
Jackson County Schools	1,122,790	225,944
Jasper County Schools	350,554	70,543
Jeff Davis County Schools	350,554	70,543



Employers	State's Proportionate Share Of the Net Pension Liability Associated with the District	Employer Pension Expense and Revenue for State Support
Jefferson County Schools	\$ 391,198 \$	78,722
Jenkins County Schools	157,496	31,694
Johnson County Schools	157,496	31,694
Jones County Schools	645,223	129,841
Lamar County Schools	325,152	65,432
Lanier County Schools	167,656	33,738
Laurens County Schools	889,086	178,914
Lee County Schools	838,282	168,691
Liberty County Schools	1,453,020	292,397
Lincoln County Schools	233,702	47,029
Long County Schools	477,567	96,103
Lowndes County Schools	1,341,249	269,905
Lumpkin County Schools	558,854	112,460
Macon County Schools	213,381	42,939
Madison County Schools	533,452	107,349
Marion County Schools	177,817	35,783
Mcduffie County Schools	548,694	110,416
Mcintosh County Schools	182,898	36,805
Meriwether County Schools	533,452	107,349
Miller County Schools	157,496	31,694
Mitchell County Schools	254,025	51,118
Monroe County Schools	756,994	152,333
Montgomery County Schools	121,933	24,537
Morgan County Schools	345,473	69,521
Murray County Schools	548,694	110,416
Muscogee County Schools	3,886,577	782,112
Newton County Schools	2,408,154	484,603
Oconee County Schools	894,167	179,937
Oglethorpe County Schools	355,634	71,566
Paulding County Schools	2,850,156	573,549
Peach County Schools	299,750	60,320
Pickens County Schools	492,807	99,170
Pierce County Schools	355,634	71,566
Pike County Schools	208,300	41,917
Polk County Schools	563,934	113,483
Pulaski County Schools	203,219	40,895
Putnam County Schools	472,486	95,080
Quitman County Schools	55,885	11,246
Rabun County Schools	396,279	79,745
Randolph County Schools	101,610	20,447
Richmond County Schools	3,805,288	765,754
Rockdale County Schools	1,971,232	396,679



Employers	State's Proportionate Share Of the Net Pension Liability Associated with the District	Employer Pension Expense and Revenue for State Support
Schley County Schools \$	111,771 \$	22,492
Screven County Schools	269,265	54,185
Seminole County Schools	213,381	42, 939
Spalding County Schools	1,336,170	268,883
Stephens County Schools	528,371	106,326
Stewart County Schools	66,046	13,291
Sumter County Schools	675,705	135,975
Talbot County Schools	101,610	20,447
Taliaferro County Schools	35,563	7,157
Tattnall County Schools	391,198	78,722
Taylor County Schools	203,219	40,895
Telfair County Schools	223,542	44,984
Terrell County Schools	233,702	47,029
Thomas County Schools	716,350	144,154
Tift County Schools	528,371	106,326
Toombs County Schools	248,944	50,096
Towns County Schools	198,138	39,872
Treutlen County Schools	111,771	22,492
Troup County Schools	2,316,705	466,200
Turner County Schools	152,415	30,671
Twiggs County Schools	121,933	24,537
Union County Schools	406,440	81,790
Upson County Schools	756,994	152,333
Walker County Schools	1,371,734	276,040
Walton County Schools	1,783,253	358,851
Ware County Schools	868,765	174,825
Warren County Schools	101,610	20,447
Washington County Board of Education	330,232	66,454
Wayne County Schools	736,671	148,243
Webster County Schools	15,242	3,067
Wheeler County Schools	137,173	27,604
White County Board of Education	381,036	76,678
Whitfield County Schools	1,011,019	203,451
Wilcox County Schools	167,656	33,738
Wilkes County Schools	269,265	54,185
Wilkinson County Schools	208,300	41,917
Worth County Schools	325,152	65,432
City of Bremen Schools (Haralson)	96,529	19,425
City of Buford Schools (Gwinnett)	462,325	93,036
City of Calhoun Schools (Gordon)	157,496	31,694
City of Carrollton Schools (Carroll)	452,163	90,991
City of Cartersville Schools (Bartow)	274,346	55,208



Employers	State's Proportionate Share Of the Net Pension Liability Associated with the District	Employer Pension Expense and Revenue for State Support
City of Chickamauga Schools (West)	\$ 116,852	\$ 23,515
City of Commerce Schools (Jackson)	121,933	24,537
City of Dalton Schools (Whitfield)	436,923	87,924
City of Decatur Schools (Dekalb)	619,821	124,729
City of Dublin Schools (Laurens)	254,025	51,118
City of Gainesville Schools (Hall)	685,867	138,020
City of Jefferson Schools (Jackson)	254,025	51,118
City of Marietta Schools (Cobb)	518,209	104,281
City of Pelham Schools (Mitchell)	132,092	26,581
City of Rome Schools (Floyd)	589,336	118,595
City of Social Circle Schools (Walton)	137,173	27,604
City of Thomasville Schools (Thomas)	152,415	30,671
City of Trion Schools (Chattooga)	116,852	23,515
City of Valdosta Schools (Lowndes)	1,031,340	207,541
City of Vidalia Schools (Toomb)	218,461	43,962
Scintilla Charter Academy	10,161	2,045
School for Arts Infused Learning	20,321	4,089
Furlow Charter School	10,161	2,045
Georgia Magnet Charter School	5,081	1,022
Georgia Military College	121,933	24,537
Kipp Metro Atlanta Collaborative Inc	238,783	48,051
The Globe Academy	<u>5,081</u>	1,022
Total State of Georgia	\$ 176,476,000	\$ 35,513,000



SCHEDULE C

SUMMARY OF MAIN PLAN PROVISIONS

The Georgia Public School Employees Retirement System (PSERS) is a cost-sharing multiple employer defined benefit pension plan established by the Georgia General Assembly in 1969 for the purpose of providing retirement allowances and other benefits for public school employees who are not eligible for membership in the Teachers Retirement System of Georgia.

Normal Retirement Benefit

Eligibility Age 65 and 10 years of creditable service.

Benefit Monthly benefit is \$15.00 multiplied by years of creditable service for

members retiring on or before August 1, 2012 and \$15.50 multiplied by years of creditable service for members retiring after August 1, 2012. For members with retirement dates prior to July 1, 2013, a one-time

1.75% increase is made at time of retirement.

Early Retirement Benefit

Eligibility Age 60 and 10 years of creditable service.

Benefit Accrued benefit reduced by 6% for each year member is under age

65.

Disability Retirement Benefit

Eligibility 15 years of creditable service.

Benefit Accrued benefit payable immediately.

Deferred Vested Retirement Benefit

Eligibility 10 years of creditable service. Member contributions not withdrawn.

Benefit Accrued benefit deferred to age 65 or reduced benefit payable at age

60.

Death Benefit

Eligibility Death in service and the member is at least age 60 and has at least 10

years of creditable service.

Benefit payable to beneficiary under the joint and survivor annuity

payment option.

If the member dies in service under age 60 or with less than 10 years of creditable service his beneficiary receives a refund of the member's

accumulated contributions.



Termination Benefit

Eligibility Less than 10 years of creditable service.

Benefit Return of the member's accumulated contributions.

Payment Options (1) Life annuity. Guaranteed payment of accumulated member

contributions.

(2) Joint and survivorship annuity.

(3) Certain and life annuity.

Post-Retirement Adjustments The Board may from time to time grant a Cost of Living Adjustment.

Contributions

By Members who joined the System prior to July 1, 2012 contribute \$4 per

month. Members joining the System on or after July 1, 2012 contribute

\$10 per month.

By Employers Employer contributions are actuarially determined and approved and

certified by the Board.



SCHEDULE D

STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS

Actuarial assumptions and methods adopted by the Board December 17, 2015. Valuation interest rate adopted by the Board March 15, 2018.

VALUATION INTEREST RATE: 7.30% per annum, compounded annually, net of investment expenses, composed of a 2.75% inflation assumption and a 4.55% real rate of investment return assumption.

SEPARATIONS BEFORE SERVICE RETIREMENT: Representative values of the assumed annual rates of separation before service retirement are as follows:

		al Rates of Withd Years of Service	
Age	<u>0-4</u>	<u>5-9</u>	10 & Over
		<u>Males</u>	
20	37.0%		
25	28.0	17.0%	
30	25.0	15.0	12.0%
35	23.0	13.0	9.0
40	21.0	12.0	7.5
45	19.0	11.0	6.5
50	17.0	9.0	6.5
55	15.0	9.0	6.0
60	12.0	7.5	
		<u>Females</u>	
20	32.0%		
25	28.0	18.0%	
30	23.0	15.0	10.0%
35	19.0	13.0	10.0
40	17.0	12.0	8.0
45	15.5	10.0	7.0
50	14.0	8.5	6.0
55	12.0	8.0	5.5
60	11.0	7.5	

Age	Dea	Disability	
	<u>Males</u>	<u>Females</u>	
20	0.0320%	0.0177%	0.0000%
25	0.0349	0.0192	0.0000
30	0.0412	0.0245	0.0000
35	0.0717	0.0441	0.0025
40	0.1001	0.0655	0.0110
45	0.1399	0.1043	0.0370
50	0.1983	0.1555	0.0865
55	0.2810	0.2228	0.2250
60	0.4092	0.3058	0.3500
65	0.5600	0.4304	0.0000



RETIREMENT:

Age	Annual Rate	Age	Annual Rate
60	13.0%	68	23.0%
61	13.0	69	26.0
62	22.0	70	27.0
63	17.5	71	27.0
64	17.0	72	27.0
65	28.0	73	27.0
66	27.0	74	27.0
67	23.0	75 & Over	100.0

DEATHS AFTER RETIREMENT: The RP-2000 Blue-Collar Mortality Table projected to 2025 with projection scale BB (set forward 3 years for males and 2 years for females) is used for the period after service retirement and for beneficiaries of deceased members. The RP-2000 Disabled Mortality Table projected to 2025 with projection scale BB (set forward 5 years for both males and females) is used for the period after disability retirement. There is a margin for future mortality improvement in the tables used by the System. Based on the results of the most recent experience study adopted by the Board on December 17, 2015, the numbers of expected future deaths are 9-11% less than the actual number of deaths that occurred during the study period for healthy retirees and 9-11% less than expected under the selected table for disabled retirees. Representative values of the assumed annual rates of mortality for service retirements and beneficiaries are as follows:

Age	Men	Women	Age	Men	Women
40	0.1476%	0.0995%	65	1.4859%	0.9774%
45	0.1974	0.1484	70	2.4262	1.7054
50	0.3057	0.2084	75	3.9830	2.7288
55	0.5644	0.2844	80	6.5238	4.4542
60	0.9575	0.5014	85	10.9551	7.5727

ADMINISTRATIVE EXPENSES: Budgeted administrative expenses are added to the normal cost contribution.

AMORTIZATION METHOD: Level dollar amortization.

ASSET METHOD: Market value.

VALUATION METHOD: Entry age actuarial cost method.

COST-OF-LIVING ADJUSTMENT (COLA): 1.5% semi-annually.

TERMINATING VESTED MEMBERS: 50% of active vested members who terminate are assumed to elect a refund in lieu of a benefit. Benefits are assumed to begin at age 65.



SCHEDULE E

FUNDING POLICY OF THE PSERS BOARD OF TRUSTEES

The purpose of this Funding Policy is to state the overall objectives for the Public School Employees Retirement System (System), the benchmarks that will be used to measure progress in achieving those goals, and the methods and assumptions that will be employed to develop the benchmarks. It is the intent of the PSERS Board of Trustees that the Funding Policy outlined herein will remain unchanged until the objectives below are met.

I. Funding Objectives

The goal in requiring employer and member contributions to the System is to accumulate sufficient assets during a member's employment to fully finance the benefits the member is expected to receive throughout retirement. In meeting this objective, the System will strive to meet the following funding objectives:

- To develop a pattern of contributions expressed as both a total dollar amount and as a dollar amount per active member and measured by valuations prepared in accordance with applicable State laws and the principles of practice prescribed by the Actuarial Standards Board.
- To maintain an increasing funded ratio (ratio of actuarial value of assets to actuarial accrued liabilities) that
 reflects a trend of improved actuarial condition. The long-term objective is to obtain a 100% funded ratio
 over a reasonable period of future years.
- To maintain adequate asset levels to finance the benefits promised to members and monitor the future demand for liquidity.
- To promote intergenerational equity for taxpayers with respect to contributions required for the benefits provided by the System.

II. Measures of Funding Progress

To track progress in achieving the System's funding objectives, the following measures will be determined annually as of the actuarial valuation date (with due recognition that a single year's results may not be indicative of long-term trends):

- **Funded ratio** The funded ratio, defined as the actuarial value of assets divided by the actuarial accrued liability, should increase over time, before adjustments for changes in benefits, actuarial methods, and/or actuarial adjustments. The target funded ratio will be 100 percent within 25 years of the valuation date for the first valuation conducted following the adoption of this Policy (i.e. the June 30, 2013 valuation date).
- Unfunded Actuarial Accrued Liability (UAAL)
 - Transitional UAAL The UAAL established as of the initial valuation date for which this funding policy is adopted shall be known as the Transitional UAAL.
 - New Incremental UAAL Each subsequent valuation will produce a New Incremental UAAL consisting of all benefit changes, assumption and method changes and experience gains and/or losses that have occurred since the previous valuations.

UAAL Amortization Period

- The transitional UAAL will be amortized over a closed 25 year period beginning on the initial valuation date for which this funding policy is adopted.
- Each New Incremental UAAL shall be amortized over a closed 25 year period beginning with the year it is incurred.



• Employer Contributions

- Employer Normal Contributions the contribution determined as of the valuation date each year
 to fund the employer portion of the annual normal cost of the System based on the assumptions
 and methods adopted by the Board.
- o In each valuation subsequent to the adoption of this funding policy the required employer contributions will be determined as the summation of the employer Normal Contribution, a contribution for administrative expenses, the amortization cost for the Transitional UAAL and the individual amortization cost for each of the New Incremental UAAL bases.
- Employer Contributions will be expressed as both a total dollar amount and as a dollar amount per active member. In no event shall the employer contributions be less than \$0.
- The valuation methodology, including the amortization of the Unfunded Actuarial Accrued Liability (UAAL), would be expected to maintain reasonably stable contributions as a dollar per active member.

III. Methods and Assumptions

The annual actuarial valuations providing the measures to assess funding progress will utilize the actuarial methods and assumptions last adopted by the Board based upon the advice and recommendations of the actuary. These include the following primary methods and assumptions:

- The actuarial cost method used to develop the benchmarks will be the Entry Age Normal (EAN) actuarial
 cost method.
- The long-term annual investment rate of return assumption will be:
 - Effective with the June 30, 2013 valuation date, 7.50% net of investment expenses.
 - Effective with the June 30, 2017 valuation date, reduced by 0.10% (10 basis points) from the immediate prior actuarial valuation, as long as the following conditions are met:
 - The actual rate of return for the fiscal year ending with the current valuation date exceeds the assumed rate of return from the immediate prior actuarial valuation, and
 - The assumed rate of return does not decrease below 7.00% net of investment expenses.
- The actuarial value of assets will be determined by recognizing the annual differences between actual and expected market value of assets over a five-year period, beginning with the June 30, 2013 actuarial valuation.
 - Prior to the June 30, 2013 valuation, the differences between actual and expected market value of assets were recognized over a seven-year period. For the June 30, 2013 valuation, all then-current deferred gains and losses will be recognized immediately, and the initial new five-year period will begin immediately thereafter.

The employer contributions determined in an annual actuarial valuation will be at least sufficient to satisfy the annual normal cost of the System and amortize the UAAL as a level dollar amount over a period not to exceed 25 years (for the UAAL as of the June 30, 2013 valuation date, and for each successive year of gains and losses incurred in years following the June 30, 2013 valuation date). However in no event shall the employer contributions be less than \$0.

The actuary shall conduct an investigation into the System's experience at least every five years and utilize the results of the investigation to form the basis for recommended assumptions and methods. Any changes to the recommended assumptions and methods that are approved by the Board will be reflected in this Policy.



IV. Funding Policy Progress

The Board will periodically have actuarial projections of the valuation results performed to assess the current and expected future progress towards the overall funding goals of the System. These periodic projections will provide the expected valuation results over at least a 30-year period. The projected measures of funding progress and the recent historical trend provided in valuations will provide important information for the Board's assessment of the System's funding progress.

Adopted: March 15, 2018