












# Employees' Retirement System of Rhode Island -- Retirement Board Meeting

<b>Schedule</b>	Monday, December 18, 2023 9:00 AM — 11:30 AM EST
<b>Venue</b>	2nd Floor Conference Room, 50 Service Avenue, Warwick, RI
<b>Description</b>	ERSRI Retirement Board Meeting.
<b>Notes for Participants</b>	If you are unable to attend the December meeting, please contact Frank at 462-7610 or Roxanne at 462-7608.
<b>Organizer</b>	Frank J. Karpinski



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For Vote - Presented by Dr. Laura Shawhughes	

























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10.2. State Investment Commission (SIC)

For Reference

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1295

For Reference

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Posted Agenda

**RETIREMENT BOARD MEETING AGENDA**

**Monday, December 18, 2023**

**9:00 a.m.**

**2nd Floor Conference Room, 50 Service Avenue, Warwick, RI  
Streamed via Zoom Webinar - Dial-in: +1 929 205 6099 (US)**

**Access Code: 850 0607 8523**

**Link: <https://treasury-ri-gov.zoom.us/j/85006078523>**

- I. Chairperson Call to Order
- II. Approval of the Draft Meeting Minutes of the November 15, 2023, Retirement Board Meeting
- III. Chairperson's Report
- IV. Executive Director's Report
  - Presentation and Consideration of the Actuarial Valuation as of June 30, 2023 by Gabriel, Roeder, Smith and Company (GRS) for the ERS (State and Teachers), MERS Plans (Municipal Employees), State Police (SPRBT), State Police Retirement Fund Trust (SPRFT), Judges (JRBT), Judicial Retirement Fund Trust (RIJRFT) and the Teacher Survivor Benefits Plan (TSBP)
  - Administration, Audit, Risk & Compliance Committee Recommendation on Actuarial Valuations as of June 30, 2023
  - Discuss and Distribute Evaluation Package for the Executive Director Evaluation
- V. Approval of the November 2023 Pensions as Presented by ERSRI
- VI. Legal Counsel Report
- VII. Committee Reports

*Disability Committee – (See Attachment I)*  
*\*Discussion and Consideration of the Disability Application of Robert Paul, Jr.*
- VIII. Adjournment

*\* Board members may seek to convene in Executive Session pursuant to Rhode Island General Laws §42-46-5 (a) (1) to discuss the disability application of Robert Paul, Jr.*

## Attachment I

### Disability Applications and Hearings on Friday, December 1, 2023

- \* Cathleen Hickey
- \* Krislyn Mattschek
- \* Shawn Lindell
- \* Shawn Richards
- \* Thomas Fagan
- \* Timothy Gleason
- \* Kim Alix
- \* Joanne Schondek
- \* Doris White
  
- \*\* Meredith Miller

\* Votes by the full Board on these applications will be limited to approvals made by the Disability Committee at their December 1, 2023 meeting.

\*\* Votes by the full Board on these denied applications, and on decisions reversing prior denials are subject to approval of the decisions by the Disability Committee.





# 1. Chairperson Call to Order

Roll Call of Members

Presented by Treasurer James A. Diossa



## 2. Approval of the Draft Meeting Minutes of the November 15, 2023 Retirement Board Meeting

For Vote

Presented by Treasurer James A. Diossa

**Employees' Retirement Board of Rhode Island  
Meeting Minutes**

**Wednesday, November 15, 2023 – 9:00 a.m.**

**2<sup>nd</sup> Floor Conference Room, 50 Service Avenue, Warwick, RI  
Streamed via Zoom Webinar – Dial-in +1 929 205 6099 (US)**

**Access Code: 873 6440 4993**

**Link: <https://treasury-ri-gov.zoom.us/j/87364404993>**

**I. Call to Order**

The Meeting of the Retirement Board was called to order at 9:05 a.m., on Wednesday, November 15, 2023.

The Executive Director was asked to call the roll, and the following members were present: General Treasurer James A. Diossa; John P. Maguire, Vice Chair; Roger P. Boudreau; Mark A. Carruolo; Paul L. Dion, Ph.D.; Matthew K. Howard; Brenna McCabe; Andrew E. Nota; Raymond J. Pouliot; Jean Rondeau; Michael J. Twohey and Lisa A. Whiting.

Members absent: Joseph Codega, Jr.; Claire M. Newell and Dr. Laura Shawhughes.

Also in attendance: Frank J. Karpinski, ERSRI Executive Director; Attorney Michael P. Robinson, Board Counsel.

A quorum was recognized.

**II. Approval of Minutes**

On a motion duly made by John P. Maguire and seconded by Brenna McCabe, it was unanimously:

**VOTED: To approve the draft meeting minutes of the October 18, 2023 Retirement Board meeting.**

**III. Chairperson's Report**

General Treasurer James A. Diossa did not have a formal report.

**IV. Executive Director's Report**

Executive Director Karpinski provided the Board with an update on the Actuarial Audit RFP, noting that questions and requests for clarification were due back by November 3<sup>rd</sup>. He noted that six (6) vendors submitted questions. Director Karpinski said that vendor proposals are due by November 22, 2023. Once the proposals are submitted to the Administrative Committee, they will be evaluated and interviews will be conducted. Thereafter a recommendation will be made to the Board as to the bidder to be selected, and the scope of the audit to be performed. The Audit is expected to begin in January of 2024 and to be completed by the end of July 2024.

It was further noted that Elections Committee Chairman Jean Rondeau will update the Board later in the meeting with regard to the Board elections.

## V. Approval of the October 2023 Pensions as Presented by ERSRI

On a motion duly made by Roger P. Boudreau and seconded by John P. Maguire, it was unanimously:

**VOTED: To approve the October 2023 pensions as presented by ERSRI.**

## VI. Legal Counsel Report

Attorney Robinson provided the Board with a copy of new legislation codified at R.I.G.L. §45-19-16.1, which he indicated creates a rebuttable presumption that a disability caused by heart disease, stroke or hypertension in a firefighter was caused by an injury in the line of duty.

Attorney Robinson also updated the Board with regard to a new disability appeal filed in the Workers' Compensation Court in the matter of *Lamont v. Municipal Employees' Retirement System*, C.A. No. 202306589.

## VII. Committee Reports

### Disability Committee

The Disability Committee recommended the following actions on disability applications as a result of its November 3, 2023 meeting for approval by the full Board:

Name	Membership Group	Type	Action
1. Cynthia Clark	Teacher	Accidental	Approved at 50%
2. Chris Tardie	Municipal	Accidental	Approved
3. Angel Winpenny	Teacher	Accidental	Approved at 50%
4. Lori Facha	Teacher	Accidental	Approved at 50%
5. Stephen Mello	Municipal	Ordinary	Approved
6. Robert Paul	Municipal	Accidental	Denied

John P. Maguire requested that item No. 6 be considered separately.

On a motion duly made by Roger P. Boudreau and seconded by Andrew E. Nota, it was unanimously:

**VOTED: To approve the Disability Committee's recommendations as a result of its November 3, 2023 meeting on item Nos. 1-5.**

Prior to the vote being taken, Paul L. Dion, Ph.D. asked a question regarding the circumstances of the alleged accident at issue in application No. 3. Attorney Robinson addressed the nature of the accident at issue.

With regard to item No. 6, John Maguire inquired if this was the first case to come before the Board since R.I.G.L. §45-19-16.1 was enacted. Attorney Robinson was asked to clarify the nature of the presumption in the new legislation, the relevant standard of proof, and the mechanics of the statute’s operation.

A discussion amongst board members took place with regard to application No. 6, as impacted by R.I.G.L. §45-19-16.1, and with respect to the Committee’s recommendation in light of the new law.

On a motion duly made by Michael J. Twohey and seconded by Andrew E. Nota, it was unanimously:

**VOTED: To postpone consideration of the Disability Committee’s recommendation as a result of its November 3, 2023 meeting on item No. 6 until a future meeting, in order for the Board to be able to consider the full administrative record.**

**Elections Committee**

Jean Rondeau provided an update on the Board election. He indicated that the Committee met on October 26, 2023, to review and validate the candidate’s seeking election to the Board. He said there are sixteen candidates in total for the various open seats on the Board.

Executive Director Karpinski then administered the lottery for determination of the following ballot order of the individual’s seeking election to the Board for active state employees, teachers, municipal employees and retiree representatives.

Active State Employee Representative

Ballot Order	Name	
5	Paul L. Dion, Ph. D.	Active state employee of the State Department of Administration
4	Matthew Gunnip	Active state employee of the State Department of Children, Youth & Families
1	Michael R. Lanowy	Active member of the Rhode Island Department of Corrections
2	Robert Lantagne	Active member of the Rhode Island Department of Corrections
3	Yan Li, P.E.	Active state employee of the State Department of Environmental Management
6	Claire M. Newell	Active state employee of the State Department of Education

Active Teacher Representative

<b>Ballot Order</b>	<b>Name</b>	
<b>1</b>	Michael J. Cicerone, Jr.	Active Teacher, North Providence School Department
<b>2</b>	Cory Milone	Active Teacher, Cumberland School Department
<b>3</b>	Michael J. Twohey	State-Wide officer NEARI - Retired Teacher

Active Municipal Employee Member Representative

<b>Ballot Order</b>	<b>Name</b>	
<b>1</b>	Matthew K. Howard	Active Municipal Employee of the Cranston Fire Department
<b>2</b>	Melissa Leca	Active Municipal Employee of the City of Pawtucket

Retiree Member Representative

<b>Ballot Order</b>	<b>Name</b>	
<b>4</b>	Roger P. Boudreau	Retired – Teacher Lincoln School Department
<b>1</b>	A.G. "Aldo" Palazzo	Retired – Teacher Warwick School Department
<b>3</b>	Sandra M. Paquette	Retired – Teacher Cranston School Department
<b>2</b>	Raymond J. Pouliot	Retired – East Greenwich School Department

On a motion duly made by Paul L. Dion, Ph.D. and seconded by Roger P. Boudreau, it was unanimously:

**VOTED: To accept the Elections Committee’s report as presented and the results of the lottery.**

**VIII. Adjournment**

There being no other business to come before the Board, on a motion by Roger P. Boudreau and seconded by John P. Maguire, it was unanimously voted to adjourn the meeting at 10:55 a.m.

Respectfully submitted,

**Frank J. Karpinski**  
Executive Director



### 3. Chairperson's Report

For Report

Presented by Treasurer James A. Diossa



## 4. Executive Directors Report

For Report

Presented by Frank J. Karpinski





4.1. Presentation and Consideration of the Actuarial Valuation as of June 30, 2023 by Gabriel, Roeder, Smith and Company (GRS) for the ERS (State and Teachers), MERS Plans (Municipal Employees), State Police (SPRBT), State Police Retirement Fund Trust (SPRFT), Judges (JRBT), Judicial Retirement Fund Trust (RIJRFT) and the Teacher Survivor Benefits Plan (TSBP)

For Vote



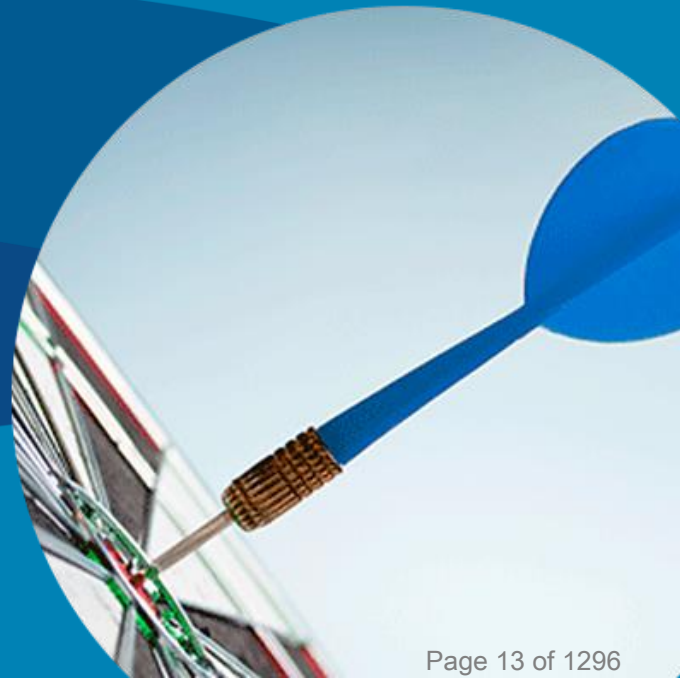
# EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND

**Actuarial Valuations as of June 30, 2023**

Joe Newton

Paul Wood

December 18, 2023



# Actuarial Valuations as of June 30, 2023

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- Purposes:
  - Measure the System's liabilities
  - Determine employer contribution rates for FY 2026
    - FY 2024 set by June 30, 2021 valuation
    - FY 2025 set by June 30, 2022 valuation
  - Provide other information for reporting
  - GASB #67/68 & ACFR
  - Explain changes in actuarial condition of ERSRI
  - Track changes over time



# Actuarial Valuations as of June 30, 2023

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- Prepared as of June 30, 2023, using
  - Member data provided by ERSRI Staff
  - Audited financial data
  - Current benefit and contribution provisions
  - Actuarial assumptions and methods approved by the Retirement Board in May 2023
- Plans covered today:
  - ERSRI (State Employees and Teachers)
  - MERS (General Employees and Police/Fire, Legacy Units)
  - JRBT (Judges)
  - SPRBT (State Police)
  - Teacher Survivor Benefits Plan (TSBP)
  - SPRFT (Formerly Paygo State Police)
  - RIJRFT (Contributing, Paygo Judges)



# Changes from 2023 Experience Study

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- In general, the assumption set was found to be reasonable.
  - The net impact is minor to the current contribution levels
  - But, the proposed combination of assumptions lowered the projected growth in the dollar amount of contributions
- The meaningful recommendations were:
  - Lower projected salary increases for most groups
  - Lower projected overall payroll growth for most groups
  - Increase rates of turnover for most groups

# STATE AND TEACHERS PLAN



# Actuarial Valuations as of June 30, 2023

## *Key Changes and Issues*

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- 8.4% market investment returns exceed the assumed 7%
  - Smoothing mechanism was still deferring some of the positive 2021 performance as well
  - Total impact was a net decrease in the UAAL from investment performance
- Aggregate UAAL decreased for the fifth year in a row!
  - this year decreased from \$4.77b to \$4.50b
- Aggregate funded ratio increased from 60.4% to 62.8%
- FY2026 projected employer contribution amounts are \$5m lower than previous projections
  - Now projected at \$548m vs previously projected \$553m



# Actuarial Valuations as of June 30, 2023

## *Financial Results and COLA Calculations*

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- 2024 COLA is 2.84%
  - 50% from change in CPI and 50% from investment performance
  - \$29,776 limit will also grow by 2.84% (\$30,622 in 2025)
- H5200Aaa Article 12: beginning in 2024 the benefit adjustments are reduced to twenty-five percent (25%) of the benefit adjustment payable each year while the plans remain less than 80% funded instead of being fully suspended.
  - Members in units less than 80% funded will received 25% of the COLA, or 0.71% in 2024 (on the first \$35,731 of annual benefit if retired before 6/30/2015)
- The probabilities continue to increase that COLAs are fully restored with or prior to the June 30, 2030 valuation
  - Calendar Year 2031 COLA
  - 54% estimated probability 80% funded as of June 30, 2030
  - 64% estimated probability 80% funded as of June 30, 2031

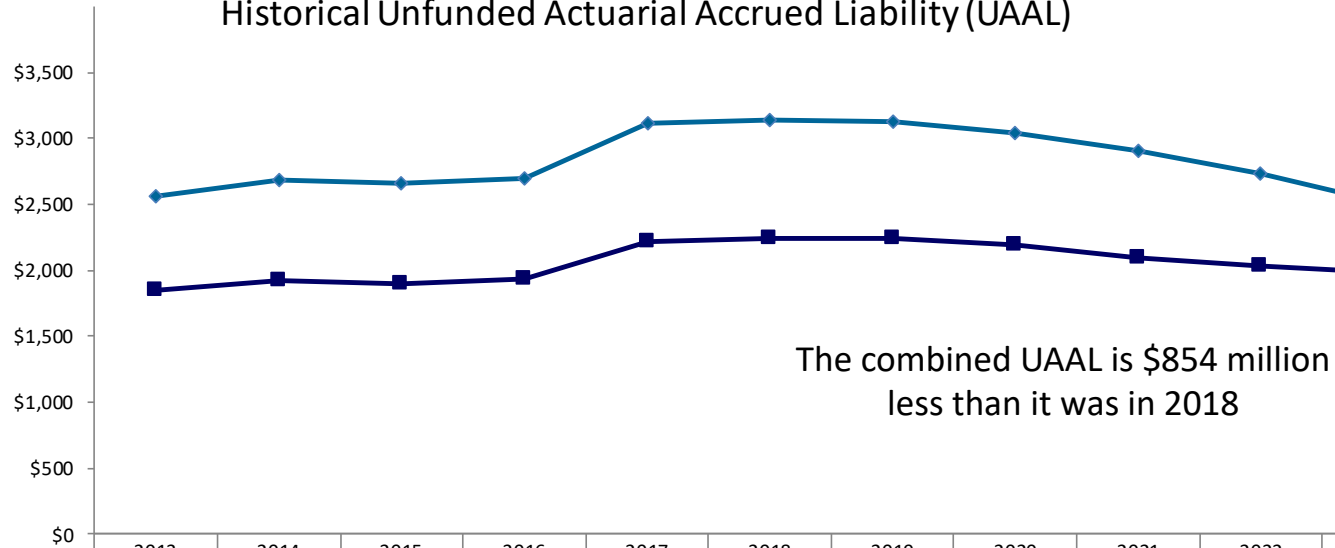




The UAAL for both groups continues to decrease. FY24 will be the first year the full contributions from the 2017 assumption changes will be made, so the decline should begin to accelerate

\$ in millions

Historical Unfunded Actuarial Accrued Liability (UAAL)



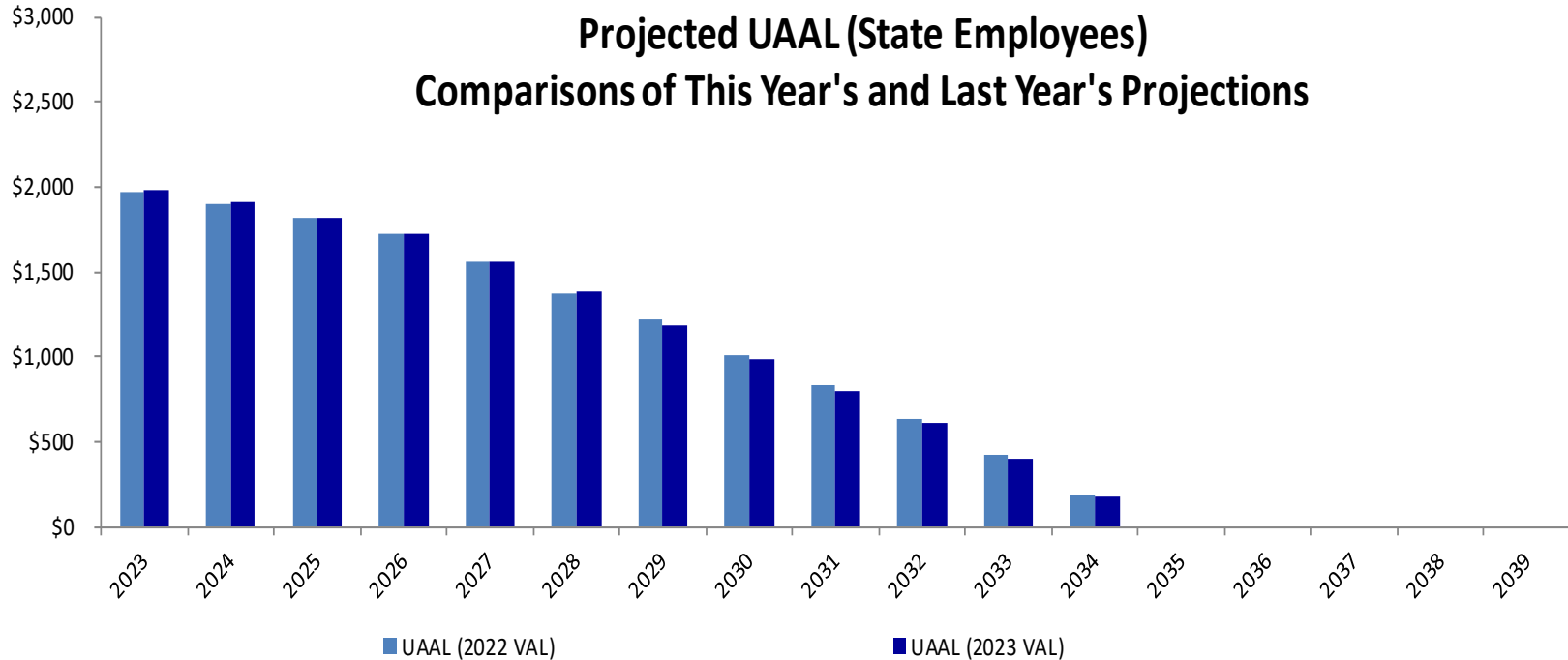
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
State Employees	\$1,855	\$1,920	\$1,895	\$1,936	\$2,213	\$2,239	\$2,244	\$2,196	\$2,100	\$2,032	\$1,984
Teachers	\$2,568	\$2,682	\$2,655	\$2,694	\$3,116	\$3,136	\$3,128	\$3,046	\$2,909	\$2,735	\$2,511

Investment Return Assumption lowered from 7.5% to 7.0% in 2017



# The projections of the UAAL remain consistent with previous projections

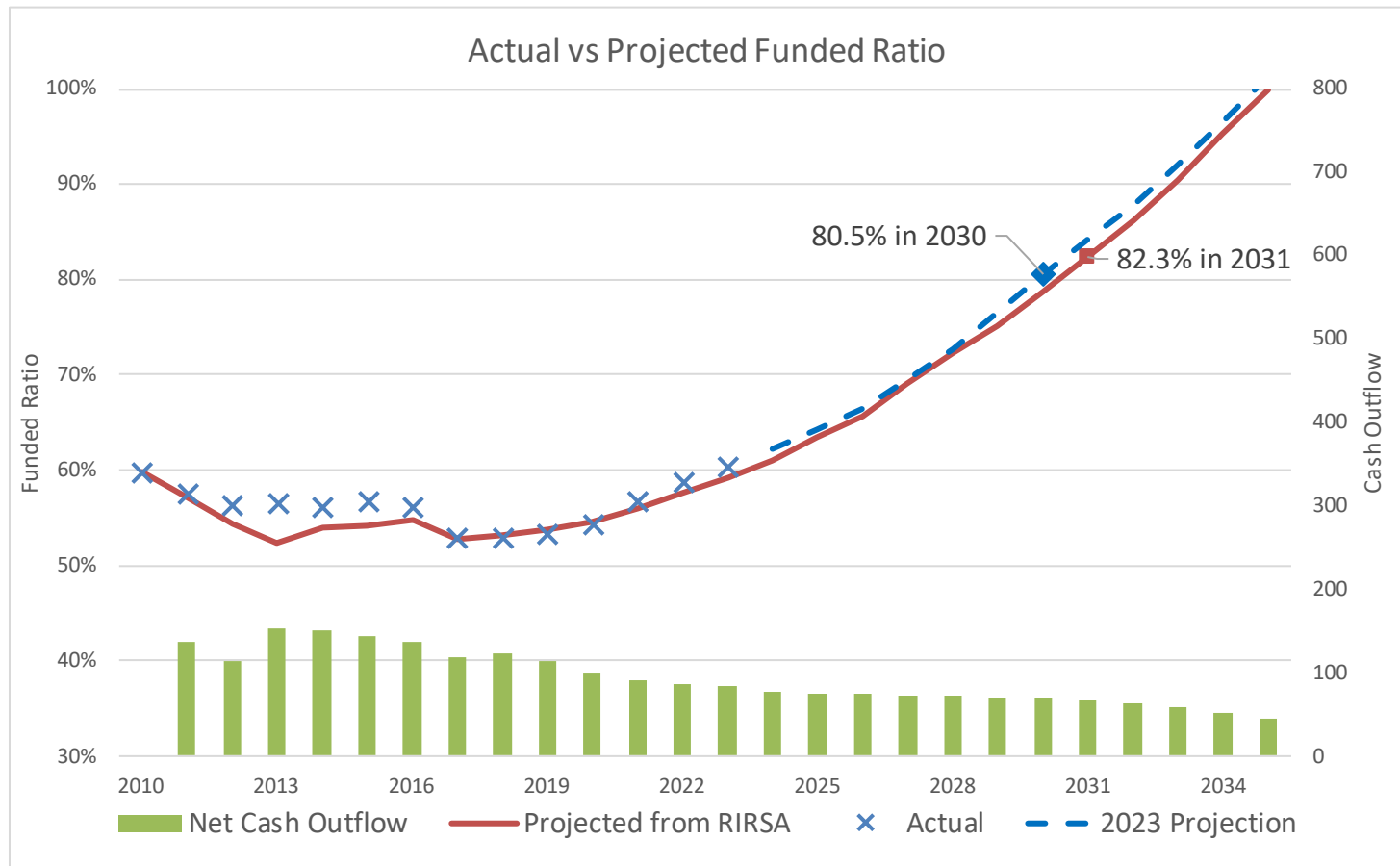
\$ in Millions



These projections assume all assumptions are met  
 The actual benefit adjustments are determined based on the funded ratio for the plan at a given valuation date with the corresponding gains or losses



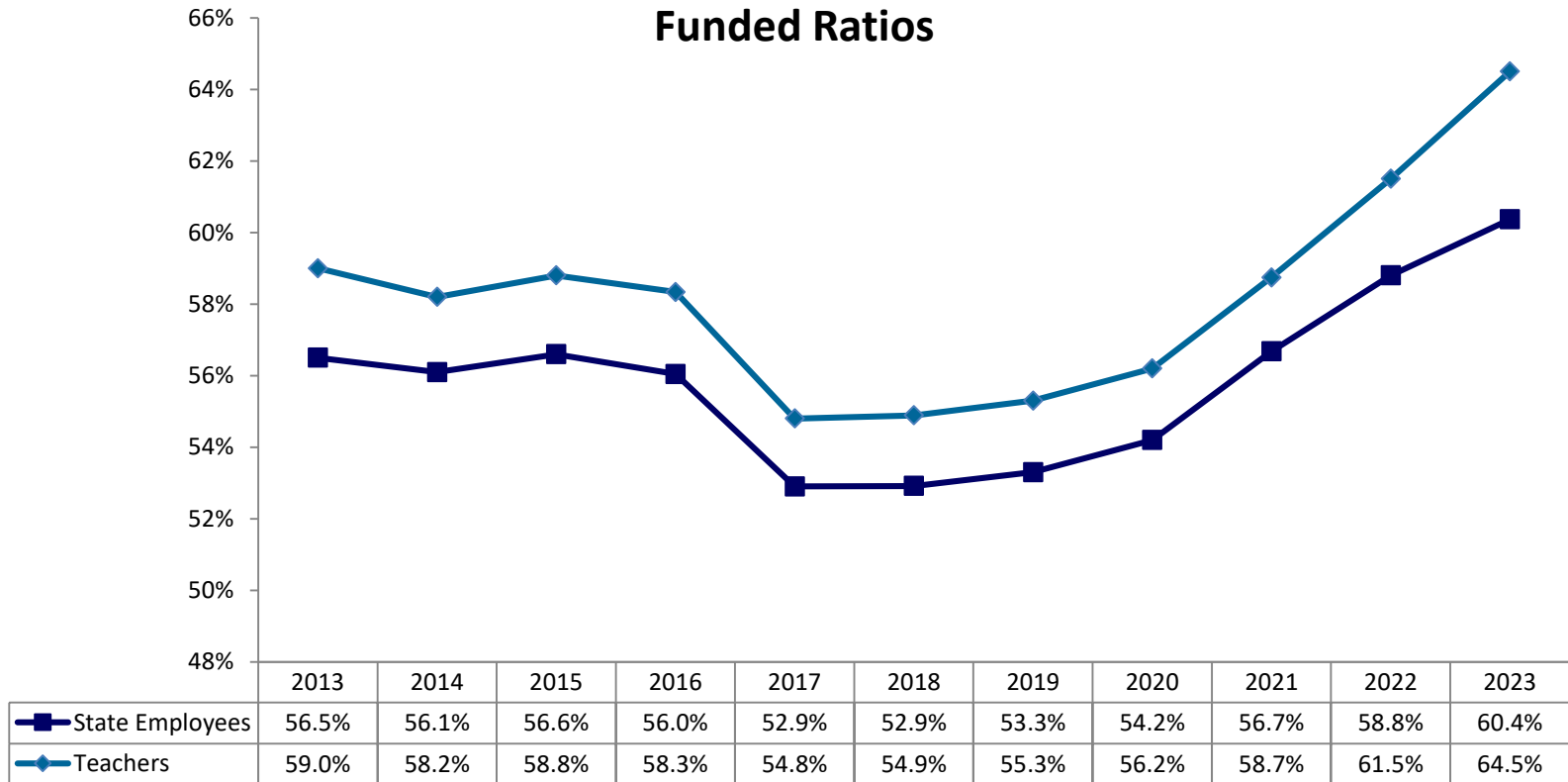
# The funded ratio continues to track well with the Original RIRSA Projections (State Employees shown below)



Original Projections from the RIRSA Impact Statement, adjusted for Mediation changes in 2016 (-1.4%) and change to investment return assumption in 2017 (-2.7%)



When zoomed in, the improvement becomes clearer. Teachers funded ratio has increased 10% since 2017, with State increasing by 8%



# Actuarial Valuations as of June 30, 2023

## *Employer Contribution Rates – State Employees*

Item	2022 Actual Results	2023 Actual Results
Total Normal Cost %	7.87%	7.63%
Member Contribution	<u>4.21%</u>	<u>4.24%</u>
Employer Normal Cost%	3.66%	3.39%
Amortization rate	<u>24.88%</u>	<u>25.31%</u>
Total Employer Contribution	28.54%	28.70%
FY ending June 30,	2025	2026
Payroll Projected 2 Years	\$834.0	\$867.0
Projected Contribution	\$238.0	\$248.8

Above dollar amounts in millions



# Actuarial Valuations as of June 30, 2022

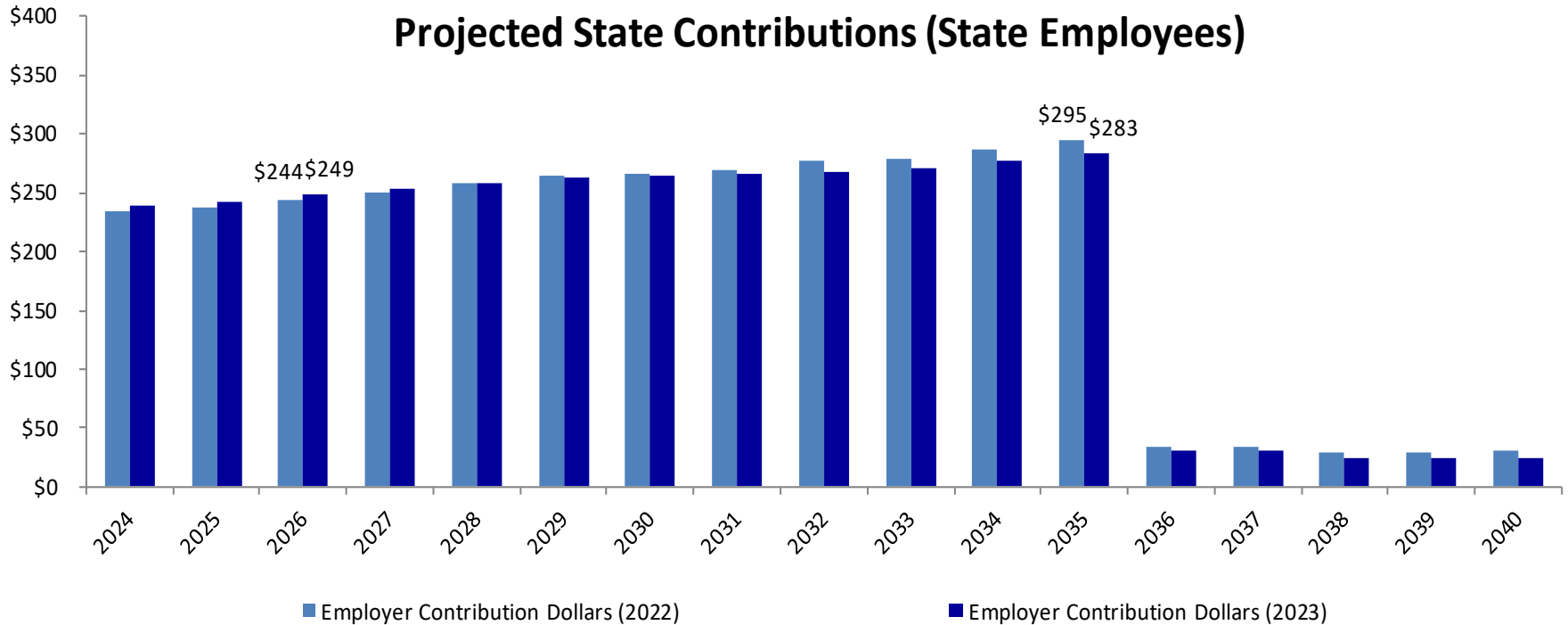
## Employer Contribution Rates – Teachers

Item	2022 Actual Results	2023 Actual Results
Total Normal Cost %	7.31%	7.01%
Member Contribution	<u>3.75%</u>	<u>3.75%</u>
Employer Normal Cost%	3.56%	3.26%
Amortization rate	<u>21.56%</u>	<u>21.09%</u>
Total Employer Contribution	25.12%	24.35%
FY ending June 30,	2025	2026
Payroll Projected 2 Years	\$1,204.6	\$1,229.8
Projected Contribution	\$302.6	\$299.5

Above dollar amounts in millions



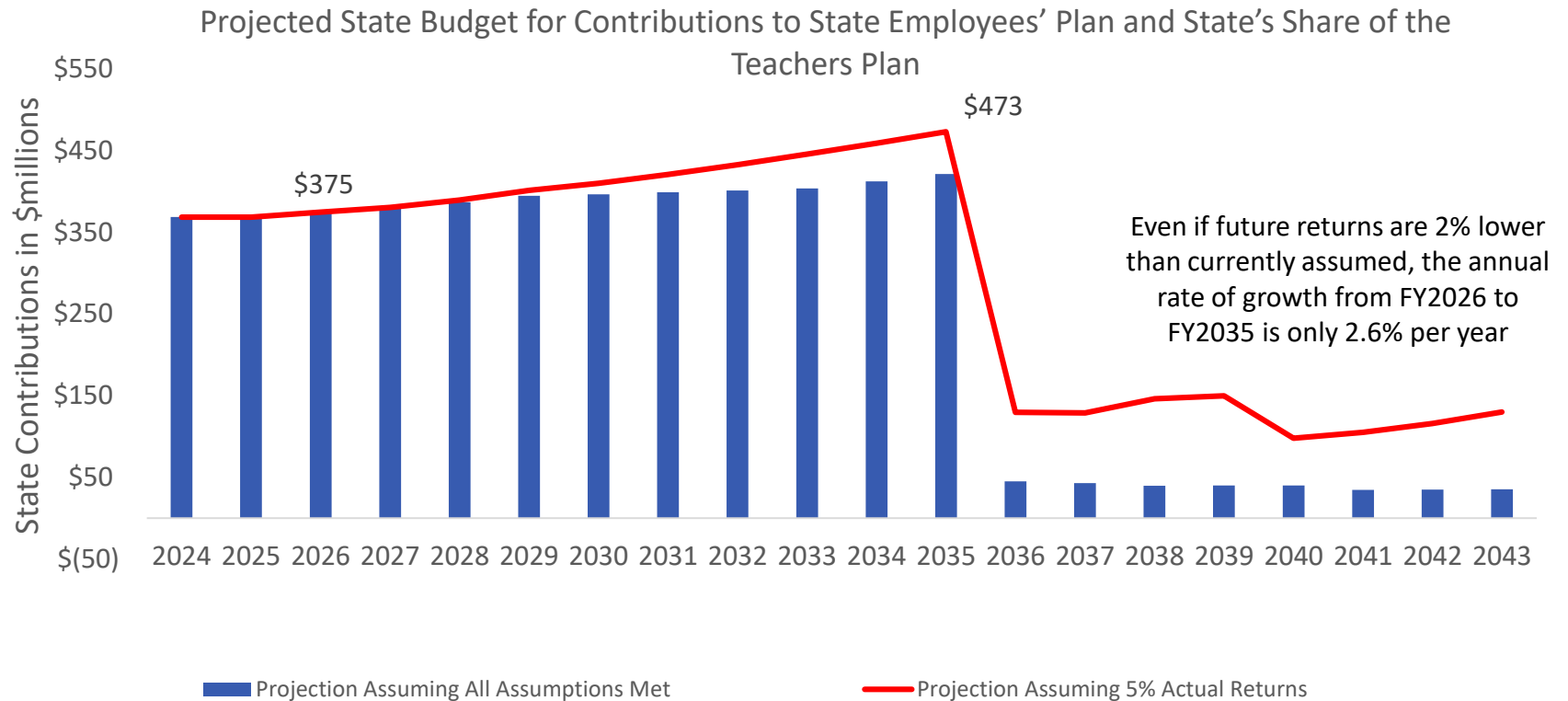
*The projected State contribution for FY2026 is slightly higher due to payroll being higher, but the projected growth is lower over the remaining amortization period due to the lowering of the payroll growth assumption used for setting the amortization schedules from 3.0% to 2.5% in the experience study*



\$ in Millions



The plan continues to be expected to perform well under stressed scenarios. The scenario below assumes 5% annual returns. As shown, the total budget outlay for the State to State Employees and Teachers only grows at 2.6% per year in this scenario, and the contributions still drop significantly in FY2036.





# The probability metrics continue to improve as well, especially the probability of the UAAL declining

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## Monte Carlo Simulation: Prospective Probabilities of Certain Events

	From 2020	From 2021	From 2022	From 2023
Probability UAAL is smaller in 5 Years	79.4%	82.3%	87.9%	91.9%
Probability 80% Funded Ratio by 2030	49.1%	51.4%	52.4%	54.1%
Probability 100% Funded Ratio by 2040	67.4%	68.0%	68.3%	68.2%

All simulations based on a 7% mean and 11.6% standard deviation, projected based on the actuarial value of assets from the valuation date



# Low-Default Risk Obligation Measure

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- New Actuarial Standard of Practice Requirement
- Lump sum cost to a plan to purchase low-default-risk fixed income securities whose resulting cash flows essentially replicate in timing and amount the benefits
  - 4.90% discount rate
- Difference = Cost to De-risk

	<b>State Employees</b>	<b>Teachers</b>
LDRM measure of benefits earned as of the measurement date:	\$5,887 million	\$8,405 million
Valuation liability (IEAN) at 7% on measurement date:	<u>5,005 million</u>	<u>7,073 million</u>
Cost to mitigate investment risk in the System's portfolio:	\$ 882 million	\$1,332 million

- ERSRI benefit structure has risk sharing provisions that are contingent on the investment returns
- If these provisions were not contingent on the investment performance, it would have increased the LDRM by another \$286 million for State Employees and \$420 for Teachers

# Summary – ERSRI

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- 2026 employer contribution dollars are projected slightly lower than previously expected between the 2 plans
- The UAAL should continue to decline year over year going forward
- The contribution rates should slowly decline year over year, but will be based on how active headcount and payroll grows

# MERS PLAN



# Actuarial Valuations as of June 30, 2023

## *Benefit Changes – MERS*

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- Five new Legacy Units
  - Town of West Warwick (Legacy)
  - West Warwick School NC (Legacy)
  - Town of West Warwick Library (Legacy)
  - West Warwick Police Dept (Legacy)
  - West Warwick Fire Dept (Legacy)
- No closed Units
- No merged Units
- No new COLA elections
- Full results can be found in the report



# Actuarial Valuations as of June 30, 2023

## *Actuarial Results – MERS (Excluding Legacy Units)*

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- For MERS, the unfunded actuarial accrued liability (UAAL) excluding the Legacy Units is \$286 million, compared to \$298 million last year
- The aggregate funded ratio (actuarial assets divided by actuarial accrued liability) for all units combined improved to 87.8%
- Results for individual units are shown in Table 7 of the actuarial valuation report
  - 39 units have funded ratios over 100%, 36 last year
  - 100 units have funded ratios over 80%, 92 last year
- COLA Changes
  - One Unit dropped below 80% funded (West Warwick Fire Dept)
  - Seven Units moved from under 80% funded to over 80% funded



# Actuarial Valuations as of June 30, 2023

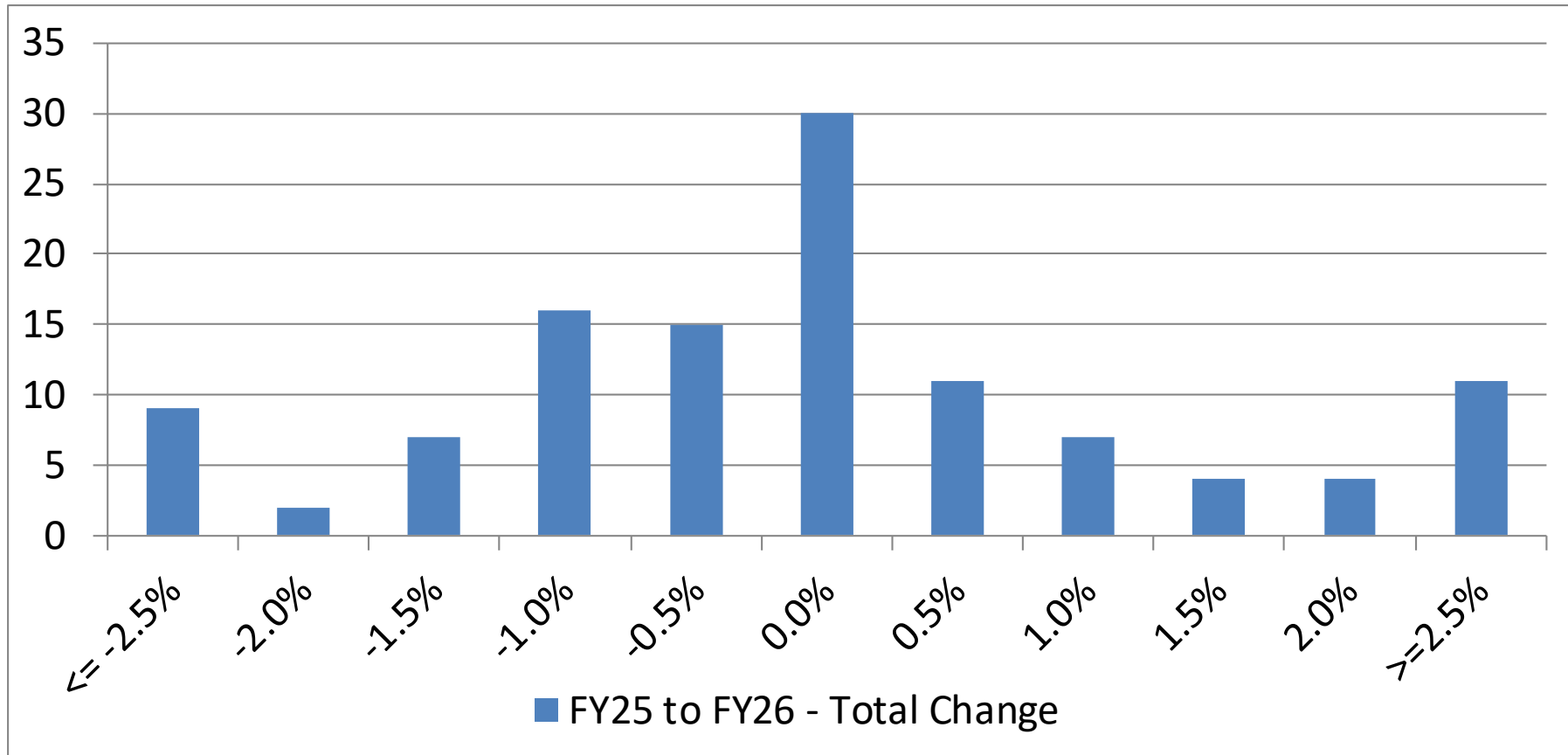
## Summary of MERS Results in Aggregate

	MERS General	MERS P&F	Total
FY2025 Employer Rate	11.25%	17.33%	13.25%
Change due to:			
Suspension of 2023 COLA for those <80%	-0.20%	-0.27%	-0.23%
Asset Performance	-0.21%	-0.33%	-0.25%
Actual 2024 COLA (2.84%)	0.11%	0.11%	0.11%
Individual salary increases	0.30%	1.07%	0.56%
Overall payroll growth	-0.15%	-0.27%	-0.19%
Noneconomic liability growth	-0.16%	0.24%	-0.02%
Benefit Tier Turnover	-0.13%	-0.05%	-0.10%
Recognition of Assumption Changes	<u>0.18%</u>	<u>0.21%</u>	<u>0.19%</u>
Total Change	-0.26%	0.71%	0.07%
FY2026 Employer Rate	10.99%	18.04%	13.32%



# Actuarial Valuations as of June 30, 2023

## *Distribution of Changes in Contribution Rate By Unit*



Rounded to nearest 0.5% change in rate as a percentage of payroll





# Actuarial Valuations as of June 30, 2023

## Actuarial Results – MERS Legacy Units

- There are now six Units that entered MERS via the Pathway to MERS Legislation

Old Unit Number	New Unit Number	Unit	Market Value of Assets	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Funded Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Legacy Units</b>							
1055	1055	Central Falls Police & Fire Legacy	\$ 20,250,032	\$ 19,919,479	\$ 43,852,670	\$ 23,933,191	45.4%
1609	1609	Town of West Warwick (Legacy)	\$ 9,453,717	\$ 9,299,398	\$ 50,166,791	\$ 40,867,393	18.5%
1610	1610	West Warwick School NC (Legacy)	13,409,407	13,190,518	33,543,047	20,352,529	39.3%
1619	1619	Town of West Warwick Library (Legacy)	975,259	959,339	3,126,220	2,166,881	30.7%
1617	1617	West Warwick Police Dept (Legacy)	13,246,857	13,030,621	53,181,343	40,150,722	24.5%
1618	1618	West Warwick Fire Dept (Legacy)	17,121,167	16,841,688	59,064,262	42,222,574	28.5%
		<b>West Warwick Legacy Units Subtotal</b>	<b>\$ 54,206,407</b>	<b>\$ 53,321,564</b>	<b>\$ 199,081,664</b>	<b>\$ 145,760,100</b>	<b>26.8%</b>
		<b>Legacy Units Subtotal</b>	<b>\$ 74,456,439</b>	<b>\$ 73,241,043</b>	<b>\$ 242,934,334</b>	<b>\$ 169,693,291</b>	<b>30.1%</b>

- FY2026 Contribution rates
  - Central Falls Police & Fire Legacy
    - 70.2% of payroll (projected dollar amount: \$2,249,910)
  - Combined West Warwick Legacy Units
    - 79.35% of payroll (projected dollar amount: \$11,740,313)



# OTHER PLANS



# Actuarial Valuations as of June 30, 2023

## Actuarial Results – Judges (JRBT)

	June 30, 2022 (1)	June 30, 2023 (2)
1. Actuarial accrued liability		
a. Actives & Inactives	\$ 51,069,954	\$ 48,898,481
b. Annuitants	42,105,638	52,100,591
2. Total actuarial accrued liability (1a +1b)	\$ 93,175,592	\$ 100,999,072
3. Actuarial value of assets	96,946,030	103,344,499
4. UAAL (2 - 3)	\$ (3,770,438)	\$ (2,345,427)
5. Funded ratio (3 / 2)	104.0%	102.3%
6. UAAL/Payroll	-31.3%	-19.0%

### Weighted Average Contribution Rate for Applicable Fiscal Year

7. Full retirement rate		
a. Applicable Fiscal Year	2025	2026
b. Normal cost	19.80%	18.67%
c. Prior service	-1.60%	-0.92%
d. Full retirement rate	18.20%	17.75%



# Actuarial Valuations as of June 30, 2023

## Actuarial Results – State Police (SPRBT)

	June 30, 2022 (1)	June 30, 2023 (2)
1. Actuarial accrued liability		
a. Actives & Inactives	\$ 96,517,567	\$ 108,756,600
b. Annuitants	113,470,444	128,352,052
2. Total actuarial accrued liability (1a +1b)	\$ 209,988,011	\$ 237,108,652
3. Actuarial value of assets	189,031,357	202,820,349
4. UAAL (2 - 3)	\$ 20,956,654	\$ 34,288,303
5. Funded ratio (3 / 2)	90.0%	85.5%
6. UAAL/Payroll	78.9%	115.5%
Weighted Average Contribution Rate for Applicable Fiscal Year		
7. Full retirement rate		
a. Applicable Fiscal Year	2025	2026
b. Normal cost	12.78%	12.59%
c. Prior service	6.87%	10.39%
d. Full retirement rate	19.65%	22.98%



# Actuarial Valuations as of June 30, 2023

## Actuarial Results – Teachers’ Survivors Benefit Plan (TSBP)

	June 30, 2022	June 30, 2023
	(1)	(2)
1. Actuarial accrued liability		
a. Actives & Inactives	\$ 47,682,440	\$ 48,898,087
b. Annuitants	177,919,318	183,559,544
2. Total actuarial accrued liability (1a +1b)	\$ 225,601,758	\$ 232,457,631
3. Market value of assets	401,796,557	423,914,539
4. UAAL (2 - 3)	\$ (176,194,799)	\$ (191,456,908)
5. Funded ratio (3 / 2)	178.1%	182.4%
6. UAAL/Payroll	-28.8%	-30.3%

### Weighted Average Contribution Rate for Applicable Fiscal Year

7. Full retirement rate		
a. Applicable Fiscal Year	2025	2026
b. Normal cost	\$ 1,644,800	\$ 1,267,332
c. Amortization of UAAL	(13,762,744)	(14,954,882)
d. Total (7a plus 7b, not less than zero)	\$ -	\$ -



# Actuarial Valuations as of June 30, 2023

*Actuarial Results – SPRFT (Formerly Paygo State Police)*

---

- Article 12
  - Trust was established with ERSRI
    - Used to advance fund the benefits
    - Initial deposit of \$15 million
- Annual contributions of \$16,387,092 until UAL is fully funded
- Expected to be fully funded by 2035

	<u>June 30, 2022</u>	<u>June 30, 2023</u>
1. Accrued Liability	\$ 160,820,268	\$ 153,657,806
2. Market Value of Assets	<u>23,894,678</u>	<u>27,140,186</u>
3. Unfunded Accrued Liability	\$ 136,925,590	\$ 126,517,620
4. Funded Ratio (2 / 1)	14.9%	17.7%



# Actuarial Valuations as of June 30, 2023

*Actuarial Results - RIJRFT (Contributing, Paygo Judges)*

---

- Pay-as-you-go plan
  - No advanced funding
- Uses a discount rate of 3.86% (3.69% last year)
  - Municipal Bond Rate used because there is no advanced funding

	<u>June 30, 2022</u>	<u>June 30, 2023</u>
1. Accrued Liability	\$ 19,331,534	\$ 18,196,432
2. Market Value of Assets	<u>1,425,241</u>	<u>1,493,278</u>
3. Unfunded Accrued Liability	\$ 17,906,293	\$ 16,703,154
4. Funded Ratio (2 / 1)	7.4%	8.2%



# Wrap up and Next Year?

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- The current ERSRI funding and benefit policies are proving themselves in real time
- Our strongest recommendation would be to stay the course and let the process continue to work



# Employees' Retirement System of Rhode Island

Actuarial Valuation Report  
As of June 30, 2023

DRAFT





December 15, 2023

Retirement Board  
50 Service Avenue, 2nd Floor  
Warwick, RI 02886-1021

Dear Members of the Board:

**Subject: Actuarial Valuation as of June 30, 2023**

This is the June 30, 2023 actuarial valuation of the Employees' Retirement System of Rhode Island (ERSRI), which is a defined benefit plan that covers State Employees and Teachers. This report describes the current actuarial condition of ERSRI, determines recommended employer contribution rates, and analyzes changes in these contribution rates. Valuations are prepared annually, as of June 30th, the last day of the ERSRI plan year. Not covered in this report are the Municipal Employees' Retirement System, the State Police Retirement Benefits Trust, State Police Retirement Fund Trust, the Judicial Retirement Benefits Trust, and the Teachers' Survivor Benefits Plan, even though assets for ERSRI and these other programs are commingled for investment purposes. Additionally, this report does not consider the contribution requirements associated with any defined contribution benefits provided to State Employees and Teachers outside of the defined benefit plan.

Under Rhode Island General Laws, the employer contribution rates for State Employees and for Teachers are certified annually by the State of Rhode Island Retirement Board. These rates are determined actuarially, based on the plan provisions in effect as of the valuation date, the actuarial assumptions adopted by the Board, and the methodology set forth in the statutes. The Board's current policy is that the contribution rates determined by a given actuarial valuation become effective two years after the valuation date. For example, the rates determined by this June 30, 2023 actuarial valuation will be applicable for the year beginning July 1, 2025 and ending June 30, 2026.

**FINANCING OBJECTIVES**

The actuarial cost method and the amortization periods are set by statute. Normal cost rate (as a percent of pay) and actuarial accrued liabilities are computed using the Entry Age Normal actuarial cost method. The employer contribution rate is the sum of two pieces: the employer normal cost rate and the amortization rate. The employer normal cost rate is the difference between the normal cost rate and the member contribution rate. The amortization rate, also determined as a level percent of pay, is the amount required to amortize the unfunded actuarial accrued liability over a closed period. The amortization rate is adjusted for the two-year deferral in contribution rates. Separate employer contribution rates are determined for State Employees and for Teachers.

### **PROGRESS TOWARD REALIZATION OF FINANCING OBJECTIVES**

The employer contribution rate for State Employees is 28.70% while the employer contribution rate for Teachers is 24.35%. These employer contribution rates determined by this June 30, 2023 actuarial valuation will be applicable for the year beginning July 1, 2025 and ending June 30, 2026.

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a plan's funded status. The funded ratio for State Employees is 60.4% while the funded ratio for Teachers is 64.5%. The funded ratio primarily increased for both State Employees and Teachers because the contributions determined by the funding policy are intended to move the System towards 100% funded. The funded ratio also increased from the changes to assumptions and actuarial gains from further recognition of the strong investment performance during fiscal year 2021. The funded status alone is not appropriate for assessing the need for future contributions. The funded status is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.

Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 7.00% on the actuarial valuation of assets), it is expected that:

1. The employer normal cost as a percentage of pay will decrease to the level of the newest tier as members with service under the old tiers declines and is replaced by new tier members (approximately, 7.0% for the State and 6.0% for Teachers),
2. The amortization payment as a percentage of pay remain level from fiscal year 2026 through 2036,
3. The unfunded actuarial accrued liability will be fully amortized within 20 years from fiscal year 2026 with single equivalent periods for all current amortization layers of 12.2 and 13.5 years for state and teachers respectively, and
4. In the absence of benefit improvements, the funded ratio should increase over time, until it reaches 100%.

An analysis of the changes in the employer contribution rates appears in Table 11A of this report. An analysis of the changes in the unfunded actuarial accrued liability appears in Table 11C.

### **BENEFIT PROVISIONS**

The benefit provisions reflected in this valuation are those which were in effect on June 30, 2023, and there have been no material changes to the benefit provisions since the preceding valuation. All benefit provisions are summarized in Appendix B.

### **ASSUMPTIONS AND METHODS**

The assumptions have been updated since the last actuarial valuation and were approved by the Board on May 17, 2023 based on the Actuarial Experience Investigation. We believe the assumptions are internally consistent and are reasonable, based on the actual experience of ERSRI. The combined effect of the assumptions used in this valuation is expected to have no significant bias. Below is a summary of the changes made to the assumptions:

1. Decrease individual salary increases and projected payroll growth for most groups. These two items mainly offset each other in calculating the contribution requirements, especially as dollar amounts, but create a much lower projected annual growth rate in the dollar amounts of contributions.
2. Update the mortality projection scales to the ultimate rates of the most recently published ones, this had no material impact to the liabilities or contributions.
3. Modestly increase turnover rates.
4. Slight modifications to the retirement rates.
5. Slight modifications to the rates of disability.

The results of the actuarial valuation are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities and the calculated contribution rates.

All assumptions and methods are described in Appendix A. The actuarial assumptions and methods used in this report comply with the parameters for disclosure that appear in Governmental Accounting Standards Board (GASB) Statement Number 67.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation. We performed tests to ensure that the model reasonably represents that which is intended to be modeled and has no material limitations or known weaknesses.

### **DATA**

The ERSRI staff supplied data for retired, active and inactive members as of June 30, 2023. We did not audit this data, but we did apply a number of tests to the data, and we concluded that it was reasonable and consistent with the prior year's data. The ERSRI staff also supplied asset data as of June 30, 2023.



**CERTIFICATION**

All of our work conforms with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of Rhode Island state law and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board.

The undersigned are independent actuaries. All are Members of the American Academy of Actuaries. They all meet the Qualification Standards of the American Academy of Actuaries and they are experienced in performing valuations for large public retirement systems.

Respectfully submitted,

**Gabriel, Roeder, Smith & Company**

Joseph P. Newton, FSA, EA, MAAA  
Pension Market Leader and Actuary

Paul T. Wood, ASA, MAAA, FCA  
Senior Consultant and Actuary

Yi Chen, ASA, EA, MAAA  
Senior Analyst and Actuary

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## Actuarial Standards of Practice Disclosure Statements

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; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

This report should not be relied on for any purpose other than the purpose described above. Determinations of the financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results.

The valuation was based upon information furnished by the System's staff, concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by the System's staff.

The developed findings included in this report consider data or other information through June 30, 2023.

This is one of multiple documents comprising the actuarial report. The other document comprising the actuarial report is a PowerPoint presentation presented to the Board of Trustees following the publication of this report.



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## **SECTION A**

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### **EXECUTIVE SUMMARY**

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## Executive Summary (State Employees)

Item	Valuation Date:	
	June 30, 2023	June 30, 2022
<b>Membership</b>		
Number of:		
- Active members	10,959	10,820
- Retirees and beneficiaries	11,328	11,365
- Inactive members	<u>5,001</u>	<u>4,651</u>
- Total	27,288	26,836
Previous year payroll supplied by ERSRI	\$ 805,088,921	\$ 763,233,105
<b>Contribution rates (Defined Benefit Only)</b>		
Member	4.24%	4.21%
Employer	28.70%	28.54%
<b>Assets</b>		
Market value	\$ 3,046,906,450	\$ 2,911,444,772
Actuarial value	3,021,524,457	2,896,669,194
Return on market value	8.4%	-2.7%
Return on actuarial value	7.7%	8.2%
Employer contribution for FYE	\$ 227,526,851	\$ 245,148,773
Ratio of actuarial value to market value	99.2%	99.5%
<b>Actuarial Information</b>		
Employer normal cost %	3.39%	3.66%
Unamortized actuarial accrued liability (UAAL)	\$ 1,983,616,913	\$ 2,031,907,747
Amortization rate	25.31%	24.88%
Single Equivalent Funding period	12.2 years	13.5 years
Funded ratio	60.4%	58.8%
<b>Projected employer contribution</b>		
Fiscal year ending June 30,		
Projected payroll (millions)	\$ 867.0	\$ 834.0
Projected employer contribution (millions)	248.8	238.0

## Executive Summary (Teachers)

Item	Valuation Date:	
	June 30, 2023	June 30, 2022
Membership		
Number of:		
- Active members	13,554	13,537
- Retirees and beneficiaries	11,595	11,521
- Inactive members	<u>5,000</u>	<u>4,539</u>
- Total	30,149	29,597
Previous year payroll supplied by ERSRI	\$ 1,158,882,737	\$ 1,118,606,392
Contribution rates (Defined Benefit Only)		
Member	3.75%	3.75%
Employer	24.35%	25.12%
State share	10.35%	10.68%
Local employer share	14.00%	14.44%
Assets		
Market value	\$ 4,664,344,475	\$ 4,418,568,124
Actuarial value	4,562,385,768	4,362,074,064
Return on market value	8.4%	-2.7%
Return on actuarial value	7.7%	8.2%
Employer contribution (state & local)	\$ 305,022,002	\$ 322,772,188
Ratio of actuarial value to market value	97.8%	98.7%
Actuarial Information		
Employer normal cost %	3.26%	3.56%
Unamortized actuarial accrued liability (UAAL)	\$ 2,511,046,843	\$ 2,735,182,328
Amortization percentage	21.09%	21.56%
Single Equivalent Funding period	13.5 years	15.2 years
Funded ratio	64.5%	61.5%
Projected employer contribution		
Fiscal year ending June 30,		
Projected payroll (millions)	\$ 1,229.8	\$ 1,204.6
Projected employer contribution (millions)	299.5	302.6
State share (millions)	127.3	128.7
Local employer share (millions)	172.2	173.9

## **SECTION B**

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### **DISCUSSION**

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## Discussion (Contribution Rates)

The employer contribution rates for ERSRI are determined actuarially. Separate rates are determined for State Employees and for Teachers. The rates determined in this valuation become effective two years after the valuation date, i.e., as of July 1, 2026.

The rate consists of two pieces: the normal cost rate and the amortization rate. The normal cost rate is the employer's Entry Age normal cost, expressed as a percentage of active member payroll. The amortization rate is the contribution required to amortize each of the laddered bases that comprise the unfunded actuarial accrued liability over closed period as a level percentage of payroll. Payment for each base is generally calculated based on a 20-year amortization period beginning 2 years after they are established. The investment return assumption was lowered from 7.5% to 7.0% in the 2017 experience study and the impact was divided into separate "stagers" with the first payment beginning in FY2020 over a 20-year period. Other stagers will begin payment in FY2021 through FY2024 with amortization periods decreasing by one year for each year past FY2020 in which payment begins (e.g. the FY2024 stagger will have a 16-year amortization period). Thus, all of the individual stagers will be fully amortized over the 20-year period beginning with FY2020, but will have different starting years. The impact of the 2020 experience study was a small gain and it is divided into two stagers to align with the final two stagers from the 2017 experience study. The final stagger for each study was recognized with the FY2024 contribution, which was set in last year's valuation. Please see pages 11 and 12 for details on each outstanding base. Accordingly, the Actuarially Determined Contribution under the funding policy can be considered a "Reasonable Actuarially Determined Contribution" as required by the Actuarial Standards of Practice.

For the Teachers, the State of Rhode Island pays 40% of the rate. In previous years, this was further adjusted so that the State paid the entire amortization charge for the 1990/91 and 1991/92 deferrals, and the town or city employing the Teacher paid the balance. In fiscal year 2022 the State made voluntary contributions to fully pay off the amortization charge for the 1990/91 and 1991/92 deferrals, and thus the contributions are now effectively split based on the 40%. However, the amortization bases that existed coming out of the 2011 pension reform are amortized over different periods for the State and Employers, so the current contribution levels are not precisely 60%/40% in a given year, but are expected to be over time.

## Discussion (Impact of Decrease in Contribution Rate)

Under Rhode Island General Laws (RIGL) §36-10-2(e), if the State's actuarially determined contribution rate for State Employees or for Teachers for a fiscal year will be less than in the preceding fiscal year, the Governor is required to include an appropriation to ERSRI in the fiscal year budget equal to 20% of the reduction. Because the FYE 2026 contribution rates for Teachers is lower than the rates for FYE 2025, the following additional appropriation will be required.

### Employees' Retirement System of Rhode Island

#### Calculation of Budget Appropriation Under RIGL Section 36-10-2(g)

Item	Teachers
A. Prior valuation date	June 30, 2022
B. Total employer contribution rate (prior valuation)	25.12%
B.2. State share for Teachers	10.68%
C. Current valuation date	June 30, 2023
D. Total employer contribution rate (current valuation)	24.35%
D.2. State share for Teachers	10.35%
E. Contribution for fiscal year ending	June 30, 2026
F. Pay projected for this fiscal year	\$1,229,815,632
G. Net Decrease in State's contribution rate	0.33%
H. Decrease in State's contribution	\$4,058,392
I. 20% of decrease to be appropriated	\$811,678

## Discussion (Financial Data and Experience)

Assets for ERSRI are held in trust and are commingled with those of several other plans and programs for investment purposes. The State Investment Commission is responsible for setting the asset allocation policy and for investing the funds. The ERSRI assets are then allocated by the ERSRI staff among State Employees, Teachers, and the Teachers' Survivor Benefits Plan.

Table 6 of this report shows the net plan assets for ERSRI in total, and it shows the breakdown between State Employees, Teachers and the Teachers' Survivor Benefits Plan. Table 7 of this report shows a reconciliation of the assets for State Employees and Teachers between the previous valuation and this valuation. Table 9 shows the target distribution of investments by category—60% of assets are held in equities, including real estate and private equity—and Table 10 shows a historical summary of the return rates. As can be seen, the net market value rate of return was 8.4% for the year ended June 30, 2023, and the return on an actuarial asset value basis was 7.7%.

The average annual return based on the market value of assets over the last ten years (July 1, 2013 – June 30, 2023) was 7.6%.

All returns above are net of both investment and administrative expenses and may differ from other information provided by the General Treasurer's office or the investment managers and advisors due to timing of reflected cash flows, frequency of compounding, and treatment of administrative expenses.

The ERSRI staff provided all of the financial information used in this report.

## Discussion (Benefit Provisions)

Appendix B includes a summary of the benefit provisions for ERSRI. There were no material changes in the benefit provisions since the preceding valuation.

The COLA to be provided to retired members is contingent on the investment performance, the annual change in the CPI-U, and funded status of the System. The amount of the COLA is determined based on 50% of the plan's five-year average investment rate of return minus 5.0% and will range from zero to 4.0%, and 50% of the lesser of 3% or last year's CPI-U increase for a total maximum increase of 3.5%. This calculation produces a 3.11% COLA for Calendar Year 2023 and 2.84% for Calendar Year 2024. The COLA will be limited and this limit will be indexed annually to increase in the same manner as COLAs, with the known values as follows:

<u>Year</u>	<u>COLA Limit</u>
2014	\$ 25,000
2015	\$ 25,168
2016	\$ 25,855
2017	\$ 26,098
2018	\$ 26,291
2019	\$ 26,687
2020	\$ 27,184
2021	\$ 27,608
2022	\$ 27,901
2023	\$ 28,878
2024	\$ 29,776
2025	\$ 30,622

Prior to the passage of H5200 Substitute A, as Amended, the COLA was suspended for all state employees, teachers, BHDDH nurses, correctional officers, judges and state police until the aggregate funding level of their plans exceeds 80%; however, an interim COLA will be granted in four-year intervals while the COLA is suspended. The first interim COLA was during the Calendar Year beginning January 1, 2017. Also, for current retirees and beneficiaries retired on or before July 1, 2015 the \$25,000 cap will be increased to \$30,000 (indexed) for any COLA payable based on the every fourth year provision. Effective with the passage of H5200 Substitute A, as Amended, the benefit adjustments while the plan is less than 80% funded are reduced to twenty-five percent (25%) of the benefit adjustment instead of fully suspended, paid annually.

## Discussion (Actuarial Methods and Assumptions)

Appendix A of this report includes a summary of the actuarial assumptions and methods used in this valuation. Costs are determined using the Entry Age Normal actuarial cost method.

The method used to determine the actuarial value of assets is the five-year smoothed market method. This technique is further described in Section III of Appendix A. The development of the actuarial value of assets utilizing this method is shown in Tables 8A and 8B of this report. The funded status as of the valuation date would be different if based on market value of assets rather than actuarial value of assets, but the measurements based on the two values are not expected to be different over time.

The assumptions were adopted by the Board on May 17, 2023. We believe the assumptions are internally consistent and are reasonable, based on the actual experience of ERSRI.



## SECTION C

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### TABLES

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## Table 1A

### Development of Contribution Rate (State Employees)

	June 30, 2023 (1)	June 30, 2022 (2)
1. Aggregate payroll		
(a) Supplied by ERSRI for previous fiscal year	\$ 805,088,921	\$ 763,233,105
(b) Adjusted for one-year's payroll growth	825,216,144	786,130,098
2. Actuarial accrued liability	5,005,141,370	4,928,576,941
3. Actuarial value of assets	3,021,524,457	2,896,669,194
4. Unfunded actuarial accrued liability (UAAL) (2 - 3)	1,983,616,913	2,031,907,747
5. Single Equivalent Funding Period	12.2	13.5
6. Contribution effective for fiscal year ending:	June 30, 2026	June 30, 2025
7. Payroll projected for two-year delay	866,992,711	834,005,421
8. Amortization of UAAL	219,418,918	207,537,386
9. Normal cost		
(a) Total normal cost rate	7.63%	7.87%
(b) Employee contribution rate	4.24%	4.21%
(c) Employer normal cost rate (a - b)	3.39%	3.66%
10. Employer contribution rate as percent of payroll		
(a) Employer normal cost rate	3.39%	3.66%
(b) Amortization payments ( 8 / 7 )	25.31%	24.88%
(c) Total ( a + b )	28.70%	28.54%
11. Estimated employer contribution amount (7 * 10(c))	\$ 248,826,908	\$ 238,025,147

## Table 1B

### Development of Contribution Rate (Teachers)

	<u>June 30, 2023</u>	<u>June 30, 2022</u>
	(1)	(2)
1. Aggregate payroll		
(a) Supplied by ERSRI for previous fiscal year	\$ 1,158,882,737	\$ 1,118,606,392
(b) Adjusted for one-year's payroll growth	1,182,060,392	1,146,571,552
2. Actuarial accrued liability	7,073,432,611	7,097,256,392
3. Actuarial value of assets	4,562,385,768	4,362,074,064
4. Unfunded actuarial accrued liability (UAAL) (2 - 3)	2,511,046,843	2,735,182,328
5. Single Equivalent Funding Period	13.5	15.2
6. Contribution effective for fiscal year ending:	June 30, 2026	June 30, 2025
7. Payroll projected for two-year delay	1,229,815,632	1,204,616,737
8. Amortization of UAAL	259,318,056	259,659,547
9. Normal cost		
(a) Total normal cost rate	7.01%	7.31%
(b) Employee contribution rate	3.75%	3.75%
(c) Employer normal cost rate ( a - b )	<u>3.26%</u>	<u>3.56%</u>
10. Employer contribution rate as percent of payroll		
(a) Employer normal cost rate	3.26%	3.56%
(b) Amortization payments ( 8 / 7 )	<u>21.09%</u>	<u>21.56%</u>
(c) Total ( a + b )	24.35%	25.12%
11. Estimated employer contribution amount ( 7 * 10(c) )	\$ 299,460,106	\$ 302,599,724

## Table 2A

### Summary of Unfunded Liability (State Employees)

Purpose	Remaining Balance as of June 30, 2023	Fiscal Year 2024 Amortization Payment *	Fiscal Year 2025 Amortization Payment *	Fiscal Year 2026 Amortization Payment *	Years Remaining Beginning with Fiscal Year 2026
Original 2011 RIRSA Base	\$ 1,602,364,638	\$ 168,860,606	\$ 173,926,424	\$ 182,813,458	10
2014 Experience Base	(44,640,222)	(4,419,268)	(4,551,846)	(4,794,439)	11
2014 Mediation Settlement	106,945,371	10,587,319	10,904,939	11,486,122	11
2015 Experience Base	(32,241,058)	(3,015,893)	(3,106,370)	(3,278,665)	12
2016 Experience Base	44,707,805	3,971,384	4,090,526	4,326,163	13
2016 Assumption Change - FY20 Stagger **	31,752,284	2,690,100	2,770,803	2,936,265	14
2016 Assumption Change - FY21 Stagger **	73,134,991	6,196,106	6,381,988	6,763,096	14
2016 Assumption Change - FY22 Stagger **	78,857,595	6,680,931	6,881,360	7,292,289	14
2016 Assumption Change - FY23 Stagger **	85,281,141	7,225,144	7,441,898	7,886,300	14
2016 Assumption Change - FY24 Stagger **	92,537,207	7,839,889	8,075,086	8,557,299	14
2017 Experience Base	16,944,639	1,435,575	1,478,642	1,566,941	14
2018 Experience Base	25,791,706	2,091,977	2,154,735	2,287,892	15
2019 Experience Base	7,765,774	605,060	623,212	663,003	16
2020 New Assumptions - FY23 Stagger **	(30,696,260)	(2,600,633)	(2,678,652)	(2,838,611)	14
2020 New Assumptions - FY24 Stagger **	(33,308,023)	(2,821,905)	(2,906,562)	(3,080,131)	14
2020 Experience Base	20,253,240	1,520,325	1,565,935	1,669,084	17
2021 Experience Base	(78,298,357)	(5,677,752)	(5,848,085)	(6,244,952)	18
2022 Experience Base	4,296,322	-	333,353	356,630	19
2022 Assumption Change	(14,351,836)	-	-	(1,239,819)	20
New Experience Base This Fiscal Year	<u>26,519,956</u>	<u>-</u>	<u>-</u>	<u>2,290,993</u>	20
Unfunded Actuarial Accrued Liability	\$ 1,983,616,913	\$ 201,168,965	\$ 207,537,386	\$ 219,418,918	

\*Assuming payment made at the middle of the year.

\*\*Assumption change staggers will begin in the fiscal year indicated.



## Table 2B

### Summary of Unfunded Liability (Teachers)

Purpose	Remaining Balance as of June 30, 2023	Fiscal Year 2024 Amortization Payment *	Fiscal Year 2025 Amortization Payment *	Fiscal Year 2026 Amortization Payment *	Years Remaining Beginning with Fiscal Year 2026
Original 2011 RIRSA Base (State)	\$ 865,692,941	\$ 93,484,066	\$ 95,821,168	\$ 100,218,772	10
Original 2011 RIRSA Base (Local)	1,446,599,211	126,585,623	129,750,265	136,797,932	14
2014 Experience Base (State)	(14,740,889)	(1,498,424)	(1,535,883)	(1,609,682)	11
2014 Experience Base (Local)	(23,590,224)	(2,064,278)	(2,115,885)	(2,230,814)	14
2014 Mediation Settlement (State)	60,366,794	6,136,329	6,289,736	6,591,956	11
2014 Mediation Settlement (Local)	96,606,568	8,453,621	8,664,962	9,135,618	14
2015 Experience Base	(46,595,328)	(4,484,366)	(4,596,476)	(4,827,092)	12
2016 Experience Base	31,300,104	2,866,214	2,937,870	3,091,408	13
2016 Assumption Change - FY20 Stagger **	61,767,188	5,404,979	5,540,103	5,841,026	14
2016 Assumption Change - FY21 Stagger **	94,287,190	8,250,663	8,456,930	8,916,286	14
2016 Assumption Change - FY22 Stagger **	101,973,407	8,923,250	9,146,331	9,643,135	14
2016 Assumption Change - FY23 Stagger **	110,611,122	9,679,100	9,921,078	10,459,963	14
2016 Assumption Change - FY24 Stagger **	120,379,062	10,533,850	10,797,196	11,383,669	14
2017 Experience Base	65,225,525	5,707,603	5,850,293	6,168,064	14
2018 Experience Base	7,787,579	653,652	669,993	707,740	15
2019 Experience Base	(16,238,447)	(1,311,707)	(1,344,500)	(1,422,920)	16
2020 New Assumptions - FY23 Stagger **	(40,255,435)	(3,522,579)	(3,610,643)	(3,806,763)	14
2020 New Assumptions - FY24 Stagger **	(43,810,353)	(3,833,654)	(3,929,495)	(4,142,934)	14
2020 Experience Base	(49,720)	(3,877)	(3,974)	(4,213)	17
2021 Experience Base	(122,959,200)	(9,277,787)	(9,509,732)	(10,101,278)	18
2022 Experience Base	(93,388,222)	-	(7,539,790)	(8,023,035)	19
2022 Assumption Change	(100,301,162)	-	-	(9,010,914)	20
New Experience Base This Fiscal Year	(49,620,868)	-	-	(4,457,868)	20
Unfunded Actuarial Accrued Liability	\$ 2,511,046,843	\$ 260,682,278	\$ 259,659,547	\$ 259,318,056	
State Portion of UAAL Payment				\$ 111,297,592	
Local Portion of UAAL Payment				\$ 148,020,464	

\*Assuming payment made at the middle of the year.

\*\*Assumption change staggers will begin in the fiscal year indicated.



## Table 3A

### Actuarial Present Value of Future Benefits (State Employees)

	June 30, 2023 (1)	June 30, 2022 (2)
1. Active members		
a. Service retirement benefits	\$ 1,745,527,000	\$ 1,722,403,330
b. Deferred termination benefits	73,931,970	65,608,516
c. Refunds	5,020,211	4,413,190
d. Pre-retirement death benefits	22,757,570	28,235,852
e. Disability retirement benefits	189,841,303	186,243,585
f. Total	<u>\$ 2,037,078,054</u>	<u>\$ 2,006,904,473</u>
2. Retired members		
a. Service retirements	\$ 2,882,939,446	\$ 2,893,669,771
b. Disability retirements	205,372,026	202,513,506
c. Beneficiaries	210,118,306	208,925,885
d. Post-retirement death benefit	17,850,000	17,690,000
e. Stipends payable	0	0
f. Total	<u>\$ 3,316,279,778</u>	<u>\$ 3,322,799,162</u>
3. Inactive members	\$ 166,253,426	\$ 148,002,573
4. Total actuarial present value of future benefits	\$ 5,519,611,258	\$ 5,477,706,208
5. Determination of actuarial accrued liability		
a. Total actuarial present value of future benefits	\$ 5,519,611,258	\$ 5,477,706,208
b. Less present value of future normal costs	(494,475,626)	(524,906,186)
c. Less present value of supplemental member contributions	(19,994,262)	(24,223,081)
d. Actuarial accrued liability (a + b + c)	<u>\$ 5,005,141,370</u>	<u>\$ 4,928,576,941</u>

## Table 3B

### Actuarial Present Value of Future Benefits (Teachers)

	June 30, 2023 (1)	June 30, 2022 (2)
1. Active members		
a. Service retirement benefits	\$ 2,565,591,123	\$ 2,654,869,241
b. Deferred termination benefits	75,635,942	60,946,984
c. Refunds	4,743,409	4,787,515
d. Pre-retirement death benefits	31,458,442	33,658,920
e. Disability retirement benefits	339,112,988	306,259,165
f. Total	<u>\$ 3,016,541,904</u>	<u>\$ 3,060,521,825</u>
2. Retired members		
a. Service retirements	\$ 4,319,841,777	\$ 4,389,535,433
b. Disability retirements	117,310,524	114,094,447
c. Beneficiaries	139,990,435	138,712,291
d. Post-retirement death benefit	18,355,000	17,757,000
e. Stipends payable	0	0
f. Total	<u>\$ 4,595,497,736</u>	<u>\$ 4,660,099,171</u>
3. Inactive members	\$ 266,071,026	\$ 214,180,584
4. Total actuarial present value of future benefits	\$ 7,878,110,666	\$ 7,934,801,580
5. Determination of actuarial accrued liability		
a. Total actuarial present value of future benefits	\$ 7,878,110,666	\$ 7,934,801,580
b. Less present value of future normal costs	(782,007,060)	(809,901,862)
c. Less present value of supplemental member contributions	<u>(22,670,995)</u>	<u>(27,643,326)</u>
d. Actuarial accrued liability (a + b + c)	<u>\$ 7,073,432,611</u>	<u>\$ 7,097,256,392</u>



## Table 3C

### Ten-Year Projections (State Employees)

Valuation as of June 30,	Unfunded Actuarial Accrued Liability (in Millions)	Funded Ratio	Actuarial Value of Fund Assets (in Millions)	For Fiscal Year Ending June 30,	Covered Compensation (in Millions)	Employer Contribution Rate	Employer Contribution	Employee Contribution	Benefit Payments, Refunds, and Administrative Expenses	Net External Cash Flow
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2023	\$ 1,983.6	60.4%	\$ 3,021.5	2024	\$ 825.2	28.97%	\$ 239.1	\$ 40.4	\$ 361.4	\$ (81.9)
2024	1,909.0	62.3%	3,148.3	2025	845.8	28.54%	241.4	40.3	371.9	(90.2)
2025	1,822.6	64.2%	3,275.3	2026	867.0	28.70%	248.8	40.4	379.4	(90.2)
2026	1,723.2	66.4%	3,411.3	2027	888.7	28.43%	252.6	40.6	386.5	(93.3)
2027	1,562.5	69.5%	3,553.6	2028	910.9	28.26%	257.4	41.0	389.8	(91.5)
2028	1,385.5	72.8%	3,707.7	2029	933.7	28.17%	263.0	41.4	392.1	(87.6)
2029	1,190.2	76.5%	3,876.6	2030	957.0	27.66%	264.7	42.0	394.3	(87.7)
2030	979.7	80.5%	4,057.3	2031	980.9	27.16%	266.4	42.6	396.1	(87.1)
2031	802.4	84.1%	4,251.2	2032	1,005.4	26.68%	268.3	43.4	402.8	(91.2)
2032	611.0	87.9%	4,454.4	2033	1,030.6	26.22%	270.2	44.2	408.1	(93.6)
2033	404.5	92.0%	4,669.4	2034	1,056.3	26.18%	276.5	45.2	412.1	(90.3)

These projections assume all assumptions are met including generating 7% annual returns on the actuarial value of assets

The actual benefit adjustments are determined based on the funded ratio for the plan at a given valuation date, with the corresponding gains or losses



### Table 3D

#### Ten-Year Projections (Teachers)

Valuation as of June 30,	Unfunded Actuarial Accrued Liability (in Millions)	Funded Ratio	Actuarial Value of Fund Assets (in Millions)	For Fiscal Year Ending June 30,	Covered Compensation (in Millions)	Employer Contribution Rate	Employer Contribution	Employee Contribution	Benefit Payments, Refunds, and Administrative Expenses	Net External Cash Flow
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2023	\$ 2,511.0	64.5%	\$ 4,562.4	2024	\$ 1,182.1	26.16%	\$ 309.2	\$ 49.9	\$ 500.9	\$ (141.7)
2024	2,412.1	66.3%	4,735.2	2025	1,205.7	25.12%	302.9	50.1	506.2	(153.3)
2025	2,308.3	68.0%	4,908.1	2026	1,229.8	24.35%	299.5	50.2	510.5	(160.9)
2026	2,201.7	69.8%	5,085.2	2027	1,254.4	24.19%	303.4	50.4	514.9	(161.1)
2027	2,034.1	72.2%	5,274.5	2028	1,279.5	24.03%	307.5	50.7	518.0	(159.8)
2028	1,850.2	74.8%	5,478.4	2029	1,305.1	23.93%	312.3	51.1	520.6	(157.2)
2029	1,648.3	77.6%	5,699.3	2030	1,331.2	23.51%	313.0	51.5	523.2	(158.7)
2030	1,431.3	80.6%	5,934.2	2031	1,357.8	23.11%	313.8	52.2	525.6	(159.7)
2031	1,246.4	83.2%	6,184.4	2032	1,385.0	22.72%	314.7	52.9	534.2	(166.6)
2032	1,047.2	86.0%	6,444.9	2033	1,412.7	22.34%	315.6	53.7	542.9	(173.6)
2033	833.0	89.0%	6,716.5	2034	1,440.9	22.28%	321.0	54.5	551.6	(176.1)

These projections assume all assumptions are met including generating 7% annual returns on the actuarial value of assets

The actual benefit adjustments are determined based on the funded ratio for the plan at a given valuation date, with the corresponding gains or losses

## Table 4

### Schedule of Funding Progress

Valuation Date (1)	Actuarial Value of Assets (AVA) (2)	Actuarial Accrued Liability (3)	Unfunded Actuarial Accrued Liability (UAAL) (3)-(2) (4)	Funded Ratio (2)/(3) (5)	Annual Covered Payroll (6)	UAAL as % of Payroll (4)/(6) (7)
<b>State Employees</b>						
June 30, 2013 <sup>1</sup>	2,411,057,214	4,266,053,163	1,854,995,949	56.5%	664,118,904	279.3%
June 30, 2014 <sup>2</sup>	2,449,125,421	4,369,081,872	1,919,956,451	56.1%	675,204,750	284.4%
June 30, 2015	2,476,485,327	4,371,789,900	1,895,304,573	56.6%	691,555,582	274.1%
June 30, 2016	2,468,446,998	4,404,298,648	1,935,851,650	56.0%	693,242,177	279.2%
June 30, 2017	2,485,576,642	4,698,278,808	2,212,702,166	52.9%	704,036,300	314.3%
June 30, 2018	2,516,618,305	4,755,940,934	2,239,322,629	52.9%	711,736,212	314.6%
June 30, 2019	2,557,560,104	4,801,093,045	2,243,532,941	53.3%	740,294,095	303.1%
June 30, 2019 <sup>3</sup>	2,557,560,104	4,750,271,989	2,192,711,885	53.8%	739,575,363	296.5%
June 30, 2020	2,597,672,247	4,793,667,018	2,195,994,771	54.2%	777,970,071	282.3%
June 30, 2021	2,747,732,215	4,848,186,502	2,100,454,287	56.7%	762,198,689	275.6%
June 30, 2022	2,896,669,194	4,928,576,941	2,031,907,747	58.8%	786,130,098	258.5%
June 30, 2023	3,021,524,457	5,005,141,370	1,983,616,913	60.4%	825,216,144	240.4%
<b>Teachers</b>						
June 30, 2013 <sup>1</sup>	3,697,787,537	6,265,311,945	2,567,524,408	59.0%	963,525,547	266.5%
June 30, 2014 <sup>2</sup>	3,742,152,714	6,424,596,267	2,682,443,553	58.2%	982,565,406	273.0%
June 30, 2015	3,783,601,053	6,438,732,100	2,655,131,047	58.8%	995,994,669	266.6%
June 30, 2016	3,772,348,051	6,466,478,470	2,694,130,419	58.3%	1,009,979,725	266.8%
June 30, 2017	3,778,302,063	6,894,243,228	3,115,941,165	54.8%	1,035,710,229	300.9%
June 30, 2018	3,815,698,266	6,951,505,936	3,135,807,670	54.9%	1,057,179,746	296.6%
June 30, 2019	3,866,452,572	6,994,286,436	3,127,833,864	55.3%	1,086,984,336	287.8%
June 30, 2019 <sup>3</sup>	3,866,452,572	6,927,441,023	3,060,988,451	55.8%	1,085,923,864	281.9%
June 30, 2020	3,911,140,020	6,957,586,318	3,046,446,298	56.2%	1,107,935,749	275.0%
June 30, 2021	4,142,172,560	7,051,432,971	2,909,260,411	58.7%	1,118,728,726	260.1%
June 30, 2022	4,362,074,064	7,097,256,392	2,735,182,328	61.5%	1,146,571,552	238.6%
June 30, 2023	4,562,385,768	7,073,432,611	2,511,046,843	64.5%	1,182,060,392	212.4%

<sup>1</sup>June 30, 2013 actuarial value after changes of actuarial assumptions

<sup>2</sup>June 30, 2014 actuarial value after reflecting the amendment of Article 21

<sup>3</sup>June 30, 2019 actuarial value after changes of actuarial assumptions

## Table 5

### Notes to Required Supplementary Information

Item (1)	State Employees (2)	Teachers (3)
Valuation date	June 30, 2023	June 30, 2023
Actuarial cost method	Entry Age Normal	Entry Age Normal
Amortization method	Level percentage, closed	Level percentage, closed
Remaining amortization period	12.2 years	13.5 years
Asset valuation method	5-Yr Smoothed Market	5-Yr Smoothed Market
Actuarial assumptions:		
Investment rate of return *	7.00%	7.00%
Projected salary increase *	3.00% to 6.00%	3.00% to 12.50%
* Includes inflation at:	2.50%	2.50%
Cost of living adjustments	2.10%	2.10%

COLAs are currently suspended for all state employees, teachers, BHDDH nurses, correctional officers, judges and state police until the aggregate funding level of their plans exceeds 80%. In the original RIRSA legislation, the COLAs suspended until 2027 were advance recognized due to the funding level of the plans; and all subsequent valuations have continued to reference this same timeframe. However, based on H5200 Substitute A, as Amended, this was changed to assume twenty-five percent of the COLA increase will be granted 2024 through 2026, with full COLAs continuing in 2027.

## Table 6

### Plan Net Assets (Assets at Market or Fair Value)

Item (1)	June 30, 2023 (2)	June 30, 2022 (3)
A. Total ERSRI assets		
1. Cash and cash equivalents	\$ 8,826,242	\$ 5,233,405
2. Receivables:		
a. Transfers receivable	\$ 0	\$ 0
b. Member and employer contributions	16,520,877	79,130,351
c. Due from state for teachers	24,746,839	24,497,989
d. Net investment income and other	1,981,724	2,809,764
e. Total receivables	\$ 43,249,440	\$ 106,438,104
3. Investments		
a. Short-term investment fund	\$ 0	\$ 0
b. Pooled trust	8,090,231,776	7,623,350,634
c. Plan specific investments	0	0
d. Invested securities lending collateral	0	0
e. Total	\$ 8,090,231,776	\$ 7,623,350,634
4. Prepaid expenses	\$ 1,362,871	\$ 1,817,161
5. Total assets	\$ 8,143,670,329	\$ 7,736,839,304
6. Liabilities		
a. Due to other plans	\$ 713,657	\$ 463,444
b. Accounts and vouchers payable	4,791,211	4,566,410
c. Securities lending liability	0	0
d. Total liabilities	\$ 5,504,868	\$ 5,029,854
7. Total market value of assets available for benefits (Item 5 - Item 6)	\$ 8,138,165,461	\$ 7,731,809,450
B. Breakdown		
1. State employees	\$ 3,046,906,450	\$ 2,911,444,772
2. Teachers	4,664,344,475	4,418,568,124
3. Teachers' survivors benefits	426,914,536	401,796,554
4. Total	\$ 8,138,165,461	\$ 7,731,809,450

**Table 7****Reconciliation of Plan Net Assets**

Item (1)	Year Ending June 30, 2023	
	State Employees (2)	Teachers (3)
1. Market value of assets at beginning of year	\$ 2,911,444,772	\$ 4,418,568,124
Current year prior period adjustments	0	0
Adjusted market value of assets at BOY	\$ 2,911,444,772	\$ 4,418,568,124
2. Contributions		
a. Members	\$ 41,020,750	\$ 50,141,527
b. Employers	227,526,851	305,022,002
c. Reimbursement of Supplemental Pensions	8,064	756,614
d. Service purchases	47,452	51,730
e. Total	\$ 268,603,117	\$ 355,971,873
3. Investment earnings, net of investment and administrative expenses	\$ 220,248,119	\$ 384,803,808
4. Expenditures for the year		
a. Benefit payments	\$ (299,798,104)	\$ (399,985,015)
b. Cost-of-living adjustments	(48,306,922)	(90,855,539)
c. Death benefits	(1,463,673)	(1,003,600)
d. Social security supplements	(1,436,373)	(307,072)
e. Supplemental pensions	(8,064)	(756,524)
f. Refunds	(2,399,687)	(2,191,756)
g. Total expenditures	\$ (353,412,823)	\$ (495,099,506)
5. Transfers and other adjustments	\$ 23,265	\$ 100,176
6. Market value of assets at end of year	\$ 3,046,906,450	\$ 4,664,344,475

## Table 8A

### Development of Actuarial Value of Assets (State Employees)

	Year Ending June 30, 2023					
1. Market value of assets at beginning of year (prior to adjustment)	\$ 2,911,444,772					
2. Net new investments						
a. Contributions	\$ 268,603,117					
b. Benefits paid	(351,013,136)					
c. Refunds	(2,399,687)					
d. Transfers	23,265					
e. Subtotal	(84,786,441)					
3. Market value of assets at end of year	\$ 3,046,906,450					
4. Net earnings (3-1-2) (includes misc revenues)	\$ 220,248,119					
5. Assumed investment return rate for fiscal year	7.00%					
6. Expected return	\$ 200,833,609					
7. Excess return (4-6)	\$ 19,414,510					
8. Development of amounts to be recognized as of June 30, 2023:						
Fiscal Year End	Remaining Deferrals of Excess (Shortfall) of Investment Income*	Offsetting of Gains/(Losses)	Net Deferrals Remaining	Years Remaining	Recognized for this valuation	Remaining after this valuation
	(1)	(2)	(3) = (1) + (2)	(4)	(5) = (3) / (4)	(6) = (3) - (5)
2019	\$ 0	\$ 0	\$ 0	1	\$ 0	\$ 0
2020	0	0	0	2	0	0
2021	14,775,578	0	14,775,578	3	4,925,193	9,850,385
2022	0	0	0	4	0	0
2023	19,414,510	0	19,414,510	5	3,882,902	15,531,608
Total	\$ 34,190,088	\$ 0	\$ 34,190,088		\$ 8,808,095	\$ 25,381,993
9. Actuarial value of assets as of June 30, 2023 (Item 3 - Item 8)						\$ 3,021,524,457
10. Ratio of actuarial value to market value						99.2%

\*Values of \$0 result from the beginning balance being offset by future gains or losses in the opposite direction.

## Table 8B

### Development of Actuarial Value of Assets (Teachers)

	Year Ending June 30, 2023
1. Market value of assets at beginning of year	\$ 4,418,568,124
2. Net new investments	
a. Contributions	\$ 355,971,873
b. Benefits paid	(492,907,750)
c. Refunds	(2,191,756)
d. Transfers	100,176
e. Subtotal	(139,027,457)
3. Market value of assets at end of year	\$ 4,664,344,475
4. Net earnings (3-1-2) (includes misc revenues)	\$ 384,803,808
5. Assumed investment return rate for fiscal year	7.00%
6. Expected return	\$ 304,433,808
7. Excess return (4-6)	\$ 80,370,000
8. Development of amounts to be recognized as of June 30, 2023:	

Fiscal Year End	Remaining Deferrals of Excess (Shortfall) of Investment Income*	Offsetting of Gains/(Losses)	Net Deferrals Remaining	Years Remaining	Recognized for this valuation	Remaining after this valuation
	(1)	(2)	(3) = (1) + (2)	(4)	(5) = (3) / (4)	(6) = (3) - (5)
2019	\$ 0	\$ 0	\$ 0	1	\$ 0	\$ 0
2020	0	0	0	2	0	0
2021	56,494,060	0	56,494,060	3	18,831,353	37,662,707
2022	0	0	0	4	0	0
2023	80,370,000	0	80,370,000	5	16,074,000	64,296,000
Total	\$ 136,864,060	\$ 0	\$ 136,864,060		\$ 34,905,353	\$ 101,958,707

9. Actuarial value of assets as of June 30, 2023 (Item 3 - Item 8)	\$ 4,562,385,768
10. Ratio of actuarial value to market value	97.8%

\*Values of \$0 result from the beginning balance being offset by future gains or losses in the opposite direction.





## Table 9

### Target Distribution of Assets at Market Value (Percentage of Total Investments)

Item (1)	June 30, 2023 (2)
US Equity	25.1%
International Developed Equity	10.7%
Emerging Markets Equity	4.2%
Private Equity and Opportunistic Private Credit	12.5%
Non-Core Real Estate	2.5%
Equity Options	2.0%
EMD (50/50 Blend)	0.0%
Liquid Credit	5.0%
Private Credit	3.0%
CLOs	2.0%
Treasury Duration	5.0%
Systematic Trend	5.0%
Core Real Estate	4.0%
Private Infrastructure	4.0%
IG Corp Credit	3.3%
Securitized Credit	3.3%
Absolute Return	6.5%
Cash	2.0%
Total investments	100.0%

## Table 10

### History of Investment Return Rates (Net of Investment and Administrative Expenses)

Year Ending June 30 of (1)	Market (2)	Actuarial (3)
1995	17.0%	10.2%
1996	13.7%	13.7%
1997	19.1%	19.1%
1998	16.1%	16.5%
1999	10.1%	14.7%
2000	9.1%	8.8%
2001	-11.0%	4.9%
2002	-8.4%	0.9%
2003	2.6%	-0.8%
2004	18.7%	0.4%
2005	11.4%	1.8%
2006	11.6%	7.4%
2007	18.2%	13.0%
2008	-5.8%	10.7%
2009	-20.1%	2.4%
2010	14.0%	0.8%
2011	19.5%	2.1%
2012	1.4%	3.9%
2013	11.0%	6.1%
2014	14.9%	8.2%
2015	2.2%	7.3%
2016	-0.2%	5.5%
2017	11.5%	5.7%
2018	7.9%	6.3%
2019	6.3%	6.3%
2020	3.7%	5.7%
2021	27.0%	10.1%
2022	-2.7%	8.2%
2023	8.4%	7.7%
Average Returns:		
Last 5 Years	8.1%	7.6%
Last 10 Years	7.6%	7.1%
Since 1995	7.3%	7.0%

## Table 11A

### Analysis of Change in Employer Cost

Basis (1)	State Employees (2)	Teachers (3)
1. Employer contribution rates from prior valuation	28.54%	25.12%
2. Impact of changes, gains and losses		
a. Non-economic liability experience (gain)/loss	0.32%	0.06%
b. Salary (gain)/loss	0.22%	0.04%
c. Total payroll growth (gain)/loss	(0.75%)	(0.33%)
d. Investment experience (gain)/loss	(0.10%)	(0.29%)
e. Actual COLA (3.11%)	0.07%	0.03%
f. Supplemental Employer Contribution	0.00%	0.00%
g. Decrease in Normal Cost from New Hires	(0.06%)	(0.12%)
h. Change in Assumptions/Methods	0.39%	(0.21%)
i. Total	0.09%	(0.82%)
3. Employer contribution rates from current valuation	28.70%	24.35%

## Table 11B

### History of Employer Contribution Rates

Valuation Date as of June 30, (1)	Fiscal Year Ending June 30, (2)	Employer Contribution Rate (3)
<b>State Employees</b>		
2006	2009	21.64% <sup>1</sup>
2007	2010	20.78% <sup>2</sup>
2008	2011	20.78%
2009	2012	22.98%
2010	2013	21.18% <sup>3</sup>
2011	2014	23.05%
2012	2015	23.33%
2013	2016	23.64%
2014	2017	25.34% <sup>4</sup>
2015	2018	24.87%
2016	2019	25.75%
2017	2020	26.39%
2018	2021	27.54%
2019	2022	28.01%
2020	2023	28.00%
2021	2024	28.97%
2022	2025	28.54%
2023	2026	28.70%
<b>Teachers</b>		
2006	2009	20.07% <sup>1</sup>
2007	2010	19.01% <sup>2</sup>
2008	2011	19.01%
2009	2012	22.32%
2010	2013	19.29% <sup>3</sup>
2011	2014	20.68%
2012	2015	22.60%
2013	2016	23.14%
2014	2017	23.13% <sup>4</sup>
2015	2018	23.13%
2016	2019	23.51%
2017	2020	24.61%
2018	2021	25.25%
2019	2022	25.72%
2020	2023	26.16%
2021	2024	26.16%
2022	2025	25.12%
2023	2026	24.35%

<sup>1</sup> Restated after adopting the amendment of Article 7.

<sup>2</sup> Restated after adopting the amendment of Article 16.

<sup>3</sup> Restated after reflecting the Rhode Island Retirement Security Act of 2011.

<sup>4</sup> Restated after adopting the amendment of Article 21.

## Table 11C

### Analysis of Change in UAAL

Basis (1)	State Employees (2)	Teachers (3)
1. UAAL as of June 30, 2022	\$ 2,032	\$ 2,735
2. Impact of changes, gains and losses		
a. Interest at 7.00% for one year	142	191
b. Expected amortization payments	(209)	(280)
c. Supplemental Employer Contribution	-	-
d. Investment experience (gain)/loss	(9)	(39)
e. Actual COLA (2.84%)	7	5
f. Salary (gain)/loss	22	5
g. Non-economic liability experience (gain)/loss	13	(12)
h. Changes in assumptions/methods	(14)	(94)
i. Changes in plan provisions	-	-
j. Total	\$ (48)	\$ (224)
3. UAAL as of June 30, 2023	\$ 1,984	\$ 2,511

Note: All dollar amounts are shown in millions.

## Table 12A

### Membership Data (State Employees)

	June 30, 2023 (1)	June 30, 2022 (2)	June 30, 2021 (3)
1. Active members			
a. Eligible for 2.00% Multiplier	871	977	1,102
b. Hired before 2012 without 2.00% Multiplier	4,442	4,766	5,187
c. Zero Service as of 06/30/2012	5,646	5,077	4,514
d. Total Count	10,959	10,820	10,803
e. Number vested	7,601	7,674	7,726
f. Annualized salaries	\$ 811,537,569	\$ 771,627,862	\$733,336,552
g. Average salary	74,052	71,315	67,883
h. Average age	49.1	49.2	49.2
i. Average service	13.3	13.6	13.7
2. Inactive members			
a. Number	5,001	4,651	4,154
3. Service retirees			
a. Number	9,171	9,203	9,270
b. Total annual benefits	\$ 302,277,248	\$ 301,139,445	\$300,008,653
c. Average annual benefit	32,960	32,722	32,363
d. Average age	74.9	74.6	74.3
4. Disabled retirees			
a. Number	839	837	797
b. Total annual benefits	\$ 19,566,588	\$ 19,370,883	\$18,095,550
c. Average annual benefit	23,321	23,143	22,705
d. Average age	67.0	66.7	66.6
5. Beneficiaries and spouses			
a. Number	1,318	1,325	1,306
b. Total annual benefits	\$ 25,912,293	\$ 25,855,189	\$25,052,311
c. Average annual benefit	19,660	19,513	19,182
d. Average age	76.6	76.6	76.6

## Table 12B

### Membership Data (Teachers)

	June 30, 2023 (1)	June 30, 2022 (2)	June 30, 2021 (3)
1. Active members			
a. Eligible for 2.00% Multiplier	893	1,053	1,214
b. Hired before 2012 without 2.00% Multiplier	7,095	7,589	8,290
c. Zero Service as of 06/30/2012	5,566	4,895	3,868
d. Number	13,554	13,537	13,372
e. Number vested	10,772	11,028	11,028
f. Annualized salaries	\$ 1,162,206,643	\$1,129,815,389	\$1,098,198,511
g. Average salary	85,746	83,461	82,127
h. Average age	46.7	46.7	46.8
i. Average service	15.7	15.8	15.9
2. Inactive members			
a. Number	5,000	4,539	4,227
3. Service retirees			
a. Number	10,576	10,533	10,441
b. Total annual benefits	\$ 458,393,505	\$458,707,016	\$456,696,521
c. Average annual benefit	43,343	43,550	43,741
d. Average age	75.2	74.7	74.2
4. Disabled retirees			
a. Number	382	373	356
b. Total annual benefits	\$ 11,360,020	\$11,091,131	\$10,629,328
c. Average annual benefit	29,738	29,735	29,858
d. Average age	66.8	66.5	66.2
5. Beneficiaries and spouses			
a. Number	637	615	601
b. Total annual benefits	\$ 16,398,735	\$16,019,175	\$15,630,218
c. Average annual benefit	25,744	26,047	26,007
d. Average age	76.0	75.5	75.2

## Table 13

### Historical Summary of Active Member Data

Valuation as of June 30,	Active Members		Total Salaries		Average Salary		Average Age	Average Service
	Number	Percent Increase	Amount in \$ Millions	Percent Increase	\$ Amount	Percent Increase		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>State Employees</b>								
2012	11,166	-0.6%	644	4.3%	57,667	4.9%	49.1	14.2
2013	11,280	0.4%	650	5.3%	57,624	4.9%	49.2	14.1
2014	11,301	0.2%	653	0.5%	57,813	0.3%	49.4	14.2
2015	11,194	-0.9%	667	2.1%	59,615	3.1%	49.7	14.4
2016	11,083	-1.0%	670	0.4%	60,482	1.5%	49.9	14.6
2017	11,152	0.6%	686	2.4%	61,538	1.7%	49.8	14.3
2018	10,978	-1.6%	686	0.0%	62,519	1.6%	49.4	13.9
2019	11,318	3.1%	729	6.3%	64,447	3.1%	49.2	13.6
2020	11,198	-1.1%	750	2.8%	66,977	3.9%	49.3	13.8
2021	10,803	-3.5%	733	-2.2%	67,883	1.4%	49.2	13.7
2022	10,820	0.2%	772	5.2%	71,315	5.1%	49.2	13.6
2023	10,959	1.3%	812	5.2%	74,052	3.8%	49.1	13.3
<b>Teachers</b>								
2012	13,212	-1.3%	962	-0.4%	72,809	0.9%	45.3	13.4
2013	13,193	-1.4%	936	-3.1%	70,965	-1.7%	45.4	13.6
2014	13,266	0.6%	952	1.7%	71,754	1.1%	45.6	14.0
2015	13,272	0.0%	968	1.7%	72,942	1.7%	45.8	14.3
2016	13,206	-0.5%	968	-0.1%	73,265	0.4%	46.0	14.6
2017	13,310	0.8%	1,001	3.4%	75,191	2.6%	46.1	14.8
2018	13,297	-0.1%	1,032	3.1%	77,581	3.2%	46.2	15.0
2019	13,511	1.6%	1,070	3.8%	79,232	2.1%	46.7	15.5
2020	13,474	-0.3%	1,091	1.9%	80,957	2.2%	46.8	15.7
2021	13,372	-0.8%	1,098	0.7%	82,127	1.4%	46.8	15.9
2022	13,537	1.2%	1,130	2.9%	83,461	1.6%	46.7	15.8
2023	13,554	0.1%	1,162	2.9%	85,746	2.7%	46.7	15.7





## Table 14A

### Distribution of Active Members by Age and by Years of Service (State Employees) As of June 30, 2023

Attained Age	Years of Credited Service												Total Count & Avg. Comp.	
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over		
	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.		
Under 25	97 \$50,081	34 \$50,863	11 \$46,317	4 \$43,959	1 \$54,855	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	147 \$49,846
25-29	200 \$60,282	194 \$58,070	81 \$62,953	58 \$62,300	71 \$64,152	60 \$65,447	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	664 \$61,018
30-34	177 \$58,410	161 \$59,874	94 \$62,760	96 \$63,154	129 \$69,473	304 \$67,887	34 \$66,682	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	995 \$64,128
35-39	110 \$62,947	94 \$58,140	83 \$64,468	65 \$62,770	104 \$71,199	350 \$74,177	231 \$80,026	55 \$66,669	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	1,092 \$70,824
40-44	102 \$60,301	83 \$62,835	41 \$66,704	53 \$65,641	61 \$73,534	266 \$73,629	227 \$75,405	205 \$81,453	32 \$75,780	1 \$66,829	0 \$0	0 \$0	0 \$0	1,071 \$72,789
45-49	88 \$65,366	64 \$64,035	41 \$55,876	46 \$74,146	65 \$69,455	206 \$70,926	177 \$76,885	208 \$78,986	195 \$86,482	20 \$86,637	0 \$0	0 \$0	0 \$0	1,110 \$75,056
50-54	89 \$59,861	66 \$60,556	39 \$65,724	59 \$69,235	56 \$76,423	217 \$71,049	184 \$74,970	216 \$78,200	297 \$87,533	132 \$93,190	95 \$90,295	2 \$63,368	2 \$63,368	1,452 \$78,071
55-59	74 \$62,179	58 \$62,065	39 \$64,943	38 \$64,562	73 \$64,956	227 \$65,168	244 \$72,109	202 \$74,006	226 \$84,860	179 \$91,865	368 \$93,258	125 \$89,043	125 \$89,043	1,853 \$78,973
60-64	30 \$63,903	37 \$68,735	25 \$61,870	39 \$69,814	55 \$71,346	195 \$65,305	235 \$68,975	200 \$69,752	237 \$81,286	133 \$87,006	230 \$93,618	196 \$95,736	196 \$95,736	1,612 \$78,586
65 & Over	17 \$77,312	10 \$91,546	14 \$95,927	8 \$64,237	24 \$73,483	111 \$67,527	155 \$72,980	156 \$71,097	173 \$76,689	78 \$85,279	99 \$83,277	118 \$93,127	118 \$93,127	963 \$77,779
<b>Total</b>	<b>984</b> \$60,203	<b>801</b> \$60,510	<b>468</b> \$63,826	<b>466</b> \$65,658	<b>639</b> \$69,930	<b>1,936</b> \$69,816	<b>1,487</b> \$74,236	<b>1,242</b> \$75,423	<b>1,160</b> \$83,618	<b>543</b> \$89,812	<b>792</b> \$91,760	<b>441</b> \$92,994	<b>441</b> \$92,994	<b>10,959</b> \$74,052



## Table 14B

### Distribution of Active Members by Age and by Years of Service (Teachers) As of June 30, 2023

Attained Age	Years of Credited Service												Total Count & Avg. Comp.
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	
	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	
Under 25	48 \$45,984	92 \$47,679	30 \$49,539	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	170 \$47,529
25-29	86 \$49,019	224 \$53,079	215 \$52,473	137 \$56,447	121 \$59,314	99 \$64,197	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	882 \$55,162
30-34	49 \$57,609	140 \$60,009	136 \$58,690	97 \$62,924	121 \$64,457	600 \$73,207	69 \$87,884	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	1,212 \$68,562
35-39	36 \$65,073	103 \$69,225	81 \$73,543	61 \$68,627	80 \$72,134	447 \$79,494	527 \$89,571	101 \$93,641	0 \$0	0 \$0	0 \$0	0 \$0	1,436 \$81,882
40-44	42 \$66,856	104 \$69,720	70 \$71,883	56 \$76,233	62 \$77,953	269 \$82,373	377 \$89,591	642 \$93,201	191 \$96,118	0 \$0	0 \$0	0 \$0	1,813 \$87,325
45-49	31 \$64,895	66 \$73,668	46 \$70,146	38 \$77,742	53 \$71,742	203 \$81,823	196 \$91,482	398 \$92,648	961 \$94,952	107 \$96,918	0 \$0	0 \$0	2,099 \$90,467
50-54	33 \$74,271	50 \$71,240	28 \$73,820	23 \$85,689	34 \$72,536	166 \$84,646	174 \$90,436	272 \$93,957	768 \$95,042	707 \$96,805	84 \$99,672	0 \$0	2,339 \$93,059
55-59	21 \$77,888	19 \$72,038	20 \$86,102	15 \$76,975	21 \$70,843	123 \$82,503	127 \$91,484	193 \$92,642	392 \$94,081	391 \$96,715	489 \$98,364	68 \$99,544	1,879 \$93,975
60-64	15 \$91,754	21 \$78,277	10 \$75,894	9 \$70,324	10 \$81,244	61 \$85,398	84 \$89,780	136 \$91,496	294 \$94,358	250 \$97,451	181 \$98,094	111 \$98,705	1,182 \$94,106
65 & Over	6 \$74,273	8 \$75,479	7 \$76,869	4 \$84,907	3 \$92,539	33 \$83,794	31 \$87,907	60 \$93,838	160 \$95,343	112 \$97,782	68 \$96,832	50 \$99,764	542 \$94,289
<b>Total</b>	<b>367</b> \$60,808	<b>827</b> \$61,788	<b>643</b> \$62,288	<b>440</b> \$66,692	<b>505</b> \$68,171	<b>2,001</b> \$78,339	<b>1,585</b> \$89,965	<b>1,802</b> \$93,050	<b>2,766</b> \$94,894	<b>1,567</b> \$96,963	<b>822</b> \$98,311	<b>229</b> \$99,185	<b>13,554</b> \$85,746



## **APPENDIX 1**

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### **SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS**

DRAFT

# APPENDIX 1

## Summary of Actuarial Methods and Assumptions

### I. Valuation Date

The valuation date is June 30th of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

### II. Actuarial Cost Method

The actuarial valuation uses the Entry Age actuarial cost method. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) a rate that will amortize the unfunded actuarial accrued liability (UAAL).

1. First, the actuarial present value of future benefits is determined by discounting the projected benefits for each member back to the valuation date using the assumed investment return rate as the discount rate. For active members, the projected benefits are based on the member's age, service, gender and compensation, and based on the actuarial assumptions. The calculations take into account the probability of the member's death, disability, or termination of employment prior to becoming eligible for a retirement benefit, as well as the possibility of the member will remain in service and receive a service retirement benefit. Future salary increases are anticipated. The present value of the expected benefits payable to all active members is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits. Liabilities for future members are not included.
2. The employer contributions required to support the benefits are determined as a level percentage of salary, and consist of a normal contribution and an amortization contribution
3. The normal contribution is determined using the Entry Age Normal method. Under this method, a calculation is made to determine the rate of contribution which, if applied to the compensation of each individual member during the entire period of anticipated covered service, would be required to meet the cost of all benefits payable on his behalf. The salary-weighted average of these rates is the normal cost rate. This calculation reflects the plan provisions that apply to each individual member.
4. The employer normal cost rate is equal to (i) the normal cost rate, minus (ii) the member contribution rate.
5. The actuarial accrued liability is equal to the present value of all benefits less the present value of future normal costs. The present value of the supplemental member contributions for members with 20 years of service as of June 30, 2012 is also subtracted. The unfunded actuarial accrued liability (UAAL) is then determined as (i) the actuarial accrued liability, minus (ii) the actuarial value of assets.



## APPENDIX 1 (Continued)

6. The amortization contribution rate is the level percentage of payroll required to reduce the UAAL to zero over the remaining amortization period. The employer contribution rate determined by this valuation will not be effective until two years after the valuation date. The determination of the contribution rate reflects this deferral. The amortization payment for the applicable fiscal year is first determined based on the individual amortization bases. The covered payroll is projected forward for two years, and we then determine the amortization rate by dividing the amortization payment by the projected payroll. Contributions are assumed to be made monthly throughout the year.

The UAAL was initially being amortized over the remainder of a closed 30-year period from June 30, 1999. In conjunction with The Rhode Island Retirement Security Act of 2011, the amortization period was reset to 25 years as of June 30, 2010 for the UAAL that existed at that time. In addition, in conjunction with the Article 21 legislation, the amortization period for the local portion of the UAAL of the Teacher's Plan existing as of June 30, 2014 was reset to 25 years from June 30, 2014. New gains and losses each year will be amortized over individual 20 year periods. At any time that the System is in an overfunded status, the amortization schedule will be a rolling 20 year amortization of any aggregate surplus.

### III. Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income. Offsetting unrecognized gains and losses are immediately recognized, with the shortest remaining bases recognized first and the net remaining bases continue to be recognized on their original timeframe. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses.

### IV. Actuarial Assumptions

#### A. Economic Assumptions

1. Investment return: 7.00% per year, compounded annually, composed of an assumed 2.50% inflation rate and a 4.50% net real rate of return. This rate represents the assumed return, net of all investment and administrative expenses.
2. Salary increase rate:

For State Employees: The sum of (i) a 3.00% general wage inflation assumption (composed of a 2.50% price inflation assumption and a 0.50% additional general increase), and (ii) a service-related component as shown on next page.

For Teachers: The sum of (i) a 2.75% general wage inflation assumption (composed of a 2.50% price inflation assumption and a 0.25% additional general increase), and (ii) a service-related component as shown on next page.



## APPENDIX 1 (Continued)

Salary Increase Rates						
Service	State Employees		Correctional Officers		Teachers	
	Service-Related Component	Total Increase	Service-Related Component	Total Increase	Service-Related Component	Total Increase
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	1.00%	4.00%	2.00%	5.00%	5.50%	8.25%
2	2.00%	5.00%	3.00%	6.00%	5.50%	8.25%
3	3.00%	6.00%	4.00%	7.00%	5.50%	8.25%
4	2.75%	5.75%	3.75%	6.75%	5.50%	8.25%
5	2.75%	5.75%	3.75%	6.75%	5.50%	8.25%
6	2.50%	5.50%	3.50%	6.50%	5.25%	8.00%
7	1.25%	4.25%	2.25%	5.25%	5.00%	7.75%
8	1.00%	4.00%	2.00%	5.00%	5.00%	7.75%
9	1.00%	4.00%	2.00%	5.00%	5.00%	7.75%
10	1.00%	4.00%	2.00%	5.00%	2.50%	5.25%
11	1.00%	4.00%	1.50%	4.50%	1.25%	4.00%
12	2.00%	5.00%	2.50%	5.50%	0.75%	3.50%
13	1.25%	4.25%	1.75%	4.75%	0.50%	3.25%
14	1.00%	4.00%	1.50%	4.50%	0.50%	3.25%
15	1.00%	4.00%	1.50%	4.50%	0.50%	3.25%
16	1.00%	4.00%	1.00%	4.00%	0.25%	3.00%
17	0.50%	3.50%	1.00%	4.00%	0.25%	3.00%
18	0.50%	3.50%	1.00%	4.00%	0.25%	3.00%
19	0.50%	3.50%	1.00%	4.00%	0.25%	3.00%
20	0.50%	3.50%	1.00%	4.00%	0.50%	3.25%
21	0.50%	3.50%	1.00%	4.00%	0.10%	2.85%
22	0.25%	3.25%	1.00%	4.00%	0.10%	2.85%
23	0.25%	3.25%	1.00%	4.00%	0.10%	2.85%
24	0.25%	3.25%	1.00%	4.00%	0.10%	2.85%
25 or more	0.00%	3.00%	0.00%	3.00%	0.00%	2.75%

## APPENDIX 1 (Continued)

Salary increases are assumed to occur once a year, on July 1. Therefore the pay used for the period year following the valuation date is equal to the reported pay for the prior year, increased by the salary increase assumption. For employees with less than one year of service, the reported rate of pay is used rather than the fiscal year salary paid.

4. Payroll growth rate: In the amortization of the unfunded actuarial accrued liability, payroll is assumed to increase 2.50% for State Employees and 2.00% for Teachers per year. This increase rate is solely due to the effect of wage inflation on, with no allowance for future membership growth. This value is less than the general wage inflation assumptions for each group based on the current demographics being expected to dampen overall payroll growth over the remaining years of the current amortization layers.
5. Post-retirement Benefit Increase: Post-retirement benefit increases are assumed to be 2.10%, per annum while the plan has a funding level that exceeds 80%; however, an interim adjustment equal to 25% of the total increase will be granted while the plan remains less than 80% funded. In the original RIRSA legislation it was assumed that the benefit adjustments would be suspended until 2027 and all subsequent valuations have continued to reference this same timeframe. The actual amount of the COLA is determined based on 50% of the plan's five-year average investment rate of return minus 5.00% which will range from zero to 4.0%, and 50% of the lesser of 3% or last year's CPI-U increase for a total maximum increase of 3.50%.

### B. Demographic Assumptions

1. Post-termination mortality rates (non-disabled)
  - a. Male state employees: PUB-10 Median Table for Healthy General Employee Males, loaded by 115%, projected with Scale MP2021 with immediate convergence.
  - b. Female state employees: PUB-10 Median Table for Healthy General Employee Females, loaded by 111%, projected with Scale MP2021 with immediate convergence.
  - c. Male teachers: PUB-10 Median Table for Healthy Teacher Males, loaded by 108%, projected with Scale MP2021 with immediate convergence.
  - d. Female teachers: PUB-10 Median Table for Healthy Teacher Females, loaded by 115%, projected with Scale MP2021 with immediate convergence.

The following table provides the life expectancy for individuals retiring in future years based on the assumption with full generational projection

Life Expectancy for an Age 65 Retiree in Years					
Group	Year of Retirement				
	2022	2025	2030	2035	2040
State Employee - Male	20.7	20.9	21.3	21.7	22.0
State Employee - Female	23.4	23.6	23.9	24.2	24.6
Teacher – Male	22.7	22.9	23.3	23.6	23.9
Teacher – Female	24.4	24.6	24.9	25.2	25.5

2. Post-retirement mortality (disabled lives): Separate set of rates are used for state employees and teachers
  - a. State Employees: Sex distinct PUB-10 Tables for General Disabled Retirees by Occupation, projected with Scale MP2021 with immediate convergence.
  - b. Teachers: Sex distinct PUB-10 Tables for Teacher Disabled Retirees by Occupation females, projected with Scale MP2021 with immediate convergence.
3. Pre-retirement mortality: Separate set of rates are used for state employees and teachers
  - a. State Employees: Sex distinct PUB-10 Tables for General Employees by Occupation, projected with Scale MP2021 with immediate convergence.
  - b. Teachers: Sex distinct PUB-10 Tables for Teachers Employees by Occupation for females, projected with Scale MP2021 with immediate convergence.
4. Disability rates: Sample rates are shown below. Ordinary disability rates are not applied to members eligible for retirement. One half the accidental disabilities are assumed to be totally and permanently disabled from any occupation.

Age	Number of Disabilities per 1,000							
	State Ordinary Males	State Accidental Males	State Ordinary Females	State Accidental Females	Teachers Ordinary Males	Teachers Accidental Males	Teachers Ordinary Females	Teachers Accidental Females
25	0.54	0.07	0.45	0.07	0.27	0.03	0.32	0.03
30	0.66	0.09	0.55	0.09	0.33	0.03	0.39	0.03
35	0.90	0.12	0.75	0.12	0.45	0.05	0.53	0.05
40	1.32	0.18	1.10	0.18	0.66	0.07	0.77	0.07
45	2.16	0.29	1.80	0.29	1.08	0.11	1.26	0.11
50	3.66	0.49	3.05	0.49	1.83	0.18	2.14	0.18
55	6.06	0.81	5.05	0.81	3.03	0.30	3.54	0.30
60	8.46	1.13	7.05	1.13	4.23	0.42	4.94	0.42
65	13.86	1.85	11.55	1.85	6.93	0.69	8.09	0.69

In addition, for General Employees and Teachers that are age 55 with 20 Years of service and not eligible to retire, another 1% is added to the rates above. In addition, if the member is above age 60, another 1% is added to the rates above.



## APPENDIX 1 (Continued)

5. Termination rates (for causes other than death, disability, or retirement) are a function of the member's gender and service. Termination rates are not applied to members eligible for retirement. Rates are shown below:

Service	State Employees	Correctional Officers	Teachers
1	0.188800	0.104000	0.150000
2	0.119369	0.072800	0.100000
3	0.095306	0.059689	0.007500
4	0.081230	0.051579	0.056841
5	0.071243	0.046835	0.047326
6	0.063496	0.043469	0.040747
7	0.057166	0.040858	0.035903
8	0.051815	0.038725	0.032175
9	0.047180	0.036922	0.029209
10	0.043091	0.035359	0.026789
11	0.039433	0.033981	0.024773
12	0.036125	0.032749	0.023065
13	0.033104	0.31634	0.021598
14	0.030325	0.030616	0.020323
15	0.027752	0.029678	0.019204
16	0.025357	0.028812	0.018213
17	0.023117	0.028004	0.017328
18	0.021012	0.027249	0.016534
19	0.019027	0.026540	0.015816
20	0.017152	0.025871	0.015164
21	0.015370	0.025239	0.014568
22	0.013677	0.024639	0.014022
23	0.012062	0.024068	0.013520
24	0.010519	0.023524	0.013056
25	0.009041	0.023004	0.000000

## APPENDIX 1 (Continued)

### 6. Retirement rates (unreduced):

For State Employees (except Correctional Officers): a 20% per year retirement probability for members who is eligible for unreduced retirement before age 62, a 25% retirement probability for those retired between ages 62 to 65, then 30% for members aged 65 and up. 100% of members aged 75 and above are assumed to retire immediately.

For Teachers: a flat 30% per year retirement probability for members between ages 65 to 69, and a flat 35% per year retirement probability for members at age 70 or older eligible for unreduced retirement. A 30% retirement probability at first eligibility will be applied for employees under age 65. 20% per year retirement probability for members at all other ages. 100% of members aged 75 and above are assumed to retire immediately.

For Correctional Officers: A set of unisex rates, indexed by service, as shown below. 100% of officers who have attained Social Security normal retirement age and have at least 5 years of service are assumed to retire.

Corrections	
Service	Ret. Rate
25	10.00%
26	5.00%
27	6.00%
28	7.00%
29	8.00%
30	9.00%
31	10.00%
32	11.00%
33	12.00%
34	13.00%
35	14.00%
36	15.00%
37	16.00%
38	17.00%
39	18.00%
40	100.00%

## APPENDIX 1 (Continued)

7. Reduced retirement: Rates based on the years from Normal Retirement Age, as shown below:

Years from Normal Retirement Age	Ret. Rate
5	1%
4	1%
3	1%
2	2%
1	3%

C. Other Assumptions:

1. Valuation payroll (used for determining the amortization contribution rate): Prior aggregate fiscal year payroll projected forward one year using the overall payroll growth rate.
2. Percent married: 85% of employees are assumed to be married.
3. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
4. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity. The spousal annuity death benefit for vested married participants is valued using a static optional form conversion factor of 0.84 and 0.78 for males and females respectively.
5. For active death benefits, the liability is initially calculated based on the ordinary death benefit provisions, and then a 7.5% load is applied to account for duty related benefits.
6. Percent electing deferred termination benefit: Vested terminating members are assumed to elect a refund or a deferred benefit, whichever is more valuable at the time of termination.
7. Recovery from disability: None assumed.
8. Remarriage: It is assumed that no surviving spouse will remarry and there will be no children's benefit.
9. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at the first age at which unreduced benefits are available.

## APPENDIX 1 (Continued)

10. Investment and administrative expenses: The assumed investment return rate represents the anticipated net return after payment of all investment and administrative expenses.
11. Inactive members: For members who terminated service prior to June 30, 2017 liabilities for inactive members are approximated as a multiple of their member contribution account balances. For non-vested inactive members, the multiple is 1.0. For vested inactive members, the multiple is 8.0 for members with 25 or more years of service, 3.0 for vested inactive members age 45 or older with less than 25 years of service, and 1.0 for other vested inactive members younger than age 45. For members who terminated service after June 30, 2017, the expected liability at termination has been carried forward with interest from the last valuation the member was active.
12. Decrement timing: For all non-teachers employees, decrements are assumed to occur at the middle of the year. For Teachers the retirement and termination decrements are assumed to occur at the beginning of the year, while death and disability are assumed to occur at the middle of the year.
13. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
14. Decrement relativity: Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
15. Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
16. Benefit Service: All members are assumed to accrue one year of eligibility service each year.
17. All calculations were performed without regard to the compensation limit in IRC Section 401(a)(17) and the benefit limit under IRC Section 415.
18. For purposes of the projection it was assumed that employees entering the Plan in the future would reflect the characteristics of employees who entered the Plan during the last six years and that the active population would remain constant.

### D. Participant Data

Participant data was supplied on electronic files. There are separate files for (i) active and inactive members, and (ii) members and beneficiaries receiving benefits.

The data for active members included name, an identification number, gender, a code indicating whether the member was active or inactive, a code indicating employee type (State Employee or Teacher), date of birth, service, salary, date of last contribution, accumulated member contributions without interest, accrued benefit multiplier as of June 30, 2014, Final Average Compensation as of June 30, 2012, Article 7 Retirement Date, and the Rhode Island Retirement Security Act Retirement Date. For retired members and beneficiaries, the data included name, an identification number, gender, date of birth, date of retirement, amount of benefit, the amount of adjustment after age 62



## APPENDIX 1 (Continued)

for anyone electing the Social Security option, a code indicating the option elected and the type of retiree (service retiree, disabled retiree, beneficiary), and if applicable, the joint pensioner's date of birth and gender.

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## APPENDIX 1 (Continued)

Salary supplied for the current year was based on the earnings for the fiscal year preceding the valuation date. However, for members with less than one year of service, the current rate of salary was used. This salary was adjusted by the salary increase rate for one year. An additional adjustment was made so that a member's compensation would not be less than it was in the previous year.

In defining who was an active member, members with a date of last contribution in the final quarter of the fiscal year were considered active. Otherwise, the member was defined as inactive.

To correct for incomplete and inconsistent data, we first attempted to pulled data from prior valuation files and then made general assumptions to fill in the rest. These modifications had no material impact on the results presented.

## **APPENDIX 2**

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### **SUMMARY OF BENEFIT PROVISIONS**

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## APPENDIX 2

### Summary of Benefit Provisions

1. **Effective Date and Authority:** The Employees' Retirement System of Rhode Island (ERSRI) became effective on July 1, 1936 for State Employees and on July 1, 1949 for Teachers. Benefits for State Employees are described in Rhode Island General Laws, Title 36, Chapter 36-10, and benefits for Teachers are described in Rhode Island General Laws, Title 16, Chapter 16-16.
2. **Plan Year:** A twelve-month period ending June 30th.
3. **Administration:** ERSRI is administered by the State of Rhode Island Retirement Board. However, the State Investment Commission is responsible for the investment of the trust assets, including the establishment of the asset allocation policy.
4. **Type of Plan:** ERSRI is a qualified governmental defined benefit retirement plan. Separate contribution rates are determined for state employees and for teachers. For Governmental Accounting Standards Board purposes, it is a cost-sharing multiple employer plan.
5. **Eligibility:** Most Rhode Island state employees and certified public school teachers participate in ERSRI. Certain employees of the Airport Corporation, the Economic Development Corporation, and the Narragansett Bay Commission participate in the plan as though they were state employees. State police officers, state judges, and teachers and administrators in the public colleges and universities are covered by their own separate systems, and are therefore excluded. Certain elected state officials are excluded unless they make an election to join ERSRI. Superintendents, principals, business agents and other administrators participate as teachers. Non-certified public school employees, such as teacher's aides, janitors, secretaries, and bus drivers, cannot participate in ERSRI, although they may be covered by the Municipal Employees Retirement System (MERS) or a separate plan maintained by the town or city. Eligible employees become members as of their date of employment.
6. **Employee Contributions:** Effective July 1, 2012, State Employees (excluding Correctional Officers) and Teachers contribute 3.75% of their salary per year. For State Employees and Teachers with 20 or more years of service as of June 30, 2012 the contribution rate beginning July 1, 2015 will be 11.0%. Correctional Officers contribute 8.75% of their salary per year. The state "picks up" the members' contributions for its employees under the provisions of Internal Revenue Code (IRC) Section 414(h). At their option, the city or town employing a Teacher may also pick up their members' contributions.
7. **Salary:** Salary includes the member's base earnings plus any payments under a regular longevity or incentive plan. Salary excludes overtime, unused sick and vacation leave, severance pay, and other extraordinary compensation. Certain amounts that are excluded from taxable wages, such as amounts sheltered under a Section 125 plan or amounts picked up by the employer under IRC Section 414(h), are not excluded from salary.





## APPENDIX 2 (Continued)

8. Employer Contributions: For Teachers, the state contributes 40% of the employer contribution rate and the city, town or other local employer contributes the remaining 60%. (This basic 40-60 split is further adjusted, since the State bears the cost of repaying certain amounts taken from the trust in the early 1990's.) Contributions determined in a given actuarial valuation go into effect two years after the actuarial valuation.

In fiscal years beginning after June 30, 2005, if the State's contribution on behalf of State Employees decreases, the State shall appropriate an additional amount to the retirement trust. Such amount shall be equal to 20% of any decrease in expected contributions.

9. Service: Employees receive credit for service while a member. In addition, a member may purchase credit for certain periods, such as time spent teaching at a public school in another state, by making an additional contribution to purchase the additional service and those costs will be determined at full actuarial value, except for purchases of military service and redeposits of previously refunded contributions. Special rules and limits govern the purchase of additional service and the contribution required.
10. Final Average Compensation (FAC): For members eligible to retire as of September 30, 2009, their Final Average Compensation (FAC) will be based on the highest three consecutive annual salaries. For members not eligible to retire as of September 30, 2009, their FAC will be based on the highest five consecutive years of salary. Monthly benefits are based on one-twelfth of this amount.

### 11. Retirement

- a. Eligibility: As of July 1, 2012, retirement eligibility dates will be as follows.
  - (i) Members with less than five years of contributory service as of June 30, 2012 and members hired on or after that date are eligible for retirement on or after their Social Security normal retirement age.
  - (ii) Members who had at least five years of contributory service as of June 30, 2012 will be eligible for retirement at an individually determined age. This age is the result of interpolating between the member's Article 7 Retirement Date, described in Section 11(b) below, and the retirement age applicable to members hired after June 30, 2012 in (i) above. The interpolation is based on service as of June 30, 2012 divided by projected service at the member's Article 7 Retirement Date. The minimum retirement age is 59.
  - (iii) Members with 10 or more years of contributory service on June 30, 2012 may choose to retire at their Article 7 Retirement Date if they continue to work and contribute until that date. If option is elected, the retirement benefit will be calculated using the benefits you have accrued as of June 30, 2012, i.e., the member will accumulate no additional defined benefits after this date, but the benefit will be paid without any actuarial reduction.
  - (iv) Effective July 1, 2015, members will be eligible to retire with full benefits at the earlier of their current RIRSA date described in sections (i) – (iii) above or upon the attainment of age 65 with 30 years of service, age 64 with 31 years of service, age 63 with 32 years of service, or age 62 with 33 years of service.



## APPENDIX 2 (Continued)

- (v) A member who is within five years of reaching their retirement eligibility date, described in this section, and has 20 or more years of service, may elect to retire at any time with a reduced benefit. The reduction is 9% for year 1, 8% for year 2, and 7% for each year thereafter.
  - (vi) Nurses (RNs) employed by MHRH are eligible to retire when they are at least 55 years old and have a minimum of 25 years of contributing service.
  - (vii) Correctional officers are eligible to retire when they are at least 55 years old and have a minimum of 25 years of contributing service. If a member has 25 years of service as of June 30, 2012, they may retain their Article 7 Retirement Date. Correctional officers who do not work for 25 years will not receive their pension benefit until they reach their Social Security normal retirement age.
- b. Article 7 Retirement Date (member's retirement date as of September 30, 2009):
- (i) Grandfathered Schedule A members—members with at least 10 years of contributory service at June 30, 2005 and eligible for retirement at September 30, 2009—are eligible to retire on or after age 60 if they have credit for 10 years of service, or at any age if they have credit for 28 years of service.
  - (ii) Correctional officers who have reached age 50 and have credit for 20 years of service as of September 30, 2009 are eligible to retire and are grandfathered.
  - (iii) Nurses (RNs) employed by MHRH who have reached age 50 with 25 years of service by September 30, 2009 are eligible to retire and are grandfathered.
  - (iv) Schedule B members—members with less than 10 years of contributory service as of June 30, 2005 and members hired on or after that date—are eligible for retirement on or after age 65 if they have credit for 10 years of service, or on or after age 62 if they have credit for 29 years of service. In addition, a member who attains age 62 with at least 20 years of service credit may retire with an actuarially reduced retirement benefit. The reduction is based on the difference between 65 and the member's age at retirement.
  - (v) Correctional officers who are hired after September 30, 2009 become eligible to retire when they have reach age 55 and have credit for 25 years of service.
  - (vi) Nurses (RNs) employed by MHRH who are hired after September 30, 2009 become eligible when they have reach age 55 and have credit for 25 years of service.
  - (vii) Schedule A members who are not grandfathered, i.e., members who had at least 10 years of creditable service at June 30, 2005 but who were not eligible to retire on September 30, 2009, will be eligible for retirement at an individually determined age. This age is the result of interpolating between the retirement age under the rules applicable to grandfathered employees in (i) above and the retirement age applicable to members hired after September 30, 2009 in (iv) above. The interpolation is based on service as of September 30, 2009 divided by projected service at the retirement age under (i) above.

## APPENDIX 2 (Continued)

- (viii) Correctional officers hired on or before September 30, 2009 who are not eligible for retirement at that date will have an individually determined retirement age. This age is the result of interpolating between the retirement age for grandfathered employees in (ii) above and the retirement age applicable to members hired after September 30, 2009 in (v) above.
  - (ix) Similarly, MHRH nurses (RNs) hired on or before September 30, 2009 who are not eligible to retire at that date will have an individually determined retirement age. This age is the result of interpolating between the retirement age for grandfathered employees in (iii) above and the retirement age applicable to members hired after September 30, 2009 in (vi) above.
- c. Monthly Benefit: Upon retirement, members are eligible to commence a benefit determined as the sum of:
- (i) Benefit accrual of 1.0% per year for all service after June 30, 2015 unless the member had 20 or more years of service as of June 30, 2012 in which case the benefit accrual is 2.0% per year for service after June 30, 2015, and
  - (ii) Benefit accrual of 1.0% per year for all service from July 1, 2012 through June 30, 2015, and
  - (iii) Benefit accruals earned as of June 30, 2012, described in Section (d), below.

For purposes of calculating benefit accruals for service after June 30, 2012, the FAC is determined through retirement. Additionally, Correctional Officers who have completed 25 years of service on or before June 30, 2012 will continue to receive the benefit accrual rate under previous law for years 31 through 35 of service.

## APPENDIX 2 (Continued)

- d. Benefit accruals earned as of June 30, 2012: The retirement benefit is a percentage of the member's monthly FAC. This percentage is a function of the member's service as described below. For purposes of determining the benefit accruals earned as of June 30, 2012, the service and FAC are frozen as of June 30, 2012.
- (i) For grandfathered Schedule A members (members with at least 10 years of contributory service at June 30, 2005 and eligible for retirement at September 30, 2009), benefits are based under this schedule (Schedule A):

For Service In:	Years	Benefit Percentage Earned
The first 10 years of service	1 – 10	1.7% per year
The next 10 years of service	11 – 20	1.9% per year
The next 14 years of service	21 – 34	3.0% per year
The next 1 year of service	35	2.0% per year

The maximum benefit is 80% of FAC.

- (ii) For Schedule B members (members with less than 10 years of contributory service as of June 30, 2005) and for all future hires, benefits are based on the following schedule (Schedule B):

For Service In:	Years	Benefit Percentage Earned
The first 10 years of service	1 – 10	1.6% per year
The next 10 years of service	11 – 20	1.8% per year
The next 5 years of service	21 – 25	2.0% per year
The next 5 years of service	26 – 30	2.25% per year
The next 7 years of service	31 – 37	2.50% per year
The next 1 year of service	38	2.25% per year

The maximum benefit is 80% of FAC.

- (iii) For Schedule A members who are not grandfathered, i.e., members who had at least 10 years of creditable service at June 30, 2005 but who were not eligible to retire on September 30, 2009, benefits are based on Schedule A (under (i) above) for service through September 30, 2009 and on Schedule B (under (ii) above) for service after September 30, 2009. The maximum benefit is 80% of FAC.

## APPENDIX 2 (Continued)

(iv) MHRH nurses receive a benefit determined under the appropriate formula above.

(v) Correctional Officers receive a benefit computed under a different formula:

For Service In:	Years	Benefit Percentage Earned
The first 30 years of service	1 – 30	2.0% per year
The next 1 year of service	31	6.0% per year
The next 1 year of service	32	5.0% per year
The next 1 year of service	33	4.0% per year
The next 1 year of service	34	3.0% per year
The next 14 years of service	35	2.0% per year

Members with less than 25 years of service as of June 30, 2012 receive a flat 2.0% per year of service for years 1-30, 3.0 per year of service for years 31-35, and 2.0% per year of service in excess of 35. The maximum benefit for correctional officers is the greater of the benefit accrual as of June 30, 2012 or 75% of FAC.

- e. Payment Form: Benefits are paid as a monthly life annuity. Optional forms of payment are available; see Item 16 below.
- f. Death benefit: After retirement, death benefits are based on the form of annuity elected. If no option is elected, i.e., if payments are made as a life annuity, there is a minimum death benefit equal to the sum of the member's contributions without interest, less the sum of the monthly benefit payments made before the member's death. In addition, a lump-sum death benefit is payable upon the death of any retired member, regardless of option elected. This lump sum is equal to a percentage of the lump-sum death benefit that was available to the member at the time of retirement. The percentage is 100% in the first year of retirement, 75% in the second year, 50% in the third year, and 25% in the fourth and subsequent years of retirement. However, in no event will the lump sum death benefit be less than \$4,000.

### 12. Disability Retirement

- a. Eligibility: A member is eligible provided he/she has credit for at least five years of service or if the disability is work-related. Members are not eligible for an ordinary disability benefit if they are eligible for unreduced retirement.
- b. Ordinary Disability Benefit: The benefit payable under the retirement formula, using FAC and service at the time of disability, but not less than 10 years of service.
- c. Accidental Disability Benefit:



## APPENDIX 2 (Continued)

- (i) For applications filed before or on September 30, 2009: An annual annuity equal to two-thirds (66 2/3%) of salary at the time of disability.
- (ii) For applications filed after September 30, 2009: An accidental disability will be available at two-thirds (66 2/3%) of salary for members who are permanently and totally disabled from engaging in any occupation as determined by the retirement board. If the member is eligible for an accidental disability benefit but deemed able to work in other jobs, the benefit is limited to fifty percent (50%) of salary.
- (iii) Benefits will be subject to an annual review by ERSRI.

d. **Payment Form:** The disability benefit commences immediately upon the member's retirement. Benefits cease upon recovery or reemployment. Disability benefits are payable as a monthly life annuity with a guarantee that, at the member's death, the sum of the member's contributions plus interest as of the date of retirement will be paid in a lump-sum to the member's beneficiary. All alternative forms of payment except for the Social Security Option are permitted in the case of disability retirement.

### 13. Deferred Termination Benefit

- a. **Eligibility:** A member with at least five years of service is vested. A vested member who does not withdraw his/her contributions from the fund is eligible for a deferred termination benefit.
- b. **Monthly Benefit:** The monthly benefit is based on the retirement formula described above. Both FAC and service are determined at the time the member leaves active employment. Benefits may commence when the member has met the requirements for a retirement benefit.
- c. **Payment Form:** The same as for Retirement above.
- d. **Death Benefit before retirement:** A member who dies after leaving active service but before retiring is entitled to receive a benefit as described below in item 15.
- e. **Death Benefit after Retirement:** The same as for Retirement above.

### 14. Withdrawal (Refund) Benefit

- a. **Eligibility:** All members leaving covered employment with less than five years of service are eligible. Optionally, vested members (those with five or more years of service) may withdraw their accumulated contributions in lieu of the deferred benefits otherwise due.
- b. **Benefit:** The member who withdraws receives a lump-sum payment equal to the sum of his/her employee contributions. No interest is credited on these contributions.

### 15. Death Benefit of Active or Inactive Members

- a. **Eligibility:** Death must have occurred while an active or an inactive, non-retired member.



## APPENDIX 2 (Continued)

- b. **Basic Benefit:** Upon the death of a nonvested member, or upon the death of an inactive, vested member, or upon the death of an active, unmarried member, a refund of the member's contributions (without interest) is paid. Upon the death of a vested, married, active member, the spouse may elect (i) the refund benefit described above, or (ii) a life annuity paid to the spouse or beneficiary. The amount of the annuity is equal to the amount which would have been paid had the member retired at the time of his death and elected the Joint and 100% Survivor option. If the member was not eligible for retirement, the annuity benefit is reduced 9% per year from the date at which the member would have been eligible had he or she remained in service.
  - c. **Lump-sum Benefit:** \$800 per year of service, with a maximum benefit of \$16,000 and a minimum of \$4,000. This benefit is only available to active members.
  - d. **Accidental Duty-related Death Benefit:** If a member dies as the result of an accident while in the course of his or her duties, in lieu of the above benefits the member's spouse may elect to receive (i) a refund of all contributions made (including interest), and (ii) an annual life annuity equal to 50% of the member's salary at the time of death. The annuity benefit stops when the spouse remarries or dies, although it may be continued to any children under age 18 or to any dependent parents.
16. **Optional Forms of Payment:** In addition to a life annuity, ERSRI offers members these optional forms of payment on an actuarially equivalent basis:
- a. **Option 1 (Joint and 100% Survivor)** - A life annuity payable while either the participant or his beneficiary is alive.
  - b. **Option 2 (Joint and 50% Survivor)** - A life annuity payable to the member while both the member and beneficiary are alive, reducing to 50% of this amount if the member predeceases the beneficiary.
  - c. **Social Security Option** – An annuity paid at one amount prior to age 62, and at a reduced amount after age 62, designed to provide a level total income when combined with the member's age 62 Social Security benefit. Benefits cease upon the member's death. This option is only available for members with at least 10 years of contributory service as of June 30, 2005.

Actuarial equivalence is based on tables adopted by the Employees' Retirement Board.

## APPENDIX 2 (Continued)

### 17. Post-retirement Benefit Increase:

- a. For members with at least 10 years of contributory service as of June 30, 2005 who are retired or eligible to retire as of September 30, 2009, and for all members receiving a disability retirement benefit on that date: a 3.00% compound increase in their retirement benefit each year, beginning in January of the year in which the member reaches the third anniversary of retirement. This increase is not a function of actual increases in the cost of living.
- b. For other members who were retired or were eligible to retire as of June 30, 2010: a compound increase in their retirement benefit each year equal to the increase in the CPI, effective on each anniversary date beginning on the third anniversary of retirement. This increase is limited to 3.00%.
- c. For other members who were not retired or eligible to retire as of June 30, 2010: a compound increase in their first \$35,000 of annual retirement benefit each year equal to the increase in the CPI, effective on each anniversary date beginning on the later of the member's third anniversary of retirement and the month following their 65th birthday. This increase is limited to 3.00%. Additionally, the \$35,000 annual COLA limit is applicable for benefits paid in 2010 and would be indexed annually to increase in the same manner as COLAs for Schedule B members (CPI increase for the year, not greater than 3.00%).
- d. For members who retire after June 30, 2012: members will be eligible to receive cost of living increases at the later of the member's third anniversary of retirement and the month following their SSNRA.



## APPENDIX 2 (Continued)

- e. Effective July 1, 2012, the following provisions will apply to all members:
- (i) The COLA will be suspended for all state employees, teachers, BHDDH nurses, correctional officers, judges and state police until the aggregate funding level of their plans exceeds 80%; however, an interim COLA will be granted in four-year intervals while the COLA is suspended. The first interim COLA may begin January 1, 2017.
  - (ii) Effective July 1, 2015, the COLA is determined based on 50% of the plan's five-year average investment rate of return less 5.0% limited to a range of 0.0% to 4.0%, plus 50% of the lesser of 3.0% or last year's CPI-U increase for a total maximum increase of 3.50%. Previously, it was the plan's five-year average investment rate of return less 5.5% limited to a range of 0.0% to 4.0%
  - (iii) The COLA will be limited to the first \$25,000 of the member's annual pension benefit. For retirees and beneficiaries who retired on or before July 1, 2015, years in which a COLA is payable based on the every fourth year provision described in (i) above will be limited to the first \$30,000. These limits will be indexed annually to increase in the same manner as COLAs, with the known values of \$25,000 for 2013, \$25,000 for 2014, \$25,168 for 2015, \$25,855 for 2016, \$26,098 for 2017, \$26,290 for 2018, \$26,687 for 2019, \$27,184 for 2020, \$27,608 for 2021, \$27,901 for 2022, \$28,878 for 2023, \$29,776 for 2024, and \$30,622 for 2025.
- F. In addition to the scheduled increases described in section (e) above, there will be a one-time 2% COLA paid in FY2016 on the first \$25,000 of pension benefit for all retirees and beneficiaries who retired on or before June 30, 2012. There will also be two one-time stipends of \$500 payable in FY2016 and FY2017 to retirees and beneficiaries who retired on or before June 30, 2015.
- G. Effective with the passage of H5200 Substitute A, as Amended, beginning in 2024 the benefit adjustments are reduced to twenty-five percent (25%) of the benefit adjustment payable each year while the plans remain less than 80% funded instead of being fully suspended. The limit will be based on the \$30,000 amount during this time.

## **APPENDIX 3**

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### **RISKS ASSOCIATED WITH MEASURING THE ACCRUED LIABILITY AND ACTUARIALLY DETERMINED CONTRIBUTION**

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## APPENDIX 3

### Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

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 due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. Investment risk – actual investment returns may differ from the expected returns;
2. Contribution risk – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
3. Salary and Payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
4. Longevity risk – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
5. Other demographic risks – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.



## APPENDIX 3 (Continued)

The computed contribution rate shown on page 9 may be considered as a minimum contribution rate that complies with the Board's funding policy. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

### ERSRI SPECIFIC RELATIONSHIP TO CERTAIN RISKS

While ERSRI has various levels of exposure to all of the risks listed above, in our opinion the two that warrant the most observation for the ERSRI Board specifically are assumption change risk and affordability risk.

Assumption Change Risk is the potential for the environment to change such that future valuation assumptions are adjusted to be different than the current assumptions. For example, declines in interest rates or increases in earnings multiples over time may result in a change in the assumed rates of return used in the valuation. A healthier workforce may result in changes in employee behavior such that retirement rates are adjusted to reflect employees working longer. And the difference in changing an assumption versus the other experience related risks listed above is instead of the loss slowly building over time, there is the immediate recognition of the change. Over the past decade, the changing of assumptions has increased the liabilities of ERSRI more than any other source. While those changes were warranted and put ERSRI on a stronger path going forward, it did cause a set-back in many of the actuarial measurements and at least gives the appearance of a weaker System. We do not currently anticipate any significant changes to assumptions in the future and will continue to communicate with the Board if any issues beginning to show.

Affordability Risk is the simple fact that the contributions into ERSRI are quite large and in order to achieve the benefit security desired by the Board and the beneficiaries of ERSRI, they must remain high for quite a number of years. State Law requires the actuarial contribution occur and there has been no requests or attempts to lower the amounts, but it will always be a risk a future decision maker does attempt to do so.

Investment Risk is the largest of the experience related risks, but in ERSRI's case is actually dampened in comparison to its peers. For one, the funded ratio is lower, thus the amount of assets per unit of liability is lower. While that increases other risks, it actually lowers the amount of investment related risk over the shorter term. Also, the size of the benefit going forward is smaller and the COLAs are contingent on the investments performing, thus there are offsetting mechanisms that dampen Investment Risk in comparison to ERSRI's past and its peers.



## APPENDIX 3 (Continued)

### PLAN MATURITY MEASURES

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

	State Employees				
	<u>June 30, 2023</u>	<u>June 30, 2022</u>	<u>June 30, 2021</u>	<u>June 30, 2020</u>	<u>June 30, 2019</u>
Ratio of the market value of assets to total payroll	3.7	3.7	4.0	3.2	3.4
Ratio of actuarial accrued liability to payroll	6.1	6.3	6.4	6.2	6.5
Ratio of actives to retirees and beneficiaries	1.0	1.0	0.9	1.0	1.0
Ratio of net cash flows to market value of assets	-2.8%	-2.3%	-3.3%	-4.0%	-4.5%
Duration of the present value of benefits	10.6	10.8	10.7	10.4	10.7

	Teachers				
	<u>June 30, 2023</u>	<u>June 30, 2022</u>	<u>June 30, 2021</u>	<u>June 30, 2020</u>	<u>June 30, 2019</u>
Ratio of the market value of assets to total payroll	3.9	3.9	4.2	3.4	3.5
Ratio of actuarial accrued liability to payroll	6.0	6.2	6.3	6.3	6.4
Ratio of actives to retirees and beneficiaries	1.2	1.2	1.2	1.2	1.2
Ratio of net cash flows to market value of assets	-3.0%	-2.8%	-3.5%	-4.5%	-4.8%
Duration of the present value of benefits	11.3	11.5	11.1	11.5	10.7

### RATIO OF MARKET VALUE OF ASSETS TO PAYROLL

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 4.0 times the payroll, a return on assets 5% different than assumed would equal 20% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

### RATIO OF ACTUARIAL ACCRUED LIABILITY TO PAYROLL

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 5.5 times the payroll, a change in liability 2% other than assumed would equal 11% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

### RATIO OF ACTIVES TO RETIREES AND BENEFICIARIES

A young plan with many active members and few retirees will have a high ratio of active to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

## APPENDIX 3 (Continued)

### **RATIO OF NET CASH FLOW TO MARKET VALUE OF ASSETS**

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

### **DURATION OF PRESENT VALUE OF BENEFITS**

The duration of the present value of benefits (PVB) may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, duration of 10 indicates that the PVB would increase approximately 10% if the assumed rate of return were lowered 1%.

### **ADDITIONAL RISK ASSESSMENT**

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability. These types of other assessments are provided to the Board in the annual presentation.

## **Low-Default-Risk Obligation Measure**

Actuarial Standards of Practice No. 4 (ASOP No. 4) was revised and reissued in December 2021 by the Actuarial Standards Board (ASB). It includes a new calculation called a low-default-risk obligation measure (LDRM) to be prepared and issued annually for defined benefit pension plans. The transmittal memorandum for ASOP No. 4 includes the following explanation:

*“The ASB believes that the calculation and disclosure of this measure provides appropriate, useful information for the intended user regarding the funded status of a pension plan. The calculation and disclosure of this additional measure is not intended to suggest that this is the “right” liability measure for a pension plan. However, the ASB does believe that this additional disclosure provides a more complete assessment of a plan’s funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.”*

The LDRM estimates the amount of money the plan would need to invest in low risk securities to provide the benefits with greater certainty. The current model expects lower costs but with higher risk, which creates less certainty and a possibility of higher costs. The LDRM model creates higher expected costs but more predictability when compared to the current model. Thus, the difference between the two measures (Valuation and LDRM) is one illustration of the possible costs the sponsor could incur if there was a reduction in the investment risk in comparison to the current diversified portfolio. However, the downside risk would be limited in the scenarios where the current portfolio would fail to achieve returns in excess of the low-default-risk discount, in this case 4.90%.



## APPENDIX 3 (Continued)

The following information has been prepared in compliance with this new requirement. Unless otherwise noted, the measurement date, actuarial cost methods, and assumptions used are the same as for the funding valuation covered in this actuarial valuation report.

### State Employees

LDRM measure of benefits earned as of the measurement date: \$5,887 million  
Valuation liability (IEAN) at 7% on measurement date: 5,005 million  
Cost to mitigate investment risk in the System's portfolio: \$ 882 million

### Teachers

LDRM measure of benefits earned as of the measurement date: \$8,405 million  
Valuation liability (IEAN) at 7% on measurement date: 7,073 million  
Cost to mitigate investment risk in the System's portfolio: \$1,332 million

The ERSRI benefit structure has several risk sharing provisions that are contingent on the investment returns of the portfolio and thus if the portfolio was changed to expect lower returns, the expected liabilities that are contingent on those returns would also decrease. If these provisions were not contingent on the investment performance, it would have increased the LDRM by another \$286 million for State Employees and \$420 for Teachers, meaning these provisions reduced the impact of lowering the discount rate from 7.0% to 4.9% by about a fourth, which is an illustration that about a fourth of the investment risk is currently being borne by the Members and not the Employers.

ASOP 4 requires commentary to help the intended user understand the significance of the LDRM with respect to the funded status of the plan, plan contributions, and the security of participant benefits. Specifically, if plan assets were changed to be invested exclusively in low-default-risk securities, the funded status would be lower and the contributions would have to immediately be higher. In addition, since the future benefit adjustments are depending on funded status and investment performance, the benefit payments would also be lower. While investing in a portfolio with low-default-risk securities may be more likely to reduce the standard deviation of investment volatility, the higher necessary contributions would produce a larger ratio of assets to payroll, and thus it is not self-evident that the volatility of the employer contributions would be any lower. In addition, the portfolio would be expected to generate less investment earnings over time, thus it also would be more likely to result in higher employer contributions and/or lower benefits.

Disclosures: Discount rate used to calculate LDRM: 4.90% Intermediate FTSE Pension Discount Curve as of June 30, 2023. Other significant assumptions that differ from those used for the funding valuation: Future assumed COLAs would decrease from 2.1% per year to 1.1% per year. This measure is not appropriate for assessing the need for or amount of future contributions as the current portfolio is expected to generate significantly more investment earnings than the low-default-risk portfolio. This measure is also not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligation as this measure includes projections of salary increases and the ability for current members to continue to accrue eligibility and vesting service.



## **GLOSSARY**

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### **DEFINITION OF ACTUARIAL TERMS**



## GLOSSARY

1. Actuarial Accrued Liability (AAL) - That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Plan Benefits which is not provided for by future Normal Costs. It is equal to the Actuarial Present Value of Future Plan Benefits minus the actuarial present value of future Normal Costs.
2. Actuarial Assumptions - Assumptions as to future experience under the Plan. These include assumptions about the occurrence of future events affecting costs or liabilities, such as:
  - mortality, withdrawal, disablement, and retirement;
  - future increases in salary;
  - future rates of investment earnings and future investment and administrative expenses;
  - characteristics of members not specified in the data, such as marital status;
  - characteristics of future members;
  - future elections made by members; and
  - other relevant items.
3. Actuarial Cost Method or Funding Method - A procedure for allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability. These items are used to determine the ARC.
4. Actuarial Gain or Actuarial Loss - A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., the Plan's assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results that produce actuarial liabilities which are larger than projected. Actuarial gains will shorten the time required for funding of the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.
5. Actuarially Equivalent - Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.

## GLOSSARY (Continued)

6. Actuarial Present Value (APV) - The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:
  - a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.),
  - b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned, and
  - c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.
7. Actuarial Present Value of Future Plan Benefits - The Actuarial Present Value of those benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members either entitled to a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
8. Actuarial Valuation - The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB 25, such as the funded ratio and the ARC.
9. Actuarial Value of Assets or Valuation Assets - The value of the Plan's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly actuaries use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ARC.
10. Actuarially Determined - Values which have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.

## GLOSSARY (Continued)

11. Amortization Method - A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.
12. Amortization Payment - That portion of the pension plan contribution or ARC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.
13. Annual Required Contribution (ARC) - The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under GASB 25. The ARC consists of the Employer Normal Cost and the Amortization Payment.
14. Closed Amortization Period - A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Funding Period and Open Amortization Period.
15. Decrements: Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or termination.
16. Defined Benefit Plan: An employer-sponsored retirement benefit that provides workers, upon attainment of designated age and service thresholds, with a monthly benefit based on the employee's salary and length of service. The value of a benefit from a defined benefit plan is generally not affected by the return on the assets that are invested to fund the benefit.
17. Defined Contribution Plan: An employer-sponsored retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, and the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.
18. Employer Normal Cost: The portion of the Normal Cost to be paid by the employers. This is equal to the Normal Cost less expected member contributions.
19. Experience Study: A periodic review and analysis of the actual experience of the Plan which may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.

## GLOSSARY (Continued)

20. **Funded Ratio:** The ratio of the actuarial value of assets (AVA) to the actuarial accrued liability (AAL). Plans sometimes calculate a market funded ratio, using the market value of assets (MVA), rather than the AVA, although GASB 25 reporting requires the use of the AVA.
21. **Funding Period or Amortization Period:** The term “Funding Period” is used in two ways. In the first sense, it is the period used in calculating the Amortization Payment as a component of the ARC. This funding period is chosen by the Board of Trustees. In the second sense, it is a calculated item: the number of years in the future that will theoretically be required to amortize (i.e., pay off or eliminate) the Unfunded Actuarial Accrued Liability, based on the statutory employer contribution rate, and assuming no future actuarial gains or losses.
22. **GASB:** Governmental Accounting Standards Board.
23. **GASB 67 and GASB 68:** Governmental Accounting Standards Board Statements No. 67 and No. 68. These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 67 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 68 sets the rules for the systems themselves.
24. **Normal Cost:** That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method. Any payment in respect of an Unfunded Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits which are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated. Under the entry age normal cost method, the Normal Cost is intended to be the level cost (when expressed as a percentage of pay) needed to fund the benefits of a member from hire until ultimate termination, death, disability or retirement.
25. **Open Amortization Period:** An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.
26. **Unfunded Actuarial Accrued Liability:** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus.
27. **Valuation Date or Actuarial Valuation Date:** The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Plan Benefits is determined. The expected benefits to be paid in the future are discounted to this date.

# Municipal Employees Retirement System State of Rhode Island

Actuarial Valuation Report  
As of June 30, 2023

Draft





December 11, 2023

Retirement Board  
40 Fountain Street, First Floor  
Providence, RI 02903-1854

Dear Members of the Board:

**Subject: Actuarial Valuation as of June 30, 2023**

This is the June 30, 2023 actuarial valuation of the Municipal Employees' Retirement System (MERS). This report describes the current actuarial condition of MERS, determines recommended employer contribution rates, and analyzes changes in these contribution rates. Separate liabilities and contribution rates are determined for each of the participating units. Valuations are prepared annually as of June 30, the last day of the plan year.

Under Rhode Island General Laws, the employer contribution rates for the units participating in MERS are certified annually by the State of Rhode Island Retirement Board. These rates are determined actuarially, based on the plan provisions in effect as of the valuation date and the actuarial assumptions and methodology adopted by the Board. Where known, we have also reflected adoption of a COLA provision even if the effective date is after the valuation date. The Board's current policy is that the contribution rates determined by a given actuarial valuation become effective two years after the valuation date. For example, the rates determined by this June 30, 2023 actuarial valuation will be applicable for the year beginning July 1, 2025 and ending June 30, 2026.

**FINANCING OBJECTIVES AND FUNDING POLICY**

The actuarial cost method and the amortization periods are set by board policy. Normal cost rate (as a percent of pay) and actuarial accrued liabilities are computed using the Entry Age Normal actuarial cost method. The employer contribution rate is the sum of two pieces: the employer normal cost rate and the amortization rate. The employer normal cost rate is the difference between the normal cost rate and the member contribution rate. The amortization rate, also determined as a level percent of pay, is the amount required to amortize the unfunded actuarial accrued liability over a closed period. The amortization rate is adjusted for the two-year deferral in contribution rates.

### PROGRESS TOWARD REALIZATION OF FINANCING OBJECTIVES

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a plan's funded status. The funded ratio of the average non-Legacy unit in MERS is 87.9%, which increased from 86.9% in the prior valuation. The funded status alone is not appropriate for assessing the need for future contributions for a given unit. The funded status is also not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.

Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 7.00% on the actuarial valuation of assets), it is expected that:

1. The employer normal cost as a percentage of pay will decrease to the level of the newest tier as the old tier population declines and is replaced by new tier members,
2. The amortization payment as a percentage of pay will remain level as a percentage of payroll
3. In the absence of benefit improvements, the funded ratio should increase over time, until it reaches 100%

There are currently 129 units participating in MERS, 74 covering general employees and 55 covering police and/or fire employees. 116 of the units are open to new entrants and have always had MERS benefits and funding strategies and most of the overall results shown in the Tables focus on these units. Of those 116 units, 47 had their rate increase and 69 had their rate decrease. Three units have no required contribution rate, while East Smithfield Water and Barrington Fire (20) have fixed dollar contributions. Of the 66 continuing general employee units, 32 had rate increases, while 15 of the 47 continuing police/fire units had rate increases. An analysis of the changes in the employer contribution rates appears on Table 5a. The primary cause of the rate decreases was an asset gain and the primary cause of a rate increase were salary increases larger than expected.

Otherwise, 6 of the units have entered MERS through the Pathway to MERS legislation and are "Legacy" units which may have alternative benefit or funding policies. The data for those is emphasized on page 7 of the discussion. Finally, 7 units are either closed to new entrants or "Special" in some way and their situations are discussed on page 8.

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#### **BENEFIT PROVISIONS**

The benefit provisions reflected in this valuation are those which were in effect on June 30, 2023, and the only change to the benefit provisions since the preceding valuation was H5200 Substitute A, as Amended, which changed the COLAs while less than 80% funded from once every four years to twenty-five percent of the COLA increase granted every year. This did not have a material impact to the valuation results. We have also reflected the known adoption of COLA B or COLA C, even if the effective date and/or the adoption date occurred after the valuation date. The benefit provisions are summarized in Appendix B, and each unit's individual election is indicated by a code in column 4 on Table 1. Changes in elections are discussed on page 5.

#### **ASSUMPTIONS AND METHODS**

The assumptions have been updated since the last actuarial valuation and were approved by the Board on May 17, 2023 based on the Actuarial Experience Investigation. We believe the assumptions are internally consistent and are reasonable, based on the actual experience of ERSRI. The combined effect of the assumptions used in this valuation is expected to have no significant bias. Below is a summary of the changes made to the assumptions:

1. Decrease individual salary increases and projected payroll growth for most groups. These two items mainly offset each other in calculating the contribution requirements, especially as dollar amounts, but create a much lower projected annual growth rate in the dollar amounts of contributions.
2. Update the mortality projection scales to the ultimate rates of the most recently published ones, this had no material impact to the liabilities or contributions.
3. Modestly increase turnover rates.
4. Slight modifications to the retirement rates.
5. Slight modifications to the rates of disability.

The results of the actuarial valuation are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities and the calculated contribution rates.

All assumptions and methods are described in Appendix A. The actuarial assumptions and methods used in this report comply with the parameters for disclosure that appear in Governmental Accounting Standards Board (GASB) Statement Number 67.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the





purposes of the valuation. We performed tests to ensure that the model reasonably represents that which is intended to be modeled and has no material limitations or known weaknesses.

#### DATA

The System's staff supplied data for retired, active and inactive members as of June 30, 2023. We did not audit this data, but we did apply a number of tests to the data, and we concluded that it was reasonable and consistent with the prior year's data. The System's staff also supplied asset data as of June 30, 2023.

#### CERTIFICATION

All of our work conforms with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of Rhode Island state law and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board.

The undersigned are independent actuaries. All are Members of the American Academy of Actuaries. They all meet the Qualification Standards of the American Academy of Actuaries and they are experienced in performing valuations for large public retirement systems.

Respectfully submitted,

Draft



Joseph P. Newton, FSA, MAAA, EA  
Pension Market Leader and Actuary



Paul T. Wood, ASA, MAAA, FCA  
Senior Consultant and Actuary



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Senior Analyst and Actuary

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## Actuarial Standards of Practice Disclosure Statements

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; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

This report should not be relied on for any purpose other than the purpose described above. Determinations of the financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results.

The valuation was based upon information furnished by the System's staff, concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by the System's staff.

The developed findings included in this report consider data or other information through June 30, 2023.

This is one of multiple documents comprising the actuarial report. The other document comprising the actuarial report is a PowerPoint presentation presented to the Board of Trustees following the publication of this report.



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## SECTION I

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### DISCUSSION

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## Discussion (Contribution Rates)

The employer contribution rates for MERS are determined actuarially. The rates determined in this valuation become effective two years after the valuation date, in this case as of July 1, 2023.

Each rate consists of two pieces: the employer normal cost rate and the amortization rate. The normal cost and actuarial accrued liability are determined using the Entry Age actuarial cost method. The employer normal cost is the difference between (i) the normal cost rate, determined as a level percent of pay, and (ii) the member contribution rate. The unfunded actuarial accrued liability (UAAL) is amortized as a level percent of payroll over a closed period. For underfunded units, the period is 25 years as measured from June 30, 2010, or 15 years as of the current valuation date for any existing UAAL. In conjunction with the Article 21 legislation, employers were given the option to extend the amortization period for the UAAL existing as of June 20, 2014 to 25 years as measured from June 30, 2014. All new experience gains and losses for underfunded units are amortized over individual closed periods of 20 years using the process of “laddering”. Generally, for overfunded plans all prior bases are erased and an amount of the surplus is credited against the contribution rate to keep the funded ratio constant year over year. The amortization rate is adjusted for the fact that the contribution rate set by this valuation is deferred for two years.

However, the impact of the 2017 experience study was divided into separate “stagers” with the first payment beginning in FY2020 over a 20 year period. Other stagers began payment in FY2021 through FY2024 with amortization periods also equal to 20 years (e.g. the FY2024 stagger will have a 20 year amortization period). The impact of the 2020 recent experience study was divided into two stagers to align with the initial two stagers from the 2017 experience study.

Accordingly, the Actuarially Determined Contribution under the funding policy can be considered a “Reasonable Actuarially Determined Contribution” as required by the Actuarial Standards of Practice.

Table 1 shows the member contribution rate, the employer normal cost rate, the amortization rate and the total employer contribution rate. These rates are applicable to the fiscal year ending June 30, 2026. Table 2 compares the total employer contribution rate with those rates determined in the two prior actuarial valuations. Table 3 shows the components used to determine the employer contribution rate in dollar amounts. Finally, Table 5 shows the major components of the rate change for each unit.



## Discussion (Financial Data and Experience)

Assets for MERS are held in trust and are commingled with those of several other plans and programs—including the Employees' Retirement System of Rhode Island—for investment purposes. The State Investment Commission is responsible for setting the asset allocation policy and for investing the funds. The System's staff determines a reserve for each unit, reflecting that unit's contributions and benefit payments, and reflecting the unit's share of the earnings, determined on a market-value basis.

Table 6a shows the development of the actuarial value of assets in aggregate. The actuarial value of assets is determined by recognizing any difference between actual return and expected return (7.00% of market value) over a five-year period, 20% in each year, where gains and losses are allowed to offset each other immediately. The market value for MERS as of June 30, 2023 was \$2,166 million while the actuarial value was \$2,131 million (98.4% of market). Therefore, a cumulative total of \$35 million in actuarial gains related to the investment experience 2022 continue to be deferred and will be recognized over the next four valuations. Recognition of this deferred gain will, all other things being equal, result in contribution rates decreasing over the next four years.

Table 4a shows the market and actuarial values of assets for each unit and Table 4b shows the reconciliation of the market value of assets for each unit for the fiscal year ending June 30, 2023. Table 6b shows a historical summary of the return rates. The fund earned 8.4% during the year ending June 30, 2023 on a market value basis and returned 7.7% on an actuarial value basis. The average annual return based on the market value of assets over the last ten years (July 1, 2013 – June 30, 2023) was 7.6%. The returns above are net of both investment and administrative expenses, so they may differ from other information provided by the General Treasurer's office or the investment managers and advisors.

The System's staff provided all of the financial information used in this report.



## Discussion (Member Data)

The System's staff supplied member data as of June 30, 2023. While we did not audit this data, we did perform various tests to ensure that it was internally consistent, consistent with the prior year's data, and was reasonable overall. Information provided for active members includes: name, identification number, sex, a code indicating whether the member was active or inactive, date of birth, service, salary, unit indicator, date of last contribution, accumulated member contributions without interest, accrued benefit multiplier as of June 30, 2023, Final Average Compensation as of June 30, 2012, and the Rhode Island Retirement Security Act Retirement Date. For retired members, data includes: name, an identification number, sex, date of birth, date of retirement, amount of benefit, the amount of adjustment after age 62 for anyone electing the Social Security option, a code indicating the option elected and the type of retiree (service retiree, disabled retiree, beneficiary), and if applicable, the joint pensioner's date of birth and sex. For the special survivor benefit provided to retired police and fire members, we have not been provided demographic information on possible spouses who will be eligible for that benefit. For this valuation, we have assumed 80% of members will be married and 10% of married members will choose option 1 or 2. The 80% was derived from analyzing two other large GRS clients with similar demographics and benefit provisions. One data set showed 84% of retirees with spousal information and the other 77%.

Table 9 shows active member statistics for each unit, and Table 10 shows statistics on retirees and beneficiaries for each unit. Tables 11 and 12 show the distribution of active members by age and service, separately for general employees and for police and fire employees. Tables 13, 14, and 15 show summaries of the total membership data for general employee units (Table 13), for police and fire units (Table 14), and for all MERS units (Table 15).

The total payroll shown on the statistical tables is the amount that was supplied by the System's staff, annualized if necessary. For the cost calculations, the pays were adjusted in accordance with the actuarial assumptions to reflect one year's salary increase.



## Discussion (Benefit Provisions)

Appendix B includes a summary of the benefit provisions for MERS. There were changes in the benefit provisions since the preceding valuation that had a meaningful impact on the valuation results.

Individual units may elect certain optional provisions, including an annual benefit increase applicable to future retirees only (COLA C), the same increase applicable to both current and future retirees (COLA B). There were no other changes reflected in this valuation.

No units closed, withdrew or subdivided since the prior valuation.

There are no ancillary benefits—e.g., cost of living benefits—that are currently provided by a source independent of MERS but that might be deemed a MERS liability if continued beyond the availability of funding by the current funding source.

Six units are included in the valuation as a result of the “Pathway to MERS” legislation. The benefit provisions for these groups are generally unchanged from the benefits provided prior to entering MERS. For more details on these benefits, please contact the ERSRI.

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## Discussion (Actuarial Methods and Assumptions)

Appendix A of this report includes a summary of the actuarial assumptions and methods used in this valuation.

Costs are determined using the Entry Age Normal actuarial cost method. This method was initially adopted effective June 30, 1999 and was modified, effective June 30, 2011, to be consistent with the Act and the standards outlined in GASB Statement No. 67 exposure draft, which has now been finalized.

The method used to determine the actuarial value of assets is the five-year smoothed market method. This technique is further described in Section III of Appendix A. The development of the actuarial value of assets utilizing this method is shown in Table 6a of this report.

The assumptions were adopted by the Board on May 17, 2023. We believe the assumptions are internally consistent and are reasonable, based on the actual experience of ERSRI.

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## Legacy Units

The units on the follow page have entered MERS utilizing the “Pathway to MERS” legislative provisions. As such, their benefit structures remain consistent with those from before they entered MERS. Future actuarial gains and losses will be amortized over a 20-year structure the same as other units in MERS, but their Legacy Liability will be based on an individualized period that was negotiated and/or solved for during either the negotiations to enter MERS or the first valuation the unit was valued in the MERS valuation. The funded status of each of these units is quite poor but now with adequate and appropriate funding, their funded status and the resulting benefit security should begin to improve year over year going forward.

### Legacy Units

Old Unit Number (1)	New Unit Number (2)	Unit (3)	Market Value of Assets (4)	Actuarial Value of Assets (5)	Actuarial Accrued Liability (6)	Unfunded Actuarial Accrued Liability (7)	Funded Ratio (8)	Normal Cost (Total) (9)
<b>Legacy Units</b>								
1055	1055	Central Falls Police & Fire Legacy	\$ 20,250,032	\$ 19,919,479	\$ 43,852,670	\$ 23,933,191	45.4%	\$ 691,011
1609	1609	Town of West Warwick (Legacy)	\$ 9,453,717	\$ 9,299,398	\$ 50,166,791	\$ 40,867,393	18.5%	\$ 596,408
1610	1610	West Warwick School NC (Legacy)	13,409,407	13,190,518	33,543,047	20,352,529	39.3%	682,432
1619	1619	Town of West Warwick Library (Legacy)	975,259	959,339	3,126,220	2,166,881	30.7%	62,148
1617	1617	West Warwick Police Dept (Legacy)	13,246,857	13,030,621	53,181,343	40,150,722	24.5%	830,078
1618	1618	West Warwick Fire Dept (Legacy)	17,121,167	16,841,688	59,064,262	42,222,574	28.5%	1,143,399
<b>West Warwick Legacy Units Subtotal</b>			<b>\$ 54,206,407</b>	<b>\$ 53,321,564</b>	<b>\$ 199,081,664</b>	<b>\$ 145,760,100</b>	<b>26.8%</b>	<b>\$ 3,314,465</b>
<b>Legacy Units Subtotal</b>			<b>\$ 74,456,439</b>	<b>\$ 73,241,043</b>	<b>\$ 242,934,334</b>	<b>\$ 169,693,291</b>	<b>30.1%</b>	<b>\$ 4,005,476</b>

Old Unit Number (1)	New Unit Number (2)	Unit (3)	Member Rate (4)	Employer Normal Cost (5)	Employer Amortization Rate (6)	Total Employer Cost (7)	Projected FY2026 Payroll (8)	Projected FY26 Employer Contribution (9)
<b>Legacy Units</b>								
1055	1055	Central Falls Police & Fire Legacy	11.70%	8.51%	61.69%	70.20%	\$ 3,205,000	\$ 2,249,910
1609	1609	Town of West Warwick (Legacy)	11.00%	6.61%	86.27%	92.88%	\$ 3,365,153	\$ 3,125,480
1610	1610	West Warwick School NC (Legacy)	11.00%	5.37%	37.96%	43.33%	3,808,176	1,650,255
1619	1619	Town of West Warwick Library (Legacy)	9.00%	10.46%	47.13%	57.59%	326,583	188,087
1617	1617	West Warwick Police Dept (Legacy)	12.00%	13.93%	90.73%	104.66%	3,143,664	3,290,047
1618	1618	West Warwick Fire Dept (Legacy)	13.00%	11.73%	72.22%	83.95%	4,152,892	3,486,444
<b>West Warwick Legacy Units Subtotal</b>			<b>11.73%</b>	<b>9.37%</b>	<b>69.98%</b>	<b>79.35%</b>	<b>\$ 14,796,468</b>	<b>\$ 11,740,313</b>
<b>Legacy Units Subtotal</b>			<b>11.72%</b>	<b>9.22%</b>	<b>68.50%</b>	<b>77.72%</b>	<b>\$ 18,001,468</b>	<b>\$ 13,990,223</b>



## Discussion (Other Observations and Comments)

- Westerly (1622/1623) has no active members, but does have retirees/beneficiaries and an inactive member covered by MERS. The actuarial value of assets is less than the actuarial accrued liability resulting in an unfunded liability as of June 30, 2023. Based on this unfunded liability, a fixed contribution amount of \$8,943 was calculated to amortize the UAAL over a 5 year period beginning in FY2026.
- East Smithfield Water (1177) has no active members but does have vested members due a deferred benefit and retirees/beneficiaries. The actuarial value of assets is less than the actuarial accrued liability resulting in an unfunded liability as of June 30, 2023. Based on this unfunded liability, a fixed contribution amount of \$5,109 was calculated to amortize the UAAL over a 5 year period beginning in FY2026.
- Scituate Police (1464) has no active members, but does have retirees/beneficiaries covered by MERS. The Unit is overfunded, so no funding is required. Please note that future experience may result in additional contribution requirements.
- Tiogue Fire and Lighting (1528) has no active members, but it has one retiree. The Unit is overfunded, so no funding is required. Please note that future experience may result in additional contribution requirements.
- Albion Fire (Admin) (1702) has no active employees but it has one retiree. The Unit is overfunded, so no funding is required. Please note that future experience may result in additional contribution requirements.
- Barrington Fire 20 (1005) no longer has any active members, so they will continue to contribute a fixed dollar amount for FY2026. Based on the June 30, 2023 valuation, the actuarially determined contribution is \$342,682.
- Pascoag Fire District (ADMIN) COLA (1802) has one active member and an inactive member. The Unit is overfunded, so no funding is required. Please note that future experience may result in additional contribution requirements.
- Effective July 1, 2021, Cumberland Fire Department (1125), Cumberland Hill Fire District (1135), North Cumberland Fire Department (1365) merged and are presented as one Unit in this valuation.
- Effective November 1, 2021, Albion Fire District (1705) and Saylesville Fire (1815) merged (named Lincoln Fire District) and are presented as one Unit in this valuation.
- Other changes made between this valuation and July 1, 2023 such as units adopting new benefits, mergers of units, spin offs from one unit into two units, etc. will also result in revisions of contribution rates.



**SECTION II**

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**TABLES**

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## Tables

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# Table 1

## Contribution Rates For Fiscal Year Ending June 30, 2026

Old Unit Number	New Unit Number	Unit	Code(s)	Member Rate	Employer Rate		
					Employer Normal Cost	Amortization Rate	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>General Employee Units</b>							
3002	1012 1019	Bristol	B	2.00%	5.21%	8.30%	13.51%
3003	1032 1033	Burrillville	C	2.00%	5.44%	(0.18%)	5.26%
3004	1052	Central Falls		1.00%	4.60%	7.51%	12.11%
3005	1082	Charlestown	C	2.00%	5.82%	(1.73%)	4.09%
3007	1112 1113	Cranston	B	2.00%	6.21%	3.12%	9.33%
3008	1122 1123	Cumberland		1.00%	5.71%	2.07%	7.78%
3009	1152 1153	East Greenwich	C	2.00%	5.66%	(0.89%)	4.77%
3010	1162 1163	East Providence	B	2.00%	5.42%	15.36%	20.78%
3011	1183	Exeter/West Greenwich	B	2.00%	6.26%	4.37%	10.63%
3012	1192 1193	Foster		1.00%	6.07%	2.62%	8.69%
3013	1212 1213	Glocester	C	2.00%	6.26%	1.87%	8.13%
3014	1262	Hopkinton	C	2.00%	5.39%	(0.95%)	4.44%
3015	1272 1273	Jamestown	C	2.00%	5.72%	3.46%	9.18%
3016	1282 1283	Johnston	C	2.00%	5.51%	13.66%	19.17%
3017	1302 1303	Lincoln		1.00%	8.11%	4.10%	12.21%
3019	1322 1323	Middletown	C	2.00%	5.46%	4.04%	9.50%
3021	1352 1353 1354	Newport	B	2.00%	5.10%	12.96%	18.06%
3022	1342 1343	New Shoreham	B	2.00%	5.04%	1.87%	6.91%
3023	1372 1373	North Kingstown	C	2.00%	5.55%	10.74%	16.29%
3024	1382 1383	North Providence		1.00%	5.66%	(0.11%)	5.55%
3025	1392 1393	North Smithfield	B	2.00%	5.40%	(1.67%)	3.73%
3026	1412 1413	Pawtucket	C	2.00%	5.50%	6.43%	11.93%
3027	1515	Union Fire District		1.00%	6.15%	1.73%	7.88%
3029	1452	Richmond		1.00%	4.91%	2.09%	7.00%
3030	1462 1463	Scituate	B	2.00%	5.94%	6.50%	12.44%
3031	1472 1473	Smithfield	C	2.00%	6.13%	1.04%	7.17%
3032	1492 1493	South Kingstown	B	2.00%	5.64%	7.30%	12.94%
3033	1532 1533	Tiverton	C	2.00%	5.55%	(0.43%)	5.12%
3034	1562	Warren	C	2.00%	4.66%	4.07%	8.73%
3037	1602	West Greenwich	C	2.00%	5.88%	3.92%	9.80%
3039	1632 1633	Woonsocket	B	2.00%	5.57%	4.16%	9.73%
3040	1073	Chariho School District	C	2.00%	6.01%	4.53%	10.54%
3041	1203	Foster/Glocester	B	2.00%	5.35%	5.14%	10.49%
3043	1336	Narragansett Housing	C	2.00%	7.21%	(3.72%)	3.49%
3045	1098	Coventry Lighting District	C	2.00%	5.70%	(72.59%)	0.00%
3046	1242	Hope Valley Fire	C	2.00%	4.48%	(5.14%)	0.00%
3050	1156	East Greenwich Housing	C	2.00%	4.93%	(1.22%)	3.71%
3051	1116	Cranston Housing	C	2.00%	4.56%	4.10%	8.66%
3052	1166	East Providence Housing	B	2.00%	5.43%	1.42%	6.85%
3053	1416	Pawtucket Housing	B	2.00%	5.39%	(5.77%)	0.00%
3056	1126	Cumberland Housing	C	2.00%	7.35%	(2.36%)	4.99%
3057	1306	Lincoln Housing	B	2.00%	5.56%	4.89%	10.45%
3059	1016	Bristol Housing		1.00%	5.86%	(2.49%)	3.37%
3065	1036	Burrillville Housing	B	2.00%	5.51%	6.95%	12.46%
3066	1386	North Providence Housing	B	2.00%	4.78%	18.85%	23.63%
3068	1227	Greenville Water	B	2.00%	5.08%	(1.10%)	3.98%
3069	1356	Newport Housing	C	2.00%	6.08%	15.49%	21.57%



# Table 1

## Contribution Rates For Fiscal Year Ending June 30, 2026

Old Unit Number	New Unit Number	Unit	Code(s)	Member Rate	Employer Rate		
					Employer Normal Cost	Amortization Rate	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
3071	1566	Warren Housing	B	2.00%	5.45%	1.85%	7.30%
3072	1286	Johnston Housing		1.00%	5.96%	10.44%	16.40%
3077	1538	Tiverton Local 2670A	C	2.00%	4.41%	(0.50%)	3.91%
3078	1002 1003 1007 1009	Barrington COLA	C	2.00%	5.57%	2.30%	7.87%
3079	1096	Coventry Housing		1.00%	6.98%	(2.10%)	4.88%
3080	1496	South Kingstown Housing	C	2.00%	6.45%	(2.45%)	4.00%
3081	1403	N. RI Collaborative Adm. Services	C	2.00%	6.08%	7.31%	13.39%
3083	1616	West Warwick Housing	B	2.00%	5.60%	2.97%	8.57%
3084	1476	Smithfield Housing		1.00%	6.30%	(4.76%)	1.54%
3094	1478	Smithfield COLA	C	2.00%	5.70%	1.24%	6.94%
3096	1056	Central Falls Housing	C	2.00%	5.57%	8.38%	13.95%
3098	1293	Lime Rock Administrative Services		1.00%	6.96%	1.32%	8.28%
3099	1063	Central Falls Schools	C	2.00%	4.69%	1.60%	6.29%
3100	1023	Bristol/Warren Schools	B	2.00%	5.22%	9.10%	14.32%
3101	1157 1158	Town of E. Greenwich-COLA-NCE	C	2.00%	5.66%	(0.89%)	4.77%
3102	1712	Harrisville Fire District (ADMIN)	C	2.00%	6.60%	(3.33%)	3.27%
3150	1159	East Greenwich Fire (ADMIN)	C	2.00%	3.21%	14.88%	18.09%
1612	1612	Town of West Warwick	C	2.00%	4.99%	0.06%	5.05%
1613	1613	West Warwick School Dept (NC)	C	2.00%	5.02%	0.04%	5.06%
<b>General Employee Units Averages</b>				<b>1.89%</b>	<b>5.58%</b>	<b>5.41%</b>	<b>10.99%</b>
<b>Police &amp; Fire Units</b>							
4016	1285	Johnston Fire	D	9.00%	8.52%	3.26%	11.78%
4029	1454	Richmond Police	6	9.00%	8.26%	(0.27%)	7.99%
4031	1474	Smithfield Police	C,D	10.00%	8.72%	(1.05%)	7.67%
4042	1555	Valley Falls Fire	D	9.00%	8.71%	14.93%	23.64%
4047	1395 1435	North Smithfield Voluntary Fire	B,D	10.00%	8.92%	4.58%	13.50%
4050	1155	East Greenwich Fire	C,D	10.00%	9.32%	21.61%	30.93%
4054	1154	East Greenwich Police	C,D	10.00%	9.76%	16.23%	25.99%
4055	1375	North Kingstown Fire	C,D	10.00%	9.43%	14.38%	23.81%
4056	1374	North Kingstown Police	C,D	10.00%	9.12%	16.86%	25.98%
4058	1385	North Providence Fire	D	9.00%	8.68%	20.93%	29.61%
4059	1008	Barrington Fire (25)	C	10.00%	8.70%	(0.43%)	8.27%
4060	1004	Barrington Police	C,D	10.00%	8.15%	21.01%	29.16%
4062	1564 1565	Warren Police & Fire	C,D	10.00%	9.83%	14.56%	24.39%
4063	1494	South Kingstown Police	B,1	10.00%	9.38%	18.72%	28.10%
4076	1394	North Smithfield Police	C,D	10.00%	8.68%	11.23%	19.91%
4077	1534	Tiverton Fire	C,D	10.00%	8.85%	11.35%	20.20%
4082	1194	Foster Police	C,D	10.00%	9.35%	23.48%	32.83%
4085	1634	Woonsocket Police	C,D	10.00%	8.90%	21.12%	30.02%
4086	1084	Charlestown Police	C,D	10.00%	9.17%	20.85%	30.02%
4087	1264	Hopkinton Police	C,D,6	10.00%	9.96%	18.92%	28.88%
4088	1214	Glocester Police	C,D	10.00%	10.15%	14.55%	24.70%
4089	1604	West Greenwich Police/Rescue	C,D	10.00%	10.54%	9.26%	19.80%
4090	1034	Burrillville Police	C,D,6	10.00%	9.02%	10.23%	19.25%
4091	1148	Cumberland Rescue	C,D	10.00%	9.85%	(0.18%)	9.67%
4093	1635	Woonsocket Fire	C,D	10.00%	9.30%	3.84%	13.14%
4094	1015	Bristol Fire	D	9.00%	9.22%	11.03%	20.25%



# Table 1

## Contribution Rates For Fiscal Year Ending June 30, 2026

Old Unit Number	New Unit Number	Unit	Code(s)	Member Rate	Employer Rate		
					Employer Normal Cost	Amortization Rate	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
4096	1014	Bristol Police	C,D	10.00%	9.15%	(1.84%)	7.31%
4098	1095	Coventry Fire	C,D	10.00%	9.82%	33.35%	43.17%
4099	1505	South Kingstown EMT	C,D	10.00%	10.60%	(4.63%)	5.97%
4102	1045 1235 1525 1585	Central Coventry Fire	C,D	10.00%	9.76%	25.16%	34.92%
4103	1255	Hopkins Hill Fire	C,D	10.00%	9.71%	(0.92%)	8.79%
4104	1114	Cranston Police	C,D,4	10.00%	8.88%	10.27%	19.15%
4105	1115	Cranston Fire	C,D,4	10.00%	9.24%	2.71%	11.95%
4106	1125 1135 1365	Cumberland Fire	B,D	10.00%	9.49%	13.66%	23.15%
4107	1305	Lincoln Rescue	C	10.00%	9.08%	16.94%	26.02%
4108	1344	New Shoreham Police	B,D	10.00%	6.74%	23.22%	29.96%
4109	1324	Middletown Police & Fire	C,D	10.00%	8.93%	(1.56%)	7.37%
4110	1715	Harrisville Fire District	C,D	10.00%	10.11%	(6.45%)	3.66%
4111	1705 1815	Lincoln Fire District	C	10.00%	8.56%	2.90%	11.46%
1054	1054	Central Falls Police & Fire New	C	10.00%	8.77%	(0.40%)	8.37%
1284	1284	Johnston Police		9.00%	8.56%	0.61%	9.17%
1295	1295	Limerock Fire District	C	10.00%	8.83%	1.72%	10.55%
1364	1364	Newport Police Dept		9.00%	8.37%	(1.11%)	7.26%
1424	1424	Portsmouth Police Department	C	10.00%	8.36%	(1.45%)	6.91%
1425	1425	Portsmouth Fire Department	C	10.00%	8.40%	(0.29%)	8.11%
1465	1465	Smithfield Fire	C	10.00%	8.66%	0.20%	8.86%
1484	1484	Scituate Police Dept COLA	C	10.00%	8.49%	(0.31%)	8.18%
1614	1614	West Warwick Police Dept	C	10.00%	8.66%	0.14%	8.80%
1615	1615	West Warwick Fire Dept	C	10.00%	8.72%	3.93%	12.65%
1805	1805	Pascoag Fire District COLA	C	10.00%	9.25%	10.93%	20.18%
<b>Police &amp; Fire Units Averages</b>				<b>9.87%</b>	<b>9.06%</b>	<b>8.98%</b>	<b>18.04%</b>
<b>All MERS Units Averages</b>				<b>4.52%</b>	<b>6.73%</b>	<b>6.59%</b>	<b>13.32%</b>

B - Municipality has adopted COLA Plan B

C - Municipality has adopted COLA Plan C

D - Municipality has adopted the "20-year" optional Police & Fire Plan

1 - S.Kingstown Police have a unique plan that provides 2.0% of salary for service prior to July 1, 1993, and 2.5% of salary for service on or after July 1, 1993.

2 - New unit since prior valuation.

3 - Closed unit.

4 - Historically, Cranston Fire and Police are contributing 10% due to special plan provision.

5 - This unit has no active members.

6 - Historically, Special plan provisions apply to this unit.





# Table 2

## Comparison of Employer Contribution Rates

Old Unit Number	New Unit Number	Unit	Code(s)	Contribution Rates			Projected Payroll, Projected from Actual FY2023 Payroll			Estimated Contributions		
				June 30, 2023 Actuarial Valuation, for FY2026	June 30, 2022 Actuarial Valuation, for FY2025	June 30, 2021 Actuarial Valuation, for FY2024	For FY2026	For FY2025	For FY2024	June 30, 2023 Actuarial Valuation, for FY2026	June 30, 2022 Actuarial Valuation, for FY2025	June 30, 2021 Actuarial Valuation, for FY2024
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<b>General Employee Units</b>												
3002	1012 1019	Bristol	B	13.51%	13.56%	15.24%	\$ 6,073,072	\$ 5,924,949	\$ 5,780,438	\$ 820,472	\$ 803,423	\$ 880,939
3003	1032 1033	Burrillville	C	5.26%	6.38%	7.66%	7,795,245	7,605,117	7,419,626	410,030	485,206	568,343
3004	1052	Central Falls		12.11%	12.99%	14.42%	2,717,282	2,651,007	2,586,348	329,063	344,366	372,951
3005	1082	Charlestown	C	4.09%	3.91%	7.42%	3,310,089	3,229,355	3,150,590	135,383	126,268	233,774
3007	1112 1113	Cranston	B	9.33%	9.06%	10.70%	27,646,652	26,972,344	26,314,482	2,579,433	2,443,694	2,815,650
3008	1122 1123	Cumberland		7.78%	8.38%	10.81%	12,865,768	12,551,969	12,245,823	1,000,957	1,051,855	1,323,773
3009	1152 1153	East Greenwich	C	4.77%	4.49%	5.54%	2,066,843	2,016,432	1,967,251	98,589	90,538	108,986
3010	1162 1163	East Providence	B	20.78%	20.60%	21.56%	23,249,843	22,682,774	22,129,536	4,831,317	4,672,651	4,771,128
3011	1183	Exeter/West Greenwich	B	10.63%	11.55%	12.64%	3,460,630	3,376,224	3,293,877	367,865	389,954	416,346
3012	1192 1193	Foster		8.69%	8.96%	12.11%	1,650,101	1,609,855	1,570,590	143,394	144,243	190,198
3013	1212 1213	Glocester	C	8.13%	7.74%	10.47%	3,748,425	3,657,000	3,567,805	304,747	283,052	373,549
3014	1262	Hopkinton	C	4.44%	1.57%	2.98%	2,359,093	2,301,554	2,245,419	104,744	36,135	66,913
3015	1272 1273	Jamestown	C	9.18%	9.81%	10.53%	4,980,193	4,858,725	4,740,219	457,182	476,641	499,145
3016	1282 1283	Johnston	C	19.17%	19.87%	16.62%	8,992,929	8,773,589	8,559,599	1,723,944	1,743,312	1,422,605
3017	1302 1303	Lincoln		12.21%	11.17%	11.42%	850,864	830,111	809,864	103,890	92,723	92,486
3019	1322 1323	Middletown	C	9.50%	9.35%	11.92%	5,533,757	5,398,787	5,267,109	525,707	504,787	627,839
3021	1352 1353 1354	Newport	B	18.06%	19.47%	21.08%	17,491,192	17,064,577	16,648,368	3,158,909	3,322,473	3,509,476
3022	1342 1343	New Shoreham	B	6.91%	6.56%	7.03%	3,209,686	3,131,401	3,055,025	221,789	205,420	214,768
3023	1372 1373	North Kingstown	C	16.29%	16.15%	17.04%	14,657,828	14,300,320	13,951,532	2,387,760	2,309,502	2,377,341
3024	1382 1383	North Providence		5.55%	6.16%	6.38%	10,300,738	10,049,500	9,804,390	571,691	619,049	625,520
3025	1392 1393	North Smithfield	B	3.73%	3.77%	5.93%	4,859,840	4,741,307	4,625,665	181,272	178,747	274,302
3026	1412 1413	Pawtucket	C	11.93%	11.89%	14.28%	26,177,994	25,539,506	24,916,591	3,123,035	3,036,647	3,558,089
3027	1515	Union Fire District		7.88%	9.54%	6.91%	439,342	428,626	418,172	34,620	40,891	28,896
3029	1452	Richmond		7.00%	8.24%	8.61%	1,650,181	1,609,933	1,570,666	115,513	132,658	135,234
3030	1462 1463	Scituate	B	12.44%	12.42%	15.01%	4,277,341	4,173,016	4,071,235	532,101	518,289	611,092
3031	1472 1473	Smithfield	C	7.17%	8.37%	9.89%	4,329,545	4,223,947	4,120,923	310,428	353,544	407,559
3032	1492 1493	South Kingstown	B	12.94%	12.78%	12.37%	14,741,111	14,381,572	14,030,802	1,907,500	1,837,965	1,735,610
3033	1532 1533	Tiverton	C	5.12%	4.33%	3.11%	4,384,516	4,277,577	4,173,245	224,487	185,219	129,788
3034	1562	Warren	C	8.73%	9.75%	10.69%	2,929,609	2,858,155	2,788,444	255,755	278,670	298,085
3037	1602	West Greenwich	C	9.80%	10.81%	14.60%	1,724,018	1,681,968	1,640,945	168,954	181,821	239,578
3039	1632 1633	Woonsocket	B	9.73%	11.05%	11.43%	15,796,436	15,411,158	15,035,276	1,536,993	1,702,933	1,718,532
3040	1073	Chariho School District	C	10.54%	10.38%	11.50%	5,546,021	5,410,752	5,278,782	584,551	561,636	607,060
3041	1203	Foster/Glocester	B	10.49%	10.70%	10.29%	2,587,835	2,524,717	2,463,138	271,464	270,145	253,457
3043	1336	Narragansett Housing	C	3.49%	1.58%	2.80%	240,578	234,710	228,985	8,396	3,709	6,412
3045	1098	Coventry Lighting District	C	0.00%	0.00%	0.00%	58,599	57,170	55,776	-	-	-
3046	1242	Hope Valley Fire	C	0.00%	0.00%	0.00%	195,337	190,573	185,925	-	-	-
3050	1156	East Greenwich Housing	C	3.71%	3.29%	11.67%	550,052	536,636	523,547	20,407	17,655	61,098
3051	1116	Cranston Housing	C	8.66%	8.33%	6.54%	1,245,699	1,215,316	1,185,674	107,877	101,236	77,543
3052	1166	East Providence Housing	B	6.85%	7.47%	11.75%	1,013,626	988,904	964,784	69,433	73,871	113,362



## Table 2

### Comparison of Employer Contribution Rates

Old Unit Number	New Unit Number	Unit	Code(s)	Contribution Rates			Projected Payroll, Projected from Actual FY2023 Payroll			Estimated Contributions		
				June 30, 2023 Actuarial Valuation, for FY2026	June 30, 2022 Actuarial Valuation, for FY2025	June 30, 2021 Actuarial Valuation, for FY2024	For FY2026	For FY2025	For FY2024	June 30, 2023 Actuarial Valuation, for FY2026	June 30, 2022 Actuarial Valuation, for FY2025	June 30, 2021 Actuarial Valuation, for FY2024
				(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
3053	1416	Pawtucket Housing	B	0.00%	0.00%	0.00%	3,453,226	3,369,001	3,286,830	-	-	-
3056	1126	Cumberland Housing	C	4.99%	3.55%	5.08%	663,832	647,641	631,845	33,125	22,991	32,098
3057	1306	Lincoln Housing	B	10.45%	10.95%	9.77%	773,958	755,081	736,665	80,879	82,681	71,972
3059	1016	Bristol Housing		3.37%	2.07%	1.17%	641,694	626,043	610,773	21,625	12,959	7,146
3065	1036	Burrillville Housing	B	12.46%	11.91%	12.31%	268,482	261,934	255,545	33,453	31,196	31,458
3066	1386	North Providence Housing	B	23.63%	27.69%	33.81%	368,121	359,143	350,383	86,987	99,447	118,464
3068	1227	Greenville Water	B	3.98%	3.73%	2.97%	367,311	358,353	349,612	14,619	13,366	10,383
3069	1356	Newport Housing	C	21.57%	23.21%	19.01%	1,950,172	1,902,606	1,856,201	420,652	441,595	352,864
3071	1566	Warren Housing	B	7.30%	6.54%	5.48%	491,715	479,722	468,021	35,895	31,374	25,648
3072	1286	Johnston Housing		16.40%	13.99%	13.55%	466,446	455,070	443,970	76,497	63,664	60,158
3077	1538	Tiverton Local 2670A	C	3.91%	6.17%	7.03%	1,248,909	1,218,448	1,188,729	48,832	75,178	83,568
3078	1002 1003 1007 1009	Barrington COLA	C	7.87%	7.98%	11.36%	10,300,974	10,049,730	9,804,615	810,687	801,968	1,113,804
3079	1096	Coventry Housing		4.88%	5.05%	6.38%	751,455	733,127	715,246	36,671	37,023	45,633
3080	1496	South Kingstown Housing	C	4.00%	1.56%	0.00%	233,752	228,050	222,488	9,350	3,558	-
3081	1403	N. RI Collaborative Adm. Services	C	13.39%	14.56%	13.87%	879,636	858,181	837,250	117,783	124,951	116,127
3083	1616	West Warwick Housing	B	8.57%	8.26%	9.40%	840,675	820,171	800,167	72,046	67,746	75,216
3084	1476	Smithfield Housing		1.54%	0.27%	1.68%	210,780	205,639	200,623	3,246	555	3,370
3094	1478	Smithfield COLA	C	6.94%	8.09%	10.20%	5,196,783	5,070,032	4,946,373	360,657	410,166	504,530
3096	1056	Central Falls Housing	C	13.95%	12.93%	14.14%	1,386,607	1,352,787	1,319,793	193,432	174,915	186,619
3098	1293	Lime Rock Administrative Services		8.28%	9.11%	14.82%	122,846	119,850	116,926	10,172	10,918	17,328
3099	1063	Central Falls Schools	C	6.29%	7.09%	8.42%	6,373,877	6,218,417	6,066,748	400,917	440,886	510,820
3100	1023	Bristol/Warren Schools	B	14.32%	14.76%	16.07%	5,465,885	5,332,570	5,202,508	782,715	787,087	836,043
3101	1157 1158	Town of E. Greenwich-COLA-NCE	C	4.77%	4.49%	5.54%	6,982,303	6,812,003	6,645,857	333,057	305,859	368,180
3102	1712	Harrisville Fire District (ADMIN)	C	3.27%	2.20%	5.04%	278,002	271,221	264,606	9,091	5,967	13,336
3150	1159	East Greenwich Fire (ADMIN)	C	18.09%	19.25%	34.47%	46,860	45,718	44,602	8,477	8,801	15,376
1612	1612	Town of West Warwick	C	5.05%	5.25%	N/A	1,100,625	1,073,780	N/A	55,582	56,373	N/A
1613	1613	West Warwick School Dept (NC)	C	5.06%	4.30%	N/A	1,383,411	1,349,670	N/A	70,001	58,036	N/A
<b>General Employee Units Average</b>				<b>10.99%</b>	<b>11.25%</b>	<b>12.50%</b>	<b>\$ 307,956,245</b>	<b>\$ 300,445,117</b>	<b>\$ 290,752,847</b>	<b>\$ 33,856,097</b>	<b>\$ 33,790,191</b>	<b>\$ 36,347,571</b>
<b>Police &amp; Fire Units</b>												
4016	1285	Johnston Fire	D	11.78%	12.00%	12.49%	\$ 6,048,333	\$ 5,900,813	\$ 5,756,891	\$ 712,494	\$ 708,098	\$ 719,036
4029	1454	Richmond Police	6	7.99%	8.53%	10.40%	1,119,867	1,092,553	1,065,906	89,477	93,195	110,854
4031	1474	Smithfield Police	C,D	7.67%	9.63%	12.54%	4,169,662	4,067,963	3,968,745	319,813	391,744	497,681
4042	1555	Valley Falls Fire	D	23.64%	26.92%	28.23%	769,747	750,972	732,656	181,968	202,162	206,829
4047	1395 1435	North Smithfield Voluntary Fire	B,D	13.50%	15.76%	17.82%	1,809,105	1,764,980	1,721,932	244,229	278,161	306,848
4050	1155	East Greenwich Fire	C,D	30.93%	32.90%	33.83%	3,216,397	3,137,949	3,061,413	994,832	1,032,385	1,035,676
4054	1154	East Greenwich Police	C,D	25.99%	31.02%	31.52%	2,788,875	2,720,854	2,654,492	724,829	844,009	836,696
4055	1375	North Kingstown Fire	C,D	23.81%	26.06%	29.84%	5,840,889	5,698,428	5,559,442	1,390,716	1,485,010	1,658,937
4056	1374	North Kingstown Police	C,D	25.98%	25.91%	29.45%	4,852,411	4,734,059	4,618,595	1,260,657	1,226,595	1,360,176
4058	1385	North Providence Fire	D	29.61%	27.57%	28.14%	7,574,883	7,390,130	7,209,883	2,242,923	2,037,459	2,028,862



## Table 2

### Comparison of Employer Contribution Rates

Old Unit Number	New Unit Number	Unit	Code(s)	Contribution Rates			Projected Payroll, Projected from Actual FY2023 Payroll			Estimated Contributions		
				June 30, 2023 Actuarial Valuation, for FY2026	June 30, 2022 Actuarial Valuation, for FY2025	June 30, 2021 Actuarial Valuation, for FY2024	For FY2026	For FY2025	For FY2024	June 30, 2023 Actuarial Valuation, for FY2026	June 30, 2022 Actuarial Valuation, for FY2025	June 30, 2021 Actuarial Valuation, for FY2024
				(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
4059	1008	Barrington Fire (25)	C	8.27%	9.74%	10.80%	2,216,206	2,162,152	2,109,417	183,280	210,594	227,817
4060	1004	Barrington Police	C,D	29.16%	29.99%	34.02%	2,165,713	2,112,891	2,061,357	631,522	633,656	701,274
4062	1564 1565	Warren Police & Fire	C,D	24.39%	25.95%	27.15%	2,275,955	2,220,444	2,166,286	555,105	576,205	588,147
4063	1494	South Kingstown Police	B,1	28.10%	26.94%	26.12%	4,653,981	4,540,469	4,429,726	1,307,769	1,223,202	1,157,044
4076	1394	North Smithfield Police	C,D	19.91%	19.74%	23.39%	2,437,744	2,378,287	2,320,280	485,355	469,474	542,713
4077	1534	Tiverton Fire	C,D	20.20%	21.01%	24.73%	2,235,410	2,180,887	2,127,695	451,553	458,205	526,179
4082	1194	Foster Police	C,D	32.83%	33.57%	30.48%	461,289	450,038	439,062	151,441	151,078	133,826
4085	1634	Woonsocket Police	C,D	30.02%	30.10%	30.62%	7,659,391	7,472,577	7,290,319	2,299,349	2,249,245	2,232,295
4086	1084	Charlestown Police	C,D	30.02%	27.49%	34.25%	1,787,556	1,743,957	1,701,421	536,625	479,414	582,737
4087	1264	Hopkinton Police	C,D,6	28.88%	31.23%	32.62%	1,291,290	1,259,795	1,229,069	372,925	393,434	400,922
4088	1214	Glocester Police	C,D	24.70%	23.19%	25.15%	1,488,550	1,452,244	1,416,824	367,672	336,775	356,331
4089	1604	West Greenwich Police/Rescue	C,D	19.80%	20.33%	23.22%	1,459,349	1,423,755	1,389,029	288,951	289,449	322,532
4090	1034	Burrillville Police	C,D,6	19.25%	19.22%	21.63%	2,112,756	2,061,225	2,010,951	406,705	396,167	434,969
4091	1148	Cumberland Rescue	C,D	9.67%	9.78%	13.52%	1,293,598	1,262,047	1,231,265	125,091	123,428	166,467
4093	1635	Woonsocket Fire	C,D	13.14%	13.73%	14.95%	8,205,584	8,005,448	7,810,193	1,078,213	1,099,148	1,167,624
4094	1015	Bristol Fire	D	20.25%	22.89%	13.61%	227,797	222,241	216,820	46,129	50,871	29,509
4096	1014	Bristol Police	C,D	7.31%	5.53%	3.93%	3,612,020	3,523,922	3,437,972	264,038	194,873	307,011
4098	1095	Coventry Fire	C,D	43.17%	48.05%	31.86%	783,412	764,304	745,663	338,199	367,248	237,568
4099	1505	South Kingstown EMT	C,D	5.97%	2.56%	4.01%	1,179,447	1,150,680	1,122,614	70,413	29,457	45,017
4102	1045 1235 1525 1585	Central Coventry Fire	C,D	34.92%	31.98%	32.88%	1,931,516	1,884,405	1,838,444	674,485	602,633	604,480
4103	1255	Hopkins Hill Fire	C,D	8.79%	10.44%	15.74%	1,040,570	1,015,190	990,429	91,466	105,986	155,894
4104	1114	Cranston Police	C,D,4	19.15%	15.84%	15.56%	16,220,007	15,824,397	15,438,436	3,106,132	2,506,585	2,402,221
4105	1115	Cranston Fire	C,D,4	11.95%	8.34%	8.64%	20,093,580	19,603,493	19,125,359	2,401,184	1,634,931	1,652,431
4106	1125 1135 1365	Cumberland Fire	B,D	23.15%	23.01%	20.97%	3,121,735	3,045,595	2,971,313	722,682	700,791	623,084
4107	1305	Lincoln Rescue	C	26.02%	27.06%	29.70%	1,029,770	1,004,654	980,150	267,946	271,860	291,105
4108	1344	New Shoreham Police	B,D	29.96%	26.65%	21.17%	385,010	375,620	366,459	115,349	100,103	77,579
4109	1324	Middletown Police & Fire	C,D	7.37%	7.22%	9.58%	5,578,606	5,442,543	5,309,798	411,144	392,952	508,678
4110	1715	Harrisville Fire District	C,D	3.66%	0.64%	7.29%	642,118	626,457	611,177	23,502	4,009	44,555
4111	1705 1815	Lincoln Fire District	C	11.46%	11.69%	13.09%	553,128	539,637	526,475	63,388	63,084	68,916
1054	1054	Central Falls Police & Fire New	C	8.37%	8.24%	8.96%	1,181,330	1,152,517	1,124,407	98,877	94,967	100,747
1284	1284	Johnston Police	C	9.17%	7.09%	9.18%	2,075,471	2,024,850	1,975,463	190,321	143,562	181,347
1295	1295	Limerock Fire District	C	10.55%	10.68%	N/A	882,766	861,235	N/A	93,132	91,980	N/A
1364	1364	Newport Police Dept	C	7.26%	7.62%	8.49%	1,861,914	1,816,501	1,772,196	135,175	138,417	150,459
1424	1424	Portsmouth Police Department	C	6.91%	6.64%	N/A	1,984,757	1,936,349	N/A	137,147	128,573	N/A
1425	1425	Portsmouth Fire Department	C	8.11%	8.39%	N/A	1,786,292	1,742,724	N/A	144,868	146,215	N/A
1465	1465	Smithfield Fire	C	8.86%	9.09%	8.95%	2,898,321	2,827,631	2,758,664	256,791	257,032	246,901
1484	1484	Scituate Police Dept COLA	C	8.18%	8.30%	7.84%	844,459	823,862	803,768	69,077	68,381	63,015
1614	1614	West Warwick Police Dept	C	8.80%	9.91%	N/A	524,077	511,295	N/A	46,119	50,669	N/A
1615	1615	West Warwick Fire Dept	C	12.65%	2.25%	N/A	810,411	790,645	N/A	102,517	17,790	N/A



## Table 2

### Comparison of Employer Contribution Rates

Old Unit Number	New Unit Number	Unit	Code(s)	Contribution Rates			Projected Payroll, Projected from Actual FY2023 Payroll			Estimated Contributions		
				June 30, 2023 Actuarial Valuation, for FY2026	June 30, 2022 Actuarial Valuation, for FY2025	June 30, 2021 Actuarial Valuation, for FY2024	For FY2026	For FY2025	For FY2024	June 30, 2023 Actuarial Valuation, for FY2026	June 30, 2022 Actuarial Valuation, for FY2025	June 30, 2021 Actuarial Valuation, for FY2024
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1805	1805	Pascoag Fire District COLA	C	20.18%	20.53%	22.37%	284,962	278,011	271,230	57,505	57,076	60,674
		<b>Police &amp; Fire Units Average</b>		<b>18.04%</b>	<b>17.33%</b>	<b>18.89%</b>	<b>\$ 151,468,019</b>	<b>\$ 147,773,677</b>	<b>\$ 138,469,686</b>	<b>\$ 27,331,079</b>	<b>\$ 25,608,336</b>	<b>\$ 26,153,664</b>
		<b>All MERS Units Average</b>		<b>13.32%</b>	<b>13.25%</b>	<b>14.56%</b>	<b>\$ 459,424,264</b>	<b>\$ 448,218,794</b>	<b>\$ 429,222,533</b>	<b>\$ 61,187,176</b>	<b>\$ 59,398,527</b>	<b>\$ 62,501,235</b>

B - Municipality has adopted COLA Plan B

D - Municipality has adopted the "20-year" optional Police & Fire Plan

2 - New unit since prior valuation.

4 - Historically, Cranston Fire and Police are contributing 10% due to special plan provision.

6 - Historically, Special plan provisions apply to this unit.

C - Municipality has adopted COLA Plan C

1 - S.Kingstown Police have a unique plan that provides 2.0% of salary for service prior to July 1, 1993, and 2.5% of salary for service on or after July 1, 1993.

3 - Closed unit.

5 - This unit has no active members.

Draft



### Table 3

#### Components Used in Determining Contribution Rates

Old Unit Number	New Unit Number	Unit	Code(s)	Projected Compensation	Normal Cost (Total)	Actuarial Accrued Liability	Actuarial Value of Assets
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>General Employee Units</b>							
3002	1012 1019	Bristol	B	5,780,438	412,789	28,272,084	22,923,593
3003	1032 1033	Burrillville	C	7,419,626	562,792	34,473,712	34,758,396
3004	1052	Central Falls		2,586,348	143,107	8,306,788	6,562,465
3005	1082	Charlestown	C	3,150,590	223,961	10,425,611	11,556,830
3007	1112 1113	Cranston	B	26,314,482	2,089,306	169,919,110	161,628,572
3008	1122 1123	Cumberland		12,245,823	808,081	38,948,312	36,180,675
3009	1152 1153	East Greenwich	C	1,967,251	159,248	7,953,772	8,911,374
3010	1162 1163	East Providence	B	22,129,536	1,597,067	117,065,429	78,280,677
3011	1183	Exeter/West Greenwich	B	3,293,877	255,419	14,823,737	13,545,772
3012	1192 1193	Foster		1,570,590	105,076	5,239,265	4,936,202
3013	1212 1213	Glocester	C	3,567,805	281,282	12,455,706	12,019,698
3014	1262	Hopkinton	C	2,245,419	163,196	6,691,020	7,136,235
3015	1272 1273	Jamestown	C	4,740,219	358,219	20,485,876	18,974,472
3016	1282 1283	Johnston	C	8,559,599	643,323	50,077,463	36,332,870
3017	1302 1303	Lincoln		809,864	56,949	3,518,176	3,259,874
3019	1322 1323	Middletown	C	5,267,109	380,537	27,228,310	24,932,290
3021	1352 1353 1354	Newport	B	16,648,368	1,161,600	81,239,224	62,386,601
3022	1342 1343	New Shoreham	B	3,055,025	217,553	10,739,945	10,042,849
3023	1372 1373	North Kingstown	C	13,951,532	1,011,584	73,450,268	59,626,416
3024	1382 1383	North Providence		9,804,390	655,741	35,080,935	35,306,122
3025	1392 1393	North Smithfield	B	4,625,665	334,399	17,729,820	19,341,313
3026	1412 1413	Pawtucket	C	24,916,591	1,816,388	131,322,562	113,648,713
3027	1515	Union Fire District		418,172	29,476	1,246,651	1,152,559
3029	1452	Richmond		1,570,666	90,504	3,855,620	3,538,517
3030	1462 1463	Scituate	B	4,071,235	307,561	16,292,518	13,932,872
3031	1472 1473	Smithfield	C	4,120,923	323,593	15,883,293	15,424,289
3032	1492 1493	South Kingstown	B	14,030,802	1,037,094	79,507,664	68,918,798
3033	1532 1533	Tiverton	C	4,173,245	321,164	16,330,705	16,703,391
3034	1562	Warren	C	2,788,444	182,069	9,496,381	8,199,013
3036	1622 1623	Westerly	S	-	-	694,468	658,358
3037	1602	West Greenwich	C	1,640,945	128,761	5,304,665	4,657,803
3039	1632 1633	Woonsocket	B	15,035,276	1,128,437	76,884,004	70,810,516



### Table 3

#### Components Used in Determining Contribution Rates

Old Unit Number	New Unit Number	Unit	Code(s)	Projected Compensation	Normal Cost (Total)	Actuarial Accrued Liability	Actuarial Value of Assets
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
3040	1073	Chariho School District	C	5,278,782	409,371	27,990,562	25,929,668
3041	1203	Foster/Glocester	B	2,463,138	178,330	10,429,183	9,085,097
3042	1528	Tiogue Fire & Lighting	C,5	-	-	26,011	59,083
3043	1336	Narragansett Housing	C	228,985	19,883	861,769	1,038,908
3045	1098	Coventry Lighting District	C	55,776	4,243	551,341	1,393,795
3046	1242	Hope Valley Fire	C	185,925	11,669	379,447	578,106
3050	1156	East Greenwich Housing	C	523,547	37,349	1,878,874	2,011,369
3051	1116	Cranston Housing	C	1,185,674	80,128	6,939,712	6,317,596
3052	1166	East Providence Housing	B	964,784	70,163	3,885,239	3,709,944
3053	1416	Pawtucket Housing	B	3,286,830	240,205	14,963,868	18,910,843
3056	1126	Cumberland Housing	C	631,845	56,606	1,661,718	1,971,513
3057	1306	Lincoln Housing	B	736,665	55,212	2,416,979	1,989,197
3059	1016	Bristol Housing		610,773	37,086	2,239,905	2,556,959
3065	1036	Burrillville Housing	B	255,545	18,673	1,210,070	999,103
3066	1386	North Providence Housing	B	350,383	23,039	1,692,908	950,369
3067	1177	East Smithfield Water	C,5	-	-	735,812	715,184
3068	1227	Greenville Water	B	349,612	24,096	1,699,728	1,779,402
3069	1356	Newport Housing	C	1,856,201	149,662	10,516,589	7,711,440
3071	1566	Warren Housing	B	468,021	33,699	1,332,790	1,216,700
3072	1286	Johnston Housing		443,970	29,407	1,968,186	1,428,953
3077	1538	Tiverton Local 2670A	C	1,188,729	77,100	4,711,434	4,834,573
3078	1002 1003 1007 1009	Barrington COLA	C	9,804,615	727,489	45,342,799	43,310,018
3079	1096	Coventry Housing		715,246	54,406	1,734,458	2,046,311
3080	1496	South Kingstown Housing	C	222,488	19,847	568,130	681,711
3081	1403	N. RI Collaborative Adm. Services	C	837,250	56,297	4,194,984	3,614,635
3083	1616	West Warwick Housing	B	800,167	62,406	2,157,975	1,928,132
3084	1476	Smithfield Housing		200,623	14,024	682,984	881,613
3094	1478	Smithfield COLA	C	4,946,373	375,340	21,506,562	20,873,727
3096	1056	Central Falls Housing	C	1,319,793	105,465	4,631,244	3,356,482



### Table 3

#### Components Used in Determining Contribution Rates

Old Unit Number	New Unit Number	Unit	Code(s)	Projected Compensation	Normal Cost (Total)	Actuarial Accrued Liability	Actuarial Value of Assets
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
3098	1293	Lime Rock Administrative Services		116,926	8,817	552,166	543,529
3099	1063	Central Falls Schools	C	6,066,748	405,521	20,689,896	19,678,014
3100	1023	Bristol/Warren Schools	B	5,202,508	370,135	25,360,130	19,930,575
3101	1157 1158	Town of E. Greenwich-COLA-NCE	C	6,645,857	475,636	28,394,189	29,028,080
3102	1712	Harrisville Fire District (ADMIN)	C	264,606	22,819	1,263,849	1,446,969
3103	1702	Albion Fire District (ADMIN)	C,5	-	-	136,148	151,848
3150	1159	East Greenwich Fire (ADMIN)	C	44,602	2,308	238,129	152,976
1612	1612	Town of West Warwick	C	1,047,590	91,546	203,471	195,001
1613	1613	West Warwick School Dept (NC)	C	1,316,751	124,850	183,922	176,834
1802	1802	Pascoag Fire District (ADMIN) COLA	C	12,915	2,965	71,883	114,245
<b>General Employee Units Subtotal</b>				<b>\$ 293,130,103</b>	<b>\$ 21,462,068</b>	<b>\$ 1,386,948,133</b>	<b>\$ 1,229,586,627</b>
<b>Police &amp; Fire Units</b>							
4016	1285	Johnston Fire	D	5,756,891	1,021,700	20,187,948	17,946,511
4029	1454	Richmond Police	6	1,065,906	185,330	3,879,523	3,940,019
4031	1474	Smithfield Police	C,D	3,968,745	691,710	25,220,829	26,085,699
4042	1555	Valley Falls Fire	D	732,656	111,970	6,227,290	5,006,573
4047	1395 1435	North Smithfield Voluntary Fire	B,D	1,721,932	305,338	11,791,703	11,192,539
4050	1155	East Greenwich Fire	C,D	3,061,413	591,784	26,711,344	20,660,343
4054	1154	East Greenwich Police	C,D	2,654,492	520,123	24,785,401	21,236,372
4055	1375	North Kingstown Fire	C,D	5,559,442	1,037,307	51,680,534	45,413,073
4056	1374	North Kingstown Police	C,D	4,618,595	857,993	39,867,975	32,872,098
4058	1385	North Providence Fire	D	7,209,883	1,282,483	62,740,546	45,504,788
4059	1008	Barrington Fire (25)	C	2,109,417	396,234	6,601,651	6,791,355
4060	1004	Barrington Police	C,D	2,061,357	401,610	18,153,540	14,379,553
4061	1005	Barrington Fire (20)	C,D,5	-	-	8,675,367	5,644,065
4062	1564 1565	Warren Police & Fire	C,D	2,166,286	420,341	19,358,209	15,778,324
4063	1494	South Kingstown Police	B,1	4,429,726	884,005	40,528,702	32,470,528
4073	1464	Scituate Police	5	-	-	12,463	316,270
4076	1394	North Smithfield Police	C,D	2,320,280	454,104	16,077,743	13,772,597
4077	1534	Tiverton Fire	C,D	2,127,695	412,465	16,838,321	14,608,429



### Table 3

#### Components Used in Determining Contribution Rates

Old Unit Number	New Unit Number	Unit	Code(s)	Projected Compensation	Normal Cost (Total)	Actuarial Accrued Liability	Actuarial Value of Assets
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
4082	1194	Foster Police	C,D	439,062	99,516	4,576,827	3,624,661
4085	1634	Woonsocket Police	C,D	7,290,319	1,323,994	71,147,296	56,935,912
4086	1084	Charlestown Police	C,D	1,701,421	312,694	18,219,080	15,035,732
4087	1264	Hopkinton Police	C,D,6	1,229,069	261,189	9,685,950	7,705,349
4088	1214	Glocester Police	C,D	1,416,824	290,289	11,995,416	9,910,294
4089	1604	West Greenwich Police/Rescue	C,D	1,389,029	275,409	8,826,715	7,379,939
4090	1034	Burrillville Police	C,D,6	2,010,951	393,659	16,816,810	14,892,955
4091	1148	Cumberland Rescue	C,D	1,231,265	259,133	9,814,659	9,860,873
4093	1635	Woonsocket Fire	C,D	7,810,193	1,437,484	72,385,414	69,406,861
4094	1015	Bristol Fire	D	216,820	39,922	1,143,562	839,173
4096	1014	Bristol Police	C,D	3,437,972	644,675	14,329,179	15,643,895
4098	1095	Coventry Fire	C,D	745,663	158,891	7,188,631	4,182,251
4099	1505	South Kingstown EMT	C,D	1,122,614	196,734	5,274,551	6,356,265
4102	1045 1235 1525 1585	Central Coventry Fire	C,D	1,838,444	351,997	18,064,304	12,924,167
4103	1255	Hopkins Hill Fire	C,D	990,429	182,684	5,054,761	5,244,774
4104	1114	Cranston Police	C,D,4	15,438,436	2,836,972	91,560,411	73,611,388
4105	1115	Cranston Fire	C,D,4	19,125,359	3,530,330	116,839,301	110,531,900
4106	1125 1135 1365	Cumberland Fire	B,D	2,971,313	573,675	25,409,486	20,928,674
4107	1305	Lincoln Rescue	C	980,150	185,043	7,164,196	5,587,033
4108	1344	New Shoreham Police	B,D	366,459	77,272	3,180,389	2,264,597
4109	1324	Middletown Police & Fire	C,D	5,309,798	1,046,376	15,639,491	17,357,708
4110	1715	Harrisville Fire District	C,D	611,177	112,770	2,259,555	3,080,092
4111	1705 1815	Lincoln Fire District	C	526,475	94,089	1,953,246	1,789,529
1054	1054	Central Falls Police & Fire New	C	1,124,407	282,545	542,287	634,987
1284	1284	Johnston Police		1,975,463	422,519	2,795,167	2,649,321
1295	1295	Limerock Fire District	C	840,230	179,829	1,453,306	1,268,977

Draft





### Table 3

#### Components Used in Determining Contribution Rates

Old Unit Number	New Unit Number	Unit	Code(s)	Projected Compensation	Normal Cost (Total)	Actuarial Accrued Liability	Actuarial Value of Assets
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1364	1364	Newport Police Dept		1,772,196	305,829	1,840,636	2,248,744
1424	1424	Portsmouth Police Department	C	1,889,121	357,244	2,071,632	2,642,231
1425	1425	Portsmouth Fire Department	C	1,700,219	328,460	2,210,574	2,313,528
1465	1465	Smithfield Fire	C	2,758,664	510,830	4,425,702	4,355,167
1484	1484	Scituate Police Dept COLA	C	803,768	151,507	739,395	792,082
1614	1614	West Warwick Police Dept	C	498,824	108,194	162,888	154,192
1615	1615	West Warwick Fire Dept	C	771,361	128,142	1,620,198	1,251,247
1805	1805	Pascoag Fire District COLA	C	271,230	58,419	1,317,134	1,007,499
<b>Police &amp; Fire Units Subtotal</b>				<b><u>\$ 144,169,441</u></b>	<b><u>\$ 27,092,812</u></b>	<b><u>\$ 957,047,242</u></b>	<b><u>\$ 828,031,133</u></b>
<b>Legacy Units</b>							
1609	1609	Town of West Warwick (Legacy)	E,2	3,706,751	596,408	50,166,791	9,299,398
1610	1610	West Warwick School NC (Legacy)	E,2	4,733,972	682,432	33,543,047	13,190,518
1055	1055	Central Falls Police & Fire Legacy	C	3,426,649	691,011	43,852,670	19,919,479
1619	1619	Town of West Warwick Library (Legacy)	E,2	368,640	62,148	3,126,220	959,339
1617	1617	West Warwick Police Dept (Legacy)	E,2	3,267,581	830,078	53,181,343	13,030,621
1618	1618	West Warwick Fire Dept (Legacy)	E,2	4,758,895	1,143,399	59,064,262	16,841,688
<b>Legacy Units Subtotal</b>				<b><u>\$ 20,262,488</u></b>	<b><u>\$ 4,005,476</u></b>	<b><u>\$ 242,934,334</u></b>	<b><u>\$ 73,241,043</u></b>
<b>All MERS Units Total</b>				<b>\$ 457,562,031</b>	<b>\$ 52,560,356</b>	<b>\$ 2,586,929,709</b>	<b>\$ 2,130,858,803</b>

B - Municipality has adopted COLA Plan B

C - Municipality has adopted COLA Plan C

D - Municipality has adopted the "20-year" optional Police & Fire Plan

1 - S.Kingstown Police have a unique plan that provides 2.0% of salary for service prior to July 1, 1993, and 2.5% of salary for service on or after July 1, 1993.

2 - New unit since prior valuation.

3 - Closed unit.

4 - Historically, Cranston Fire and Police are contributing 10% due to special plan provision.

5 - This unit has no active members.

6 - Historically, Special plan provisions apply to this unit.



## Table 4a

### Asset Values

Old Unit Number	New Unit Number	Unit	Code	Market Value of Assets	Actuarial Value of Assets
(1)	(2)	(3)	(4)	(5)	(6)
<b>General Employee Units</b>					
3002	1012 1019	Bristol	B	\$ 23,303,998	\$ 22,923,593
3003	1032 1033	Burrillville	C	35,335,193	34,758,396
3004	1052	Central Falls		6,671,366	6,562,465
3005	1082	Charlestown	C	11,748,609	11,556,830
3007	1112 1113	Cranston	B	164,310,712	161,628,572
3008	1122 1123	Cumberland		36,781,074	36,180,675
3009	1152 1153	East Greenwich	C	9,059,254	8,911,374
3010	1162 1163	East Providence	B	79,579,703	78,280,677
3011	1183	Exeter/West Greenwich	B	13,770,557	13,545,772
3012	1192 1193	Foster		5,018,116	4,936,202
3013	1212 1213	Glocester	C	12,219,158	12,019,698
3014	1262	Hopkinton	C	7,254,657	7,136,235
3015	1272 1273	Jamestown	C	19,289,343	18,974,472
3016	1282 1283	Johnston	C	36,935,795	36,332,870
3017	1302 1303	Lincoln		3,313,970	3,259,874
3019	1322 1323	Middletown	C	25,346,028	24,932,290
3021	1352 1353 1354	Newport	B	63,421,874	62,386,601
3022	1342 1343	New Shoreham	B	10,209,505	10,042,849
3023	1372 1373	North Kingstown	C	60,615,885	59,626,416
3024	1382 1383	North Providence		35,892,008	35,306,122
3025	1392 1393	North Smithfield	B	19,662,272	19,341,313
3026	1412 1413	Pawtucket	C	115,534,653	113,648,713
3027	1515	Union Fire District		1,171,685	1,152,559
3029	1452	Richmond		3,597,237	3,538,517
3030	1462 1463	Scituate	B	14,164,081	13,932,872
3031	1472 1473	Smithfield	C	15,680,247	15,424,289
3032	1492 1493	South Kingstown	B	70,062,469	68,918,798
3033	1532 1533	Tiverton	C	16,980,575	16,703,391
3034	1562	Warren	C	8,335,071	8,199,013
3036	1622 1623	Westerly	5	669,283	658,358
3037	1602	West Greenwich	C	4,735,097	4,657,803
3039	1632 1633	Woonsocket	B	71,985,579	70,810,516
3040	1073	Chariho School District	C	26,359,957	25,929,668
3041	1203	Foster/Glocester	B	9,235,859	9,085,097
3042	1528	Tiogue Fire & Lighting	C,5	60,063	59,083
3043	1336	Narragansett Housing	C	1,056,148	1,038,908
3045	1098	Coventry Lighting District	C	1,416,924	1,393,795
3046	1242	Hope Valley Fire	C	587,699	578,106
3050	1156	East Greenwich Housing	C	2,044,747	2,011,369
3051	1116	Cranston Housing	C	6,422,433	6,317,596
3052	1166	East Providence Housing	B	3,771,509	3,709,944
3053	1416	Pawtucket Housing	B	19,224,658	18,910,843



# Table 4a

## Asset Values

Old Unit Number	New Unit Number	Unit	Code	Market Value of Assets	Actuarial Value of Assets
(1)	(2)	(3)	(4)	(5)	(6)
3056	1126	Cumberland Housing	C	2,004,229	1,971,513
3057	1306	Lincoln Housing	B	2,022,207	1,989,197
3059	1016	Bristol Housing		2,599,390	2,556,959
3065	1036	Burrillville Housing	B	1,015,683	999,103
3066	1386	North Providence Housing	B	966,140	950,369
3067	1177	East Smithfield Water	C,5	727,052	715,184
3068	1227	Greenville Water	B	1,808,930	1,779,402
3069	1356	Newport Housing	C	7,839,407	7,711,440
3071	1566	Warren Housing	B	1,236,890	1,216,700
3072	1286	Johnston Housing		1,452,666	1,428,953
3077	1538	Tiverton Local 2670A	C	4,914,800	4,834,573
3078	1002 1003 1007 1009	Barrington COLA	C	44,028,725	43,310,018
3079	1096	Coventry Housing		2,080,268	2,046,311
3080	1496	South Kingstown Housing	C	693,024	681,711
3081	1403	N. RI Collaborative Adm. Services	C	3,674,618	3,614,635
3083	1616	West Warwick Housing	B	1,960,128	1,928,132
3084	1476	Smithfield Housing		896,243	881,613
3094	1478	Smithfield COLA	C	21,220,115	20,873,727
3096	1056	Central Falls Housing	C	3,412,181	3,356,482
3098	1293	Lime Rock Administrative Services		552,549	543,529
3099	1063	Central Falls Schools	C	20,004,560	19,678,014
3100	1023	Bristol/Warren Schools	B	20,261,312	19,930,575
3101	1157 1158	Town of E. Greenwich-COLA-NCE	C	29,509,786	29,028,080
3102	1712	Harrisville Fire District (ADMIN)	C	1,470,981	1,446,969
3103	1702	Albion Fire District (ADMIN)	C,5	154,368	151,848
3150	1159	East Greenwich Fire (ADMIN)	C	155,515	152,976
1612	1612	Town of West Warwick	C	198,237	195,001
1613	1613	West Warwick School Dept (NC)	C	179,768	176,834
1802	1802	Pascoag Fire District (ADMIN) COLA	C	116,141	114,245
<b>General Employee Units Subtotal</b>				<b>\$ 1,249,990,964</b>	<b>\$ 1,229,586,627</b>
<b>Police &amp; Fire Units</b>					
4016	1285	Johnston Fire	D	\$ 18,244,324	\$ 17,946,511
4029	1454	Richmond Police	6	4,005,402	3,940,019
4031	1474	Smithfield Police	C,D	26,518,577	26,085,699
4042	1555	Valley Falls Fire	D	5,089,654	5,006,573
4047	1395 1435	North Smithfield Voluntary Fire	B,D	11,378,273	11,192,539
4050	1155	East Greenwich Fire	C,D	21,003,190	20,660,343
4054	1154	East Greenwich Police	C,D	21,588,778	21,236,372
4055	1375	North Kingstown Fire	C,D	46,166,679	45,413,073
4056	1374	North Kingstown Police	C,D	33,417,593	32,872,098
4058	1385	North Providence Fire	D	46,259,916	45,504,788
4059	1008	Barrington Fire (25)	C	6,904,054	6,791,355
4060	1004	Barrington Police	C,D	14,618,174	14,379,553
4061	1005	Barrington Fire (20)	C,D,5	5,737,725	5,644,065
4062	1564 1565	Warren Police & Fire	C,D	16,040,157	15,778,324
4063	1494	South Kingstown Police	B,1	33,009,359	32,470,528
4073	1464	Scituate Police	5	321,518	316,270
4076	1394	North Smithfield Police	C,D	14,001,146	13,772,597



## Table 4a

### Asset Values

Old Unit Number	New Unit Number	Unit	Code	Market Value of Assets	Actuarial Value of Assets
(1)	(2)	(3)	(4)	(5)	(6)
4077	1534	Tiverton Fire	C,D	14,850,848	14,608,429
4082	1194	Foster Police	C,D	3,684,810	3,624,661
4085	1634	Woonsocket Police	C,D	57,880,734	56,935,912
4086	1084	Charlestown Police	C,D	15,285,242	15,035,732
4087	1264	Hopkinton Police	C,D,6	7,833,215	7,705,349
4088	1214	Glocester Police	C,D	10,074,750	9,910,294
4089	1604	West Greenwich Police/Rescue	C,D	7,502,405	7,379,939
4090	1034	Burrillville Police	C,D,6	15,140,096	14,892,955
4091	1148	Cumberland Rescue	C,D	10,024,509	9,860,873
4093	1635	Woonsocket Fire	C,D	70,558,631	69,406,861
4094	1015	Bristol Fire	D	853,099	839,173
4096	1014	Bristol Police	C,D	15,903,497	15,643,895
4098	1095	Coventry Fire	C,D	4,251,653	4,182,251
4099	1505	South Kingstown EMT	C,D	6,461,744	6,356,265
4102	1045 1235 1525 1585	Central Coventry Fire	C,D	13,138,637	12,924,167
4103	1255	Hopkins Hill Fire	C,D	5,331,808	5,244,774
4104	1114	Cranston Police	C,D,4	74,832,930	73,611,388
4105	1115	Cranston Fire	C,D,4	112,366,118	110,531,900
4106	1125 1135 1365	Cumberland Fire	B,D	21,275,974	20,928,674
4107	1305	Lincoln Rescue	C	5,679,747	5,587,033
4108	1344	New Shoreham Police	B,D	2,302,177	2,264,597
4109	1324	Middletown Police & Fire	C,D	17,645,750	17,357,708
4110	1715	Harrisville Fire District	C,D	3,131,204	3,080,092
4111	1705 1815	Lincoln Fire District	C	1,819,225	1,789,529
1054	1054	Central Falls Police & Fire New	C	645,524	634,987
1284	1284	Johnston Police		2,693,285	2,649,321
1295	1295	Limerock Fire District	C	1,290,035	1,268,977
1364	1364	Newport Police Dept		2,286,061	2,248,744
1424	1424	Portsmouth Police Department	C	2,686,077	2,642,231
1425	1425	Portsmouth Fire Department	C	2,351,920	2,313,528
1465	1465	Smithfield Fire	C	4,427,439	4,355,167
1484	1484	Scituate Police Dept COLA	C	805,226	792,082
1614	1614	West Warwick Police Dept	C	156,751	154,192
1615	1615	West Warwick Fire Dept	C	1,272,011	1,251,247
1805	1805	Pascoag Fire District COLA	C	1,024,218	1,007,499
<b>Police &amp; Fire Units Subtotal</b>				<b>\$ 841,771,869</b>	<b>\$ 828,031,133</b>
<b>Legacy Units</b>					
1609	1609	Town of West Warwick (Legacy)	E,2	9,453,717	9,299,398
1610	1610	West Warwick School NC (Legacy)	E,2	13,409,407	13,190,518
1619	1619	Town of West Warwick Library (Legacy)	E,2	975,259	959,339
1055	1055	Central Falls Police & Fire Legacy	C	20,250,032	19,919,479
1617	1617	West Warwick Police Dept (Legacy)	E,2	13,246,857	13,030,621
1618	1618	West Warwick Fire Dept (Legacy)	E,2	17,121,167	16,841,688
<b>Legacy Units Subtotal</b>				<b>\$ 74,456,439</b>	<b>\$ 73,241,043</b>
<b>All MERS Units Total</b>				<b>\$ 2,166,219,272</b>	<b>\$ 2,130,858,803</b>



## Table 4b

### Reconciliation of Market Assets by Unit

Old Unit Number	New Unit Number	Unit	Code	Current year prior		Adjusted		Member Contributions	Employer Contributions	Service		Refunds	Net Investment Return	End of Year Account Balance
				Beginning of Year Account Balance	period adjustments	Beginning of Year Account Balance	Member Contributions			Purchases and Others*	Benefit Payments			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
<b>General Employee Units</b>														
3002	1012 1019	Bristol	B	\$ 22,098,851	\$	(1) \$ 22,098,850	\$ 155,910	\$ 854,560	\$ 9,334	\$ (1,644,807)	\$	\$ -	\$ 1,830,151	\$ 23,303,998
3003	1032 1033	Burrillville	C	34,127,533		(1) 34,127,532	178,045	577,647	(153,982)	(2,159,794)		(9,261)	2,775,006	35,335,193
3004	1052	Central Falls		6,310,118		0 6,310,118	32,925	374,957	(6,064)	(540,074)	(24,424)		523,928	6,671,366
3005	1082	Charlestown	C	10,884,847		(1) 10,884,846	99,120	217,580	0	(375,600)	0		922,663	11,748,609
3007	1112 1113	Cranston	B	158,695,256		4 158,695,260	700,588	2,836,907	(59,172)	(10,749,948)	(16,865)		12,903,942	164,310,712
3008	1122 1123	Cumberland		34,985,861		0 34,985,861	187,297	1,290,643	(370,667)	(2,199,086)	(1,531)		2,888,557	36,781,074
3009	1152 1153	East Greenwich	C	8,418,577		(1) 8,418,576	38,386	116,692	210,881	(436,738)	0		711,457	9,059,254
3010	1162 1163	East Providence	B	76,131,663		3 76,131,666	500,502	4,630,205	(4,011)	(7,859,436)	(68,918)		6,249,695	79,579,703
3011	1183	Exeter/West Greenwich	B	13,090,952		0 13,090,952	71,014	410,869	22,167	(846,398)	(59,501)		1,081,454	13,770,557
3012	1192 1193	Foster		4,710,792		0 4,710,792	29,591	179,737	(9,921)	(285,252)	(923)		394,092	5,018,116
3013	1212 1213	Glocester	C	11,448,321		1 11,448,322	90,995	356,084	(31,726)	(604,134)	0		959,617	12,219,158
3014	1262	Hopkinton	C	6,938,505		1 6,938,506	46,498	67,776	0	(360,256)	(7,603)		569,736	7,254,657
3015	1272 1273	Jamestown	C	18,274,127		0 18,274,127	128,866	452,804	(34,691)	(1,029,982)	(16,646)		1,514,865	19,289,343
3016	1282 1283	Johnston	C	35,788,733		(1) 35,788,732	186,665	1,595,008	44,477	(3,578,328)	(1,467)		2,900,708	36,935,795
3017	1302 1303	Lincoln		3,342,996		(1) 3,342,995	7,901	95,129	(211,568)	(180,746)	0		260,259	3,313,970
3019	1322 1323	Middletown	C	23,925,437		1 23,925,438	140,408	587,365	75,777	(1,356,154)	(17,326)		1,990,520	25,346,028
3021	1352 1353 1354	Newport	B	59,810,730		0 59,810,730	417,455	3,512,807	56,021	(5,345,159)	(10,740)		4,980,760	63,421,874
3022	1342 1343	New Shoreham	B	9,725,001		1 9,725,002	63,458	218,472	(987)	(598,231)	0		801,791	10,209,505
3023	1372 1373	North Kingstown	C	57,811,621		1 57,811,622	315,923	2,376,326	110,441	(4,748,349)	(10,473)		4,760,395	60,615,885
3024	1382 1383	North Providence		34,324,228		1 34,324,229	140,037	663,831	194,102	(2,224,944)	(23,982)		2,818,735	35,892,008
3025	1392 1393	North Smithfield	B	18,381,661		0 18,381,661	104,927	275,434	462,344	(1,077,469)	(28,778)		1,544,153	19,662,272
3026	1412 1413	Pawtucket	C	110,478,002		0 110,478,002	646,936	3,364,152	9,013	(8,012,998)	(23,825)		9,073,373	115,534,653
3027	1515	Union Fire District		1,118,678		1 1,118,679	4,080	27,905	0	(70,996)	0		92,017	1,171,685
3029	1452	Richmond		3,374,284		1 3,374,285	21,529	134,388	(15,257)	(200,213)	0		282,505	3,597,237
3030	1462 1463	Scituate	B	13,303,043		0 13,303,043	104,780	582,877	(67,979)	(870,999)	0		1,112,359	14,164,081
3031	1472 1473	Smithfield	C	14,859,035		1 14,859,036	91,628	408,452	(7,829)	(902,469)	0		1,231,429	15,680,247
3032	1492 1493	South Kingstown	B	67,107,616		0 67,107,616	343,105	1,749,400	149,310	(4,766,294)	(22,939)		5,502,271	70,062,469
3033	1532 1533	Tiverton	C	16,582,775		0 16,582,775	91,989	174,459	(305,047)	(890,671)	(6,479)		1,333,549	16,980,575
3034	1562	Warren	C	7,772,630		0 7,772,630	68,434	283,263	0	(439,555)	(4,286)		654,585	8,335,071
3036	1622 1623	Westerly	S	741,147		0 741,147	0	0	0	(124,425)	0		52,561	669,283
3037	1602	West Greenwich	C	4,232,419		1 4,232,420	37,405	214,205	106,126	(226,924)	0		371,865	4,735,097
3039	1632 1633	Woonsocket	B	69,565,471		0 69,565,471	345,599	1,757,443	(22,636)	(5,294,502)	(19,096)		5,653,300	71,985,579
3040	1073	Chariho School District	C	25,038,976		2 25,038,978	141,466	597,422	(102,233)	(1,385,823)	0		2,070,147	26,359,957
3041	1203	Foster/Glocester	B	8,787,709		0 8,787,709	51,589	274,670	0	(603,436)	0		725,327	9,235,859
3042	1528	Tiogue Fire & Lighting	C,S	57,548		(1) 57,547	0	0	0	(2,201)	0		4,717	60,063
3043	1336	Narragansett Housing	C	961,164		0 961,164	4,468	7,573	0	0	0		82,943	1,056,148
3045	1098	Coventry Lighting District	C	1,371,125		0 1,371,125	1,088	0	0	(66,565)	0		111,276	1,416,924
3046	1242	Hope Valley Fire	C	560,915		0 560,915	3,628	0	0	(22,998)	0		46,154	587,699
3050	1156	East Greenwich Housing	C	1,891,658		(1) 1,891,657	10,215	57,105	0	(74,812)	0		160,582	2,044,747
3051	1116	Cranston Housing	C	6,381,734		(1) 6,381,733	23,135	70,447	(1,837)	(555,423)	0		504,378	6,422,433
3052	1166	East Providence Housing	B	3,588,906		0 3,588,906.00	18,825	10,773	0	(240,186)	0		296,191	3,771,509
3053	1416	Pawtucket Housing	B	18,378,391		1 18,378,392	95,887	0	2,602	(760,905)	(1,103)		1,509,785	19,224,658
3056	1126	Cumberland Housing	C	1,860,397		0 1,860,397	12,327	27,553	(89)	(53,359)	0		157,400	2,004,229
3057	1306	Lincoln Housing	B	1,922,227		(1) 1,922,226	14,374	73,667	0	(146,872)	0		158,812	2,022,207
3059	1016	Bristol Housing		2,504,599		0 2,504,599	13,970	12,931	0	(136,250)	0		204,140	2,599,390
3065	1036	Burrillville Housing	B	991,602		1 991,603	4,986	33,133	0	(93,804)	0		79,765	1,015,683
3066	1386	North Providence Housing	B	910,205		(1) 910,204	6,837	120,223	0	(134,088)	(12,911)		75,875	966,140
3067	1177	East Smithfield Water	C,S	716,932		0 716,932	0	5,938	0	(52,916)	0		57,098	727,052
3068	1227	Greenville Water	B	1,720,972		(1) 1,720,971	6,821	11,835	0	(72,759)	0		142,062	1,808,930
3069	1356	Newport Housing	C	7,557,346		1 7,557,347	40,370	389,892	0	(757,438)	(6,422)		615,658	7,839,407



# Table 4b

## Reconciliation of Market Assets by Unit

Old Unit Number	New Unit Number	Unit	Code	Current year prior		Adjusted		Member Contributions	Employer Contributions	Service			Net Investment		End of Year Account Balance								
				Beginning of Year Account Balance	period adjustments	Beginning of Year Account Balance				Purchases and Others*	Benefit Payments	Refunds	Return										
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)										
3071	1566	Warren Housing	B	1,219,716		0	1,219,716	9,194	29,098	0	(118,256)	0	97,138	1,236,890									
3072	1286	Johnston Housing		1,418,142		0	1,418,142	4,349	59,235	0	(143,143)	0	114,083	1,452,666									
3077	1538	Tiverton Local 2670A	C	4,736,586		(1)	4,736,585	23,784	80,506	0	(312,053)	0	385,978	4,914,800									
3078	1002 1003 1007 1009	Barrington COLA	C	41,834,440		0	41,834,440	229,150	1,027,444	94,333	(2,612,317)	(2,067)	3,457,742	44,028,725									
3079	1096	Coventry Housing		1,898,888	1	1,898,889	6,978	42,217	0	(30,803)	(384)	163,371	2,080,268										
3080	1496	South Kingstown Housing	C	656,054	0	656,054	4,341	0	0	(21,797)	0	54,426	693,024										
3081	1403	N. RI Collaborative Adm. Services	C	3,466,776	1	3,466,777	23,439	113,784	(3,124)	(205,069)	(9,771)	288,582	3,674,618										
3083	1616	West Warwick Housing	B	1,873,057	1	1,873,058	15,613	70,259	1,340	(154,078)	0	153,936	1,960,128										
3084	1476	Smithfield Housing		813,575	1	813,576	7,545	4,737	0	0	0	70,385	896,243										
3094	1478	Smithfield COLA	C	19,958,965	1	19,958,966	133,971	475,882	742	(1,014,629)	(1,313)	1,666,496	21,220,115										
3096	1056	Central Falls Housing	C	3,128,509	1	3,128,510	31,274	178,848	0	(189,213)	(5,209)	267,971	3,412,181										
3098	1293	Lime Rock Administrative Services		503,234	(1)	503,233	5,360	15,103	0	(14,541)	0	43,394	552,549										
3099	1063	Central Falls Schools	C	19,009,351	0	19,009,351	134,138	500,334	(44,471)	(1,165,826)	0	1,571,034	20,004,560										
3100	1023	Bristol/Warren Schools	B	19,557,107	1	19,557,108	112,621	841,312	(84,521)	(1,750,716)	(5,689)	1,591,197	20,261,312										
3101	1157 1158	Town of E. Greenwich-COLA-NCE	C	28,132,350	(1)	28,132,349	175,651	395,405	(45,250)	(1,465,884)	0	2,317,515	29,509,786										
3102	1712	Harrisville Fire District (ADMIN)	C	1,357,454	0	1,357,454	11,484	12,211	0	(25,690)	0	115,522	1,470,981										
3103	1702	Albion Fire District (ADMIN)	C,5	151,719	0	151,719	0	0	0	(9,474)	0	12,123	154,368										
3150	1159	East Greenwich Fire (ADMIN)	C	148,343	(1)	148,342	870	15,726	0	(21,636)	0	12,213	155,515										
1612	1612	Town of West Warwick	C	74,339	1	74,340	20,440	66,433	21,456	0	0	15,568	198,237										
1613	1613	West Warwick School Dept (NC)	C	52,620	1	52,621	25,691	83,502	3,836	0	0	14,118	179,768										
1802	1802	Pascoag Fire District (ADMIN) COLA	C	105,690	(1)	105,689	252	1,079	0	0	0	9,121	116,141										
<b>General Employee Units Subtotal</b>				<b>\$</b>	<b>1,193,660,231</b>	<b>\$</b>	<b>14</b>	<b>\$</b>	<b>1,193,660,245</b>	<b>\$</b>	<b>6,818,127</b>	<b>\$</b>	<b>36,190,654</b>	<b>\$</b>	<b>(8,760)</b>	<b>\$</b>	<b>(84,415,891)</b>	<b>\$</b>	<b>(419,932)</b>	<b>\$</b>	<b>98,166,521</b>	<b>\$</b>	<b>1,249,990,964</b>
<b>Police &amp; Fire Units</b>																							
4016	1285	Johnston Fire	D	\$ 16,087,926	\$ -	\$ 16,087,926	\$ 505,478	\$ 645,337	\$ -	\$ (427,213)	\$ -	\$ 1,432,796	\$ 18,244,324										
4029	1454	Richmond Police	6	3,511,646	0	3,511,646	93,591	111,998	0	(26,392)	0	314,559	4,005,402										
4031	1474	Smithfield Police	C,D	24,145,679	(1)	24,145,678	387,195	461,924	0	(558,824)	0	2,082,604	26,518,577										
4042	1555	Valley Falls Fire	D	4,695,057	(1)	4,695,056	64,331	206,001	0	(275,444)	0	399,710	5,089,654										
4047	1395 1435	North Smithfield Voluntary Fire	B,D	10,538,363	0	10,538,363	167,993	280,718	0	(502,380)	0	893,579	11,378,273										
4050	1155	East Greenwich Fire	C,D	19,192,247	0	19,192,247	299,020	1,035,781	392	(1,143,527)	(30,183)	1,649,460	21,003,190										
4054	1154	East Greenwich Police	C,D	20,085,289	(1)	20,085,288	258,974	820,951	0	(1,271,883)	0	1,695,448	21,588,778										
4055	1375	North Kingstown Fire	C,D	42,899,799	1	42,899,800	542,384	1,646,139	16,931	(2,564,219)	0	3,625,644	46,166,679										
4056	1374	North Kingstown Police	C,D	30,780,884	0	30,780,884	450,595	1,307,175	27,586	(1,755,781)	(17,276)	2,624,410	33,417,593										
4058	1385	North Providence Fire	D	43,651,510	0	43,651,510	634,229	2,009,102	0	(3,666,812)	(1,079)	3,632,966	46,259,916										
4059	1008	Barrington Fire (25)	C	6,022,111	1	6,022,112	205,797	238,518	0	(104,574)	0	542,201	6,904,054										
4060	1004	Barrington Police	C,D	13,561,128	1	13,561,129	201,108	616,396	59,811	(968,290)	0	1,148,020	14,618,174										
4061	1005	Barrington Fire (20)	C,D,5	5,725,037	0	5,725,037	0	348,940	0	(786,857)	0	450,605	5,737,725										
4062	1564 1565	Warren Police & Fire	C,D	14,909,369	0	14,909,369	212,444	582,844	192	(889,404)	(34,982)	1,259,694	16,040,157										
4063	1494	South Kingstown Police	B,1	30,964,980	0	30,964,980	441,603	1,215,289	40,944	(2,172,443)	(73,364)	2,592,350	33,009,359										
4073	1464	Scituate Police	5	299,876	1	299,877	0	0	0	(3,609)	0	25,250	321,518										
4076	1394	North Smithfield Police	C,D	12,958,869	1	12,958,870	226,370	514,989	2,032	(787,004)	(13,674)	1,099,563	14,001,146										
4077	1534	Tiverton Fire	C,D	13,804,503	0	13,804,503	207,695	477,091	49,232	(853,966)	0	1,166,293	14,850,848										
4082	1194	Foster Police	C,D	3,637,809	0	3,637,809	42,836	119,253	(49,600)	(298,596)	(56,274)	289,382	3,684,810										
4085	1634	Woonsocket Police	C,D	53,523,904	0	53,523,904	740,834	2,355,384	0	(3,180,198)	(104,783)	4,545,593	57,880,734										
4086	1084	Charlestown Police	C,D	14,168,194	0	14,168,194	165,992	600,892	123	(850,367)	0	1,200,408	15,285,242										
4087	1264	Hopkinton Police	C,D,6	7,310,269	0	7,310,269	121,166	416,206	(52,421)	(479,549)	(97,628)	615,172	7,833,215										
4088	1214	Glocester Police	C,D	9,283,194	0	9,283,194	138,227	341,006	0	(478,885)	0	791,208	10,074,750										
4089	1604	West Greenwich Police/Rescue	C,D	6,837,363	(1)	6,837,362	135,515	289,596	26,004	(375,264)	0	589,192	7,502,405										
4090	1034	Burrillville Police	C,D,6	14,173,220	(1)	14,173,219	196,191	387,476	0	(805,799)	0	1,189,009	15,140,096										
4091	1148	Cumberland Rescue	C,D	9,385,782	0	9,385,782	120,726	147,124	0	(362,642)	(53,744)	787,263	10,024,509										
4093	1635	Woonsocket Fire	C,D	66,187,533	0	66,187,533	762,208	1,131,873	(122,551)	(2,941,668)	0	5,541,236	70,558,631										
4094	1015	Bristol Fire	D	784,521	(1)	784,520	19,038	26,547	0	(44,003)	0	66,997	853,099										
4096	1014	Bristol Police	C,D	14,081,907	0	14,081,907	336,335	285,599	11,776	(61,082)	0	1,248,962	15,903,497										
4098	1095	Coventry Fire	C,D	3,846,090	0	3,846,090	72,748	364,465	0	(365,548)	0	333,898	4,251,653										



## Table 4b

### Reconciliation of Market Assets by Unit

Old Unit Number	New Unit Number	Unit	Code	Current year prior		Adjusted	Member Contributions	Employer Contributions	Service			Refunds	Net Investment Return	End of Year Account Balance
				Beginning of Year Account Balance	period adjustments	Beginning of Year Account Balance			Purchases and Others*	Benefit Payments				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
4099	1505	South Kingstown EMT	C,D	5,968,935		1	5,968,936	109,523	54,214	0	(134,724)	(43,670)	507,465	6,461,744
4102	1045 1235 1525 1585	Central Coventry Fire	C,D	12,256,120		0	12,256,120	179,359	605,161	(73,028)	(860,802)	0	1,031,827	13,138,637
4103	1255	Hopkins Hill Fire	C,D	4,833,098		0	4,833,098	96,627	100,396	0	(117,040)	0	418,727	5,331,808
4104	1114	Cranston Police	C,D,4	66,987,120		0	66,987,120	1,512,458	2,439,269	(4,624)	(1,978,206)	0	5,876,913	74,832,930
4105	1115	Cranston Fire	C,D,4	102,931,532		(1)	102,931,531	1,867,323	1,734,745	3,908	(2,995,925)	0	8,824,536	112,366,118
4106	1125 1135 1365	Cumberland Fire	B,D,7	19,651,105		(1)	19,651,104	289,888	779,209	0	(1,097,208)	(17,902)	1,670,883	21,275,974
4107	1305	Lincoln Rescue	C	5,208,758		1	5,208,759	95,624	285,247	2,094	(318,990)	(39,039)	446,052	5,679,747
4108	1344	New Shoreham Police	B,D	2,139,150		0	2,139,150	35,752	68,501	0	(122,025)	0	180,799	2,302,177
4109	1324	Middletown Police & Fire	C,D	15,366,677		1	15,366,678	518,030	400,956	28,665	(54,366)	0	1,385,787	17,645,750
4110	1715	Harrisville Fire District	C,D	2,798,124		0	2,798,124	59,627	27,548	0	0	0	245,905	3,131,204
4111	1705 1815	Lincoln Fire District	C	1,694,308		0	1,694,308	51,364	67,235	(49,232)	(87,321)	0	142,871	1,819,225
1054	1054	Central Falls Police & Fire New	C	396,719		0	396,719	109,699	98,290	0	0	(9,879)	50,695	645,524
1284	1284	Johnston Police	C	2,267,356		0	2,267,356	173,456	161,120	(46,374)	0	(73,787)	211,514	2,693,285
1295	1295	Limerock Fire District	C	1,010,186		0	1,010,186	81,974	96,564	0	0	0	101,311	1,290,035
1364	1364	Newport Police Dept	C	1,834,871		1	1,834,872	149,595	131,478	0	0	(9,417)	179,533	2,286,061
1424	1424	Portsmouth Police Department	C	2,169,628		(1)	2,169,627	184,305	156,842	0	0	(35,645)	210,948	2,686,077
1425	1425	Portsmouth Fire Department	C	1,863,830		0	1,863,830	165,874	137,511	0	0	0	184,705	2,351,920
1465	1465	Smithfield Fire	C	3,625,867		0	3,625,867	269,138	223,116	0	(38,386)	0	347,704	4,427,439
1484	1484	Scituate Police Dept COLA	C	597,780		0	597,780	78,417	65,792	0	0	0	63,237	805,226
1614	1614	West Warwick Police Dept	C	35,739		0	35,739	48,666	51,099	8,937	0	0	12,310	156,751
1615	1615	West Warwick Fire Dept	C	977,707		0	977,707	75,255	79,017	73,028	(32,892)	0	99,896	1,272,011
1805	1805	Pascoag Fire District COLA	C	895,108		(1)	895,107	26,462	58,162	0	(35,949)	0	80,436	1,024,218
<b>Police &amp; Fire Units Subtotal</b>				<b>\$ 772,563,777</b>	<b>\$</b>	<b>(1)</b>	<b>\$ 772,563,776</b>	<b>\$ 13,929,039</b>	<b>\$ 26,806,086</b>	<b>\$ (46,175)</b>	<b>\$ (36,876,057)</b>	<b>\$ (712,326)</b>	<b>\$ 66,107,526</b>	<b>\$ 841,771,869</b>
<b>Legacy Units</b>														
1609	1609	Town of West Warwick (Legacy)	E,2	0	9,422,254		9,422,254	438,168	1,951,717	218,739	(3,313,505)	(5,446)	741,790	9,453,717
1610	1610	West Warwick School NC (Legacy)	E,2	0	11,410,293		11,410,293	508,788	2,311,616	5,887	(1,843,547)	(35,942)	1,052,312	13,409,407
1619	1619	Town of West Warwick Library (Legacy)	E,2	0	905,095		905,095	32,369	215,463	0	(254,197)	0	76,529	975,259
1055	1055	Central Falls Police & Fire Legacy	C	18,374,466	0		18,374,466	467,874	2,460,134	237,992	(2,840,258)	(40,488)	1,590,312	20,250,032
1617	1617	West Warwick Police Dept (Legacy)	E,2	0	12,493,349		12,493,349	382,548	2,857,176	0	(3,433,191)	(92,494)	1,039,469	13,246,857
1618	1618	West Warwick Fire Dept (Legacy)	E,2	0	15,576,155		15,576,155	603,565	2,822,616	0	(3,224,629)	0	1,343,460	17,121,167
<b>Legacy Units Subtotal</b>				<b>\$ 18,374,466</b>	<b>\$ 49,807,146</b>	<b>\$</b>	<b>68,181,612</b>	<b>\$ 2,433,312</b>	<b>\$ 12,618,722</b>	<b>\$ 462,618</b>	<b>\$ (14,909,327)</b>	<b>\$ (174,370)</b>	<b>\$ 5,843,872</b>	<b>\$ 74,456,439</b>
<b>All MERS Units Total</b>				<b>\$ 1,984,598,474</b>	<b>\$ 49,807,159</b>	<b>\$</b>	<b>2,034,405,633</b>	<b>\$ 23,180,478</b>	<b>\$ 75,615,462</b>	<b>\$ 407,683</b>	<b>\$ (136,201,275)</b>	<b>\$ (1,306,628)</b>	<b>\$ 170,117,919</b>	<b>\$ 2,166,219,272</b>

B - Municipality has adopted COLA Plan B

C - Municipality has adopted COLA Plan C

D - Municipality has adopted the "20-year" optional Police & Fire Plan

1 - S.Kingstown Police have a unique plan that provides 2.0% of salary for service prior to July 1, 1993, and 2.5% of salary for service on or after July 1, 1993.

2 - New unit since prior valuation.

3 - Closed unit.

4 - Historically, Cranston Fire and Police are contributing 10% due to special plan provision.

5 - This unit has no active members.

6 - Historically, Special plan provisions apply to this unit.

7 - Units 4095 and 4101 merged into 4106 effective July 1, 2021. Assets have been combined for this valuation.



## Table 5a

### Explanation of Rate Changes

All rates are gross: before recognizing 0% minimum contribution rate

Old Unit Number	New Unit Number	Unit	Source of Rate Change								June 30, 2023 Actuarial Valuation	
			June 30, 2022 Actuarial Valuation	Salary (Gains)/ Losses	Payroll (Gains)/ Losses	Other Non-Asset (Gains)/ Losses	Asset (Gains)/ Losses	Benefit Accrual Turnover	Recognition of Assumption Changes	COLA Suspension		2024 COLA different than Assumed
(1)	(2)	(3)	(4)	(5)	(6)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<b>General Employee Units</b>												
3002	1012 1019	Bristol	13.56%	(0.02%)	(0.38%)	0.43%	(0.20%)	(0.13%)	0.12%	0.00%	0.13%	13.51%
3003	1032 1033	Burrillville	6.38%	0.19%	0.00%	(0.93%)	(0.22%)	(0.14%)	(0.11%)	0.00%	0.09%	5.26%
3004	1052	Central Falls	12.99%	(0.21%)	0.06%	(0.44%)	(0.13%)	(0.28%)	0.12%	0.00%	0.00%	12.11%
3005	1082	Charlestown	3.91%	1.26%	(0.02%)	(1.72%)	(0.20%)	0.16%	0.68%	0.00%	0.02%	4.09%
3007	1112 1113	Cranston	9.06%	0.56%	(0.01%)	0.12%	(0.29%)	(0.20%)	(0.09%)	0.00%	0.18%	9.33%
3008	1122 1123	Cumberland	8.38%	0.13%	(0.08%)	(0.52%)	(0.15%)	(0.10%)	0.12%	0.00%	0.00%	7.78%
3009	1152 1153	East Greenwich	4.49%	0.60%	0.00%	(4.69%)	(0.22%)	(0.23%)	0.00%	0.00%	0.05%	0.00%
3010	1162 1163	East Providence	20.60%	0.13%	0.06%	0.82%	(0.17%)	(0.13%)	0.41%	(1.07%)	0.13%	20.78%
3011	1183	Exeter/West Greenwich	11.55%	(0.09%)	0.04%	(0.42%)	(0.21%)	(0.66%)	0.30%	0.00%	0.12%	10.63%
3012	1192 1193	Foster	8.96%	0.19%	(0.17%)	(0.32%)	(0.17%)	0.05%	0.14%	0.00%	0.00%	8.69%
3013	1212 1213	Glocester	7.74%	0.14%	(0.09%)	0.30%	(0.18%)	0.05%	0.10%	0.00%	0.07%	8.13%
3014	1262	Hopkinton	1.57%	1.06%	0.11%	0.54%	(0.16%)	(0.25%)	1.53%	0.00%	0.04%	4.44%
3015	1272 1273	Jamestown	9.81%	0.03%	(0.01%)	(0.56%)	(0.20%)	(0.01%)	0.03%	0.00%	0.10%	9.18%
3016	1282 1283	Johnston	19.87%	(0.10%)	(0.51%)	0.90%	(0.20%)	(0.06%)	0.35%	(1.25%)	0.17%	19.17%
3017	1302 1303	Lincoln	11.17%	(0.03%)	0.53%	1.21%	(0.15%)	(0.82%)	0.26%	0.00%	0.00%	12.21%
3019	1322 1323	Middletown	9.35%	0.60%	(0.12%)	(0.08%)	(0.24%)	(0.12%)	0.00%	0.00%	0.11%	9.50%
3021	1352 1353 1354	Newport	19.47%	0.11%	(0.67%)	0.12%	(0.19%)	(0.16%)	0.24%	(1.00%)	0.14%	18.06%
3022	1342 1343	New Shoreham	6.56%	0.37%	(0.06%)	0.21%	(0.16%)	(0.01%)	(0.08%)	0.00%	0.09%	6.91%
3023	1372 1373	North Kingstown	16.15%	0.42%	(0.38%)	0.04%	(0.21%)	(0.06%)	0.17%	0.00%	0.16%	16.29%
3024	1382 1383	North Providence	6.16%	0.49%	0.00%	(0.77%)	(0.18%)	(0.08%)	(0.08%)	0.00%	0.00%	5.55%
3025	1392 1393	North Smithfield	3.77%	1.39%	0.01%	(1.63%)	(0.22%)	(0.33%)	0.68%	0.00%	0.06%	3.73%
3026	1412 1413	Pawtucket	11.89%	0.70%	(0.37%)	(0.10%)	(0.22%)	(0.12%)	0.02%	0.00%	0.13%	11.93%
3027	1515	Union Fire District	9.54%	0.03%	(0.04%)	(1.20%)	(0.14%)	(0.47%)	0.16%	0.00%	0.00%	7.88%
3029	1452	Richmond	8.24%	0.12%	(0.07%)	(0.89%)	(0.12%)	(0.30%)	0.02%	0.00%	0.00%	7.00%
3030	1462 1463	Scituate	12.42%	(0.08%)	0.18%	0.24%	(0.18%)	(0.32%)	0.09%	0.00%	0.09%	12.44%
3031	1472 1473	Smithfield	8.37%	(0.14%)	0.01%	(0.94%)	(0.19%)	(0.09%)	0.05%	0.00%	0.10%	7.17%
3032	1492 1493	South Kingstown	12.78%	0.39%	(0.29%)	0.20%	(0.24%)	(0.18%)	0.12%	0.00%	0.16%	12.94%
3033	1532 1533	Tiverton	4.33%	0.30%	(0.01%)	0.19%	(0.18%)	0.01%	0.42%	0.00%	0.06%	5.12%
3034	1562	Warren	9.75%	(0.06%)	0.06%	(0.61%)	(0.16%)	(0.27%)	(0.06%)	0.00%	0.07%	8.73%
3037	1602	West Greenwich	10.81%	0.26%	(0.61%)	(0.54%)	(0.18%)	(0.14%)	0.11%	0.00%	0.08%	9.80%
3039	1632 1633	Woonsocket	11.05%	0.10%	(0.05%)	(1.22%)	(0.22%)	(0.06%)	(0.01%)	0.00%	0.15%	9.73%
3040	1073	Chariho School District	10.38%	(0.19%)	0.27%	0.01%	(0.25%)	0.10%	0.08%	0.00%	0.13%	10.54%
3041	1203	Foster/Glocester	10.70%	0.07%	0.08%	(0.01%)	(0.18%)	(0.34%)	0.06%	0.00%	0.12%	10.49%
3043	1336	Narragansett Housing	1.58%	2.86%	0.06%	(3.11%)	(0.27%)	0.06%	2.30%	0.00%	0.01%	3.49%
3045	1098	Coventry Lighting District	(108.58%)	0.00%	0.56%	(0.62%)	(1.16%)	0.03%	42.88%	0.00%	0.00%	(66.89%)
3046	1242	Hope Valley Fire	(3.71%)	0.00%	0.08%	0.10%	(0.15%)	(0.09%)	3.11%	0.00%	0.00%	(0.66%)
3050	1156	East Greenwich Housing	3.29%	1.34%	0.05%	(1.05%)	(0.21%)	(0.57%)	0.81%	0.00%	0.05%	3.71%
3051	1116	Cranston Housing	8.33%	0.23%	(0.05%)	0.23%	(0.22%)	0.22%	(0.23%)	0.00%	0.15%	8.66%
3052	1166	East Providence Housing	7.47%	0.47%	(0.18%)	(0.65%)	(0.19%)	(0.24%)	0.04%	0.00%	0.13%	6.85%
3053	1416	Pawtucket Housing	(4.02%)	0.00%	0.16%	0.49%	(0.28%)	(0.36%)	3.63%	0.00%	0.00%	(0.38%)
3056	1126	Cumberland Housing	3.55%	2.05%	(0.14%)	(0.14%)	(0.17%)	0.60%	1.23%	0.00%	0.01%	4.99%
3057	1306	Lincoln Housing	10.95%	0.09%	(0.41%)	(0.34%)	(0.14%)	(0.08%)	0.26%	0.00%	0.11%	10.45%
3059	1016	Bristol Housing	2.07%	1.99%	(0.02%)	(1.60%)	(0.20%)	(0.31%)	1.43%	0.00%	0.00%	3.37%





# Table 5a

## Explanation of Rate Changes

All rates are gross: before recognizing 0% minimum contribution rate

Old Unit Number	New Unit Number	Unit	Source of Rate Change									June 30, 2023 Actuarial Valuation
			June 30, 2022 Actuarial Valuation	Salary (Gains)/ Losses	Payroll (Gains)/ Losses	Other Non-Asset (Gains)/ Losses	Asset (Gains)/ Losses	Benefit Accrual Turnover	Recognition of Assumption Changes	COLA Suspension	2024 COLA different than Assumed	
(1)	(2)	(3)	(4)	(5)	(6)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
3065	1036	Burrillville Housing	11.91%	(0.02%)	(0.09%)	0.56%	(0.18%)	0.24%	(0.13%)	0.00%	0.17%	12.46%
3066	1386	North Providence Housing	27.69%	(0.13%)	(2.59%)	(0.36%)	(0.14%)	(0.37%)	0.60%	(1.25%)	0.18%	23.63%
3068	1227	Greenville Water	3.73%	0.97%	(0.10%)	(0.79%)	(0.25%)	(0.04%)	0.41%	0.00%	0.05%	3.98%
3069	1356	Newport Housing	23.21%	0.06%	(1.42%)	0.69%	(0.20%)	(0.04%)	0.33%	(1.22%)	0.16%	21.57%
3071	1566	Warren Housing	6.54%	0.38%	0.07%	0.18%	(0.11%)	0.28%	(0.13%)	0.00%	0.09%	7.30%
3072	1286	Johnston Housing	13.99%	0.21%	0.96%	1.36%	(0.14%)	(0.21%)	0.23%	0.00%	0.00%	16.40%
3077	1538	Tiverton Local 2670A	6.17%	0.16%	(0.04%)	(1.84%)	(0.19%)	(0.26%)	(0.16%)	0.00%	0.08%	3.91%
3078	1002 1003 1007 1009	Barrington COLA	7.98%	0.05%	(0.04%)	0.15%	(0.22%)	(0.12%)	(0.04%)	0.00%	0.11%	7.87%
3079	1096	Coventry Housing	5.05%	1.55%	(0.11%)	(2.08%)	(0.17%)	(0.36%)	1.00%	0.00%	0.00%	4.88%
3080	1496	South Kingstown Housing	1.56%	1.62%	(0.07%)	(1.57%)	(0.16%)	1.09%	1.49%	0.00%	0.04%	4.00%
3081	1403	N. RI Collaborative Adm. Services	14.56%	(1.02%)	(0.15%)	(0.53%)	(0.22%)	0.49%	0.14%	0.00%	0.12%	13.39%
3083	1616	West Warwick Housing	8.26%	0.12%	(0.27%)	0.24%	(0.12%)	0.31%	(0.05%)	0.00%	0.08%	8.57%
3084	1476	Smithfield Housing	0.27%	1.54%	(0.02%)	(2.42%)	(0.26%)	(0.02%)	2.45%	0.00%	0.00%	1.54%
3094	1478	Smithfield COLA	8.09%	0.01%	(0.04%)	(0.91%)	(0.22%)	(0.09%)	0.01%	0.00%	0.09%	6.94%
3096	1056	Central Falls Housing	12.93%	0.57%	(0.39%)	1.28%	(0.15%)	(0.12%)	0.25%	(0.48%)	0.05%	13.95%
3098	1293	Lime Rock Administrative Services	9.11%	(0.23%)	0.00%	(1.03%)	(0.27%)	(0.06%)	0.76%	0.00%	0.00%	8.28%
3099	1063	Central Falls Schools	7.09%	0.11%	(0.15%)	(0.46%)	(0.16%)	(0.19%)	(0.04%)	0.00%	0.09%	6.29%
3100	1023	Bristol/Warren Schools	14.76%	0.10%	(0.18%)	0.77%	(0.18%)	(0.30%)	0.24%	(1.05%)	0.16%	14.32%
3101	1157 1158	Town of E. Greenwich-COLA-NCE	4.49%	0.00%	0.00%	(4.69%)	(0.22%)	(0.23%)	0.00%	0.00%	0.05%	0.00%
3102	1712	Harrisville Fire District (ADMIN)	2.20%	2.88%	(0.40%)	(3.01%)	(0.31%)	0.13%	1.77%	0.00%	0.00%	3.27%
3150	1159	East Greenwich Fire (ADMIN)	19.25%	(0.08%)	0.10%	0.04%	(0.17%)	(0.01%)	0.28%	(1.60%)	0.28%	18.09%
1612	1612	Town of West Warwick	5.25%	0.10%	(0.06%)	(0.35%)	(0.03%)	0.21%	(0.06%)	0.00%	0.00%	5.05%
1613	1613	West Warwick School Dept (NC)	4.30%	(0.13%)	0.01%	0.09%	(0.03%)	0.89%	(0.07%)	0.00%	0.00%	5.06%
<b>General Employee Units Averages</b>			<b>11.25%</b>	<b>0.30%</b>	<b>(0.15%)</b>	<b>(0.15%)</b>	<b>(0.21%)</b>	<b>(0.13%)</b>	<b>0.18%</b>	<b>(0.20%)</b>	<b>0.11%</b>	<b>10.99%</b>
<b>Police &amp; Fire Units</b>												
4016	1285	Johnston Fire	12.00%	(0.22%)	(0.06%)	0.33%	(0.20%)	0.02%	(0.09%)	0.00%	0.00%	11.78%
4029	1454	Richmond Police	8.53%	0.35%	0.02%	(0.32%)	(0.24%)	(0.05%)	(0.30%)	0.00%	0.00%	7.99%
4031	1474	Smithfield Police	9.63%	1.17%	0.04%	(2.33%)	(0.39%)	(0.13%)	(0.38%)	0.00%	0.05%	7.67%
4042	1555	Valley Falls Fire	26.92%	0.53%	0.10%	(3.90%)	(0.38%)	(0.01%)	0.38%	0.00%	0.00%	23.64%
4047	1395 1435	North Smithfield Voluntary Fire	15.76%	0.21%	(0.44%)	(1.95%)	(0.36%)	0.19%	(0.12%)	0.00%	0.21%	13.50%
4050	1155	East Greenwich Fire	32.90%	(0.39%)	(0.65%)	(0.01%)	(0.39%)	0.04%	0.49%	(1.28%)	0.22%	30.93%
4054	1154	East Greenwich Police	31.02%	0.03%	(0.84%)	(2.74%)	(0.44%)	(0.18%)	0.26%	(1.35%)	0.22%	25.99%
4055	1375	North Kingstown Fire	26.06%	(1.93%)	0.21%	(0.49%)	(0.45%)	0.14%	0.03%	0.00%	0.23%	23.81%
4056	1374	North Kingstown Police	25.91%	(0.05%)	(0.36%)	0.63%	(0.40%)	(0.06%)	0.09%	0.00%	0.22%	25.98%
4058	1385	North Providence Fire	27.57%	0.76%	0.01%	0.99%	(0.33%)	0.12%	0.48%	0.00%	0.00%	29.61%
4059	1008	Barrington Fire (25)	9.74%	0.20%	0.00%	(1.36%)	(0.21%)	0.14%	(0.27%)	0.00%	0.03%	8.27%
4060	1004	Barrington Police	29.99%	0.92%	(0.63%)	0.60%	(0.38%)	(0.40%)	0.27%	(1.36%)	0.16%	29.16%
4062	1564 1565	Warren Police & Fire	25.95%	(0.23%)	(0.76%)	0.58%	(0.40%)	0.18%	0.19%	(1.32%)	0.20%	24.39%
4063	1494	South Kingstown Police	26.94%	0.55%	0.07%	1.74%	(0.39%)	0.06%	0.16%	(1.25%)	0.21%	28.10%
4076	1394	North Smithfield Police	19.74%	0.74%	(0.66%)	0.24%	(0.33%)	0.12%	(0.12%)	0.00%	0.18%	19.91%
4077	1534	Tiverton Fire	21.01%	(0.68%)	0.48%	(0.45%)	(0.38%)	(0.08%)	0.09%	0.00%	0.20%	20.20%
4082	1194	Foster Police	33.57%	0.17%	1.59%	1.25%	(0.35%)	(1.76%)	0.53%	(2.60%)	0.43%	32.83%
4085	1634	Woonsocket Police	30.10%	1.06%	(0.47%)	0.75%	(0.43%)	(0.09%)	0.33%	(1.51%)	0.28%	30.02%
4086	1084	Charlestown Police	27.49%	0.26%	0.61%	1.91%	(0.49%)	(0.12%)	0.11%	0.00%	0.24%	30.02%



# Table 5a

## Explanation of Rate Changes

All rates are gross: before recognizing 0% minimum contribution rate

Old Unit Number	New Unit Number	Unit	Source of Rate Change									June 30, 2023 Actuarial Valuation
			June 30, 2022 Actuarial Valuation	Salary (Gains)/ Losses	Payroll (Gains)/ Losses	Other Non-Asset (Gains)/ Losses	Asset (Gains)/ Losses	Benefit Accrual Turnover	Recognition of Assumption Changes	COLA Suspension	2024 COLA different than Assumed	
(1)	(2)	(3)	(4)	(5)	(6)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
4087	1264	Hopkinton Police	31.23%	0.68%	(1.24%)	(0.49%)	(0.34%)	(0.26%)	0.38%	(1.31%)	0.23%	28.88%
4088	1214	Glocester Police	23.19%	1.20%	(0.72%)	1.18%	(0.39%)	(0.13%)	0.18%	0.00%	0.20%	24.70%
4089	1604	West Greenwich Police/Rescue	20.33%	0.14%	(0.94%)	(0.11%)	(0.31%)	0.30%	0.24%	0.00%	0.15%	19.80%
4090	1034	Burrillville Police	19.22%	0.00%	(0.03%)	0.13%	(0.39%)	0.08%	0.03%	0.00%	0.21%	19.25%
4091	1148	Cumberland Rescue	9.78%	1.22%	0.01%	(0.77%)	(0.43%)	(0.15%)	(0.11%)	0.00%	0.11%	9.67%
4093	1635	Woonsocket Fire	13.73%	(0.56%)	0.16%	0.34%	(0.47%)	(0.08%)	(0.19%)	0.00%	0.20%	13.14%
4094	1015	Bristol Fire	22.89%	(0.14%)	(0.02%)	(1.14%)	(0.22%)	(1.94%)	0.82%	0.00%	0.00%	20.25%
4096	1014	Bristol Police	5.53%	0.98%	0.08%	(0.22%)	(0.29%)	0.00%	1.19%	0.00%	0.04%	7.31%
4098	1095	Coventry Fire	48.05%	(0.39%)	(5.39%)	1.38%	(0.34%)	0.18%	1.29%	(1.69%)	0.07%	43.17%
4099	1505	South Kingstown EMT	2.56%	3.22%	0.04%	(2.91%)	(0.32%)	0.49%	2.83%	0.00%	0.06%	5.97%
4102	1045 1235 1525 1585	Central Coventry Fire	31.98%	(0.22%)	1.78%	2.63%	(0.38%)	0.29%	0.46%	(1.83%)	0.21%	34.92%
4103	1255	Hopkins Hill Fire	10.44%	0.17%	0.02%	(1.94%)	(0.32%)	0.02%	0.33%	0.00%	0.07%	8.79%
4104	1114	Cranston Police	15.84%	4.16%	(1.39%)	0.96%	(0.29%)	(0.10%)	(0.08%)	0.00%	0.06%	19.15%
4105	1115	Cranston Fire	8.34%	3.23%	(0.25%)	0.80%	(0.33%)	(0.20%)	0.30%	0.00%	0.06%	11.95%
4106	1125 1135 1365	Cumberland Fire	23.01%	0.23%	0.27%	(0.02%)	(0.39%)	(0.29%)	0.14%	0.00%	0.20%	23.15%
4107	1305	Lincoln Rescue	27.06%	0.63%	(0.87%)	0.28%	(0.33%)	0.16%	0.19%	(1.27%)	0.17%	26.02%
4108	1344	New Shoreham Police	26.65%	0.63%	4.05%	0.52%	(0.34%)	(1.70%)	0.96%	(0.97%)	0.16%	29.96%
4109	1324	Middletown Police & Fire	7.22%	0.44%	(0.01%)	(0.60%)	(0.22%)	0.06%	0.46%	0.00%	0.02%	7.37%
4110	1715	Harrisville Fire District	0.64%	3.66%	0.00%	(4.25%)	(0.31%)	0.06%	3.53%	0.00%	0.04%	3.66%
4111	1705 1815	Lincoln Fire District	11.69%	(0.05%)	0.11%	(0.12%)	(0.18%)	(0.18%)	0.06%	0.00%	0.13%	11.46%
1054	1054	Central Falls Police & Fire New	8.24%	0.31%	0.12%	(0.45%)	(0.07%)	(0.09%)	0.30%	0.00%	0.01%	8.37%
1284	1284	Johnston Police	7.09%	0.70%	(0.14%)	1.20%	(0.10%)	(0.08%)	0.50%	0.00%	0.00%	9.17%
1295	1295	Limerock Fire District	10.68%	0.00%	0.00%	(0.13%)	0.00%	0.00%	0.00%	0.00%	0.00%	10.55%
1364	1364	Newport Police Dept	7.62%	0.36%	0.04%	(0.78%)	(0.10%)	0.02%	0.11%	0.00%	0.00%	7.26%
1424	1424	Portsmouth Police Department	6.64%	1.14%	0.10%	(1.39%)	(0.11%)	0.16%	0.36%	0.00%	0.02%	6.91%
1425	1425	Portsmouth Fire Department	8.39%	0.15%	0.02%	(0.12%)	(0.11%)	(0.14%)	(0.10%)	0.00%	0.02%	8.11%
1465	1465	Smithfield Fire	9.09%	0.38%	(0.03%)	(0.22%)	(0.12%)	0.03%	(0.27%)	0.00%	0.01%	8.86%
1484	1484	Scituate Police Dept COLA	8.30%	0.16%	0.04%	(0.22%)	(0.09%)	0.06%	(0.09%)	0.00%	0.02%	8.18%
1614	1614	West Warwick Police Dept	9.91%	0.02%	(0.17%)	(0.06%)	(0.06%)	(0.82%)	(0.04%)	0.00%	0.02%	8.80%
1615	1615	West Warwick Fire Dept	2.25%	0.01%	(1.41%)	9.70%	(0.14%)	(0.25%)	2.47%	0.00%	0.02%	12.65%
1805	1805	Pascoag Fire District COLA	20.53%	(0.42%)	(0.11%)	0.92%	(0.25%)	(0.14%)	0.03%	(0.42%)	0.04%	20.18%
<b>Police &amp; Fire Units Averages</b>			<b>17.33%</b>	<b>1.07%</b>	<b>(0.27%)</b>	<b>0.24%</b>	<b>(0.33%)</b>	<b>(0.05%)</b>	<b>0.21%</b>	<b>(0.27%)</b>	<b>0.11%</b>	<b>18.04%</b>
<b>All MERS Units Averages</b>			<b>13.25%</b>	<b>0.56%</b>	<b>(0.19%)</b>	<b>(0.02%)</b>	<b>(0.25%)</b>	<b>(0.10%)</b>	<b>0.19%</b>	<b>(0.23%)</b>	<b>0.11%</b>	<b>13.32%</b>

Units with no active members are excluded from this exhibit and units new in 2022 are excluded from this exhibit



## Table 5B

### Analysis of Financial Experience

Basis	Municipal Employees Retirement System Plan - General	Municipal Employees Retirement System Plan - Police/Fire	Municipal Employees Retirement System Plan - Legacy General	Municipal Employees Retirement System Plan - Legacy Police/Fire
1. UAAL as of June 30, 2022	\$ 170.6	\$ 122.2	\$ -	\$ 23.9
2. Impact of changes, gains and losses				
a. Interest at 7.00% for one year	12.0	9.0	-	2.0
b. Expected amortization payments	(17.4)	(12.4)	-	(2.3)
c. Investment experience (gain)/loss	(7.4)	(5.7)	-	(0.1)
d. Actual COLA (2.84%)	4.1	3.7	-	-
e. COLA Suspension	(6.9)	(4.5)	-	-
f. Salary (gain)/loss	6.3	17.6	-	0.1
g. Non-economic liability experience (gain)/loss	(1.0)	1.4	-	0.3
h. Changes in assumptions/methods	(3.0)	(2.2)	-	(0.1)
i. Changes in plan provisions*	-	-	63.4	82.4
j. Total	\$ (13.3)	\$ 6.9	\$ 63.4	\$ 82.2
3. UAAL as of June 30, 2023	\$ 157.4	\$ 129.0	\$ 63.4	\$ 106.2

*Note: All dollar amounts are shown in millions.*

*\*Represents the liability for the three new General and two new Police and Fire West Warwick Legacy Units*

## Table 6a

### Development of Actuarial Value of Assets (All Units in Aggregate)

	Year Ending June 30, 2023																																																								
1. Market value of assets at beginning of year (prior to adjustments)	\$ 1,984,598,474																																																								
Adjustments	49,807,159																																																								
Market value of assets at beginning of year (after adjustments)	\$ 2,034,405,633																																																								
2. Net new investments																																																									
a. Contributions	\$ 99,203,623																																																								
b. Benefits and refunds paid	(137,507,903)																																																								
c. Subtotal	(38,304,280)																																																								
3. Market value of assets at end of year	\$ 2,166,219,272																																																								
4. Net earnings (3-1-2) (includes misc revenues)	\$ 170,117,919																																																								
5. Assumed investment return rate for fiscal year	7.00%																																																								
6. Expected return	\$ 141,067,745																																																								
7. Excess return (4-6)	\$ 29,050,174																																																								
8. Development of amounts to be recognized as of June 30, 2023:																																																									
<table style="width: 100%; border-collapse: collapse; margin-left: 20px;"> <thead> <tr> <th style="width: 10%;"></th> <th style="width: 15%; text-align: center;">Remaining Deferrals of Excess (Shortfall) of Investment Income*</th> <th style="width: 15%; text-align: center;">Offsetting of Gains/(Losses)</th> <th style="width: 15%; text-align: center;">Net Deferrals Remaining</th> <th style="width: 10%; text-align: center;">Years Remaining</th> <th style="width: 15%; text-align: center;">Recognized for this valuation</th> <th style="width: 15%; text-align: center;">Remaining after this valuation</th> </tr> <tr> <th style="text-align: left;">Fiscal Year End</th> <th style="text-align: center;">(1)</th> <th style="text-align: center;">(2)</th> <th style="text-align: center;">(3) = (1) + (2)</th> <th style="text-align: center;">(4)</th> <th style="text-align: center;">(5) = (3) / (4)</th> <th style="text-align: center;">(6) = (3) - (5)</th> </tr> </thead> <tbody> <tr> <td>2019</td> <td style="text-align: right;">\$ 0</td> <td style="text-align: right;">\$ 0</td> <td style="text-align: right;">\$ 0</td> <td style="text-align: center;">1</td> <td style="text-align: right;">\$ 0</td> <td style="text-align: right;">\$ 0</td> </tr> <tr> <td>2020</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: center;">2</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> </tr> <tr> <td>2021</td> <td style="text-align: right;">18,180,498</td> <td style="text-align: right;">0</td> <td style="text-align: right;">18,180,498</td> <td style="text-align: center;">3</td> <td style="text-align: right;">6,060,166</td> <td style="text-align: right;">12,120,332</td> </tr> <tr> <td>2022</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: center;">4</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> </tr> <tr> <td>2023</td> <td style="text-align: right; border-bottom: 1px solid black;">29,050,174</td> <td style="text-align: right; border-bottom: 1px solid black;">0</td> <td style="text-align: right; border-bottom: 1px solid black;">29,050,174</td> <td style="text-align: center;">5</td> <td style="text-align: right; border-bottom: 1px solid black;">5,810,035</td> <td style="text-align: right; border-bottom: 1px solid black;">23,240,139</td> </tr> <tr> <td>Total</td> <td style="text-align: right;">\$ 47,230,672</td> <td style="text-align: right;">\$ 0</td> <td style="text-align: right;">\$ 47,230,672</td> <td></td> <td style="text-align: right;">\$ 11,870,201</td> <td style="text-align: right;">\$ 35,360,471</td> </tr> </tbody> </table>		Remaining Deferrals of Excess (Shortfall) of Investment Income*	Offsetting of Gains/(Losses)	Net Deferrals Remaining	Years Remaining	Recognized for this valuation	Remaining after this valuation	Fiscal Year End	(1)	(2)	(3) = (1) + (2)	(4)	(5) = (3) / (4)	(6) = (3) - (5)	2019	\$ 0	\$ 0	\$ 0	1	\$ 0	\$ 0	2020	0	0	0	2	0	0	2021	18,180,498	0	18,180,498	3	6,060,166	12,120,332	2022	0	0	0	4	0	0	2023	29,050,174	0	29,050,174	5	5,810,035	23,240,139	Total	\$ 47,230,672	\$ 0	\$ 47,230,672		\$ 11,870,201	\$ 35,360,471	
	Remaining Deferrals of Excess (Shortfall) of Investment Income*	Offsetting of Gains/(Losses)	Net Deferrals Remaining	Years Remaining	Recognized for this valuation	Remaining after this valuation																																																			
Fiscal Year End	(1)	(2)	(3) = (1) + (2)	(4)	(5) = (3) / (4)	(6) = (3) - (5)																																																			
2019	\$ 0	\$ 0	\$ 0	1	\$ 0	\$ 0																																																			
2020	0	0	0	2	0	0																																																			
2021	18,180,498	0	18,180,498	3	6,060,166	12,120,332																																																			
2022	0	0	0	4	0	0																																																			
2023	29,050,174	0	29,050,174	5	5,810,035	23,240,139																																																			
Total	\$ 47,230,672	\$ 0	\$ 47,230,672		\$ 11,870,201	\$ 35,360,471																																																			
9. Actuarial value of assets as of June 30, 2023 (Item 3 - Item 8)	\$ 2,130,858,801																																																								
10. Ratio of actuarial value to market value	98.4%																																																								

\*Values of \$0 result from the beginning balance being offset by future gains or losses in the opposite direction.



## Table 6b

### History of Investment Return Rates

Year Ending June 30 of (1)	Market (2)	Actuarial (3)
1997	13.7%	13.7%
1998	16.1%	16.5%
1999	10.1%	14.7%
2000	9.1%	8.8%
2001	-11.0%	4.9%
2002	-8.4%	0.9%
2003	2.5%	-0.7%
2004	19.2%	0.7%
2005	11.4%	2.3%
2006	11.7%	7.7%
2007	18.3%	12.9%
2008	-5.8%	10.5%
2009	-19.8%	2.4%
2010	13.7%	1.1%
2011	19.5%	2.7%
2012	1.5%	4.7%
2013	11.0%	6.3%
2014	14.8%	8.4%
2015	2.2%	7.5%
2016	0.0%	5.6%
2017	11.6%	6.0%
2018	7.9%	6.6%
2019	6.4%	6.6%
2020	3.7%	5.9%
2021	27.2%	10.2%
2021	-2.9%	8.2%
2023	8.4%	7.7%
Average Returns:		
Last 5 Years	8.1%	7.7%
Last 10 Years	7.6%	7.3%
Since 1997	6.6%	6.7%

## Table 7

### Schedule of Funding Progress

Old Unit Number	New Unit Number	Unit	Code (s)	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded		Annual Covered Payroll	UAAL as % of Payroll (7)/(9)
						Actuarial Accrued Liability (UAAL) (5)	Funded Ratio (4)/(5)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<b>General Employee Units</b>									
3002	1012 1019	Bristol	B	22,923,593	28,272,084	5,348,491	81.1%	5,689,817	94.0%
3003	1032 1033	Burrillville	C	34,758,396	34,473,712	(284,684)	100.8%	7,569,039	(3.8%)
3004	1052	Central Falls		6,562,465	8,306,788	1,744,323	79.0%	2,535,189	68.8%
3005	1082	Charlestown	C	11,556,830	10,425,611	(1,131,219)	110.9%	2,924,952	(38.7%)
3007	1112 1113	Cranston	B	161,628,572	169,919,110	8,290,538	95.1%	25,942,408	32.0%
3008	1122 1123	Cumberland		36,180,675	38,948,312	2,767,637	92.9%	12,102,876	22.9%
3009	1152 1153	East Greenwich	C	8,911,374	7,953,772	(957,602)	112.0%	2,023,118	(47.3%)
3010	1162 1163	East Providence	B	78,280,677	117,065,429	38,784,752	66.9%	21,575,250	179.8%
3011	1183	Exeter/West Greenwich	B	13,545,772	14,823,737	1,277,965	91.4%	3,144,263	40.6%
3012	1192 1193	Foster		4,936,202	5,239,265	303,063	94.2%	1,505,347	20.1%
3013	1212 1213	Glocester	C	12,019,698	12,455,706	436,008	96.5%	3,459,312	12.6%
3014	1262	Hopkinton	C	7,136,235	6,691,020	(445,215)	106.7%	2,192,788	(20.3%)
3015	1272 1273	Jamestown	C	18,974,472	20,485,876	1,511,404	92.6%	4,700,767	32.2%
3016	1282 1283	Johnston	C	36,332,870	50,077,463	13,744,593	72.6%	8,574,653	160.3%
3017	1302 1303	Lincoln		3,259,874	3,518,176	258,302	92.7%	651,269	39.7%
3019	1322 1323	Middletown	C	24,932,290	27,228,310	2,296,020	91.6%	5,151,283	44.6%
3021	1352 1353 1354	Newport	B	62,386,601	81,239,224	18,852,623	76.8%	16,501,855	114.2%
3022	1342 1343	New Shoreham	B	10,042,849	10,739,945	697,096	93.5%	3,087,951	22.6%
3023	1372 1373	North Kingstown	C	59,626,416	73,450,268	13,823,852	81.2%	13,475,742	102.6%
3024	1382 1383	North Providence		35,306,122	35,080,935	(225,187)	100.6%	9,875,932	(2.3%)
3025	1392 1393	North Smithfield	B	19,341,313	17,729,820	(1,611,493)	109.1%	4,523,827	(35.6%)
3026	1412 1413	Pawtucket	C	113,648,713	131,322,562	17,673,849	86.5%	24,407,984	72.4%
3027	1515	Union Fire District		1,152,559	1,246,651	94,092	92.5%	409,993	22.9%
3029	1452	Richmond		3,538,517	3,855,620	317,103	91.8%	1,556,436	20.4%
3030	1462 1463	Scituate	B	13,932,872	16,292,518	2,359,646	85.5%	3,942,423	59.9%
3031	1472 1473	Smithfield	C	15,424,289	15,883,293	459,004	97.1%	4,004,845	11.5%
3032	1492 1493	South Kingstown	B	68,918,798	79,507,664	10,588,866	86.7%	13,629,878	77.7%
3033	1532 1533	Tiverton	C	16,703,391	16,330,705	(372,686)	102.3%	4,258,254	(8.8%)
3034	1562	Warren	C	8,199,013	9,496,381	1,297,368	86.3%	2,744,421	47.3%
3036	1622 1623	Westerly	S	658,358	694,468	36,110	94.8%	0	-
3037	1602	West Greenwich	C	4,657,803	5,304,665	646,862	87.8%	1,653,018	39.1%
3039	1632 1633	Woonsocket	B	70,810,516	76,884,004	6,073,488	92.1%	15,029,889	40.4%
3040	1073	Chariho School District	C	25,929,668	27,990,562	2,060,894	92.6%	5,157,509	40.0%
3041	1203	Foster/Glocester	B	9,085,097	10,429,183	1,344,086	87.1%	2,408,858	55.8%
3042	1528	Tiogue Fire & Lighting	C,5	59,083	26,011	(33,072)	227.1%	0	-



## Table 7

### Schedule of Funding Progress

Old Unit Number	New Unit Number	Unit	Code (s)	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded		Annual Covered Payroll	UAAL as % of Payroll (7)/(9)
						Actuarial Accrued Liability (UAAL) (5) - (4)	Funded Ratio (4)/(5)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
3043	1336	Narragansett Housing	C	1,038,908	861,769	(177,139)	120.6%	223,400	(79.3%)
3045	1098	Coventry Lighting District	C	1,393,795	551,341	(842,454)	252.8%	54,415	(1548.2%)
3046	1242	Hope Valley Fire	C	578,106	379,447	(198,659)	152.4%	181,390	(109.5%)
3050	1156	East Greenwich Housing	C	2,011,369	1,878,874	(132,495)	107.1%	539,640	(24.6%)
3051	1116	Cranston Housing	C	6,317,596	6,939,712	622,116	91.0%	1,209,933	51.4%
3052	1166	East Providence Housing	B	3,709,944	3,885,239	175,295	95.5%	941,588	18.6%
3053	1416	Pawtucket Housing	B	18,910,843	14,963,868	(3,946,975)	126.4%	3,261,809	(121.0%)
3056	1126	Cumberland Housing	C	1,971,513	1,661,718	(309,795)	118.6%	624,526	(49.6%)
3057	1306	Lincoln Housing	B	1,989,197	2,416,979	427,782	82.3%	732,091	58.4%
3059	1016	Bristol Housing	C	2,556,959	2,239,905	(317,054)	114.2%	583,721	(54.3%)
3065	1036	Burrillville Housing	B	999,103	1,210,070	210,967	82.6%	249,313	84.6%
3066	1386	North Providence Housing	B	950,369	1,692,908	742,539	56.1%	335,799	221.1%
3067	1177	East Smithfield Water	C,5	715,184	735,812	20,628	97.2%	0	-
3068	1227	Greenville Water	B	1,779,402	1,699,728	(79,674)	104.7%	341,085	(23.4%)
3069	1356	Newport Housing	C	7,711,440	10,516,589	2,805,149	73.3%	1,900,680	147.6%
3071	1566	Warren Housing	B	1,216,700	1,332,790	116,090	91.3%	454,378	25.5%
3072	1286	Johnston Housing	C	1,428,953	1,968,186	539,233	72.6%	425,574	126.7%
3077	1538	Tiverton Local 2670A	C	4,834,573	4,711,434	(123,139)	102.6%	1,191,963	(10.3%)
3078	1002 1003 1007 1009	Barrington COLA	C	43,310,018	45,342,799	2,032,781	95.5%	9,627,203	21.1%
3079	1096	Coventry Housing	C	2,046,311	1,734,458	(311,853)	118.0%	703,934	(44.3%)
3080	1496	South Kingstown Housing	C	681,711	568,130	(113,581)	120.0%	233,551	(48.6%)
3081	1403	N. RI Collaborative Adm. Services	C	3,614,635	4,194,984	580,349	86.2%	694,413	83.6%
3083	1616	West Warwick Housing	B	1,928,132	2,157,975	229,843	89.3%	834,258	27.6%
3084	1476	Smithfield Housing	C	881,613	682,984	(198,629)	129.1%	195,731	(101.5%)
3094	1478	Smithfield COLA	C	20,873,727	21,506,562	632,835	97.1%	4,902,985	12.9%
3096	1056	Central Falls Housing	C	3,356,482	4,631,244	1,274,762	72.5%	1,387,089	91.9%
3098	1293	Lime Rock Administrative Services	C	543,529	552,166	8,637	98.4%	114,074	7.6%
3099	1063	Central Falls Schools	C	19,678,014	20,689,896	1,011,882	95.1%	6,067,848	16.7%
3100	1023	Bristol/Warren Schools	B	19,930,575	25,360,130	5,429,555	78.6%	5,121,816	106.0%
3101	1157 1158	Town of E. Greenwich-COLA-NCE	C	29,028,080	28,394,189	(633,891)	102.2%	6,339,030	(10.0%)
3102	1712	Harrisville Fire District (ADMIN)	C	1,446,969	1,263,849	(183,120)	114.5%	269,251	(68.0%)
3103	1702	Albion Fire District (ADMIN)	C,5	151,848	136,148	(15,700)	111.5%	0	-
3150	1159	East Greenwich Fire (ADMIN)	C	152,976	238,129	85,153	64.2%	43,515	195.7%



## Table 7

### Schedule of Funding Progress

Old Unit Number	New Unit Number	Unit	Code (s)	Actuarial Value of Assets (AVA) (5)	Actuarial Accrued Liability (AAL) (6)	Unfunded		Annual Covered Payroll (9)	UAAAL as % of Payroll (7)/(9) (10)	
						Actuarial Accrued Liability (UAAAL) (5) - (4) (7)	Funded Ratio (4)/(5) (8)			
1612	1612	Town of West Warwick	C	195,001	203,471	8,470	95.8%	1,309,041	0.6%	
1613	1613	West Warwick School Dept (NC)	C	176,834	183,922	7,088	96.1%	1,765,492	0.4%	
1802	1802	Pascoag Fire District (ADMIN) COLA	C	114,245	71,883	(42,362)	158.9%	46,800	(90.5%)	
<b>General Employee Units Subtotal</b>				<b>\$ 1,229,586,627</b>	<b>\$ 1,386,948,133</b>	<b>\$ 157,361,506</b>	<b>88.7%</b>	<b>\$ 289,318,482</b>	<b>54.4%</b>	
<b>Police &amp; Fire Units</b>										
4016	1285	Johnston Fire	D	17,946,511	20,187,948	2,241,437	88.9%	5,635,042	39.8%	
4029	1454	Richmond Police	6	3,940,019	3,879,523	(60,496)	101.6%	1,046,401	(5.8%)	
4031	1474	Smithfield Police	C,D	26,085,699	25,220,829	(864,870)	103.4%	3,663,559	(23.6%)	
4042	1555	Valley Falls Fire	D	5,006,573	6,227,290	1,220,717	80.4%	667,857	182.8%	
4047	1395 1435	North Smithfield Voluntary Fire	B,D	11,192,539	11,791,703	599,164	94.9%	1,608,582	37.2%	
4050	1155	East Greenwich Fire	C,D	20,660,343	26,711,344	6,051,001	77.3%	2,986,743	202.6%	
4054	1154	East Greenwich Police	C,D	21,236,372	24,785,401	3,549,029	85.7%	2,563,972	138.4%	
4055	1375	North Kingstown Fire	C,D	45,413,073	51,680,534	6,267,461	87.9%	5,319,469	117.8%	
4056	1374	North Kingstown Police	C,D	32,872,098	39,867,975	6,995,877	82.5%	4,466,900	156.6%	
4058	1385	North Providence Fire	D	45,504,788	62,740,546	17,235,758	72.5%	7,105,964	242.6%	
4059	1008	Barrington Fire (25)	C	6,791,355	6,601,651	(189,704)	102.9%	2,059,256	(9.2%)	
4060	1004	Barrington Police	C,D	14,379,553	18,153,540	3,773,987	79.2%	2,154,039	175.2%	
4061	1005	Barrington Fire (20)	C,D,5	5,644,065	8,675,367	3,031,302	65.1%	0	-	
4062	1564 1565	Warren Police & Fire	C,D	15,778,324	19,358,209	3,579,885	81.5%	2,142,707	167.1%	
4063	1494	South Kingstown Police	B,1	32,470,528	40,528,702	8,058,174	80.1%	4,444,323	181.3%	
4073	1464	Scituate Police	5	316,270	12,463	(303,807)	2537.6%	0	-	
4076	1394	North Smithfield Police	C,D	13,772,597	16,077,743	2,305,146	85.7%	2,348,974	98.1%	
4077	1534	Tiverton Fire	C,D	14,608,429	16,838,321	2,229,892	86.8%	2,130,603	104.7%	
4082	1194	Foster Police	C,D	3,624,661	4,576,827	952,166	79.2%	515,945	184.5%	
4085	1634	Woonsocket Police	C,D	56,935,912	71,147,296	14,211,384	80.0%	6,898,723	206.0%	
4086	1084	Charlestown Police	C,D	15,035,732	18,219,080	3,183,348	82.5%	1,604,347	198.4%	
4087	1264	Hopkinton Police	C,D,6	7,705,349	9,685,950	1,980,601	79.6%	1,265,025	156.6%	
4088	1214	Glocester Police	C,D	9,910,294	11,995,416	2,085,122	82.6%	1,421,361	146.7%	
4089	1604	West Greenwich Police/Rescue	C,D	7,379,939	8,826,715	1,446,776	83.6%	1,302,311	111.1%	
4090	1034	Burrillville Police	C,D,6	14,892,955	16,816,810	1,923,855	88.6%	2,046,743	94.0%	
4091	1148	Cumberland Rescue	C,D	9,860,873	9,814,659	(46,214)	100.5%	1,260,408	(3.7%)	
4093	1635	Woonsocket Fire	C,D	69,406,861	72,385,414	2,978,553	95.9%	7,323,037	40.7%	
4094	1015	Bristol Fire	D	839,173	1,143,562	304,389	73.4%	250,080	121.7%	
4096	1014	Bristol Police	C,D	15,643,895	14,329,179	(1,314,716)	109.2%	3,304,913	(39.8%)	
4098	1095	Coventry Fire	C,D	4,182,251	7,188,631	3,006,380	58.2%	791,684	379.7%	
4099	1505	South Kingstown EMT	C,D	6,356,265	5,274,551	(1,081,714)	120.5%	916,960	(118.0%)	
4102	1045 1235 1525 1585	Central Coventry Fire	C,D	12,924,167	18,064,304	5,140,137	71.5%	1,737,030	295.9%	
4103	1255	Hopkins Hill Fire	C,D	5,244,774	5,054,761	(190,013)	103.8%	961,032	(19.8%)	
4104	1114	Cranston Police	C,D,4	73,611,388	91,560,411	17,949,023	80.4%	14,935,407	120.2%	
4105	1115	Cranston Fire	C,D,4	110,531,900	116,839,301	6,307,401	94.6%	18,666,752	33.8%	





## Table 7

### Schedule of Funding Progress

Old Unit Number	New Unit Number	Unit	Code (s)	Actuarial Value of Assets (AVA) (5)	Actuarial Accrued Liability (AAL) (6)	Unfunded		Annual Covered Payroll (9)	UAAL as % of Payroll (7)/(9) (10)
						Actuarial Accrued Liability (UAAL) (5) - (4) (7)	Funded Ratio (4)/(5) (8)		
4106	1125 1135 1365	Cumberland Fire	B,D	20,928,674	25,409,486	4,480,812	82.4%	2,957,609	151.5%
4107	1305	Lincoln Rescue	C	5,587,033	7,164,196	1,577,163	78.0%	939,760	167.8%
4108	1344	New Shoreham Police	B,D	2,264,597	3,180,389	915,792	71.2%	436,944	209.6%
4109	1324	Middletown Police & Fire	C,D	17,357,708	15,639,491	(1,718,217)	111.0%	5,339,625	(32.2%)
4110	1715	Harrisville Fire District	C,D	3,080,092	2,259,555	(820,537)	136.3%	599,242	(136.9%)
4111	1705 1815	Lincoln Fire District	C	1,789,529	1,953,246	163,717	91.6%	482,751	33.9%
1054	1054	Central Falls Police & Fire New	C	634,987	542,287	(92,700)	117.1%	1,425,038	(6.5%)
1284	1284	Johnston Police		2,649,321	2,795,167	145,846	94.8%	2,307,411	6.3%
1295	1295	Limerock Fire District	C	1,268,977	1,453,306	184,329	87.3%	923,676	20.0%
1364	1364	Newport Police Dept		2,248,744	1,840,636	(408,108)	122.2%	1,675,804	(24.4%)
1424	1424	Portsmouth Police Department	C	2,642,231	2,071,632	(570,599)	127.5%	1,869,805	(30.5%)
1425	1425	Portsmouth Fire Department	C	2,313,528	2,210,574	(102,954)	104.7%	1,693,999	(6.1%)
1465	1465	Smithfield Fire	C	4,355,167	4,425,702	70,535	98.4%	2,678,289	2.6%
1484	1484	Scituate Police Dept COLA	C	792,082	739,395	(52,687)	107.1%	784,165	(6.7%)
1614	1614	West Warwick Police Dept	C	154,192	162,888	8,696	94.7%	531,396	1.6%
1615	1615	West Warwick Fire Dept	C	1,251,247	1,620,198	368,951	77.2%	638,529	57.8%
1805	1805	Pascoag Fire District COLA	C	1,007,499	1,317,134	309,635	76.5%	290,194	106.7%
<b>Police &amp; Fire Units Subtotal</b>				<b>\$ 828,031,133</b>	<b>\$ 957,047,242</b>	<b>\$ 129,016,109</b>	<b>86.5%</b>	<b>\$ 141,120,386</b>	<b>91.4%</b>
<b>Legacy Units</b>									
1609	1609	Town of West Warwick (Legacy)	E,2	9,299,398	50,166,791	40,867,393	18.5%	3,309,871	1234.7%
1610	1610	West Warwick School NC (Legacy)	E,2	13,190,518	33,543,047	20,352,529	39.3%	4,204,319	484.1%
1619	1619	Town of West Warwick Library (Legacy)	E,2	959,339	3,126,220	2,166,881	30.7%	308,752	701.8%
1055	1055	Central Falls Police & Fire Legacy	C	19,919,479	43,852,670	23,933,191	45.4%	3,391,497	705.7%
1617	1617	West Warwick Police Dept (Legacy)	E,2	13,030,621	53,181,343	40,150,722	24.5%	3,133,865	1281.2%
1618	1618	West Warwick Fire Dept (Legacy)	E,2	16,841,688	59,064,262	42,222,574	28.5%	4,623,509	913.2%
<b>Legacy Units Subtotal</b>				<b>\$ 73,241,043</b>	<b>\$ 242,934,334</b>	<b>\$ 169,693,291</b>	<b>30.1%</b>	<b>\$ 18,971,813</b>	<b>894.4%</b>
<b>All MERS Units Total</b>				<b>2,130,858,803</b>	<b>2,586,929,709</b>	<b>456,070,906</b>	<b>82.4%</b>	<b>449,410,681</b>	<b>101.5%</b>

B - Municipality has adopted COLA Plan B

C - Municipality has adopted COLA Plan C

D - Municipality has adopted the "20-year" optional Police & Fire Plan

1 - S.Kingstown Police have a unique plan that provides 2.0% of salary for service prior to July 1, 1993, and 2.5% of salary for service on or after July 1, 1993.

2 - New unit since prior valuation.

3 - Closed unit.

4 - Historically, Cranston Fire and Police are contributing 10% due to special plan provision.

5 - This unit has no active members.

6 - Historically, Special plan provisions apply to this unit.



## Table 8

### Distribution of Assets at Market Value (Percentage of Total Investments)

Item (1)	June 30, 2023 (2)
US Equity	25.1%
International Developed Equity	10.7%
Emerging Markets Equity	4.2%
Private Equity and Opportunistic Private Credit	12.5%
Non-Core Real Estate	2.5%
Equity Options	2.0%
EMD (50/50 Blend)	0.0%
Liquid Credit	5.0%
Private Credit	3.0%
CLOs	2.0%
Treasury Duration	5.0%
Systematic Trend	5.0%
Core Real Estate	4.0%
Private Infrastructure	4.0%
IG Corp Credit	3.3%
Securitized Credit	3.3%
Absolute Return	6.5%
Cash	2.0%
Total investments	100.0%

# Table 9

## Active Member Statistics

Old Unit Number	New Unit Number	Unit	Code(s)	Active Employees as of June 30, 2023				Active Employees as of June 30, 2022			
				Number	Average Age	Average Service	Average Salary	Number	Average Age	Average Service	Average Salary
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<b>General Employee Units</b>											
3002	1012 1019	Bristol	B	94	48.9	13.1	\$ 60,530	98	50.0	14.2	\$ 58,693
3003	1032 1033	Burrillville	C	147	50.6	10.5	51,490	135	51.8	11.7	51,149
3004	1052	Central Falls		47	42.9	9.1	53,940	49	45.2	8.7	53,161
3005	1082	Charlestown	C	47	54.5	14.2	62,233	47	52.8	14.3	63,879
3007	1112 1113	Cranston	B	582	53.9	13.2	44,575	572	54.2	14.0	42,317
3008	1122 1123	Cumberland		268	50.6	10.6	45,160	264	51.0	11.2	44,705
3009	1152 1153	East Greenwich	C	20	55.1	13.4	101,156	18	53.1	12.6	94,065
3010	1162 1163	East Providence	B	426	49.7	10.7	50,646	414	50.3	11.4	49,602
3011	1183	Exeter/West Greenwich	B	72	52.3	10.2	43,670	69	54.6	12.3	45,593
3012	1192 1193	Foster		34	53.2	11.8	44,275	33	52.3	11.4	42,588
3013	1212 1213	Glocester	C	73	53.9	12.2	47,388	73	53.6	12.0	45,288
3014	1262	Hopkinton	C	38	48.6	6.4	57,705	39	50.1	7.6	51,826
3015	1272 1273	Jamestown	C	85	52.3	12.6	55,303	78	52.4	13.1	56,246
3016	1282 1283	Johnston	C	213	50.8	10.5	40,257	209	50.5	10.4	39,316
3017	1302 1303	Lincoln		9	60.0	17.5	72,363	12	61.4	20.2	74,855
3019	1322 1323	Middletown	C	107	50.3	11.7	48,143	102	50.1	12.7	47,911
3021	1352 1353 1354	Newport	B	327	46.8	9.9	50,464	308	47.5	10.5	49,786
3022	1342 1343	New Shoreham	B	62	48.5	8.6	49,806	56	48.5	9.2	48,449
3023	1372 1373	North Kingstown	C	302	50.6	9.8	44,622	297	50.2	9.9	42,429
3024	1382 1383	North Providence		215	50.3	10.7	45,935	212	50.7	10.7	42,576
3025	1392 1393	North Smithfield	B	95	49.8	9.7	47,619	93	51.2	10.2	46,104
3026	1412 1413	Pawtucket	C	506	50.1	11.9	48,237	508	50.3	12.4	44,990
3027	1515	Union Fire District		7	57.2	16.0	58,570	7	56.2	15.0	56,314
3029	1452	Richmond		28	47.6	10.1	55,587	28	49.2	10.0	52,072
3030	1462 1463	Scituate	B	90	52.1	10.3	43,805	101	52.8	10.7	40,353
3031	1472 1473	Smithfield	C	91	52.7	9.9	44,009	91	52.4	10.1	42,534
3032	1492 1493	South Kingstown	B	259	51.1	12.1	52,625	268	50.9	12.3	47,417
3033	1532 1533	Tiverton	C	101	50.2	9.4	42,161	100	50.4	9.3	40,508
3034	1562	Warren	C	46	47.1	13.9	59,661	46	47.8	14.5	58,310
3036	1622 1623	Westerly	5	---	---	---	---	---	---	---	---
3037	1602	West Greenwich	C	27	51.5	13.2	61,223	24	50.9	13.1	57,159
3039	1632 1633	Woonsocket	B	380	49.9	9.8	39,552	371	49.9	10.2	37,839
3040	1073	Chariho School District	C	140	53.5	14.7	36,839	146	52.6	14.6	35,882
3041	1203	Foster/Glocester	B	55	51.3	8.5	43,797	56	52.4	10.0	43,027
3042	1528	Tiogoe Fire & Lighting	C,5	---	---	---	---	---	---	---	---
3043	1336	Narragansett Housing	C	4	60.7	24.3	55,850	4	59.7	23.3	53,688
3045	1098	Coventry Lighting District	C	1	56.3	8.4	54,415	1	55.3	7.4	52,682
3046	1242	Hope Valley Fire	C	3	47.7	12.7	60,463	3	46.7	11.6	58,043
3050	1156	East Greenwich Housing	C	9	47.7	8.7	59,960	8	51.3	8.9	58,850
3051	1116	Cranston Housing	C	20	44.3	6.6	60,497	18	43.0	6.7	58,964
3052	1166	East Providence Housing	B	13	50.5	10.4	72,430	12	49.8	9.6	68,186
3053	1416	Pawtucket Housing	B	49	47.8	11.5	66,568	47	48.9	13.0	64,595
3056	1126	Cumberland Housing	C	10	58.5	13.6	62,453	11	55.9	12.7	58,888
3057	1306	Lincoln Housing	B	13	52.9	8.0	56,315	12	53.4	9.1	54,481
3059	1016	Bristol Housing		9	53.5	12.9	64,858	9	51.9	10.7	66,422
3065	1036	Burrillville Housing	B	4	52.3	11.3	62,328	4	51.3	10.3	60,031
3066	1386	North Providence Housing	B	7	44.5	5.9	47,971	8	46.9	4.2	42,802
3067	1177	East Smithfield Water	C,5	---	---	---	---	---	---	---	---
3068	1227	Greenville Water	B	4	48.5	15.8	85,271	4	47.5	14.8	80,983
3069	1356	Newport Housing	C	30	54.2	11.5	63,356	28	55.2	11.3	61,898



# Table 9

## Active Member Statistics

Old Unit Number	New Unit Number	Unit	Code(s)	Active Employees as of June 30, 2023				Active Employees as of June 30, 2022			
				Number	Average Age	Average Service	Average Salary	Number	Average Age	Average Service	Average Salary
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
3071	1566	Warren Housing	B	7	53.5	8.7	64,911	8	51.9	7.9	58,109
3072	1286	Johnston Housing		7	52.9	15.2	60,796	7	52.5	16.9	63,778
3077	1538	Tiverton Local 2670A	C	25	43.7	8.8	47,679	25	44.4	8.9	47,328
3078	02 1003 1007 10	Barrington COLA	C	196	51.9	10.8	49,118	190	51.8	11.2	48,248
3079	1096	Coventry Housing		13	56.6	14.2	54,149	13	58.5	14.3	51,531
3080	1496	South Kingstown Housing	C	4	58.1	5.1	58,388	3	56.6	5.7	61,463
3081	1403	N. RI Collaborative Adm. Services	C	22	54.1	9.3	31,564	22	50.8	8.1	34,487
3083	1616	West Warwick Housing	B	12	51.9	6.2	69,522	11	50.9	5.7	66,894
3084	1476	Smithfield Housing		3	56.7	18.8	65,244	3	55.7	17.9	65,522
3094	1478	Smithfield COLA	C	75	51.6	13.2	65,373	69	52.3	14.0	64,995
3096	1056	Central Falls Housing	C	22	49.6	11.7	63,050	20	49.4	10.5	59,663
3098	1293	Lime Rock Administrative Services		2	63.8	23.6	57,037	2	62.8	22.7	55,657
3099	1063	Central Falls Schools	C	155	43.5	7.5	39,147	139	45.1	8.2	39,436
3100	1023	Bristol/Warren Schools	B	122	49.9	8.5	41,982	122	50.8	9.9	39,936
3101	1157 1158	Town of E. Greenwich-COLA-NCE	C	159	51.0	11.0	39,868	159	52.1	12.2	39,609
3102	1712	Harrisville Fire District (ADMIN)	C	4	57.0	19.5	67,313	4	56.0	18.6	64,359
3103	1702	Albion Fire District (ADMIN)	C,5	---	---	---	---	---	---	---	---
3150	1159	East Greenwich Fire (ADMIN)	C	1	40.5	3.6	43,515	1	39.5	2.7	42,737
1609	1609	Town of West Warwick (Legacy)	E,2	50	46.0	11.2	66,197	---	---	---	---
1610	1610	West Warwick School NC (Legacy)	E,2	100	51.8	12.8	42,043	---	---	---	---
1612	1612	Town of West Warwick	C	27	43.5	1.8	48,483	10	40.6	2.5	47,949
1613	1613	West Warwick School Dept (NC)	C	49	40.8	1.5	36,030	33	40.5	0.7	47,733
1619	1619	Town of West Warwick Library (Legacy)	E,2	7	40.0	6.3	44,107	---	---	---	---
1802	1802	Pascoag Fire District (ADMIN) COLA	C	1	44.3	0.3	46,800	---	---	---	---
<b>All General Employee Units</b>				<b>6,232</b>	<b>50.4</b>	<b>10.9</b>	<b>\$ 47,680</b>	<b>5,934</b>	<b>50.8</b>	<b>11.4</b>	<b>\$ 45,981</b>
<b>Police &amp; Fire Units</b>											
4016	1285	Johnston Fire	D	75	41.2	12.4	\$ 75,134	77	39.9	11.2	\$ 71,455
4029	1454	Richmond Police	6	14	40.7	14.1	74,743	13	41.1	14.2	72,535
4031	1474	Smithfield Police	C,D	42	40.8	16.1	87,228	43	41.4	16.6	83,479
4042	1555	Valley Falls Fire	D	9	45.7	19.8	74,206	10	44.6	18.1	70,215
4047	1395 1435	North Smithfield Voluntary Fire	B,D	22	42.7	13.2	73,117	22	41.3	13.8	67,616
4050	1155	East Greenwich Fire	C,D	38	45.9	15.8	78,599	38	44.9	14.8	75,795
4054	1154	East Greenwich Police	C,D	33	42.5	12.8	77,696	32	43.9	14.2	73,887
4055	1375	North Kingstown Fire	C,D	78	41.1	13.3	68,198	81	40.7	12.8	70,841
4056	1374	North Kingstown Police	C,D	52	41.6	13.6	85,902	52	41.2	14.0	83,935
4058	1385	North Providence Fire	D	97	36.7	10.7	73,257	95	37.1	10.5	67,895
4059	1008	Barrington Fire (25)	C	27	38.5	10.5	76,269	28	37.8	10.4	72,526
4060	1004	Barrington Police	C,D	27	39.9	10.4	79,779	24	40.2	12.5	78,156
4061	1005	Barrington Fire (20)	C,D,5	---	---	---	---	---	---	---	---
4062	1564 1565	Warren Police & Fire	C,D	29	41.8	14.1	73,886	27	42.1	14.1	71,932
4063	1494	South Kingstown Police	B,1	55	38.7	11.6	80,806	54	38.7	11.6	75,482
4073	1464	Scituate Police	5	---	---	---	---	---	---	---	---
4076	1394	North Smithfield Police	C,D	27	35.1	9.3	86,999	26	34.1	8.8	79,929
4077	1534	Tiverton Fire	C,D	30	41.0	9.5	71,020	33	38.7	9.4	70,291
4082	1194	Foster Police	C,D	7	42.7	7.1	73,706	8	37.0	4.7	64,110
4085	1634	Woonsocket Police	C,D	95	39.2	12.1	72,618	94	39.9	12.8	67,542
4086	1084	Charlestown Police	C,D	19	38.9	12.7	84,439	20	42.6	15.5	83,585
4087	1264	Hopkinton Police	C,D,6	16	43.3	10.3	79,064	15	43.1	11.0	74,350
4088	1214	Glocester Police	C,D	17	43.1	13.8	83,609	16	42.5	12.8	77,902
4089	1604	West Greenwich Police/Rescue	C,D	17	43.6	9.8	76,607	17	43.6	10.5	73,411
4090	1034	Burrillville Police	C,D,6	25	39.6	12.5	81,870	23	40.1	12.5	79,583
4091	1148	Cumberland Rescue	C,D	17	43.4	11.8	74,142	17	42.8	13.3	68,343
4093	1635	Woonsocket Fire	C,D	107	39.1	12.9	68,440	107	39.7	13.5	68,388
4094	1015	Bristol Fire	D	4	55.2	11.9	62,520	3	54.6	14.7	60,382



# Table 9

## Active Member Statistics

Old Unit Number	New Unit Number	Unit	Code(s)	Active Employees as of June 30, 2023				Active Employees as of June 30, 2022			
				Number	Average Age	Average Service	Average Salary	Number	Average Age	Average Service	Average Salary
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
4096	1014	Bristol Police	C,D	40	42.4	15.5	82,623	39	42.1	15.1	80,496
4098	1095	Coventry Fire	C,D	11	43.0	12.7	71,971	9	44.2	14.4	70,724
4099	1505	South Kingstown EMT	C,D	15	41.4	7.0	61,131	19	39.4	6.5	60,193
4102	45 1235 1525 15	Central Coventry Fire	C,D	26	42.8	13.7	66,809	29	39.6	11.2	62,833
4103	1255	Hopkins Hill Fire	C,D	14	48.9	11.9	68,645	14	49.8	11.9	65,794
4104	1114	Cranston Police	C,D,4	138	43.2	16.7	108,228	142	42.5	15.8	89,788
4105	1115	Cranston Fire	C,D,4	185	42.6	14.8	100,901	185	43.7	15.4	89,575
4106	1125 1135 1365	Cumberland Fire	B,D	43	42.9	14.5	68,782	40	44.7	15.4	69,137
4107	1305	Lincoln Rescue	C	15	40.8	11.4	62,651	13	42.4	12.6	63,397
4108	1344	New Shoreham Police	B,D	5	56.2	11.4	87,389	4	54.4	13.2	69,134
4109	1324	Middletown Police & Fire	C,D	74	37.6	10.8	72,157	71	37.1	10.3	71,492
4110	1715	Harrisville Fire District	C,D	9	43.9	14.2	66,582	9	42.9	13.2	64,185
4111	1705 1815	Lincoln Fire District	C	7	45.0	7.6	68,964	8	42.3	6.8	66,237
1054	1054	Central Falls Police & Fire New	C	24	30.8	1.6	59,377	17	33.5	1.5	57,090
1055	1055	Central Falls Police & Fire Legacy	C	50	43.4	15.1	67,830	60	42.8	14.7	65,043
1284	1284	Johnston Police	C	32	34.3	5.9	72,107	26	35.4	6.1	64,198
1295	1295	Limerock Fire District	C	15	37.5	7.2	61,578	13	37.4	8.5	57,050
1364	1364	Newport Police Dept	C	26	32.5	5.4	64,454	25	32.3	5.1	66,746
1424	1424	Portsmouth Police Department	C	26	31.2	5.7	71,916	25	30.1	5.5	67,564
1425	1425	Portsmouth Fire Department	C	25	34.8	5.9	67,760	24	32.8	5.1	64,424
1465	1465	Smithfield Fire	C	38	31.3	6.3	70,481	37	30.6	5.7	63,892
1484	1484	Scituate Police Dept COLA	C	10	32.6	5.3	78,417	10	31.6	4.3	73,457
1614	1614	West Warwick Police Dept	C	9	29.0	1.5	59,044	4	32.7	0.8	53,187
1615	1615	West Warwick Fire Dept	C	11	26.8	2.5	58,048	10	31.6	4.1	54,023
1617	1617	West Warwick Police Dept (Legacy)	E,2	39	40.2	13.0	80,356	---	---	---	---
1618	1618	West Warwick Fire Dept (Legacy)	E,2	58	45.8	16.6	79,716	---	---	---	---
1805	1805	Pascoag Fire District COLA	C	5	43.5	11.9	58,039	4	45.7	13.7	56,952
<b>All Police &amp; Fire Units</b>				<b>1,929</b>	<b>40.3</b>	<b>12.4</b>	<b>\$ 78,937</b>	<b>1,812</b>	<b>40.2</b>	<b>12.3</b>	<b>\$ 74,105</b>
<b>All MERS Units</b>				<b>8,161</b>	<b>48.0</b>	<b>11.3</b>	<b>\$ 55,068</b>	<b>7,746</b>	<b>48.3</b>	<b>11.6</b>	<b>\$ 52,560</b>

B - Municipality has adopted COLA Plan B

C - Municipality has adopted COLA Plan C

D - Municipality has adopted the "20-year" optional Police & Fire Plan

1 - S.Kingstown Police have a unique plan that provides 2.0% of salary for service prior to July 1, 1993, and 2.5% of salary for service on or after July 1, 1993.

2 - New unit since prior valuation.

3 - Closed unit.

4 - Historically, Cranston Fire and Police are contributing 10% due to special plan provision.

5 - This unit has no active members.

6 - Historically, Special plan provisions apply to this unit.



# Table 10

## Retired Member Statistics

Old Unit Number	New Unit Number	Unit	Code(s)	Retirees and Beneficiaries As of June 30, 2023			Retirees and Beneficiaries As of June 30, 2022		
				Number	Average Age	Average Monthly Benefit	Number	Average Age	Average Monthly Benefit
<b>General Employee Units</b>									
3002	1012 1019	Bristol	B	77	75.8	\$ 1,827	72	76.1	\$ 1,785
3003	1032 1033	Burrillville	C	126	74.2	1,406	128	73.9	1,354
3004	1052	Central Falls		34	75.1	1,346	34	74.6	1,350
3005	1082	Charlestown	C	17	71.0	1,876	15	69.8	1,825
3007	1112 1113	Cranston	B	662	74.9	1,383	641	75.0	1,339
3008	1122 1123	Cumberland		189	75.3	960	184	75.1	950
3009	1152 1153	East Greenwich	C	34	82.7	1,078	35	81.7	1,056
3010	1162 1163	East Providence	B	433	74.2	1,539	431	73.9	1,525
3011	1183	Exeter/West Greenwich	B	51	72.1	1,355	44	72.6	1,359
3012	1192 1193	Foster		30	74.3	786	31	73.8	767
3013	1212 1213	Glocester	C	46	75.9	1,132	44	75.1	1,072
3014	1262	Hopkinton	C	24	72.9	1,525	19	74.2	1,521
3015	1272 1273	Jamestown	C	57	74.4	1,526	53	73.8	1,541
3016	1282 1283	Johnston	C	255	73.8	1,180	256	73.4	1,162
3017	1302 1303	Lincoln		11	74.8	1,575	8	76.4	1,370
3019	1322 1323	Middletown	C	76	69.6	1,608	72	68.8	1,521
3021	1352 1353 1354	Newport	B	270	73.8	1,687	268	73.2	1,676
3022	1342 1343	New Shoreham	B	38	75.7	1,327	37	74.9	1,303
3023	1372 1373	North Kingstown	C	284	74.4	1,416	281	73.9	1,411
3024	1382 1383	North Providence		206	75.3	887	201	75.2	922
3025	1392 1393	North Smithfield	B	76	75.2	1,182	73	75.6	1,168
3026	1412 1413	Pawtucket	C	475	74.5	1,445	478	74.6	1,386
3027	1515	Union Fire District		3	76.0	2,022	3	75.0	2,022
3029	1452	Richmond		17	73.5	945	17	73.5	1,048
3030	1462 1463	Scituate	B	62	76.9	1,265	60	77.5	1,188
3031	1472 1473	Smithfield	C	72	76.2	1,051	74	75.5	1,018
3032	1492 1493	South Kingstown	B	265	73.0	1,523	255	72.6	1,502
3033	1532 1533	Tiverton	C	66	74.6	1,156	62	74.5	1,157
3034	1562	Warren	C	26	78.0	1,388	28	77.9	1,294
3036	1622 1623	Westerly	S	7	89.9	1,481	7	88.9	1,481
3037	1602	West Greenwich	C	15	73.7	1,251	15	73.9	1,243
3039	1632 1633	Woonsocket	B	353	75.8	1,247	355	75.4	1,247
3040	1073	Chariho School District	C	87	72.5	1,364	85	72.0	1,341
3041	1203	Foster/Glocester	B	50	73.9	1,071	46	73.8	1,067
3042	1528	Tiogue Fire & Lighting	C,5	1	75.3	189	1	74.3	183
3043	1336	Narragansett Housing	C	---	---	---	---	---	---
3045	1098	Coventry Lighting District	C	2	82.3	2,820	2	81.3	2,746
3046	1242	Hope Valley Fire	C	1	81.0	1,922	1	80.0	1,857
3050	1156	East Greenwich Housing	C	5	69.2	1,308	4	68.8	1,507
3051	1116	Cranston Housing	C	24	74.6	1,919	24	73.6	1,891
3052	1166	East Providence Housing	B	11	77.3	1,734	12	77.3	1,591
3053	1416	Pawtucket Housing	B	35	74.5	1,905	32	75.1	1,916
3056	1126	Cumberland Housing	C	2	79.6	2,268	2	78.6	2,216
3057	1306	Lincoln Housing	B	8	75.9	1,555	8	74.9	1,505
3059	1016	Bristol Housing		8	76.8	1,390	9	77.9	1,299
3065	1036	Burrillville Housing	B	3	76.2	2,625	3	75.2	2,602
3066	1386	North Providence Housing	B	6	77.1	1,886	6	76.1	1,886
3067	1177	East Smithfield Water	C,5	4	78.6	1,116	4	77.6	1,087
3068	1227	Greenville Water	B	3	70.2	2,046	3	69.2	2,021
3069	1356	Newport Housing	C	36	74.7	1,814	35	74.1	1,833



# Table 10

## Retired Member Statistics

Old Unit Number	New Unit Number	Unit	Code(s)	Retirees and Beneficiaries As of June 30, 2023			Retirees and Beneficiaries As of June 30, 2022		
				Number	Average Age	Average Monthly Benefit	Number	Average Age	Average Monthly Benefit
3071	1566	Warren Housing	B	5	80.0	2,002	5	79.0	1,951
3072	1286	Johnston Housing		7	76.0	1,820	6	77.1	1,803
3077	1538	Tiverton Local 2670A	C	19	73.0	1,342	20	73.4	1,286
3078	1002 1003 1007 1009	Barrington COLA	C	136	74.6	1,605	133	74.5	1,563
3079	1096	Coventry Housing		3	80.7	620	5	82.3	614
3080	1496	South Kingstown Housing	C	1	66.7	1,854	1	65.7	1,798
3081	1403	N. RI Collaborative Adm. Services	C	19	70.8	870	20	70.5	860
3083	1616	West Warwick Housing	B	6	80.3	2,176	6	79.3	2,118
3084	1476	Smithfield Housing		---	---	---	---	---	---
3094	1478	Smithfield COLA	C	39	71.9	2,161	40	71.2	2,061
3096	1056	Central Falls Housing	C	12	72.7	1,314	12	71.7	1,314
3098	1293	Lime Rock Administrative Services		1	71.0	1,212	1	70.0	1,212
3099	1063	Central Falls Schools	C	94	73.2	1,047	92	73.1	1,022
3100	1023	Bristol/Warren Schools	B	140	74.2	1,071	133	73.6	1,079
3101	1157 1158	Town of E. Greenwich-COLA-NCE	C	89	71.6	1,542	78	71.4	1,501
3102	1712	Harrisville Fire District (ADMIN)	C	1	63.3	2140.8	1	62.3	2140.8
3103	1702	Albion Fire District (ADMIN)	C,5	1	65.9	790	1	64.9	790
3150	1159	East Greenwich Fire (ADMIN)	C	1	74.1	1,803	1	73.1	1,803
1609	1609	Town of West Warwick (Legacy)	E,2	123	68.8	2,288	---	---	---
1610	1610	West Warwick School NC (Legacy)	E,2	90	72.7	1,831	---	---	---
1612	1612	Town of West Warwick	C	---	---	---	---	---	---
1613	1613	West Warwick School Dept (NC)	C	---	---	---	---	---	---
1619	1619	Town of West Warwick Library (Legacy)	E,2	9	74.2	2,385	---	---	---
1802	1802	Pascoag Fire District (ADMIN) COLA	C	---	---	---	---	---	---
<b>All General Employee Units</b>				<b>5,439</b>	<b>74.3</b>	<b>1,403</b>	<b>5,113</b>	<b>74.3</b>	<b>1,348</b>
<b>Police and Fire Units</b>									
4016	1285	Johnston Fire	D	10	51.6	\$ 3,346	9	51.7	\$ 3,468
4029	1454	Richmond Police	6	1	62.8	2,199	1	61.8	2,199
4031	1474	Smithfield Police	C,D	14	55.4	3,760	13	53.8	3,559
4042	1555	Valley Falls Fire	D	9	61.5	2,412	10	61.7	2,354
4047	1395 1435	North Smithfield Voluntary Fire	B,D	15	67.7	2,821	15	66.7	2,762
4050	1155	East Greenwich Fire	C,D	33	63.8	2,837	35	64.2	2,782
4054	1154	East Greenwich Police	C,D	32	64.3	3,144	33	65.3	3,145
4055	1375	North Kingstown Fire	C,D	74	68.5	2,941	74	68.1	2,868
4056	1374	North Kingstown Police	C,D	48	64.7	3,178	45	64.6	3,092
4058	1385	North Providence Fire	D	108	62.6	2,873	104	62.0	2,879
4059	1008	Barrington Fire (25)	C	2	61.0	4,361	2	60.0	4,320
4060	1004	Barrington Police	C,D	28	67.9	2,932	27	67.6	2,862
4061	1005	Barrington Fire (20)	C,D,5	26	73.0	2,470	28	73.0	2,386
4062	1564 1565	Warren Police & Fire	C,D	27	69.7	2,736	28	69.6	2,650
4063	1494	South Kingstown Police	B,1	55	66.5	3,298	53	65.9	3,303
4073	1464	Scituate Police	5	1	92.6	301	1	91.6	301
4076	1394	North Smithfield Police	C,D	22	62.9	3,002	22	61.9	2,937
4077	1534	Tiverton Fire	C,D	31	67.2	2,321	29	66.7	2,249
4082	1194	Foster Police	C,D	10	66.8	2,488	10	65.8	2,488
4085	1634	Woonsocket Police	C,D	92	58.4	3,001	88	57.4	2,952
4086	1084	Charlestown Police	C,D	25	62.1	3,143	20	62.9	3,293
4087	1264	Hopkinton Police	C,D,6	14	63.2	2,854	14	62.2	2,854
4088	1214	Glocester Police	C,D	17	66.8	2,479	17	65.8	2,426
4089	1604	West Greenwich Police/Rescue	C,D	12	61.0	2,846	10	60.6	3,019
4090	1034	Burrillville Police	C,D,6	23	66.1	2,953	23	65.1	2,900
4091	1148	Cumberland Rescue	C,D	12	59.6	2,585	11	58.8	2,424



# Table 10

## Retired Member Statistics

Old Unit Number	New Unit Number	Unit	Code(s)	Retirees and Beneficiaries As of June 30, 2023			Retirees and Beneficiaries As of June 30, 2022		
				Number	Average Age	Average Monthly Benefit	Number	Average Age	Average Monthly Benefit
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
4093	1635	Woonsocket Fire	C,D	79	57.6	3,340	73	56.9	3,226
4094	1015	Bristol Fire	D	3	64.7	1,222	3	63.7	1,222
4096	1014	Bristol Police	C,D	2	51.1	3,929	1	57.4	3,371
4098	1095	Coventry Fire	C,D	12	61.5	2,539	12	60.5	2,539
4099	1505	South Kingstown EMT	C,D	5	54.3	2,562	5	53.3	2,505
4102	1045 1235 1525 1585	Central Coventry Fire	C,D	29	59.4	2,454	29	58.4	2,454
4103	1255	Hopkins Hill Fire	C,D	6	62.0	1,631	6	61.0	1,613
4104	1114	Cranston Police	C,D,4	39	54.7	4,293	36	54.0	4,236
4105	1115	Cranston Fire	C,D,4	66	57.8	4,111	50	56.2	4,025
4106	1125 1135 1365	Cumberland Fire	B,D	35	66.1	2,615	34	65.2	2,579
4107	1305	Lincoln Rescue	C	11	60.0	2,417	11	59.0	2,417
4108	1344	New Shoreham Police	B,D	3	59.1	3,390	3	58.1	3,390
4109	1324	Middletown Police & Fire	C,D	2	46.6	2,265	2	45.6	2,265
4110	1715	Harrisville Fire District	C,D	---	---	---	---	---	---
4111	1705 1815	Lincoln Fire District	C	3	65.7	2,455	3	64.7	2,383
1054	1054	Central Falls Police & Fire New	C	---	---	---	---	---	---
1055	1055	Central Falls Police & Fire Legacy	C	111	70.2	1,641	111	70.3	1,604
1284	1284	Johnston Police	---	---	---	---	---	---	---
1295	1295	Limerock Fire District	C	---	---	---	---	---	---
1364	1364	Newport Police Dept	---	---	---	---	---	---	---
1424	1424	Portsmouth Police Department	C	---	---	---	---	---	---
1425	1425	Portsmouth Fire Department	C	---	---	---	---	---	---
1465	1465	Smithfield Fire	C	1	47.9	3,199	1	46.9	3,199
1484	1484	Scituate Police Dept COLA	C	---	---	---	---	---	---
1614	1614	West Warwick Police Dept	C	---	---	---	---	---	---
1615	1615	West Warwick Fire Dept	C	2	52.3	3,780	---	---	---
1617	1617	West Warwick Police Dept (Legacy)	E,2	81	64.0	3,532	---	---	---
1618	1618	West Warwick Fire Dept (Legacy)	E,2	84	65.2	3,226	---	---	---
1805	1805	Pascoag Fire District COLA	C	1	63.9	2,996	1	62.9	2,996
<b>All Police &amp; Fire Units</b>				<b>1,316</b>	<b>63.6</b>	<b>\$ 2,965</b>	<b>1,103</b>	<b>63.1</b>	<b>\$ 2,833</b>
<b>All MERS Units</b>				<b>6,755</b>	<b>72.2</b>	<b>\$ 1,708</b>	<b>6,216</b>	<b>72.3</b>	<b>\$ 1,612</b>

B - Municipality has adopted COLA Plan B

C - Municipality has adopted COLA Plan C

D - Municipality has adopted the "20-year" optional Police & Fire Plan

1 - S.Kingstown Police have a unique plan that provides 2.0% of salary for service prior to July 1, 1993, and 2.5% of salary for service on or after July 1, 1993.

2 - New unit since prior valuation.

3 - Closed unit.

4 - Historically, Cranston Fire and Police are contributing 10% due to special plan provision.

5 - This unit has no active members.

6 - Historically, Special plan provisions apply to this unit.





## Table 11

### Distribution of Active Members by Age and by Years of Service (General Employees) As of June 30, 2023

Attained Age	Years of Credited Service												Total Count & Avg. Comp.	
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over		
	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.		
Under 25	92 \$29,680	50 \$38,005	10 \$43,799	7 \$39,720	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	159 \$33,628
25-29	121 \$36,777	80 \$39,255	49 \$41,416	25 \$48,370	17 \$42,708	38 \$45,614	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	330 \$40,268
30-34	104 \$40,546	78 \$43,147	44 \$49,487	36 \$47,028	36 \$45,891	86 \$49,247	13 \$51,335	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	397 \$45,358
35-39	91 \$35,697	79 \$41,705	26 \$45,291	35 \$39,782	36 \$45,054	121 \$49,691	39 \$56,917	21 \$61,141	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	448 \$45,204
40-44	99 \$36,393	93 \$37,796	41 \$36,477	43 \$46,974	37 \$43,175	141 \$46,361	61 \$57,398	57 \$58,891	30 \$54,869	0 \$0	0 \$0	0 \$0	0 \$0	602 \$45,302
45-49	75 \$38,392	78 \$36,763	37 \$38,736	39 \$40,700	31 \$39,578	153 \$44,808	63 \$57,294	47 \$66,541	58 \$66,563	12 \$66,983	0 \$0	0 \$0	0 \$0	593 \$47,641
50-54	76 \$38,319	73 \$40,782	36 \$40,520	51 \$40,905	40 \$41,901	214 \$44,570	84 \$48,661	102 \$61,057	92 \$61,814	43 \$60,670	31 \$62,042	0 \$0	0 \$0	842 \$48,911
55-59	73 \$42,348	66 \$35,461	38 \$51,372	40 \$46,852	51 \$42,668	213 \$45,036	140 \$49,805	152 \$55,233	179 \$56,607	73 \$70,134	105 \$69,285	20 \$63,434	20 \$63,434	1,150 \$52,340
60-64	38 \$38,033	48 \$40,623	39 \$50,898	34 \$46,475	22 \$43,258	165 \$47,198	129 \$48,176	191 \$45,754	214 \$49,850	105 \$54,905	67 \$52,801	36 \$64,418	36 \$64,418	1,088 \$48,661
65-69	29 \$44,077	20 \$36,387	20 \$41,236	9 \$51,788	16 \$56,567	96 \$47,547	68 \$47,346	86 \$45,457	129 \$46,636	78 \$52,771	39 \$54,219	33 \$68,655	33 \$68,655	623 \$48,808
70 & Over	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0
<b>Total</b>	<b>798</b> \$37,412	<b>665</b> \$39,216	<b>340</b> \$44,035	<b>319</b> \$44,471	<b>286</b> \$43,823	<b>1,227</b> \$46,338	<b>597</b> \$51,076	<b>656</b> \$53,414	<b>702</b> \$54,146	<b>311</b> \$59,208	<b>242</b> \$61,365	<b>89</b> \$65,768	<b>89</b> \$65,768	<b>6,232</b> \$47,680



## Table 12

### Distribution of Active Members by Age and by Years of Service (Police & Fire) As of June 30, 2023

Attained Age	Years of Credited Service												Total
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	
	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	
Under 25	55 \$54,069	26 \$54,716	8 \$61,395	4 \$65,267	1 \$71,407	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	94 \$55,533
25-29	40 \$57,446	55 \$57,482	40 \$60,892	41 \$66,570	42 \$68,766	34 \$75,056	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	252 \$63,748
30-34	18 \$58,809	21 \$56,053	26 \$60,372	26 \$65,323	38 \$68,600	154 \$77,145	42 \$85,311	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	325 \$72,535
35-39	10 \$52,114	10 \$61,912	8 \$60,248	8 \$63,614	20 \$66,378	75 \$77,334	147 \$82,883	29 \$86,533	0 \$0	0 \$0	0 \$0	0 \$0	307 \$78,019
40-44	7 \$64,345	5 \$64,928	7 \$56,936	1 \$48,994	1 \$54,868	37 \$76,336	67 \$82,267	113 \$83,555	31 \$90,355	0 \$0	0 \$0	0 \$0	269 \$81,251
45-49	1 \$67,496	1 \$63,165	1 \$98,824	1 \$73,655	0 \$0	12 \$74,506	28 \$82,784	64 \$83,760	97 \$92,911	18 \$92,376	0 \$0	0 \$0	223 \$87,672
50-54	4 \$72,022	1 \$71,239	2 \$100,284	1 \$60,191	1 \$77,176	9 \$74,177	11 \$81,005	48 \$78,771	89 \$90,572	61 \$102,832	9 \$100,550	0 \$0	236 \$90,151
55-59	4 \$88,781	0 \$0	1 \$51,156	3 \$67,703	2 \$86,272	7 \$79,782	12 \$85,238	18 \$81,560	34 \$87,300	38 \$103,018	24 \$101,145	6 \$96,720	149 \$92,094
60-64	1 \$118,000	0 \$0	3 \$86,055	0 \$0	1 \$114,680	0 \$0	7 \$93,231	4 \$76,455	11 \$79,106	16 \$92,761	11 \$111,224	6 \$100,982	60 \$93,883
65-69	0 \$0	1 \$83,998	0 \$0	0 \$0	0 \$0	1 \$122,539	1 \$80,872	2 \$96,401	5 \$80,896	2 \$129,237	1 \$157,718	1 \$120,006	14 \$101,492
70 & Over	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0
<b>Total</b>	<b>140</b> \$58,075	<b>120</b> \$57,695	<b>96</b> \$62,352	<b>85</b> \$65,690	<b>106</b> \$68,992	<b>329</b> \$76,898	<b>315</b> \$83,314	<b>278</b> \$82,948	<b>267</b> \$90,326	<b>135</b> \$100,688	<b>45</b> \$104,747	<b>13</b> \$100,478	<b>1,929</b> \$78,937



## Table 13

### Membership Data (General Employee Units)

	June 30, 2023 (1)	June 30, 2022 (2)
1. Active members		
a. Number	6,232	5,934
b. Number vested	3,824	3,793
c. Total payroll supplied by ERSRI	\$297,141,424	\$272,852,197
d. Average salary	\$47,680	\$45,981
e. Average age	50.4	50.8
f. Average service	10.9	11.4
2. Inactive members		
a. Number	4,312	3,874
3. Service retirees		
a. Number	4,583	4,314
b. Total annual benefits	\$79,962,972	\$72,394,875
c. Average annual benefit	\$17,448	\$16,781
d. Average age	74.5	74.4
4. Disabled retirees		
a. Number	279	261
b. Total annual benefits	\$5,000,455	\$4,411,126
c. Average annual benefit	\$17,923	\$16,901
d. Average age	67.3	67.3
5. Beneficiaries and spouses		
a. Number	577	538
b. Total annual benefits	\$6,637,422	\$5,923,741
c. Average annual benefit	\$11,503	\$11,011
d. Average age	76.4	76.3

## Table 14

### Membership Data (Police & Fire Units)

	<u>June 30, 2023</u>	<u>June 30, 2022</u>
	(1)	(2)
1. Active members		
a. Number	1,929	1,812
b. Number vested	1,382	1,295
c. Total payroll supplied by ERSRI	\$152,269,257	\$134,279,012
d. Average salary	\$78,937	\$74,105
e. Average age	40.3	40.2
f. Average service	12.4	12.3
2. Inactive members		
a. Number	382	306
3. Service retirees		
a. Number	787	679
b. Total annual benefits	\$31,481,367	\$25,985,388
c. Average annual benefit	\$40,002	\$38,270
d. Average age	63.8	63.6
4. Disabled retirees		
a. Number	302	242
b. Total annual benefits	\$11,441,470	\$8,646,536
c. Average annual benefit	\$37,886	\$35,729
d. Average age	60.1	59.4
5. Beneficiaries and spouses		
a. Number	227	182
b. Total annual benefits	\$3,899,548	\$2,861,183
c. Average annual benefit	\$17,179	\$15,721
d. Average age	67.3	66.3

## Table 15

### Membership Data (All MERS Units)

	<u>June 30, 2023</u> (1)	<u>June 30, 2022</u> (2)
1. Active members		
a. Number	8,161	7,746
b. Number vested	5,206	5,088
c. Total payroll supplied by ERSRI	\$449,410,681	\$407,131,209
d. Average salary	\$55,068	\$52,560
e. Average age	48.0	48.3
f. Average service	11.3	11.6
2. Inactive members		
a. Number	4,694	4,180
3. Service retirees		
a. Number	5,370	4,993
b. Total annual benefits	\$111,444,339	\$98,380,263
c. Average annual benefit	\$20,753	\$19,704
d. Average age	72.9	73.0
4. Disabled retirees		
a. Number	581	503
b. Total annual benefits	\$16,441,925	\$13,057,662
c. Average annual benefit	\$28,299	\$25,960
d. Average age	63.6	63.5
5. Beneficiaries and spouses		
a. Number	804	720
b. Total annual benefits	\$10,536,970	\$8,784,924
c. Average annual benefit	\$13,106	\$12,201
d. Average age	73.8	73.7

**APPENDIX 1**

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**SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS**

Draft

# APPENDIX 1

## Summary of Actuarial Methods and Assumptions

### I. Valuation Date

The valuation date is June 30th of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

### II. Actuarial Cost Method

The actuarial valuation uses the Entry Age actuarial cost method. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) a rate that will amortize the unfunded actuarial accrued liability (UAAL).

The employer normal cost rate is the total normal cost rate, less the member contribution rate. The total normal cost rate is the level percentage-of-pay contribution which would theoretically pay for all benefits if it had been made each year from the inception of the plan and if there had never been any changes of benefits, any changes of assumptions or methods, or any experience gains or losses. The normal costs are determined on an individual basis.

The actuarial accrued liability is the difference between the actuarial present value of all future benefits and the actuarial present value of future normal costs. It is the amount to which the normal costs would have accumulated under the assumptions described in the preceding paragraph. The unfunded actuarial accrued liability (UAAL) is the difference between the actuarial accrued liability and the actuarial value of assets.

The amortization contribution rate is the level percentage of payroll required to reduce the UAAL to zero over the remaining amortization period. The employer contribution rate determined by this valuation will not be effective until two years after the valuation date. The determination of the contribution rate reflects this deferral. The amortization payment for the applicable fiscal year is first determined based on the individual amortization bases. The covered payroll is projected forward for two years, and we then determine the amortization rate by dividing the amortization payment by the projected payroll. Contributions are assumed to be made monthly throughout the year.

For underfunded units, the amortization period for the UAAL as of June 30, 2010 was set to 25 years, or 12 years as of the current valuation date. In conjunction with the Article 21 legislation, employers were given the option to reset the amortization period for the UAAL existing as of June 30, 2014 to 25 years from June 30, 2014. All new gains and losses each year will be amortized over individual 20 year periods. At any time that a unit is in an overfunded status, all prior bases are erased and an amount of the surplus is credited against the contribution rate to keep the funded ratio constant year over year.



## APPENDIX 1 (Continued)

### III. Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income. Offsetting unrecognized gains and losses are immediately recognized, with the shortest remaining bases recognized first and the net remaining bases continue to be recognized on their original timeframe. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses. The actuarial value is calculated in the aggregate for all units combined, and then it is allocated to each unit in proportion to that unit's market value.

### IV. Actuarial Assumptions

#### A. Economic Assumptions

1. Investment return: 7.00% per year, compounded annually, composed of an assumed 2.50% inflation rate and a 4.50% net real rate of return. This rate represents the assumed return, net of all investment and administrative expenses.
2. Salary increase rate: For general employees, the sum of (i) a 3.00% wage inflation assumption (composed of a 2.50% price inflation assumption and a 0.50% additional general increase), and (ii) a service-related component as shown below:

General Employees		
Years of Service	Service-Related Component	Total Increase
1	4.25%	7.25%
2	3.25	6.25
3	3.00	6.00
4	2.75	5.75
5	2.50	5.50
6	2.25	5.25
7	1.50	4.50
8	1.00	4.00
9-10	0.75	3.75
11-15	0.50	3.50
16-20	0.20	3.20
20-24	0.10	3.10
16 or more	0.00	3.00





## APPENDIX 1 (Continued)

For police/fire employees, the sum of (i) a 3.50% wage inflation assumption (composed of a 2.50% price inflation assumption and a 1.00% additional general increase), and (ii) a service-related component as shown below:

Police/Fire Employees		
Years of Service	Service-Related Component	Total Increase
1	10.00%	13.50%
2	9.00	12.50
3	7.00	10.50
4	4.00	7.50
5	2.50	6.00
6	3.00	6.50
7-20	0.50	4.00
20-24	0.25	3.75
25 or more	0.00	3.50

Salary increases are assumed to occur once a year, on July 1. Therefore the pay used for the period year following the valuation date is equal to the reported pay for the prior year, increased by the salary increase assumption. For employees with less than one year of service, the reported rate of pay is used rather than the fiscal year salary paid.

3. Payroll growth rate: In the amortization of the unfunded actuarial accrued liability, payroll is assumed to increase 2.5% per year. This increase rate is solely due to the effect of wage inflation on salaries, with no allowance for future membership growth.
4. Post-retirement Benefit Increase: Post-retirement benefit increases are assumed to be 2.10%, per annum while the plan has a funding level that exceeds 80. The actual amount of the COLA is determined based on 50% of the plan's five-year average investment rate of return minus 5.00% which will range from zero to 4.0%, and 50% of the lesser of 3% or last year's CPI-U increase for a total maximum increase of 3.50%. It is known that the COLA for calendar years 2023 and 2024 will be 3.11% and 2.84% respectively, and this has been reflected in the valuation.

## APPENDIX 1 (Continued)

### B. Demographic Assumptions

1. Post-retirement mortality rates:
  - a. Male employees: PUB(10) Median Table for Healthy General Employee Males, loaded by 115%, projected with Scale MP2021 with immediate convergence.
  - b. Female employees: PUB(10) Median Table for Healthy General Employee Females, loaded by 111%, projected with Scale MP2021 with immediate convergence.
  - c. Disabled males – PUB(10) Tables for Disabled Retirees by Occupation for males, projected with Scale MP2021 with immediate convergence.
  - d. Disabled females – PUB(10) Tables for Disabled Retirees by Occupation for females, projected with Scale MP2021 with immediate convergence.
2. Pre-retirement mortality (combined ordinary and duty):
  - a. Male employees: PUB(10) Tables for Employees by Occupation for males, projected with Scale MP2021 with immediate convergence.
  - b. Female employees: PUB(10) Tables for Employees by Occupation for females, projected with Scale MP2021 with immediate convergence.

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## APPENDIX 1 (Continued)

3. Disability rates: Sample rates per 1,000 active members are shown below. Ordinary disability rates are not applied to members eligible for unreduced retirement.

Age	Number of Disabilities per 1,000					
	General Employees, Ordinary, Males	General Employees, Accidental, Males	General Employees, Ordinary, Females	General Employees, Accidental, Females	Police & Fire, Ordinary, Males and Females	Police & Fire, Accidental, Males and Females
25	0.45	0.14	0.45	0.05	0.34	1.53
30	0.55	0.17	0.55	0.06	0.44	1.98
35	0.75	0.23	0.75	0.08	0.58	2.61
40	1.10	0.33	1.10	0.11	0.88	3.96
45	1.80	0.54	1.80	0.18	1.44	6.48
50	3.05	0.92	3.05	0.31	2.42	10.89
55	5.05	1.52	5.05	0.51	2.42	10.89
60	7.05	2.12	7.05	0.71	2.42	10.89
65	11.55	3.47	11.55	1.16	2.42	10.89

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For General Employees that are age 55 with 20 Years of service but not eligible to retire, an additional 1% is added to the rates above. In addition, if the member is above age 60, another 1% is added to the rates above.

## APPENDIX 1 (Continued)

4. Termination rates (for causes other than death, disability, or retirement) are a function of the member's service. Termination rates are not applied to members eligible for retirement. Rates are shown below:

Service	General Employees, Males & Females	Police & Fire, Males & Females
1	0.175000	0.125000
2	0.118774	0.069562
3	0.101396	0.0548625
4	0.086148	0.046265
5	0.086007	0.040164
6	0.072536	0.035433
7	0.061073	0.031566
8	0.051453	0.028296
9	0.043504	0.025465
10	0.037061	0.022968
11	0.031957	0.020733
12	0.028021	0.018711
13	0.025086	0.016866
14	0.022985	0.015169
15	0.021550	0.013598
16	0.020615	0.012135
17	0.020008	0.010766
18	0.019563	0.009480
19	0.001911	0.008269
20	0.018489	0.000000
21	0.017524	0.000000
22	0.016050	0.000000
23	0.013898	0.000000
24	0.010902	0.000000
25	0.006892	0.000000

## APPENDIX 1 (Continued)

### 5. Retirement rates (unreduced):

For MERS General Employees: a flat 20% per year retirement probability for members eligible for unreduced retirement. A 25% retirement probability will be applied if they have reached age 65.

For MERS P&F: Unisex, service based rates are used for police and fire.

Service	Units without the Optional 20-year retirement election
25	15.0%
26	18.0%
27	21.0%
28	22.0%
29	22.0%
30-34	27.0%
35-39	37.0%
40+	100.0%

100% of members eligible to retire as of June 30, 2012 are assumed to retire once they reach 35 years of service. All members not eligible to retire as of June 30, 2012 are assumed retire at SSNRA, if eligible.

Members are eligible to receive an enhanced benefit if they are at least age 57 with 30 or more years of service. In the year prior to becoming eligible for this provision, no members are assumed to retire.

## APPENDIX 1 (Continued)

6. Reduced retirement rates: No early retirements are assumed for police and fire. Rates for general employees are based on the years from Retirement Eligibility for unreduced benefits, as shown below:

Years from Normal Retirement Age	Ret. Rate
5	1%
4	1%
3	1%
2	2%
1	3%

C. Other Assumptions:

1. Valuation payroll (used for determining the amortization contribution rate): Prior aggregate fiscal year payroll projected forward one year using the overall payroll growth rate.
2. Percent married: 80% of employees are assumed to be married.
3. For the special post-retirement police and fire survivor benefit, we have assumed 80% of members will have a spouse at the time of retirement and 10% of those members would choose option 1 or option 2.
4. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
5. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity. The spousal annuity death benefit for vested married participants is valued using optional form conversion factors based on a unisex mortality table.
6. For active death benefits, the liability is initially calculated based on the ordinary death benefit provisions, and then a 7.5% load is applied to account for duty related benefits.
7. Percent electing deferred termination benefit: Vested terminating members are assumed to elect a refund or a deferred benefit, whichever is more valuable at the time of termination.
8. Recovery from disability: None assumed.
9. Remarriage: It is assumed that no surviving spouse will remarry and there will be no children's benefit.

## APPENDIX 1 (Continued)

### C. Other Assumptions:

10. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at the first age at which unreduced benefits are available.
11. Investment and administrative expenses: The assumed investment return rate represents the anticipated net return after payment of all investment and administrative expenses.
12. Inactive members: For members who terminated service prior to June 30, 2017 liabilities for inactive members are approximated as a multiple of their member contribution account balances. For non-vested inactive members, the multiple is 1.0. For vested inactive members, the multiple is 8.0 for members with 25 or more years of service, 3.0 for vested inactive members age 45 or older with less than 25 years of service, and 1.0 for other vested inactive members younger than age 45. For members who terminated service after June 30, 2017, the expected liability at termination has been carried forward with interest from the last valuation the member was active.
13. Decrement timing: For all members, decrements are assumed to occur at the middle of the year.
14. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
15. Decrement relativity: Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
16. Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
17. Benefit Service: All members are assumed to accrue one year of eligibility service each year.
18. All calculations were performed without regard to the compensation limit in IRC Section 401(a)(17) and the benefit limit under IRC Section 415.



## APPENDIX 1 (Continued)

### D. Participant Data

Participant data was supplied on electronic files. There were separate files for (i) active and inactive members, and (ii) members and beneficiaries receiving benefits.

The data for active members included name, identification number, sex, a code indicating whether the member was active or inactive, date of birth, service, salary, unit indicator, date of last contribution, accumulated member contributions without interest, accrued benefit multiplier as of Valuation Date, Final Average Compensation as of June 30, 2012, and the Rhode Island Retirement Security Act Retirement Date. For retired members and beneficiaries, the data included date of birth, sex, spouse's date of birth (where applicable), amount of monthly benefit, date of retirement, and a form of payment code.

Salary supplied for the current year was based on the earnings for the year preceding the valuation date. This salary was adjusted by the salary increase rate for one year. However, for members with less than one year of service, the current rate of salary was used. This salary was adjusted by the salary increase rate for one year. An additional adjustment was made so that a member's compensation would not be less than it was in the previous year.

In defining who was an active member, members with a date of last contribution in the final quarter of the fiscal year were considered active. Otherwise, the member was defined as inactive.

Beneficiary data for police and fire employees was completed, based on the Age Difference stated above, if the information was not originally supplied on the electronic files.

To correct for incomplete and inconsistent data, we first attempted to pull data from prior valuation files and then made general assumptions to complete the rest. These had no material impact on the results presented.

For members who transferred during the prior fiscal year adjustments were made for certain data records as needed. The active record for a member who transferred into a MERS unit was compared to the prior active record to test for reasonability of service and account balances relative to the prior year's active record and adjusted if needed. The inactive record for any member who transferred out of a MERS unit was deleted when calculating the inactive liability.





## **APPENDIX 2**

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### **SUMMARY OF BENEFIT PROVISIONS**

Draft

## APPENDIX 2

### Summary of Benefit Provisions

1. Authority: The Municipal Employees' Retirement System (MERS) covers employees of certain participating Rhode Island municipalities and other local governmental units, such as housing authorities, water districts, etc. Benefits are described in Rhode Island General Laws, Title 45, Chapters 19, 19.1, 21, 21.1, 21.2, and 21.3.
2. Plan Year: A twelve-month period ending June 30th.
3. Administration: MERS is administered by the State of Rhode Island Retirement Board. However, the State Investment Commission is responsible for the investment of the trust assets, including the establishment of the asset allocation policy.
4. Type of Plan: MERS is a qualified governmental defined benefit retirement plan. Separate contribution rates are determined for each participating governmental unit. For Governmental Accounting Standards Board purposes, it is an agent multiple-employer plan.
5. Eligibility: General employees, police officers and firefighters employed by electing municipalities participate in MERS. Teachers and administrators are covered by the separate Employees' Retirement System of Rhode Island, but other school employees may be covered by MERS. Eligible employees become members at their date of employment. Anyone employed by a municipality at the time the municipality joins MERS may elect not to be covered. Elected officials may opt to be covered by MERS. Employees covered under another plan maintained by the municipality may not become members of MERS. Police officers and/or firefighters may be designated as such by the municipality, in which case the special contribution and benefit provisions described below will apply to them, or they may be designated as general employees with no special benefits. Members designated as police officers and/or firefighters are treated as belonging to a unit separate from the general employees, with separate contribution rates applicable.
6. Employee Contributions: Effective July 1, 2012, General employees contribute 1.00% of their salary per year, and police officers and firefighters contribute 7.00%. General MERS active members with 20 years of service as of June 30, 2012 will contribute 8.25% beginning July 1, 2015. Also, beginning July 1, 2015, MERS Police and Fire active members will contribute 9.00%. In addition, if the municipality has elected one of the optional cost-of-living provisions, an additional member contribution of 1.00% of salary is required. The municipality, at its election, may choose to "pick up" the members' contributions for its employees under the provisions of Internal Revenue Code (IRC) Section 414(h).
7. Salary: Salary includes the member's base earnings plus any payments under a regular longevity or incentive plan. Salary excludes overtime, unused sick and vacation leave, severance pay, and other extraordinary compensation. Certain amounts that are excluded from taxable wages, such as amounts sheltered under a Section 125 plan or amounts picked up by the employer under IRC Section 414(h), are not excluded from salary.



## APPENDIX 2 (Continued)

8. Employer Contributions: Each participating unit's contribution rate is determined actuarially. Contributions determined in a given actuarial valuation go into effect two years after the actuarial valuation.
9. Service: Employees receive credit for service while a member. In addition, a member may purchase credit for certain periods by making an additional contribution to purchase the additional service. Special rules and limits govern the purchase of additional service and the contribution required.
10. Final Average Compensation (FAC): Prior to July 1, 2012 and for general employee members eligible to retire as of June 30, 2012, the average was based on the member's highest three consecutive annual salaries. Effective July 1, 2012, the average was based on the member's highest five consecutive annual salaries. Once a member retires or is terminated, the applicable FAC will be the greater of the member's highest three year FAC as of July 1, 2012 or the five year FAC as of the retirement/termination date. Monthly benefits are based on one-twelfth of this amount.

### 11. Retirement

#### a. General employees: Eligibility

- (i) Members with less than five years of contributory service as of June 30, 2012 and members hired on or after that date are eligible for retirement on or after their Social Security normal retirement age.
- (ii) Members who had at least five years of contributory service as of June 30, 2012 will be eligible for retirement at an individually determined age. This age is the result of interpolating between the member's prior Retirement Date, described in Section (e) below, and the retirement age applicable to members hired after June 30, 2012 in (a) above. The interpolation is based on service as of June 30, 2012 divided by projected service at the member's prior Retirement Date. The minimum retirement age is 59.
- (iii) Members with 10 or more years of contributory service on June 30, 2012 may choose to retire at their prior Retirement Date if they continue to work and contribute until that date. If option is elected, the retirement benefit will be calculated using the benefits accrued as of June 30, 2012, i.e., the member will accumulate no additional defined benefits after this date, but the benefit will be paid without any actuarial reduction.
- (iv) Effective July 1, 2015, members will be eligible to retire with full benefits at the earlier of their current RIRSA date described in sections (a) – (c) above or upon the attainment of age 65 with 30 years of service, age 64 with 31 years of service, age 63 with 32 years of service, or age 62 with 33 years of service.
- (v) A member who is within five years of reaching their retirement eligibility date, as described in this section, and has 20 or more years of service, may elect to retire at any time with an actuarially reduced benefit.



## APPENDIX 2 (Continued)

(vi) Prior to July 1, 2012, members were eligible for retirement on or after age 58 if they had credit for 10 or more years of service, or at any age if they had credit for at least 30 years of service. Members eligible to retire before July 1, 2012 were not impacted by the changes to retirement eligibility above.

b. General employees: Monthly Benefit

2.00% of the member's monthly FAC for each year of service prior to July 1, 2012 and 1.00% of the member's monthly FAC for each year of service from July 1, 2012 through June 30, 2105. 1.0% per year for all service after June 30, 2015 unless the member had 20 or more years of service as of June 30, 2012 in which case the benefit accrual is 2.0% per year for service after June 30, 2015. The benefit cannot exceed 75% of the member's monthly FAC

c. Police and Fire employees: Eligibility

- (i) Members are eligible to retire when they are at least 50 years old and have a minimum of 25 years of contributing service or if they have 27 years of contributing service at any age. Members with less than 25 years of contributing service are eligible for retirement on or after their Social Security normal retirement age.
- (ii) Members who, as of June 30, 2012, had at least 10 years of contributing service, had attained age 45, and had a prior Retirement Date (described in Section (e)) before age 52 may retire at age 52.
- (iii) Active members on June 30, 2012 may choose to retire at their prior Retirement Date if they continue to work and contribute until that date. If option is elected, the retirement benefit will be calculated using the benefits accrued as of June 30, 2012, i.e., the member will accumulate no additional defined benefits after this date, but the benefit will be paid without any actuarial reduction.
- (iv) A member who is within five years of reaching their retirement eligibility date, as described in this section, and has 20 or more years of service, may elect to retire at any time with an actuarially reduced benefit.
- (v) Prior to July 1, 2012, members designated as police officers or firefighters were eligible for retirement at or after age 55 with credit for at least 10 years of service or at any age with credit for 25 or more years of service. Members were also eligible to retire and receive a reduced benefit if they are at least age 50 and have at least 20 years of service. If the municipality elected to adopt the 20-year retirement provisions for police officers and/or firefighters, then such a member was eligible to retire at any age with 20 or more years of service. Members eligible to retire before July 1, 2012 were not impacted by the changes to retirement eligibility above.

## APPENDIX 2 (Continued)

- d. Police and Fire employees: Monthly Benefit
  - (i) 2.00% of the member's monthly FAC for each year of service, up to 37.5 years (75% of FAC maximum)
  - (ii) If the optional 20-year retirement provisions were adopted by the municipality prior to July 1, 2012: 2.50% of the member's monthly FAC for each year of service prior to July 1, 2012 and 2.00% of the member's monthly FAC for each year of service after July 1, 2012. The benefit cannot exceed 75% of the member's monthly FAC.
  - (iii) Active members (including future hires), members who retire after July 1, 2015 and after attaining age 57 with 30 years of service will have a benefit equal to the greater of their current benefit described in (a) and (b) above and one calculated based on a 2.25% multiplier for all years of service.
- e. Payment Form: Benefits are paid as a monthly life annuity. Optional forms of payment are available; see item 16. Below.
- f. Death Benefit
  - (i) After retirement, death benefits are based on the form of annuity elected. If no option is elected, i.e., if payments are made as a life annuity, there is a minimum death benefit equal to the sum of the member's contributions without interest, less the sum of the monthly benefit payments made before the member's death. In addition, a lump-sum death benefit is payable upon the death of any retired member, regardless of option elected. This lump sum is equal to a percentage of the lump-sum death benefit that was available to the member at the time of retirement. The percentage is 100% in the first year of retirement, 75% in the second year, 50% in the third year, and 25% in the fourth and subsequent years of retirement. However, in no event will the lump sum death benefit be less than \$4,000.
  - (ii) Special Police/Fire Death Benefit: A member that does not elect an optional form of payment at retirement will be eligible the active member death benefit, which is an annuity of 30% of the member's salary that will be paid to the member's spouse upon death, for life or until remarriage. Children's benefits may also be payable.

## APPENDIX 2 (Continued)

### 12. Disability Retirement

- a. Eligibility: A member is eligible for a disability retirement provided he/she has credit for at least five years of service or if the disability is work-related. Members are not eligible for an ordinary disability benefit if they are eligible for unreduced retirement.
- b. Ordinary Disability Benefit: The benefit payable under the retirement formula, using FAC and service at the time of disability, but not less than 10 years of service.
- c. Occupational Disability Benefit: An annual annuity equal to two-thirds of salary at the time of disability.
- d. Payment Form: The disability benefit commences immediately upon the member's retirement. Benefits cease upon recovery or reemployment. Disability benefits are payable as a monthly life annuity with a guarantee that, at the member's death, the sum of the member's contributions plus interest as of the date of retirement will be paid in a lump-sum to the member's beneficiary. All alternative forms of payment except for the Social Security Option are permitted in the case of disability retirement.

### 13. Deferred Termination Benefit

- a. Eligibility: A member with at least ten years of service is vested. Effective July 1, 2012, a member with at least 5 years of service is vested. A vested member who does not withdraw his/her contributions from the fund is eligible for a deferred termination benefit.
- b. Monthly Benefit: The monthly benefit is based on the retirement formula described above. Both FAC and service are determined at the time the member leaves active employment. Benefits may commence at Social Security normal retirement age provided that the member has met the requirements for a retirement benefit.
- c. Payment Form: The same as for Retirement above.
- d. Death Benefit before retirement: A member who dies after leaving active service but before retiring is entitled to receive a benefit as described below in Item 15.
- e. Death Benefit after Retirement: The same as for Retirement above.

### 14. Withdrawal (Refund) Benefit

- a. Eligibility: All members leaving covered employment with less than ten years (5 years, effective July 1, 2012) of service are eligible. Optionally, vested members (described in Item 13, above) may withdraw their accumulated contributions in lieu of the deferred benefits otherwise due.



## APPENDIX 2 (Continued)

- b. **Benefit:** The member who withdraws receives a lump-sum payment equal to the sum of his/her employee contributions. No interest is credited on these contributions.

### 15. Death Benefit of Active or Inactive Members

- a. **Eligibility:** Death must have occurred while an active member or while an inactive, non-retired member. The basic benefit plus the lump-sum benefit are paid on behalf of an active, general employee, and the special police/fire benefit and the lump-sum benefit are paid on behalf of an active police officer or firefighter. If the death was due to accidental, duty-related causes, the accidental death benefit is paid regardless of whether the employee is a general employee, a police officer, or a firefighter. Inactive members receive a refund of their accumulated contributions without interest.
- b. **Basic Benefit:** Upon the death of a non-vested member, or upon the death of a vested, inactive member, or upon the death of an active, unmarried member, a refund of the member's contributions (without interest) is paid. Upon the death of a vested, married, active member, the spouse may elect (i) the refund benefit described above, or (ii) a life annuity paid to the spouse or beneficiary. The amount of the annuity is equal to the amount which would have been paid had the member retired at the time of his death and elected the Joint and 100% Survivor option. If the member was not eligible for retirement, the annuity benefit is reduced 9% per year from the date at which the member would have been eligible had he or she remained in service.
- c. **Lump-sum Benefit:** \$800 per year of service, with a maximum benefit of \$16,000 and a minimum of \$4,000. This benefit is only available to active members.
- d. **Special Police/Fire Death Benefit:** In lieu of the basic benefit above, if a police officer or firefighter dies while an active member, an annuity of 30% of the member's salary will be paid to the member's spouse, for life or until remarriage. Children's benefits may also be payable.
- e. **Accidental Duty-related Death Benefit:** If a member dies as the result of an accident while in the course of his or her duties, in lieu of the above benefits the member's spouse may elect to receive (i) a refund of all contributions made (including interest), and (ii) an annual life annuity equal to 50% of the member's salary at the time of death. The annuity benefit stops when the spouse remarries or dies, although it may be continued to any children under age 18 or to any dependent parents.



## APPENDIX 2 (Continued)

16. Optional Forms of Payment: In addition to a life annuity, MERS offers members these optional forms of payment on an actuarially equivalent basis:
- a. Option 1 (Joint and 100% Survivor) - A life annuity payable while either the participant or his beneficiary is alive.
  - b. Option 2 (Joint and 50% Survivor) - A life annuity payable to the member while both the member and beneficiary are alive, reducing to 50% of this amount if the member predeceases the beneficiary.
  - c. Social Security Option – An annuity paid at one amount prior to age 62, and at a reduced amount after age 62, designed to provide a level total income when combined with the member's age 62 Social Security benefit. Benefits cease upon the member's death.

Actuarial equivalence is based on tables adopted by the Employees' Retirement Board.

17. Post-retirement Benefit Increase: For members who retire after June 30, 2012: members will be eligible to receive cost of living increases at the later of the member's third anniversary of retirement and the month following their SSNRA (age 55 for members designated as police officers and/or firefighters). When a municipality elects coverage, it may elect either COLA C (covering only current and future active members and excluding members already retired) or COLA B (covering current retired members as well as current and future active members).
- a. The COLA will be suspended for any unit whose funding level is less than 80%; however, an interim COLA may be granted in four-year intervals while the COLA is suspended. The first interim COLA may begin January 1, 2018.
  - b. Effective July 1, 2015, the COLA is determined based on 50% of the plan's five-year average investment rate of return less 5.5% limited to a range of 0.0% to 4.0%, plus 50% of the lesser of 3.0% or last year's CPI-U increase for a total maximum increase of 3.50%. Previously, it was the plan's five-year average investment rate of return less 5.5% limited to a range of 0.0% to 4.0%.
  - c. The COLA will be limited to the first \$25,000 of the member's annual pension benefit. For retirees and beneficiaries who retired on or before July 1, 2015, years in which a COLA is payable based on the every fourth year provision described in (i) above will be limited to the first \$30,000. These limits will be indexed annually to increase in the same manner as COLAs, with the known values of \$25,000 for 2013, \$25,000 for 2014, \$25,168 for 2015, \$25,855 for 2016, \$26,098 for 2017, \$26,290 for 2018, \$26,687 for 2019, \$27,184 for 2020, \$27,608 for 2021, \$27,901 for 2022 and \$28,878 for 2023, \$29,776 for 2024, and \$30,622 for 2025.
  - d. Beginning with 2024, instead of a OLA occurring once every four years while a unit is less than 80% funded, an annual adjustment equal to 25% of the total increase will be granted while the plan remains less than 80% funded. The limit will be based on the \$30k starting point during such years.





## APPENDIX 2 (Continued)

18. Special Provisions Applying to Specific Units: Prior to July 1, 2012, some units had specific provisions that apply only to that unit. The transition rules outlined in Item 11, above, apply to these units in a similar manner.

The following summarizes those provisions:

- a. Rhode Island General Law §45-21.2-22.1 contains special provisions that apply to employees of Burrillville Police, but only if adopted by the Town of Burrillville. The Town adopted these provisions effective July 1, 2006. Under these special provisions, the retirement benefit for a member with 20 or more years of service is improved. The new formula is  $60.00\% \times \text{Final Average Compensation (FAC)}$ , plus  $1.50\% \times \text{FAC} \times \text{Years of Service in Excess of 20}$ , with a maximum benefit equal to 75% of FAC. In addition to this benefit change, the member contribution rate increased from 9.00% to 10.20%.
- b. Rhode Island General Law § 45-21.2-6.1, § 45-21.2-5(5), and § 45-21.2-14(d) contain special provisions that apply to members of the South Kingstown police department. Under these special provisions, the member receives a retirement allowance which is a life annuity terminable at the death of the annuitant, and is an amount equal to the sum of two and one-half percent (2.5%) of final compensation multiplied by the years of service accrued after July 1, 1993 and two percent (2%) of final compensation multiplied by the years of service accrued prior to July 1, 1993. The annual retirement allowance in no event shall exceed seventy-five percent (75%) of final compensation. The member contribution rate is 8.00%, plus 1.00% for the adoption of the optional COLA, for a total of 9.00%.
- c. Rhode Island General Law § 45-21.2-5 (9) contains special provisions that apply to members of the Hopkinton police department. Under these special provisions, the final compensation for benefit computation is based on the members' highest year of earnings. In addition, the members shall receive a three percent (3%) escalation of their pension payment compounded each year on January 1st following the year of retirement and continuing on an annual basis on that date. The member contribution rate is 9.00%. Compensation for benefit purposes includes base, longevity, and holiday pay.
- d. Rhode Island General Law § 45-21.2-5 (7) and § 45-21.2-14 contain special provisions that apply to members of the Cranston fire department hired after July 1, 1995 or with less than 5 years of service at that date. Under these special provisions, the final compensation for benefit computation is based on the members' highest year of earnings. In addition, the members shall receive a three percent (3%) escalation of their pension payment compounded each year on January 1st following the year of retirement and continuing on an annual basis on that date. The member contribution rate is 10.00%. Compensation for benefit purposes includes base, longevity, and holiday pay.



## APPENDIX 2 (Continued)

- e. Rhode Island General Law §§ 45-21.2-5 (8) and § 45-21.2-14 contain special provisions that apply to members of the Cranston police department hired after July 1, 1995 or with less than 5 years of service at that date. Under these special provisions, the final compensation for benefit computation is based on the members' highest year of earnings. In addition, the members shall receive a three percent (3%) escalation of their pension payment compounded each year on January 1st following the year of retirement and continuing on an annual basis on that date. The member contribution rate is 10.00%. Compensation for benefit purposes includes base, longevity, and holiday pay.
- f. Rhode Island General Law §§ 45-21.2-6.3 contains special provisions that apply to employees of Richmond Police. The Town adopted these provisions on April 3, 2008, effective July 1, 2008. Under these special provisions, members are eligible to retire after attaining 22 years of service. The retirement benefit for a member with 22 or more years of service was improved to 50.00% x Final Average Compensation (FAC), plus 2.2727% x FAC x Years of Service in Excess of 22, with a maximum benefit equal to 75% of FAC.

Draft

## **APPENDIX 3**

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### **OUTSTANDING AMORTIZATION BASES**

Draft

## **APPENDIX 4**

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### **RISKS ASSOCIATED WITH MEASURING THE ACCRUED LIABILITY AND ACTUARIALLY DETERMINED CONTRIBUTION**

Draft

## APPENDIX 4

### Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

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 due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. Investment risk – actual investment returns may differ from the expected returns;
2. Asset/Liability mismatch – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. Contribution risk – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
4. Salary and Payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
5. Longevity risk – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
6. Other demographic risks – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

## APPENDIX 4 (Continued)

The effects of certain trends in experience can generally be anticipated. For example if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The computed contribution rate shown on page 9 may be considered as a minimum contribution rate that complies with the Board's funding policy. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

### PLAN MATURITY MEASURES

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

<b>For General Employees</b>	<u>June 30, 2023</u>	<u>June 30, 2022</u>	<u>June 30, 2021</u>
Ratio of the market value of assets to total payroll	4.2	4.4	4.9
Ratio of actuarial accrued liability to payroll	5.0	5.0	5.1
Ratio of actives to retirees and beneficiaries	1.1	1.2	1.2
Ratio of net cash flows to market value of assets	-3.5%	-3.3%	-3.8%
Duration of the actuarial accrued liability	10.7	10.9	10.9

<b>For Police and Fire</b>	<u>June 30, 2023</u>	<u>June 30, 2022</u>	<u>June 30, 2021</u>
Ratio of the market value of assets to total payroll	5.5	5.9	6.3
Ratio of actuarial accrued liability to payroll	7.3	6.9	6.8
Ratio of actives to retirees and beneficiaries	1.5	1.6	1.7
Ratio of net cash flows to market value of assets	0.4%	0.8%	1.2%
Duration of the actuarial accrued liability	15.5	16.2	16.2

### RATIO OF MARKET VALUE OF ASSETS TO PAYROLL

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 4.0 times the payroll, a return on assets 5% different than assumed would equal 20% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

### RATIO OF ACTUARIAL ACCRUED LIABILITY TO PAYROLL

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.



## APPENDIX 4 (Continued)

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 5.5 times the payroll, a change in liability 2% other than assumed would equal 11% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

### **RATIO OF ACTIVES TO RETIREES AND BENEFICIARIES**

A young plan with many active members and few retirees will have a high ratio of active to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

### **RATIO OF NET CASH FLOW TO MARKET VALUE OF ASSETS**

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

### **DURATION OF ACTUARIAL ACCRUED LIABILITY**

The duration of the actuarial accrued liability may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, duration of 10 indicates that the liability would increase approximately 10% if the assumed rate of return were lowered 1%.

### **ADDITIONAL RISK ASSESSMENT**

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability

## APPENDIX 4 (Continued)

### Low-Default-Risk Obligation Measure

Actuarial Standards of Practice No. 4 (ASOP No. 4) was revised and reissued in December 2021 by the Actuarial Standards Board (ASB). It includes a new calculation called a low-default-risk obligation measure (LDRM) to be prepared and issued annually for defined benefit pension plans. The transmittal memorandum for ASOP No. 4 includes the following explanation:

*“The ASB believes that the calculation and disclosure of this measure provides appropriate, useful information for the intended user regarding the funded status of a pension plan. The calculation and disclosure of this additional measure is not intended to suggest that this is the “right” liability measure for a pension plan. However, the ASB does believe that this additional disclosure provides a more complete assessment of a plan’s funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.”*

The LDRM estimates the amount of money the plan would need to invest in low risk securities to provide the benefits with greater certainty. The current model expects lower costs but with higher risk, which creates less certainty and a possibility of higher costs. The LDRM model creates higher expected costs but more predictability when compared to the current model. Thus, the difference between the two measures (Valuation and LDRM) is one illustration of the possible costs the sponsor could incur if there was a reduction in the investment risk in comparison to the current diversified portfolio. However, the downside risk would be limited in the scenarios where the current portfolio would fail to achieve returns in excess of the low-default-risk discount, in this case 4.90%.

The following information has been prepared in compliance with this new requirement. Unless otherwise noted, the measurement date, actuarial cost methods, and assumptions used are the same as for the funding valuation covered in this actuarial valuation report.

#### General Employees

LDRM measure of benefits earned as of the measurement date:	\$1,718 million
Valuation liability (IEAN) at 7% on measurement date:	<u>1,474 million</u>
Cost to mitigate investment risk in the System’s portfolio:	\$ 244 million

#### Police & Fire

LDRM measure of benefits earned as of the measurement date:	\$1,386 million
Valuation liability (IEAN) at 7% on measurement date:	<u>1,110 million</u>
Cost to mitigate investment risk in the System’s portfolio:	\$ 276 million





## APPENDIX 4 (Continued)

The ERSRI benefit structure has several risk sharing provisions that are contingent on the investment returns of the portfolio and thus if the portfolio was changed to expect lower returns, the expected liabilities that are contingent on those returns would also decrease. If these provisions were not contingent on the investment performance, it would have increased the LDRM by another \$104 million for General Employees and \$85 for Police & Fire, meaning these provisions reduced the impact of lowering the discount rate from 7.0% to 4.9% which is an illustration that a portion of the investment risk is currently being borne by the Members and not the Employers.

ASOP 4 requires commentary to help the intended user understand the significance of the LDRM with respect to the funded status of the plan, plan contributions, and the security of participant benefits. Specifically, if plan assets were changed to be invested exclusively in low-default-risk securities, the funded status would be lower and the contributions would have to immediately be higher. In addition, since the future benefit adjustments are depending on funded status and investment performance, the benefit payments would also be lower. While investing in a portfolio with low-default-risk securities may be more likely to reduce the standard deviation of investment volatility, the higher necessary contributions would produce a larger ratio of assets to payroll, and thus it is not self-evident that the volatility of the employer contributions would be any lower. In addition, the portfolio would be expected to generate less investment earnings over time, thus it also would be more likely to result in higher employer contributions and/or lower benefits.

Disclosures: Discount rate used to calculate LDRM: 4.90% Intermediate FTSE Pension Discount Curve as of June 30, 2023. Other significant assumptions that differ from those used for the funding valuation: Future assumed COLAs would decrease from 2.1% per year to 1.1% per year. This measure is not appropriate for assessing the need for or amount of future contributions as the current portfolio is expected to generate significantly more investment earnings than the low-default-risk portfolio. This measure is also not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligation as this measure includes projections of salary increases and the ability for current members to continue to accrue eligibility and vesting service



## **GLOSSARY**

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### **DEFINITION OF ACTUARIAL TERMS**

Draft

# GLOSSARY

1. Actuarial Accrued Liability (AAL) - That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Plan Benefits which is not provided for by future Normal Costs. It is equal to the Actuarial Present Value of Future Plan Benefits minus the actuarial present value of future Normal Costs.
2. Actuarial Assumptions - Assumptions as to future experience under the Plan. These include assumptions about the occurrence of future events affecting costs or liabilities, such as:
  - mortality, withdrawal, disablement, and retirement;
  - future increases in salary;
  - future rates of investment earnings and future investment and administrative expenses;
  - characteristics of members not specified in the data, such as marital status;
  - characteristics of future members;
  - future elections made by members; and
  - other relevant items.
3. Actuarial Cost Method or Funding Method - A procedure for allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability. These items are used to determine the ARC.
4. Actuarial Gain or Actuarial Loss - A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., the Plan's assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results that produce actuarial liabilities which are larger than projected. Actuarial gains will shorten the time required for funding of the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.
5. Actuarially Equivalent - Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.

## GLOSSARY (Continued)

6. Actuarial Present Value (APV) - The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:
  - a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.),
  - b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned, and
  - c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.
7. Actuarial Present Value of Future Plan Benefits - The Actuarial Present Value of those benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members either entitled to a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
8. Actuarial Valuation - The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB 25, such as the funded ratio and the ARC.
9. Actuarial Value of Assets or Valuation Assets - The value of the Plan's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly actuaries use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ARC.
10. Actuarially Determined - Values which have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.

## GLOSSARY (Continued)

11. Amortization Method - A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.
12. Amortization Payment - That portion of the pension plan contribution or ARC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.
13. Annual Required Contribution (ARC) - The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under GASB 25. The ARC consists of the Employer Normal Cost and the Amortization Payment.
14. Closed Amortization Period - A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Funding Period and Open Amortization Period.
15. Decrements: Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or termination.
16. Defined Benefit Plan: An employer-sponsored retirement benefit that provides workers, upon attainment of designated age and service thresholds, with a monthly benefit based on the employee's salary and length of service. The value of a benefit from a defined benefit plan is generally not affected by the return on the assets that are invested to fund the benefit.
17. Defined Contribution Plan: An employer-sponsored retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, and the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.
18. Employer Normal Cost: The portion of the Normal Cost to be paid by the employers. This is equal to the Normal Cost less expected member contributions.
19. Experience Study: A periodic review and analysis of the actual experience of the Plan which may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.



## GLOSSARY (Continued)

20. **Funded Ratio:** The ratio of the actuarial value of assets (AVA) to the actuarial accrued liability (AAL). Plans sometimes calculate a market funded ratio, using the market value of assets (MVA), rather than the AVA, although GASB 25 reporting requires the use of the AVA.
21. **Funding Period or Amortization Period:** The term “Funding Period” is used in two ways. In the first sense, it is the period used in calculating the Amortization Payment as a component of the ARC. This funding period is chosen by the Board of Trustees. In the second sense, it is a calculated item: the number of years in the future that will theoretically be required to amortize (i.e., pay off or eliminate) the Unfunded Actuarial Accrued Liability, based on the statutory employer contribution rate, and assuming no future actuarial gains or losses.
22. **GASB:** Governmental Accounting Standards Board.
23. **GASB 67 and GASB 68:** Governmental Accounting Standards Board Statements No. 67 and No. 68. These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 67 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 68 sets the rules for the systems themselves.
24. **Normal Cost:** That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method. Any payment in respect of an Unfunded Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits which are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated. Under the entry age normal cost method, the Normal Cost is intended to be the level cost (when expressed as a percentage of pay) needed to fund the benefits of a member from hire until ultimate termination, death, disability or retirement.
25. **Open Amortization Period:** An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.
26. **Unfunded Actuarial Accrued Liability:** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus.
27. **Valuation Date or Actuarial Valuation Date:** The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Plan Benefits is determined. The expected benefits to be paid in the future are discounted to this date.



# Judicial Retirement Benefits Trust State of Rhode Island

Actuarial Valuation Report  
As of June 30, 2023

DRAFT





December 15, 2023

Retirement Board  
40 Fountain Street, First Floor  
Providence, RI 02903-1854

Dear Members of the Board:

**Subject: Actuarial Valuation of the JRBT as of June 30, 2023**

This is the June 30, 2023 actuarial valuation of the Judicial Retirement Benefits Trust (JRBT). This report describes the current actuarial condition of the JRBT, determines the recommended employer contribution rate, and analyzes changes in the contribution rate. Valuations are prepared annually, as of June 30, the last day of the JRBT plan year. Benefits for state judges hired before January 1, 1990 are funded by the State from general assets, on a pay-as-you-go basis, and are not included in this valuation.

Under Rhode Island General Laws, the employer contribution rate for the JRBT is certified annually by the State of Rhode Island Retirement Board. This rate is determined actuarially, based on the plan provisions in effect as of the valuation date and the actuarial assumptions and methods adopted by the Board or set by statute. The Board's current policy is that the contribution rate determined by a given actuarial valuation becomes effective two years after the valuation date. For example, the rate determined by the June 30, 2023 actuarial valuation will be applicable for the year beginning July 1, 2025 and ending June 30, 2026.

#### **Financing objectives and funding policy**

The actuarial cost method and the amortization periods are set by statute. The normal cost rate (as a percent of pay) and actuarial accrued liabilities are computed using the Entry Age Normal actuarial cost method. The employer contribution rate is the sum of two pieces: the employer normal cost rate and the amortization rate. The employer normal cost rate is the difference between the normal cost rate and the member contribution rate. The amortization rate, also determined as a level percent of pay, is the amount required to amortize the unfunded actuarial accrued liability over a closed period. The amortization rate is adjusted for the two-year deferral in contribution rates.



### **Progress toward realization of financing objectives**

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a plan's funded status. The funded status alone is not appropriate for assessing the need for future contributions. The funded status is also not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations. The funded ratio, as can be seen in Table 4 of this report, decreased slightly from 104.0% to 102.3% between the valuations. This is due to a gain on the actuarial value of assets with the return on the actuarial value of assets of 7.7% compared to the 7.0% assumption, as well as liability gains mainly resulting from fewer retirements than expected. If the market value of assets were used rather than the actuarial value, the funded ratio would be 104.0%.

Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 7.00% on the actuarial valuation of assets), it is expected that in the absence of benefit improvements, the funded ratio should remain over 100%.

The employer contribution rate decreased from 18.20% to 17.75% for fiscal year 2026.

An analysis of the changes in the employer contribution rate appears on Table 11a of this report. An analysis of the changes in the unfunded actuarial accrued liability appears on Table 11c.

Additional information regarding these assumptions changes is provided further below and in the body of this report.

### **Benefit provisions**

The benefit provisions reflected in this valuation are those which were in effect on June 30, 2023, and there have been no changes in benefits since the preceding valuation. All benefit provisions are summarized in Appendix B.

### **Assumptions and methods**

The assumptions were changed from the last actuarial valuation and were approved by the Board on May 17, 2023. We believe the assumptions are internally consistent and are reasonable, based on the actual experience of JRBT. The combined effect of the assumptions used in this valuation is expected to have no significant bias. Below is a summary of the changes made to the assumptions:

1. Decrease the projected payroll growth from 2.75% to 2.50%.
2. Update the mortality projection scales to the ultimate rates of the most recently published ones, this had no material impact to the liabilities or contributions.

The results of the actuarial valuation are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities and the calculated contribution rates.

All assumptions and methods are described in Appendix A. The actuarial assumptions and methods used in this report comply with the parameters for disclosure that appear in Governmental Accounting Standards Board (GASB) Statement Number 67.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

### **Data**

The System's staff supplied data for active members and retirees as of June 30, 2023. We did not audit this data, but we did apply a number of tests to the data, and we concluded that it was reasonable and consistent with the prior year's data. The System's staff also supplied asset data as of June 30, 2023.



**Certification**

All of our work conforms with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of Rhode Island state law and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board.

The undersigned are independent actuaries. All are Members of the American Academy of Actuaries. They all meet the Qualification Standards of the American Academy of Actuaries, and they are experienced in performing valuations for large public retirement systems.

Respectfully submitted,  
**Gabriel, Roeder, Smith & Company**



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## Actuarial Standards of Practice Disclosure Statements

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; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

This report should not be relied on for any purpose other than the purpose described above. Determinations of the financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results.

The valuation was based upon information furnished by the System's staff, concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by the System's staff.

The developed findings included in this report consider data or other information through June 30, 2023.

This is one of multiple documents comprising the actuarial report. The other document comprising the actuarial report is a PowerPoint presentation presented to the Board of Trustees following the publication of this report.



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## Executive Summary

Item	Valuation Date	
	June 30, 2023	June 30, 2022
<b>Membership</b> <ul style="list-style-type: none"> <li>• Number of:               <ul style="list-style-type: none"> <li>- Active members</li> <li>- Retirees and beneficiaries</li> <li>- Inactive members</li> <li>- Total</li> </ul> </li> <li>• Payroll supplied by ERSRI, annualized</li> </ul>	60 36 1 <hr/> 97 \$ 12,355,040	60 31 1 <hr/> 92 \$ 12,027,297
<b>Contribution rates</b> <ul style="list-style-type: none"> <li>• Member</li> <li>• State</li> </ul>	12.00% 17.75%	12.00% 18.20%
<b>Assets</b> <ul style="list-style-type: none"> <li>• Market value</li> <li>• Actuarial value</li> <li>• Return on market value</li> <li>• Return on actuarial value</li> <li>• Employer contribution</li> <li>• Ratio of actuarial value to market value</li> </ul>	\$ 105,067,197 103,344,499 8.4% 7.7% \$ 2,842,875 98.4%	\$ 97,841,373 96,946,030 -2.8% 8.2% \$ 2,611,262 99.1%
<b>Actuarial Information</b> <ul style="list-style-type: none"> <li>• Employer normal cost %</li> <li>• Unfunded actuarial accrued liability (UAAL)</li> <li>• Amortization rate</li> <li>• Funding period</li> <li>• Funded ratio</li> </ul>	18.67% \$ (2,345,427) (0.92%) N/A 102.3%	19.80% \$ (3,770,438) (1.60%) N/A 104.0%
<b>Projected employer contribution</b> <ul style="list-style-type: none"> <li>• Fiscal year ending June 30,</li> <li>• Projected payroll</li> <li>• Projected employer contribution</li> </ul>	2026 \$ 12,918,384 2,293,013	2025 \$ 12,853,261 2,339,294



## Discussion (Contribution Rates)

The employer contribution rate for the JRBT is determined actuarially. The rate determined in each valuation becomes effective two years after the valuation date, in this case as of July 1, 2025.

The rate consists of two pieces: the normal cost rate and the amortization rate. The normal cost rate is the employer's Entry Age normal cost, expressed as a percentage of active member payroll. The amortization rate is the contribution required to amortize each of the laddered bases that comprise the unfunded actuarial accrued liability over closed period as a level percentage of payroll. Payment for each base is generally calculated based on a 20 year amortization period beginning 2 years after they are established. The amortization rate is adjusted for the fact that the contribution rate set by this valuation is deferred for two years. Because the JRBT is overfunded, the UAAL is amortized using a single base such that the funded ratio is not expected to decline below its current level. Accordingly, the Actuarially Determined Contribution under the funding policy can be considered a "Reasonable Actuarially Determined Contribution" as required by the Actuarial Standards of Practice.

There was a decrease in the employer contribution rate from 18.20% to 17.75% of payroll for FY2026. This is due to a gain on the actuarial value of assets with the return on the actuarial value of assets of 7.7% compared to the 7.0% assumption as well as liability gains mainly resulting from fewer retirements than expected. The impact from these gains was partially offset by losses on retiree mortality experience and higher than expected individual salary increases.

An analysis of the changes in the employer contribution rate appears in Table 11a of this report and a history of the employer contribution rates appears in Table 11b. Table 11c shows a reconciliation of the UAAL.

## Discussion (Financial Data and Experience)

Assets for the JRBT are held in trust and are commingled with those of several other plans and programs—including the Employees' Retirement System of Rhode Island—for investment purposes. The State Investment Commission is responsible for setting the asset allocation policy and for investing the funds.

Table 6 shows the net plan assets for the JRBT. Table 7 shows a reconciliation of the assets between the previous valuation and this valuation. Table 8 shows the development of the actuarial value of assets. Table 9 shows the distribution of investments by category — 60% of assets are held in equities, including real estate and private equity — and Table 10 shows a historical summary of the return rates. As can be seen, the market value rate of return was 8.4% for the year ended June 30, 2023, and the return on an actuarial asset value basis was 7.7%.

The average annual return based on the market value of assets over the last ten years (July 1, 2013 – June 30, 2023) was 7.7%. This is more than the current 7.00% annual investment return assumption. The average annual return based on the actuarial value of assets over the same period was 7.0%.

All returns above are net of both investment and administrative expenses and may differ from other information provided by the General Treasurer's office or the investment managers and advisors.

The System's staff provided all of the financial information used in this report.



## Discussion (Member Data)

The System's staff supplied member data as of June 30, 2023. While we did not audit this data, we did perform various tests to ensure that it was internally consistent, consistent with the prior year's data, and was reasonable overall. Information provided for active members includes: name, identification number, sex, a code indicating whether the member was active or inactive, date of birth, service, salary, date of last contribution, and accumulated member contributions without interest. For retired members, data includes: name, an identification number, sex, date of birth, date of retirement, amount of benefit (original, COLA, gross), a code indicating the option elected and the type of retiree (service retiree, disabled retiree, beneficiary), and if applicable, the joint pensioner's date of birth and sex.

Table 12 and Table 13 show information and statistics about the active and retired members. Table 14 shows the distribution of active members by age and service.

The total payroll shown on the statistical tables is the amount that was supplied by the System's staff. For the cost calculations, the earnings were adjusted in accordance with the actuarial assumptions to reflect one year's salary increase.

## Discussion (Benefit Provisions)

Appendix B includes a summary of the benefit provisions for the JRBT. There were no changes in the benefit provisions since the preceding valuation. Also, there are no ancillary benefits—e.g., cost of living benefits—that are currently provided by a source independent of the JRBT but that might be deemed a liability of the JRBT if continued beyond the availability of funding by the current funding source.

The COLA to be provided to retired members is contingent on the investment performance, the annual change in the CPI-U, and funded status of the System. The amount of the COLA is determined based on 50% of the plan's five-year average investment rate of return minus 5.0% and will range from zero to 4.0%, and 50% of the lesser of 3% or last year's CPI-U increase for a total maximum increase of 3.50%. This calculation produces a 2.84% COLA for Calendar Year 2024. The COLA will be limited and this limit will be indexed annually to increase in the same manner as COLAs, with the known values as follows:

<u>Year</u>	<u>COLA Limit</u>
2014	\$ 25,000
2015	\$ 25,168
2016	\$ 25,855
2017	\$ 26,098
2018	\$ 26,291
2019	\$ 26,687
2020	\$ 27,184
2021	\$ 27,608
2022	\$ 27,901
2023	\$ 28,878
2024	\$ 29,776
2025	\$ 30,622

Furthermore, the COLA will be suspended for all judges and state police until the aggregate funding level of their plans exceeds 80%; however, an interim COLA will be granted in four-year intervals while the COLA is suspended. The first interim COLA was during the Calendar Year beginning January 1, 2017. Also, for current retirees and beneficiaries retired on or before July 1, 2015 the \$25,000 cap will be increased to \$30,000 (indexed) for any COLA payable based on the every fourth year provision.

## Discussion (Actuarial Methods and Assumptions)

Appendix A of this report includes a summary of the actuarial assumptions and methods used in this valuation.

The method used to determine the actuarial value of assets is the five-year smoothed market method. This technique is further described in Section III of Appendix A. The development of the actuarial value of assets utilizing this method is shown on Table 8.

The assumptions were adopted by the Board on May 17, 2023. We believe the assumptions are internally consistent and are reasonable, based on the actual experience of the JRBT.

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## Table 1

### Development of Contribution Rate (Judges)

	June 30, 2023 (1)	June 30, 2022 (2)
1. Compensation		
(a) Supplied by ERSRI, annualized	\$ 12,355,040	\$ 12,027,297
(b) Adjusted for one-year's pay increase	12,295,904	12,174,459
2. Actuarial accrued liability	100,999,072	93,175,592
3. Actuarial value of assets	103,344,499	96,946,030
4. Unfunded actuarial accrued liability (UAAL) (2 - 3)	(2,345,427)	(3,770,438)
5. Remaining amortization period at valuation date	N/A	N/A
6. Contribution effective for fiscal year ending:	June 30, 2026	June 30, 2025
7. Base pay projected for two-year delay	12,918,384	12,853,261
8. Amortization of UAAL	(118,430)	(206,198)
9. Normal cost		
(a) Total normal cost rate	30.67%	31.80%
(b) Employee contribution rate	12.00%	12.00%
(c) Employer normal cost rate ( a - b )	18.67%	19.80%
10. Employer contribution rate as percent of payroll		
(a) Employer normal cost rate	18.67%	19.80%
(b) Amortization payments ( 8 / 7 )	(0.92%)	(1.60%)
(c) Total ( a + b )	17.75%	18.20%
11. Estimated employer contribution amount ( 7 * 10(c) )	\$ 2,293,013	\$ 2,339,294

**Table 2**

**Summary of Unfunded Liability**

<b>Purpose</b>	<b>Remaining Balance as of June 30, 2023</b>	<b>Fiscal Year 2024 Amortization Payment *</b>	<b>Fiscal Year 2025 Amortization Payment *</b>	<b>Fiscal Year 2026 Amortization Payment *</b>	<b>Years Remaining Beginning with Fiscal Year 2026</b>
Surplus as of Valuation Date	(2,345,427)	-	-	(118,430)	NA
Unfunded Actuarial Accrued Liability	\$ (2,345,427)	\$ -	\$ -	\$ (118,430)	

### Table 3

#### Actuarial Present Value of Future Benefits

	June 30, 2023 (1)	June 30, 2022 (2)
1. Active members		
a. Service retirement benefits	\$ 70,333,785	\$ 71,421,890
b. Deferred termination benefits	-	-
c. Refunds	-	-
d. Pre-retirement death benefits	689,657	687,259
e. Non-occupational disability retirement benefits	-	-
f. Occupational disability retirement benefits	-	-
g. Total	<u>\$ 71,023,442</u>	<u>\$ 72,109,149</u>
2. Retired members		
a. Service retirements	\$ 49,036,609	\$ 38,676,334
b. Disability retirements	-	-
c. Beneficiaries	3,063,982	3,429,304
d. Total	<u>\$ 52,100,591</u>	<u>\$ 42,105,638</u>
3. Inactive members	<u>\$ 585,248</u>	<u>\$ 546,961</u>
4. Total actuarial present value of future benefits	\$ 123,709,281	\$ 114,761,748
5. Determination of actuarial accrued liability		
a. Total actuarial present value of future benefits	\$ 123,709,281	\$ 114,761,748
b. Less present value of future normal costs	<u>(22,710,209)</u>	<u>(21,586,156)</u>
c. Actuarial accrued liability (a + b)	\$ 100,999,072	\$ 93,175,592

## Table 4

### Schedule of Funding Progress

Valuation Date (1)	Actuarial Value of Assets (AVA) (2)	Actuarial Accrued Liability (3)	Unfunded Actuarial Accrued Liability (UAAL) (3)-(2) (4)	Funded Ratio (2)/(3) (5)	Annual Covered Payroll (6)	UAAL as % of Payroll (4)/(6) (7)
June 30, 2007 <sup>1</sup>	29,630,637	35,355,326	5,724,689	83.8%	6,451,666	88.7%
June 30, 2008 <sup>2</sup>	34,670,394	38,115,602	3,445,208	91.0%	6,601,889	52.2%
June 30, 2009	36,839,221	41,738,040	4,898,819	88.3%	6,843,454	71.6%
June 30, 2010	38,074,287	48,941,360	10,867,073	77.8%	7,461,120	145.6%
June 30, 2010 <sup>3</sup>	38,074,287	46,641,701	8,567,414	81.6%	7,461,120	114.8%
June 30, 2011	40,105,919	46,594,407	6,488,488	86.1%	8,474,716	76.6%
June 30, 2012	43,428,646	52,085,154	8,656,508	83.4%	8,822,823	98.1%
June 30, 2013 <sup>4</sup>	47,640,773	54,429,531	6,788,758	87.5%	8,975,536	75.6%
June 30, 2014 <sup>5</sup>	53,830,516	57,504,663	3,674,147	93.6%	9,309,572	39.5%
June 30, 2015	60,004,470	61,963,672	1,959,202	96.8%	9,285,354	21.1%
June 30, 2016	64,401,616	65,287,527	885,911	98.6%	9,034,080	9.8%
June 30, 2017	68,784,251	73,728,347	4,944,096	93.3%	9,569,304	51.7%
June 30, 2018	73,673,771	76,198,297	2,524,526	96.7%	9,237,641	27.3%
June 30, 2019	78,027,132	81,260,939	3,233,807	96.0%	9,928,890	32.6%
June 30, 2019 <sup>6</sup>	78,027,132	83,589,474	5,562,342	93.3%	9,928,890	56.0%
June 30, 2020	82,419,083	88,534,540	6,115,457	93.1%	10,220,315	59.8%
June 30, 2021	90,266,123	91,428,486	1,162,363	98.7%	10,651,072	10.9%
June 30, 2022 <sup>7</sup>	96,946,030	92,848,637	(4,097,393)	104.4%	12,027,297	(34.1%)
June 30, 2023	103,344,499	100,999,072	(2,345,427)	102.3%	12,355,040	(19.0%)

<sup>1</sup> Reflects the benefit changes enacted by Article 35.

<sup>2</sup> Restated to reflect the benefit changes enacted by Article 16.

<sup>3</sup> Restated after reflecting the Rhode Island Retirement Security Act of 2011.

<sup>4</sup> Restated to reflect recommended salary scale assumption.

<sup>5</sup> Restated to reflect impact of Article 21.

<sup>6</sup> June 30, 2019 results after assumption changes.

<sup>7</sup> June 30, 2022 results after assumption changes.

## Table 5

### Notes to Required Supplementary Information

Valuation date	June 30, 2023
Actuarial cost method	Entry Age Normal
Amortization method	Level percentage, closed
Remaining amortization period	N/A
Asset valuation method	5-Yr Smoothed Market
Actuarial assumptions:	
Investment rate of return:	7.00% *
Projected salary increase:	2.75% *
Cost of living adjustment	2.10% **

\* Includes inflation at 2.50%.

\*\* COLAs are currently suspended for all judges and state police until the aggregate funding level of their plans exceeds 80%. In the original RIRSA legislation, the COLAs suspended through 2027 were advance recognized due to the funding level of the plans; and all subsequent valuations have continued to reference this same timeframe. However, an interim COLA may be granted in four-year intervals while the COLA is suspended.



## Table 6

### Plan Net Assets (Assets at Market or Fair Value)

Item (1)	June 30, 2023 (2)	June 30, 2022 (3)
1. Cash and cash equivalents	\$ 70,738	\$ 30,920
2. Receivables:		
a. Employer and member contributions	\$ 83	\$ 85,992
b. Transfers receivable	0	151,229
c. Miscellaneous	11,363	15,150
d. Total receivables	\$ 11,446	\$ 252,371
3. Investments		
a. Pooled trust	\$ 105,032,640	\$ 97,592,258
b. Plan specific investments	0	0
c. Total	\$ 105,032,640	\$ 97,592,258
4. Invested securities lending collateral	\$ 0	\$ 0
5. Property and equipment	\$ 0	\$ 0
6. Total assets	\$ 105,114,824	\$ 97,875,549
7. Liabilities		
a. Other post-employment benefit liability, net	\$ 0	\$ 0
b. Securities lending liability	0	0
c. Accounts and vouchers payable	47,627	34,176
d. Total liabilities	\$ 47,627	\$ 34,176
8. Total market value of assets available for benefits		
Total (Item 6 - Item 7)	\$ 105,067,197	\$ 97,841,373

## Table 7

### Reconciliation of Plan Net Assets

Item (1)	June 30, 2023 (2)	June 30, 2022 (3)
1. Market value of assets as of beginning of year		
a. Market value of assets as of beginning of year	\$ 97,841,372	\$ 101,371,285
b. Adjustment for market value of assets	0	0
c. Adjusted market value of assets as of beginning of year	\$ 97,841,372	\$ 101,371,285
2. Contributions		
a. Members	\$ 1,371,301	\$ 1,398,104
b. State	2,842,875	2,611,262
c. Service purchases	0	0
d. Total	\$ 4,214,176	\$ 4,009,366
3. Investment earnings, net of investment and administrative expenses	\$ 8,221,308	\$ (2,839,545)
4. Expenditures for the year		
a. Benefit payments	\$ (5,155,439)	\$ (4,631,889)
b. Cost-of-living adjustments	(54,220)	(67,845)
c. Post-retirement death benefits	0	0
d. Pre-retirement death benefits	0	0
e. Social security supplements	0	0
f. Supplemental pensions	0	0
g. Refunds	0	0
h. Total expenditures	\$ (5,209,659)	\$ (4,699,734)
5. Transfers and other adjustments	\$ 0	\$ 0
6. Market value of assets at end of year	\$ 105,067,197	\$ 97,841,372

## Table 8

### Development of Actuarial Value of Assets

		Year Ending June 30, 2023																																																								
1.	Market value of assets at beginning of year	\$ 97,841,372																																																								
2.	Net new investments																																																									
a.	Contributions	\$ 4,214,176																																																								
b.	Benefits paid	(5,209,659)																																																								
c.	Refunds	0																																																								
d.	Subtotal	(995,483)																																																								
3.	Market value of assets at end of year	\$ 105,067,197																																																								
4.	Net earnings (3-1-2)	\$ 8,221,308																																																								
5.	Assumed investment return rate	7.00%																																																								
6.	Expected return	\$ 6,814,054																																																								
7.	Excess return (4-6)	\$ 1,407,254																																																								
8.	Development of amounts to be recognized as of June 30, 2023:																																																									
	<table style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 10%;"></th> <th style="width: 15%; text-align: center;">Remaining Deferrals of Excess (Shortfall) of Investment Income</th> <th style="width: 15%; text-align: center;">Offsetting of Gains/(Losses)</th> <th style="width: 15%; text-align: center;">Net Deferrals Remaining</th> <th style="width: 10%; text-align: center;">Years Remaining</th> <th style="width: 15%; text-align: center;">Recognized for this valuation</th> <th style="width: 15%; text-align: center;">Remaining after this valuation</th> </tr> <tr> <th style="text-align: left;">Fiscal Year End</th> <th style="text-align: center;">(1)</th> <th style="text-align: center;">(2)</th> <th style="text-align: center;">(3) = (1) + (2)</th> <th style="text-align: center;">(4)</th> <th style="text-align: center;">(5) = (3) / (4)</th> <th style="text-align: center;">(6) = (3) - (5)</th> </tr> </thead> <tbody> <tr> <td>2019</td> <td style="text-align: right;">\$ 0</td> <td style="text-align: right;">\$ 0</td> <td style="text-align: right;">\$ 0</td> <td style="text-align: center;">1</td> <td style="text-align: right;">\$ 0</td> <td style="text-align: right;">\$ 0</td> </tr> <tr> <td>2020</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: center;">2</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> </tr> <tr> <td>2021</td> <td style="text-align: right;">895,342</td> <td style="text-align: right;">0</td> <td style="text-align: right;">895,342</td> <td style="text-align: center;">3</td> <td style="text-align: right;">298,447</td> <td style="text-align: right;">596,895</td> </tr> <tr> <td>2022</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: center;">4</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> </tr> <tr> <td>2023</td> <td style="text-align: right; border-bottom: 1px solid black;">1,407,254</td> <td style="text-align: right; border-bottom: 1px solid black;">0</td> <td style="text-align: right; border-bottom: 1px solid black;">1,407,254</td> <td style="text-align: center;">5</td> <td style="text-align: right; border-bottom: 1px solid black;">281,451</td> <td style="text-align: right; border-bottom: 1px solid black;">1,125,803</td> </tr> <tr> <td></td> <td style="text-align: right;">\$ 2,302,596</td> <td style="text-align: right;">\$ 0</td> <td style="text-align: right;">\$ 2,302,596</td> <td></td> <td style="text-align: right;">\$ 579,898</td> <td style="text-align: right;">\$ 1,722,698</td> </tr> </tbody> </table>		Remaining Deferrals of Excess (Shortfall) of Investment Income	Offsetting of Gains/(Losses)	Net Deferrals Remaining	Years Remaining	Recognized for this valuation	Remaining after this valuation	Fiscal Year End	(1)	(2)	(3) = (1) + (2)	(4)	(5) = (3) / (4)	(6) = (3) - (5)	2019	\$ 0	\$ 0	\$ 0	1	\$ 0	\$ 0	2020	0	0	0	2	0	0	2021	895,342	0	895,342	3	298,447	596,895	2022	0	0	0	4	0	0	2023	1,407,254	0	1,407,254	5	281,451	1,125,803		\$ 2,302,596	\$ 0	\$ 2,302,596		\$ 579,898	\$ 1,722,698	
	Remaining Deferrals of Excess (Shortfall) of Investment Income	Offsetting of Gains/(Losses)	Net Deferrals Remaining	Years Remaining	Recognized for this valuation	Remaining after this valuation																																																				
Fiscal Year End	(1)	(2)	(3) = (1) + (2)	(4)	(5) = (3) / (4)	(6) = (3) - (5)																																																				
2019	\$ 0	\$ 0	\$ 0	1	\$ 0	\$ 0																																																				
2020	0	0	0	2	0	0																																																				
2021	895,342	0	895,342	3	298,447	596,895																																																				
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2023	1,407,254	0	1,407,254	5	281,451	1,125,803																																																				
	\$ 2,302,596	\$ 0	\$ 2,302,596		\$ 579,898	\$ 1,722,698																																																				
9.	Actuarial value of assets as of June 30, 2023 (Item 3 - Item 8)	\$ 103,344,499																																																								
10.	Ratio of actuarial value to market value	98.4%																																																								

\*Values of \$0 result from the beginning balance being offset by future gains or losses in the opposite direction.

## Table 9

### Distribution of Assets at Market Value (Percentage of Total Investments)

Item (1)	June 30, 2023 (2)
US Equity	25.1%
International Developed Equity	10.7%
Emerging Markets Equity	4.2%
Private Equity and Opportunistic Private Credit	12.5%
Non-Core Real Estate	2.5%
Equity Options	2.0%
EMD (50/50 Blend)	0.0%
Liquid Credit	5.0%
Private Credit	3.0%
CLOs	2.0%
Treasury Duration	5.0%
Systematic Trend	5.0%
Core Real Estate	4.0%
Private Infrastructure	4.0%
IG Corp Credit	3.3%
Securitized Credit	3.3%
Absolute Return	6.5%
Cash	2.0%
Total investments	100.0%

## Table 10

### History of Investment Return Rates

Year Ending June 30 of (1)	Market (2)	Actuarial (3)
1996	13.7%	13.7%
1997	19.1%	19.1%
1998	16.1%	16.5%
1999	10.1%	14.7%
2000	9.1%	8.8%
2001	-11.0%	4.9%
2002	-8.4%	0.9%
2003	4.3%	1.4%
2004	18.0%	4.1%
2005	10.2%	5.9%
2006	11.6%	8.8%
2007	18.2%	12.2%
2008	-5.9%	9.1%
2009	-19.5%	1.9%
2010	13.4%	1.2%
2011	19.4%	3.2%
2012	1.6%	5.4%
2013	10.7%	6.6%
2014	15.0%	8.6%
2015	2.2%	7.6%
2016	0.0%	5.7%
2017	11.6%	6.1%
2018	7.8%	6.7%
2019	6.5%	6.7%
2020	3.7%	6.1%
2021	27.2%	10.2%
2022	-2.8%	8.2%
2023	8.4%	7.7%
Average Returns:		
Last 5 Years	8.2%	7.5%
Last 10 Years	7.7%	7.2%
Since 1996	7.0%	7.5%

## Table 11a

### Analysis of Change in Employer Cost

Basis	Employer Cost
1. Employer contribution rates from prior valuation	18.20%
2. Impact of changes, gains and losses	
a. Non-salary normal cost and liability experience (gain)/loss	0.19%
b. Salary (gain)/loss	-0.02%
c. Total payroll growth (gain)/loss	0.00%
d. Investment experience (gain)/loss	-0.22%
e. Changes in assumptions	-0.40%
f. Changes in plan provisions	0.00%
g. Total	-0.45%
3. Employer contribution rates from current valuation	17.75%

## Table 11b

### History of Employer Contribution Rates

Valuation Date as of June 30, (1)	Fiscal Year Ending June 30, (2)	Employer Contribution Rate (3)
1999	2002	31.58%
2000	2003	33.42%
2001	2004	33.90%
2002	2005	36.19%
2003	2006	35.51%
2004	2007	36.07%
2005	2008	32.07%
2006	2009	24.06% <sup>1</sup>
2007	2010	16.19% <sup>2</sup>
2008	2011	16.19% <sup>2</sup>
2009	2012	18.69%
2010	2013	19.69% <sup>3</sup>
2011	2014	27.28%
2012	2015	28.32%
2013	2016	26.80%
2014	2017	21.58% <sup>4</sup>
2015	2018	21.13%
2016	2019	20.28%
2017	2020	21.30%
2018	2021	21.61%
2019	2022	21.82%
2020	2023	24.16%
2021	2024	22.12%
2022	2025	18.20%
2023	2026	17.75%

<sup>1</sup> Reflects changes in benefit provisions enacted by Article 35.

<sup>2</sup> Restated to reflect changes in benefit provisions enacted by Article 16.

<sup>3</sup> Restated after reflecting the Rhode Island Retirement Security Act of 2011.

## Table 11c

### Analysis of Change in UAAL

Basis (1)	June 30, 2023 (2)
1. UAAL as of June 30, 2022:	\$ (3,770)
2. Impact of changes, gains and losses	
a. Interest at 7.00% for one year	(264)
b. Expected amortization payments	264
c. Investment experience (gain)/loss	(643)
d. Salary (gain)/loss	(69)
e. Non-salary liability experience (gain)/loss	2,487
f. Changes in assumptions	(350)
g. Changes in plan provisions	0
i. Total	\$ 1,425
3. UAAL as of June 30, 2023:	\$ (2,345)

Note: All dollar figures are shown in thousands.



## Table 12

### Membership Data (State Judges)

	<u>June 30, 2023</u> (1)	<u>June 30, 2022</u> (2)
1. Active members		
a. Number	60	60
b. Number eligible to retire	14	17
c. Total annualized payroll supplied by State	\$ 12,355,040	\$ 12,027,297
d. Average salary	\$ 205,917	\$ 200,455
e. Average age	60.5	61.3
f. Average service	9.4	10.0
2. Inactive members		
a. Number	1	1
3. Service retirees		
a. Number	31	25
b. Total annual benefits	\$ 5,151,960	\$ 3,985,251
c. Average annual benefit	\$ 166,192	159,410
d. Average age	74.6	74.0
4. Disabled retirees		
a. Number	0	0
b. Total annual benefits	\$ 0	\$ 0
c. Average annual benefit	N/A	N/A
d. Average age	N/A	N/A
5. Beneficiaries and spouses		
a. Number	5	6
b. Total annual benefits	\$ 349,148	\$ 409,066
c. Average annual benefit	\$ 69,830	\$ 68,178
d. Average age	77.3	78.7

## Table 13

### Historical Summary of Active Member Data

Valuation as of June 30,	Active Members		Covered Payroll		Average Salary		Average Age	Average Service
	Number	Percent Increase	Amount	Percent Increase	Amount	Percent Increase		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2002	39	11.4%	4,738,059	15.8%	121,489	3.9%	55.6	7.5
2003	42	7.7%	5,303,153	11.9%	126,266	3.9%	55.8	7.6
2004	44	4.8%	5,637,865	6.3%	128,133	1.5%	56.9	8.2
2005	44	0.0%	5,684,585	0.8%	129,195	0.8%	58.3	8.4
2006	45	2.3%	6,313,069	11.1%	140,290	8.6%	58.3	9.0
2007	44	-2.2%	6,451,666	2.2%	146,629	4.5%	59.0	9.8
2008	43	-2.3%	6,601,889	2.3%	153,532	4.7%	59.4	10.4
2009	45	4.7%	6,843,454	3.7%	152,077	-0.9%	58.6	10.0
2010	49	8.9%	7,461,120	9.0%	152,268	0.1%	58.8	10.2
2011	54	10.2%	8,474,716	13.6%	156,939	3.1%	58.8	9.6
2012	53	-1.9%	8,822,823	4.1%	166,468	6.1%	59.7	10.5
2013	54	1.9%	8,975,536	1.7%	166,214	-0.2%	60.2	10.9
2014	56	3.7%	9,309,572	3.7%	166,242	0.0%	60.9	11.1
2015	54	-3.6%	9,285,354	-0.3%	171,951	3.4%	61.6	11.4
2016	52	-3.7%	9,034,080	-2.7%	173,732	1.0%	61.5	11.2
2017	55	5.8%	9,569,304	5.9%	173,987	0.1%	62.0	11.4
2018	53	-3.6%	9,237,641	-3.5%	174,295	0.2%	62.0	11.5
2019	55	3.8%	9,928,890	7.5%	180,525	3.6%	60.5	10.6
2020	54	-1.8%	10,220,315	2.9%	189,265	4.8%	61.3	11.7
2021	56	3.7%	10,651,072	4.2%	190,198	0.5%	60.8	10.4
2022	60	7.1%	12,027,297	12.9%	200,455	5.4%	61.3	10.0
2023	60	0.0%	12,355,040	2.7%	205,917	2.7%	60.5	9.4

## Table 14

### Distribution of Active Members by Age and by Years of Service As of June 30, 2023

Attained Age	Years of Credited Service												Total
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	
	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.
Under 30	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0
30-34	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0
35-39	1 \$182,303	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	1 \$182,303
40-44	1 \$197,661	0 \$0	1 \$187,704	0 \$0	2 \$187,318	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	4 \$190,000
45-49	0 \$0	0 \$0	1 \$208,485	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	1 \$208,485
50-54	1 \$218,766	2 \$187,633	2 \$192,232	0 \$0	0 \$0	3 \$211,611	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	8 \$201,666
55-59	1 \$191,418	2 \$196,096	0 \$0	0 \$0	3 \$187,994	3 \$205,557	4 \$205,888	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	13 \$199,063
60-64	0 \$0	0 \$0	2 \$191,735	0 \$0	1 \$195,938	2 \$192,489	7 \$208,204	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	12 \$201,818
65-69	0 \$0	2 \$190,801	1 \$214,993	0 \$0	0 \$0	4 \$210,376	3 \$210,206	5 \$220,195	4 \$224,388	0 \$0	2 \$257,027	0 \$0	21 \$218,157
70 & Over	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0
<b>Total</b>	<b>4</b> <b>\$197,537</b>	<b>6</b> <b>\$191,510</b>	<b>7</b> <b>\$197,017</b>	<b>0</b> <b>\$0</b>	<b>6</b> <b>\$189,092</b>	<b>12</b> <b>\$206,499</b>	<b>14</b> <b>\$207,971</b>	<b>5</b> <b>\$220,195</b>	<b>4</b> <b>\$224,388</b>	<b>0</b> <b>\$0</b>	<b>2</b> <b>\$257,027</b>	<b>0</b> <b>\$0</b>	<b>60</b> <b>\$205,917</b>



## **APPENDIX A**

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### **SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS**

DRAFT

## APPENDIX A

### Summary of Actuarial Methods and Assumptions

#### I. Valuation Date

The valuation date is June 30th of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

#### II. Actuarial Cost Method

The actuarial valuation uses the Entry Age Normal actuarial cost method. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) a rate that will amortize the unfunded actuarial accrued liability (UAAL).

1. First, the actuarial present value of future benefits is determined by discounting the projected benefits for each member back to the valuation date using the assumed investment return rate as the discount rate. For active members, the projected benefits are based on the member's age, service, sex and compensation, and based on the actuarial assumptions. The calculations take into account the probability of the member's death, disability, or termination of employment prior to becoming eligible for a retirement benefit, as well as the possibility of the member will remain in service and receive a service retirement benefit. Future salary increases are anticipated. The present value of the expected benefits payable to all active members is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits. Liabilities for future members are not included.
2. The employer contributions required to support the benefits are determined as a level percentage of salary, and consist of a normal contribution and an amortization contribution.
3. The normal contribution is determined using the Entry Age Normal method. Under this method, a calculation is made to determine the rate of contribution which, if applied to the compensation of each individual member during the entire period of anticipated covered service, would be required to meet the cost of all benefits payable on his behalf. The salary-weighted average of these rates is the normal cost rate. This calculation reflects the plan provisions that apply to each individual member.
4. The employer normal cost rate is equal to (i) the normal cost rate, minus (ii) the member contribution rate.

## APPENDIX A (Continued)

5. The actuarial accrued liability is equal to the present value of all benefits less the present value of future normal costs. The unfunded actuarial accrued liability (UAAL) is then determined as (i) the actuarial accrued liability, minus (ii) the actuarial value of assets.
6. The amortization contribution rate is the level percentage of payroll required to reduce the UAAL to zero over the remaining amortization period. The employer contribution rate determined by this valuation will not be effective until two years after the valuation date. The determination of the contribution rate reflects this deferral. The amortization payment for the applicable fiscal year is first determined based on the individual amortization bases. The covered payroll is projected forward for two years, and we then determine the amortization rate by dividing the amortization payment by the projected payroll. Contributions are assumed to be made monthly throughout the year.
  - (a) The UAAL was initially being amortized over the remainder of a closed 30-year period from June 30, 1999. In conjunction with The Rhode Island Retirement Security Act of 2011, the amortization period was reset to 25 years as of June 30, 2010 for the UAAL that existed at that time. New gains and losses each year will be amortized over individual 20 year periods. At any time that the System is in an overfunded status, all prior bases are erased and an amount of the surplus is credited against the contribution rate to keep the funded ratio constant year over year.

### III. Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income. Offsetting unrecognized gains and losses are immediately recognized, with the shortest remaining bases recognized first and the net remaining bases continue to be recognized on their original timeframe. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses.

## APPENDIX A (Continued)

### IV. Actuarial Assumptions

#### A. Economic Assumptions

1. Investment return: 7.00% per year, compounded annually, composed of an assumed 2.50% inflation rate and a 4.50% net real rate of return. This rate represents the assumed return, net of all investment and administrative expenses.
2. Salary increase rate: Salaries are assumed to increase at the rate of 2.75% per year.

Salary increases are assumed to occur once a year, on July 1. Therefore the pay used for the period between the valuation date and the first anniversary of the valuation date is equal to the reported pay for the prior year, increased by the salary increase assumption.

3. Payroll growth rate: In the amortization of the unfunded liability, payroll is assumed to increase 2.50% per year. This assumption includes no allowance for future membership growth.
4. Post-retirement Benefit Increase: Post-retirement benefit increases are assumed to be 2.10%, per annum while the plan has a funding level that exceeds 80%; however, an interim adjustment equal to 25% of the total increase will be granted while the plan remains less than 80% funded. In the original RIRSA legislation it was assumed that the benefit adjustments would be suspended until 2027 and all subsequent valuations have continued to reference this same timeframe. The actual amount of the COLA is determined based on 50% of the plan's five-year average investment rate of return minus 5.00% which will range from zero to 4.0%, and 50% of the lesser of 3% or last year's CPI-U increase for a total maximum increase of 3.50%.

## APPENDIX A (Continued)

### B. Demographic Assumptions

1. Post-termination mortality rates (non-disabled lives)
  - a. Male: PUB(10) Above Median Table for Healthy General Employee Males, projected with Scale MP2021 with immediate convergence.
  - b. Females: PUB(10) Above Median Table for Healthy General Employee Females, projected with Scale MP2021 with immediate convergence.
2. Post-termination mortality rates (disabled lives)
  - a. Males: PUB(10) Tables for Disabled Retirees by Occupation for males, projected with Scale MP2021 with immediate convergence.
  - b. Females: PUB(10) Tables for Disabled Retirees by Occupation for females, projected with Scale MP2021 with immediate convergence.
3. Pre-termination mortality rates
  - a. Males: PUB(10) Tables for Disabled Retirees by Occupation for males, projected with Scale MP2021 with immediate convergence.
  - b. Females: PUB(10) Tables for Disabled Retirees by Occupation for females, projected with Scale MP2021 with immediate convergence.
4. Disability rates – None
5. Termination rates – None
6. Retirement rates – 33% of members are assumed to retire when first eligible for a reduced retirement benefit (age 65 with 10 years of service, or any age with 20 years of service). All other members are assumed to retire when eligible for an unreduced retirement benefit (age 65 with 20 years of service, or age 70 with 15 years of service). Judges who have not reached eligibility for a retirement benefit by age 75 are assumed to terminate at age 75 and receive either a reduced retirement benefit, if eligible, or a refund.

### C. Other Assumptions

1. Percent married: 85% of employees are assumed to be married.
2. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.





## APPENDIX A (Continued)

3. Remarriage: It is assumed that no surviving spouse will remarry and there will be no children's benefit.
4. All married members appointed after January 1, 2009 will elect the optional spouse's coverage at retirement.
5. Investment and administrative expenses: The assumed investment return rate represents the anticipated net return after payment of all investment and administrative expenses.

### V. Participant Data

Participant data was supplied in electronic files for active members and retirees. The data for active members included birth date, sex, service, salary and employee contribution account balance. For retired members and beneficiaries, the data included date of birth, sex, spouse's date of birth (where applicable), amount of monthly benefit, date of retirement, and a form of payment code.

## **APPENDIX B**

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### **SUMMARY OF BENEFIT PROVISIONS**

DRAFT

## APPENDIX B

### Summary of Benefit Provisions

1. Effective Date and Authority: The Judicial Retirement Benefits Trust (JRBT) became effective on January 1, 1990 for judges hired on or after that date. Benefits are described in Rhode Island General Laws, Title 8, Chapters 3, 8, and 16, Title 28, Chapter 30, and Title 31, Chapter 43.
2. Plan Year: A twelve-month period ending June 30th.
3. Administration: The Judicial Retirement Benefits Trust is administered by the State of Rhode Island Retirement Board. However, the State Investment Commission is responsible for the investment of the trust assets, including the establishment of the asset allocation policy. Assets are commingled for investment purposes with those of the Employees' Retirement System of Rhode Island and various other plans and programs.
4. Type of Plan: The Judicial Retirement Benefits Trust is a qualified governmental defined benefit retirement plan. For Governmental Accounting Standards Board purposes, it is a single-employer plan.
5. Eligibility: All judges or justices of the Supreme Court, a superior court, a district court, a family court, an administrative adjudication court or a workers' compensation court participate in this plan if they were hired on or after January 1, 1990. (These are referred to collectively as state judges.) Benefits for state judges hired before January 1, 1990 are being paid by the state from the general assets of the state, on a pay-as-you-go basis. Eligible state judges become members at their date of employment.
6. Salary: Contributions are based on the judge's salary. Benefits are based on the judge's salary at the time of retirement.
7. Employee Contributions: State judges contribute 8.75% of their salary per year. Effective July 1, 2012, State judges (excluding justices of supreme, superior, family, and district courts) will contribute 12.00% of their salary per year. Active justices of supreme, superior, and family courts as of June 30, 2011 contribute the rate in effect as of June 30, 2012. The State "picks up" the members' contributions for its employees under the provisions of Internal Revenue Code (IRC) Section 414(h).

## APPENDIX B (Continued)

8. Employer Contributions: The State contributes an actuarially determined percentage of the member's annual salary. Contributions determined in a given actuarial valuation go into effect two years after the actuarial valuation.
9. Final Average Compensation (FAC)
  - a. For judges who became members on or before July 2, 1997, one-twelfth of the judge's annual salary at the time of retirement.
  - b. For judges who became members after July 2, 1997 but before July 1, 2009, one-twelfth of the average of the judge's highest three consecutive annual salaries.
  - c. For judges who became members on or after July 1, 2009, one-twelfth of the average of the judge's highest five consecutive annual salaries.
  - d. Benefits for death while an active member are based on the member's salary at the time of death, regardless of when the judge became a member.
10. Full Retirement
  - a. Eligibility: All judges are eligible for unreduced retirement at or after age 65 if the judge has served for 20 years, or at or after age 70 after 15 years of service.
  - b. Monthly Benefit:
    - (i) Judges who were appointed prior to January 1, 2009 receive 100% of FAC at retirement.
    - (ii) Judges who were appointed on or after January 1, 2009 but prior to July 1, 2009 receive 90% of FAC at retirement, and take an additional 10% reduction to 80% of FAC at retirement if they wish to elect the spouse's death benefit.
    - (iii) Judges who were appointed on or after July 1, 2009 receive 80% of FAC at retirement, or 70% of FAC at retirement if they wish to elect the spouse's death benefit.
  - c. Payment Form: Benefits are paid as a monthly life annuity. Members appointed prior to January 1, 2009 automatically receive the spouse's death benefit described below. Members appointed on or after January 1, 2009 must elect to a reduced benefit as described above if they wish to receive the spouse's death benefit. There are no other optional forms of payment available.

## APPENDIX B (Continued)

- d. Death Benefit: After the death of a retired member, if the member was married, 50% of the retiree's benefit is paid to the surviving spouse for life (or until remarriage) if spouse's death benefit is elected. (No election or benefit reduction is required for members appointed prior to January 1, 2009.)

### 11. Reduced Retirement

- a. Eligibility: A judge is eligible for a reduced retirement benefit at age 65 if the judge has served for 10 years, or at any age after 20 years of service.
- b. Reduced Retirement Benefit:
  - (i) For judges who were appointed prior to January 1, 2009: 75% of FAC at retirement.
  - (ii) For judges who were appointed on or after January 1, 2009 but prior to July 1, 2009: receive 70% of FAC at retirement, or take an additional 10% reduction to 60% of FAC at retirement if they wish to elect the spouse's death benefit.
  - (iii) For judges who were appointed on or after July 1, 2009: receive 65% of FAC at retirement, or 55% of FAC at retirement if they wish to elect the spouse's death benefit.
- c. Payment Form: Same as for Full Retirement.
- d. Death Benefit: Same as for Full Retirement.

### 12. Refunds

- a. Eligibility: All judges leaving covered employment for a reason other than death or retirement.
- b. Benefit: A lump-sum payment equal to the sum of his/her employee contributions. No interest is credited on these contributions.

### 13. Death Benefit of Active Members

After the death of an active member, if the member was married, a benefit will be paid to the spouse until his/her death or remarriage. The benefit is equal to 25% of the judge's salary at death if the member had less than seven years of service. If the judge had at least seven but less than 15 years of service, the benefit is equal to 1/3 of the judge's salary at death. If the judge had at least 15 years of service or if the judge was eligible for retirement, the spouse receives 50% of the judge's salary at death. Benefits are payable until the spouse's death or remarriage. Benefits may be paid to any minor

## APPENDIX B (Continued)

children after the death of the spouse. If an active member dies without having a spouse or minor children, a refund is paid to the member's beneficiary.

### 14. Post-retirement Benefit Increase:

- a. For members who retired or will be eligible for retirement as of June 12, 2010: members receive an increase equal to 3.00% of the original benefit each year, beginning in January of the year in which the member reaches the third anniversary of retirement. The increase applies to both retirement and death benefits. This increase is not tied in any way to actual increases in the cost of living. (Judges of the administrative adjudication and workers compensation courts receive a compound 3.00% increase, rather than a simple 3.00% increase.)
- b. For members who are or were formally justices of supreme, superior, family, and district courts and were not retired or were not eligible to retire as of June 12, 2010: The member will receive the first COLA upon the later of their third anniversary of retirement or when the member reaches age 65. The annual increase in the member's benefit will be equal to the lesser of their original benefit and the COLA limit in effect in the year the member retires, multiplied by the percentage increase in CPI up to a maximum of 3.0% per year. The COLA will be provided on a simple basis. The applicable annual COLA limit will be \$35,000 in 2010, and increase annually by the percentage increase in the Consumer Price Index (CPI) up to a maximum of 3.0% per year. No COLA would be paid on any part of the annual benefit in excess of this limit. The annual increase in the COLA limit will be determined on a compound basis.
- c. For members who are or were formally judges of the administrative adjudication court, traffic tribunal, and workers' compensation court and were not retired or were not eligible to retire as of June 12, 2010: The member will receive the first COLA upon the later of their third anniversary of retirement or when the member reaches age 65. The annual increase in the member's benefit will be equal to the lesser of the current benefit and the current COLA limit, multiplied by the percentage increase in CPI up to a maximum of 3.0% per year. The COLA will be provided on a compound basis. The applicable annual COLA limit will initially be \$35,000, and increase annually by the percentage increase in the Consumer Price Index (CPI) up to a maximum of 3.0% per year. No COLA would be paid on any part of the annual benefit in excess of this limit. The annual increase in the COLA limit will be determined on a compound basis.
- d. For members who retire after June 30, 2012: members will be eligible to receive cost of living increases at the later of the member's third anniversary of retirement and the month following their SSNRA.
- e. Effective July 1, 2012, the following provisions will apply to all members:



## APPENDIX B (Continued)

- (i) The COLA will be suspended for all state employees, teachers, BHDDH nurses, correctional officers, judges and state police until the aggregate funding level of their plans exceeds 80%; however, an interim COLA will be granted in four-year intervals while the COLA is suspended. The first interim COLA may begin January 1, 2017.
  - (ii) Effective July 1, 2015, the COLA is determined based on 50% of the plan's five-year average investment rate of return less 5.5% limited to a range of 0.0% to 4.0%, plus 50% of the lesser of 3.0% or last year's CPI-U increase for a total maximum increase of 3.50%. Previously, it was the plan's five-year average investment rate of return less 5.5% limited to a range of 0.0% to 4.0%
  - (iii) The COLA will be limited to the first \$25,000 of the member's annual pension benefit. For retirees and beneficiaries who retired on or before July 1, 2015, years in which a COLA is payable based on the every fourth year provision described in (i) above will be limited to the first \$30,000. These limits will be indexed annually to increase in the same manner as COLAs, with the known values of \$25,000 for 2013, \$25,000 for 2014, \$25,168 for 2015, \$25,855 for 2016, \$26,098 for 2017, \$26,290 for 2018, \$26,687 for 2019, \$27,184 for 2020, \$27,608 for 2021, \$27,901 for 2022, \$28,878 for 2023, \$29,776 for 2024, and \$30,622 for 2025
- f. In addition to the scheduled increases described in section (e) above, there will be a one-time 2% COLA paid in FY2016 on the first \$25,000 of pension benefit for all retirees and beneficiaries who retired on or before June 30, 2012. There will also be two one-time stipends of \$500 payable in FY2016 and FY2017 to retirees and beneficiaries who retired on or before June 30, 2015.
- g. Effective with the passage of H5200 Substitute A, as Amended, beginning in 2024 the benefit adjustments are reduced to twenty-five percent (25%) of the benefit adjustment payable each year while the plans remain less than 80% funded instead of being fully suspended. The limit will be based on the \$30,000 amount during this time.

## **APPENDIX C**

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### **RISKS ASSOCIATED WITH MEASURING THE ACCRUED LIABILITY AND ACTUARIALLY DETERMINED CONTRIBUTION**



## APPENDIX C

### Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

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 due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. Investment risk – actual investment returns may differ from the expected returns;
2. Asset/Liability mismatch – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. Contribution risk – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
4. Salary and Payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
5. Longevity risk – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
6. Other demographic risks – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

## APPENDIX C (Continued)

The effects of certain trends in experience can generally be anticipated. For example if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The computed contribution rate shown on page 9 may be considered as a minimum contribution rate that complies with the Board's funding policy. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

### PLAN MATURITY MEASURES

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

	<u>June 30, 2023</u>	<u>June 30, 2022</u>	<u>June 30, 2021</u>
Ratio of the market value of assets to total payroll	8.5	8.1	9.5
Ratio of actuarial accrued liability to payroll	8.2	7.7	8.6
Ratio of actives to retirees and beneficiaries	1.7	1.9	1.8
Ratio of net cash flows to market value of assets	-1.0%	-0.7%	-0.7%
Duration of the present value of benefits	11.1	11.3	11.2

### RATIO OF MARKET VALUE OF ASSETS TO PAYROLL

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 4.0 times the payroll, a return on assets 5% different than assumed would equal 20% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

### RATIO OF ACTUARIAL ACCRUED LIABILITY TO PAYROLL

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 5.5 times the payroll, a change in liability 2% other than assumed would equal 11% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

## APPENDIX C (Continued)

### RATIO OF ACTIVES TO RETIREES AND BENEFICIARIES

A young plan with many active members and few retirees will have a high ratio of active to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

### RATIO OF NET CASH FLOW TO MARKET VALUE OF ASSETS

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

### DURATION OF PRESENT VALUE OF BENEFITS

The duration of the present value of benefits (PVB) may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, duration of 10 indicates that the PVB would increase approximately 10% if the assumed rate of return were lowered 1%.

### ADDITIONAL RISK ASSESSMENT

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability. These types of other assessments are provided to the Board in the annual presentation.

## Low-Default-Risk Obligation Measure

Actuarial Standards of Practice No. 4 (ASOP No. 4) was revised and reissued in December 2021 by the Actuarial Standards Board (ASB). It includes a new calculation called a low-default-risk obligation measure (LDROM) to be prepared and issued annually for defined benefit pension plans. The transmittal memorandum for ASOP No. 4 includes the following explanation:

*“The ASB believes that the calculation and disclosure of this measure provides appropriate, useful information for the intended user regarding the funded status of a pension plan. The calculation and disclosure of this additional measure is not intended to suggest that this is the “right” liability measure for a pension plan. However, the ASB does believe that this additional disclosure provides a more complete assessment of a plan’s funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.”*

The LDROM estimates the amount of money the plan would need to invest in low risk securities to provide the benefits with greater certainty. The current model expects lower costs but with higher risk, which creates less certainty and a possibility of higher costs. The LDROM model creates higher expected costs but more predictability when compared to the current model. Thus, the difference between the two measures (Valuation and LDROM) is one illustration of the possible costs the sponsor could incur if there was a reduction in the investment risk in comparison to the current diversified portfolio. However, the downside risk would be limited in the scenarios where the current portfolio would fail to achieve returns in excess of the low-default-risk discount, in this case 4.90%.

## APPENDIX C (Continued)

The following information has been prepared in compliance with this new requirement. Unless otherwise noted, the measurement date, actuarial cost methods, and assumptions used are the same as for the funding valuation covered in this actuarial valuation report.

LDRM measure of benefits earned as of the measurement date:	\$120 million
Valuation liability (IEAN) at 7% on measurement date:	<u>101 million</u>
Cost to mitigate investment risk in the System's portfolio:	\$ 19 million

The ERSRI benefit structure has several risk sharing provisions that are contingent on the investment returns of the portfolio and thus if the portfolio was changed to expect lower returns, the expected liabilities that are contingent on those returns would also decrease. If these provisions were not contingent on the investment performance, it would have increased the LDRM by another \$1.7 million, meaning these provisions reduced the impact of lowering the discount rate from 7.0% to 4.9% which is an illustration that a portion of the investment risk is currently being borne by the Members and not the Employers.

ASOP 4 requires commentary to help the intended user understand the significance of the LDRM with respect to the funded status of the plan, plan contributions, and the security of participant benefits. Specifically, if plan assets were changed to be invested exclusively in low-default-risk securities, the funded status would be lower and the contributions would have to immediately be higher. In addition, since the future benefit adjustments are depending on funded status and investment performance, the benefit payments would also be lower. While investing in a portfolio with low-default-risk securities may be more likely to reduce the standard deviation of investment volatility, the higher necessary contributions would produce a larger ratio of assets to payroll, and thus it is not self-evident that the volatility of the employer contributions would be any lower. In addition, the portfolio would be expected to generate less investment earnings over time, thus it also would be more likely to result in higher employer contributions and/or lower benefits.

Disclosures: Discount rate used to calculate LDRM: 4.90% Intermediate FTSE Pension Discount Curve as of June 30, 2023. Other significant assumptions that differ from those used for the funding valuation: Future assumed COLAs would decrease from 2.1% per year to 1.1% per year. This measure is not appropriate for assessing the need for or amount of future contributions as the current portfolio is expected to generate significantly more investment earnings than the low-default-risk portfolio. This measure is also not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligation as this measure includes projections of salary increases and the ability for current members to continue to accrue eligibility and vesting service.

## GLOSSARY

**Actuarial Accrued Liability (AAL):** That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Plan Benefits which is not provided for by future Normal Costs. It is equal to the Actuarial Present Value of Future Plan Benefits minus the actuarial present value of future Normal Costs.

**Actuarial Assumptions:** Assumptions as to future experience under the Fund. These include assumptions about the occurrence of future events affecting costs or liabilities, such as:

- mortality, withdrawal, disablement, and retirement;
- future increases in salary;
- future rates of investment earnings and future investment and administrative expenses;
- characteristics of members not specified in the data, such as marital status;
- characteristics of future members;
- future elections made by members; and
- other relevant items.

**Actuarial Cost Method or Funding Method:** A procedure for allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability. These items are used to determine the ARC.

**Actuarial Gain or Actuarial Loss:** A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., the Fund's assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results that produce actuarial liabilities which are larger than projected. Actuarial gains will shorten the time required for funding of the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.

**Actuarially Equivalent:** Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.

## GLOSSARY (Continued)

**Actuarial Present Value (APV):** The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:

- a) adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.)
- b) multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned, and
- c) discounted according to an assumed rate (or rates) of return to reflect the time value of money.

**Actuarial Present Value of Future Plan Benefits:** The Actuarial Present Value of those benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members either entitled to a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would be provide sufficient assets to pay all projected benefits and expenses when due.

**Actuarial Valuation:** The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB 25, such as the funded ratio and the ARC.

**Actuarial Value of Assets** or **Valuation Assets:** The value of the Fund's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly actuaries use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ARC.

**Actuarially Determined:** Values which have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.

**Amortization Method:** A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization payment is one of a stream of increasing

## GLOSSARY (Continued)

payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.

**Amortization Payment:** That portion of the pension plan contribution or ARC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

**Annual Required Contribution (ARC):** The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under GASB 25. The ARC consists of the Employer Normal Cost and the Amortization Payment.

**Closed Amortization Period:** A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Funding Period and Open Amortization Period.

**Decrements:** Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or termination.

**Defined Benefit Plan:** A retirement plan that is not a Defined Contribution Plan. Typically a defined benefit plan is one in which benefits are defined by a formula applied to the member's compensation and/or years of service.

**Defined Contribution Plan:** A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, and the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.

**Employer Normal Cost:** The portion of the Normal Cost to be paid by the employers. This is equal to the Normal Cost less expected member contributions.

**Experience Study:** A periodic review and analysis of the actual experience of the Fund which may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.

**Funded Ratio:** The ratio of the actuarial value of assets (AVA) to the actuarial accrued liability (AAL). Plans sometimes calculate a market funded ratio, using the market value of assets (MVA), rather than the AVA.

## GLOSSARY (Continued)

**Funding Period** or **Amortization Period**: The term “Funding Period” is used in two ways. In the first sense, it is the period used in calculating the Amortization Payment as a component of the ARC. This funding period is chosen by the Board of Trustees. In the second sense, it is a calculated item: the number of years in the future that will theoretically be required to amortize (i.e., pay off or eliminate) the Unfunded Actuarial Accrued Liability, based on the statutory employer contribution rate, and assuming no future actuarial gains or losses.

**GASB**: Governmental Accounting Standards Board.

**GASB 67** and **GASB 68**: Governmental Accounting Standards Board Statements No. 67 and No. 68. These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 67 sets the rules for the systems themselves.

**Normal Cost**: That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method. Any payment in respect of an Unfunded Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits which are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated. Under the entry age normal cost method, the Normal Cost is intended to be the level cost (when expressed as a percentage of pay) needed to fund the benefits of a member from hire until ultimate termination, death, disability or retirement.

**Open Amortization Period**: An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.

**Unfunded Actuarial Accrued Liability**: The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus.



## GLOSSARY (Continued)

**Valuation Date or Actuarial Valuation Date:** The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Plan Benefits is determined. The expected benefits to be paid in the future are discounted to this date.

DRAFT

# STATE POLICE RETIREMENT BENEFITS TRUST STATE OF RHODE ISLAND

ACTUARIAL VALUATION REPORT  
AS OF JUNE 30, 2023

DRAFT





December 15, 2023

Retirement Board  
40 Fountain Street, First Floor  
Providence, RI 02903-1854

Dear Members of the Board:

**Subject: Actuarial Valuation of the SPRBT as of June 30, 2023**

This is the June 30, 2023 actuarial valuation of the State Police Retirement Benefits Trust (SPRBT). This report describes the current actuarial condition of the SPRBT, determines the recommended employer contribution rate, and analyzes changes in the contribution rate. Valuations are prepared annually, as of June 30, the last day of the SPRBT plan year. Benefits for State police officers hired before July 1, 1987 are funded by the State from general assets, on a pay-as-you-go basis, and are not included in this valuation.

Under Rhode Island General Laws, the employer contribution rate for the SPRBT is certified annually by the State of Rhode Island Retirement Board. This rate is determined actuarially, based on the plan provisions in effect as of the valuation date and the actuarial assumptions and methods adopted by the Board or set by statute. The Board's current policy is that the contribution rate determined by a given actuarial valuation becomes effective two years after the valuation date. For example, the rate determined by the June 30, 2023 actuarial valuation will be applicable for the year beginning July 1, 2025 and ending June 30, 2026.

#### **Financing objectives and funding policy**

The actuarial cost method and the amortization periods are set by statute. Normal cost rate (as a percent of pay) and actuarial accrued liabilities are computed using the Entry Age Normal actuarial cost method. The employer contribution rate is the sum of two pieces: the employer normal cost rate and the amortization rate. The employer normal cost rate is the difference between the normal cost rate and the member contribution rate. The amortization rate, also determined as a level percent of pay, is the amount required to amortize the unfunded actuarial accrued liability over a closed period. The amortization rate is adjusted for the two-year deferral in contribution rates.

#### **Progress toward realization of financing objectives**

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a plan's funded status. The funded status alone is not appropriate for assessing the need for future contributions. The funded status is also not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations. The funded ratio, as can be seen in Table 4 of this report, decreased from 90.0% to 85.5% between the valuations. The funded ratio decreased from the prior valuation primarily due to salary liability experience. If the market value of assets were used, rather than the actuarial value, the funded ratio would be 86.9%.

Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 7.00% on the actuarial valuation of assets), it is expected that:

1. The amortization payment as a percentage of pay will remain level through fiscal year 2037,
2. The unfunded actuarial accrued liability will be fully amortized after 20 years from fiscal year 2020, and
3. In the absence of benefit improvements, the funded ratio should increase over time, until it reaches 100%.

The employer contribution rate increased from 19.65% to 22.98% for fiscal year 2026.

An analysis of the changes in the employer contribution rate appears on Table 11a of this report. An analysis of the changes in the unfunded actuarial accrued liability appears on Table 11c.

### **Benefit provisions**

The benefit provisions reflected in this valuation are those which were in effect on June 30, 2023. There have been no changes to the benefit provisions since the preceding valuation. All benefit provisions are summarized in Appendix B.

### **Assumptions and methods**

The assumptions are unchanged from the last actuarial valuation and were approved by the Board on May 17, 2023. We believe the assumptions are internally consistent and are reasonable, based on the actual experience of SPRBT. The combined effect of the assumptions used in this valuation is expected to have no significant bias. Below is a summary of the changes made to the assumptions:

1. Increase individual salary increases by 0.25% to 3.25%.
2. Lower total payroll growth rate from 3.00% to 2.50%
3. Update the mortality projection scales to the ultimate rates of the most recently published ones, this had no material impact to the liabilities or contributions.

The results of the actuarial valuation are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities and the calculated contribution rates.

All assumptions and methods are described in Appendix A. The actuarial assumptions and methods used in this report comply with the parameters for disclosure that appear in Governmental Accounting Standards Board (GASB) Statement Number 67.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.



**Data**

The System's staff supplied data for active, inactive, and retired members as of June 30, 2023. We did not audit this data, but we did apply a number of tests to the data, and we concluded that it was reasonable and consistent with the prior year's data. The System's staff also supplied asset data as of June 30, 2023.

**Certification**

All of our work conforms with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of Rhode Island state law and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board.

The undersigned are independent actuaries. All are Members of the American Academy of Actuaries. They all meet the Qualification Standards of the American Academy of Actuaries, and they are experienced in performing valuations for large public retirement systems.

Respectfully submitted,  
**Gabriel, Roeder, Smith & Company**



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## Actuarial Standards of Practice Disclosure Statements

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; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

This report should not be relied on for any purpose other than the purpose described above. Determinations of the financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results.

The valuation was based upon information furnished by the System's staff, concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by the System's staff.

The developed findings included in this report consider data or other information through June 30, 2023.

This is one of multiple documents comprising the actuarial report. The other document comprising the actuarial report is a PowerPoint presentation presented to the Board of Trustees following the publication of this report.

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## SECTION I

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### EXECUTIVE SUMMARY

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## Executive Summary

Item	June 30, 2023	June 30, 2022
<b>Membership</b> <ul style="list-style-type: none"> <li>• Number of               <ul style="list-style-type: none"> <li>- Active members</li> <li>- Retirees and beneficiaries</li> <li>- Inactive members</li> <li>- Total</li> </ul> </li> <li>• Payroll for benefits</li> </ul>	238 116 73 <hr/> 427 \$ 29,680,436	267 102 62 <hr/> 431 \$ 26,401,081
<b>Contribution rates</b> <ul style="list-style-type: none"> <li>• Member</li> <li>• State</li> </ul>	8.75% 22.98%	8.75% 19.65%
<b>Assets</b> <ul style="list-style-type: none"> <li>• Market value</li> <li>• Actuarial value</li> <li>• Return on market value</li> <li>• Return on actuarial value</li> <li>• Employer contribution</li> <li>• Ratio of actuarial value to market value</li> </ul>	\$ 206,014,590 202,820,349 8.4% 7.6% \$ 6,209,247 98.4%	\$ 190,522,713 189,031,357 -2.8% 8.1% \$ 5,210,604 99.2%
<b>Actuarial Information</b> <ul style="list-style-type: none"> <li>• Employer normal cost %</li> <li>• Unfunded actuarial accrued liability (UAAL)</li> <li>• Amortization rate</li> <li>• Funding period</li> <li>• Funded ratio</li> </ul>	12.59% \$ 34,288,303 10.39% 16 years 85.5%	12.78% \$ 20,956,654 6.87% 14 years 90.0%
<b>Projected employer contribution</b> <ul style="list-style-type: none"> <li>• Fiscal year ending June 30,</li> <li>• Projected payroll for contributions</li> <li>• Projected employer contribution</li> </ul>	2026 \$ 31,969,829 7,346,667	2025 \$ 29,017,218 5,701,883



## SECTION II

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### DISCUSSIONS

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## Discussion (Contribution Rates)

The employer contribution rate for the SPRBT is determined actuarially. The rate determined in each valuation becomes effective two years after the valuation date, in this case as of July 1, 2026.

The rate consists of two pieces: the normal cost rate and the amortization rate. The normal cost rate is the employer's Entry Age normal cost, expressed as a percentage of active member payroll. The amortization rate is the contribution required to amortize each of the laddered bases that comprise the unfunded actuarial accrued liability over closed periods as a level percentage of payroll. Payment for each base is generally calculated based on a 20 year amortization period beginning 2 years after they are established. The impact of the 2016 Experience Study and 2019 Experience Study were divided into separate "stagers" with the first payment beginning in FY2020 over a 20 year period. Other stagers will begin payment in FY2021 through FY2024 with amortization periods decreasing by one year for each year past FY2020 in which payment begins (e.g. the FY2024 stager will have a 15 year amortization period). The amortization rate is adjusted for the fact that the contribution rate set by this valuation is deferred for two years. Should the SPRBT become overfunded, the UAAL will be amortized using a single base. Accordingly, the Actuarially Determined Contribution under the funding policy can be considered a "Reasonable Actuarially Determined Contribution" as required by the Actuarial Standards of Practice.

The increase in the employer contribution rate from 19.65% to 22.98% of payroll was primarily due to a gain on the actuarial value of assets with the return on the actuarial value of assets of 7.6% being higher than the assumed rate of 7.0%, but offset by the higher than expected salary liability losses.

An analysis of the changes in the employer contribution rate appears in Table 11a of this report and a history of the employer contribution rates appears in Table 11b. Table 11c shows a reconciliation of the UAAL.



## Discussion (Financial Data and Experience)

Assets for the SPRBT are held in trust and are commingled with those of several other plans and programs—including the Employees' Retirement System of Rhode Island—for investment purposes. The State Treasurer is responsible for setting the asset allocation policy and for investing the funds.

Table 6 shows the net plan assets for the SPRBT. Table 7 shows a reconciliation of the assets between the previous valuation and this valuation. Table 8 shows the development of the actuarial value of assets. Table 9 shows the distribution of investments by category — 60% of assets are held in equities, including real estate and private equity — and Table 10 shows a historical summary of the return rates. As can be seen, the market value rate of return was 8.4% for the year ended June 30, 2023, and the return on an actuarial asset basis was 7.6%.

The average annual return based on the market value of assets over the last ten years (July 1, 2013 – June 30, 2023) was 7.7%. This is more than the current 7.00% annual investment return assumption. The average annual return based on the actuarial value of assets over the same period was 7.4%.

All returns above are net of both investment and administrative expenses, and may differ from other information provided by the General Treasurer's office or the investment managers and advisors.

The System's staff provided all of the financial information used in this report.

## Discussion (Member Data)

The System's staff supplied member data as of June 30, 2023. While we did not audit this data, we did perform various tests to ensure that it was internally consistent, consistent with the prior year's data, and was reasonable overall. Information provided for active members includes: name, identification number, sex, a code indicating whether the member was active or inactive, date of birth, service, salary, date of last contribution, and accumulated member contributions without interest. For retired members, data includes: name, an identification number, sex, date of birth, date of retirement, amount of benefit (original, COLA, gross), a code indicating the option elected and the type of retiree (service retiree, disabled retiree, beneficiary), and if applicable, the joint pensioner's date of birth and sex.

Table 12 and Table 13 show information and statistics about the members. Table 14 shows the distribution of active members by age and service.

The total number of active members is 238 which is a decrease of 29 active members compared to this time last year. Total compensation used for determining benefits increased from \$26.4 million to \$29.7 million.

Since the last valuation, there have been the following changes in active membership:

- 17 members terminated
- 12 members retired

The total payroll shown on the statistical tables as of June 30, 2012 is the amount that is used for determining benefits, and includes 400 hours of overtime and other adjustments. Effective June 30, 2013, the total payroll shown on the statistical tables is the amount only including holiday pay and clothing allowance but excluding 400 hours of overtime and other adjustments. An overtime adjustment (if applicable) was applied when determining benefits.

## Discussion (Benefit Provisions)

Appendix B includes a summary of the benefit provisions for the SPRBT. There were no changes in the benefit provisions since the preceding valuation. There are no ancillary benefits—e.g., cost of living benefits—that are currently provided by a source independent of the SPRBT but that might be deemed a liability of the SPRBT if continued beyond the availability of funding by the current funding source.

The COLA provided to retired members is contingent on the investment performance, the annual change in the CPI-U, and funded status of the System. The amount of the COLA is determined based on 50% of the plan's five-year average investment rate of return minus 5.0% and will range from zero to 4.0%, and 50% of the lesser of 3% or last year's CPI-U increase for a total maximum increase of 3.50%. This calculation produces a 2.84% COLA for Calendar Year 2024. The COLA will be limited and this limit will be indexed annually to increase in the same manner as COLAs, with the known values as follows:

<u>Year</u>	<u>COLA Limit</u>
2014	\$ 25,000
2015	\$ 25,168
2016	\$ 25,855
2017	\$ 26,098
2018	\$ 26,291
2019	\$ 26,687
2020	\$ 27,184
2021	\$ 27,608
2022	\$ 27,901
2023	\$ 28,878
2024	\$ 29,776
2025	\$ 30,622

Furthermore, the COLA will be suspended for all judges and state police until the aggregate funding level of their plans exceeds 80%; however, an interim COLA will be granted in four-year intervals while the COLA is suspended. The first interim COLA was during the Calendar Year beginning January 1, 2017. Also, for current retirees and beneficiaries retired on or before July 1, 2015 the \$25,000 cap will be increased to \$30,000 (indexed) for any COLA payable based on the every fourth year provision.

## Actuarial Methods and Assumptions

Appendix A of this report includes a summary of the actuarial assumptions and methods used in this valuation. Costs are determined using the Entry Age Normal actuarial cost method. This method was initially adopted effective June 30, 1999 and was modified, effective June 30, 2011, to be consistent with the Act and the standards outlined in the GASB Statement No. 67 exposure draft, which has now been finalized.

The method used to determine the actuarial value of assets is the five-year smoothed market method. This technique is further described in Section III of Appendix A. The development of the actuarial value of assets utilizing this method is shown on Table 8.

The assumptions were adopted by the Board on May 17, 2023, we believe the assumptions are internally consistent and are reasonable, based on the actual experience of the SPRBT.

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## SECTION III

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### TABLES

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# Table 1

## Development of Contribution Rate (State Police)

	June 30, 2023 (1)	June 30, 2022 (2)
1. Base Pay from prior fiscal year supplied by ERSRI	\$ 29,687,165	\$ 26,554,865
2. Compensation projected to next fiscal year	30,429,344	27,351,511
3. Actuarial accrued liability	237,108,652	209,988,011
4. Actuarial value of assets	202,820,349	189,031,357
5. Unfunded actuarial accrued liability (UAAL) (3 - 4)	34,288,303	20,956,654
6. Remaining amortization period at valuation date	20	20
7. Contribution effective for fiscal year ending:	June 30, 2026	June 30, 2025
8. Total pay projected for two-year delay	31,969,829	29,017,218
9. Amortization of UAAL	3,321,291	1,993,385
10. Normal cost		
(a) Total normal cost rate	21.34%	21.53%
(b) Employee contribution rate	8.75%	8.75%
(c) Employer normal cost rate ( a - b )	12.59%	12.78%
11. Employer contribution rate as percent of payroll		
(a) Employer normal cost rate	12.59%	12.78%
(b) Amortization payments ( 9 / 8 )	10.39%	6.87%
(c) Total ( a + b )	22.98%	19.65%
12. Estimated employer contribution amount ( 8 * 11(c) )	\$ 7,346,667	\$ 5,701,883

## Table 2

### Summary of Unfunded Liability

Purpose	Remaining Balance as of June 30, 2023	Fiscal Year 2024 Amortization Payment *	Fiscal Year 2025 Amortization Payment *	Fiscal Year 2026 Amortization Payment *	Years Remaining Beginning with Fiscal Year 2026
Original 2011 RIRSA Base	8,202,103	864,355	890,286	935,777	10
2014 Experience Base	(4,798,399)	(475,030)	(489,280)	(515,356)	11
2014 Mediation Settlement	(1,309,877)	(129,675)	(133,564)	(140,682)	11
2015 Experience Base	(1,673,443)	(156,537)	(161,233)	(170,176)	12
2016 Experience Base	11,727,811	1,041,779	1,073,032	1,134,845	13
2016 Assumption Change - FY21 Stagger **	2,928,927	248,143	255,587	270,850	14
2016 Assumption Change - FY22 Stagger **	3,158,108	267,560	275,587	292,044	14
2016 Assumption Change - FY23 Stagger **	3,415,359	289,355	298,036	315,832	14
2016 Assumption Change - FY24 Stagger **	3,705,952	313,974	323,393	342,705	14
2017 Experience Base	2,806,320	237,755	244,889	259,513	14
2018 Experience Base	1,247,796	101,209	104,245	110,687	15
2019 Experience Base	(2,234,460)	(174,095)	(179,318)	(190,768)	16
2019 Assumption Change - FY23 Stagger**	835,715	70,803	72,927	77,282	14
2019 Assumption Change - FY24 Stagger**	906,821	76,827	79,132	83,858	14
2020 Experience Base	926,981	69,585	71,673	76,394	17
2021 Experience Base	(6,759,329)	(490,148)	(504,852)	(539,113)	18
2022 Experience Base	(2,927,625)	-	(227,155)	(243,017)	19
2022 Assumption Change	59,917	-	-	5,176	20
New Experience Base This Fiscal Year	14,069,626	-	-	1,215,440	20
Unfunded Actuarial Accrued Liability	\$ 34,288,303	\$ 2,155,860	\$ 1,993,385	\$ 3,321,291	

\* Assuming payment made at the middle of the year.

\*\* Assumption change staggers will begin in the fiscal year indicated.



### Table 3

#### Actuarial Present Value of Future Benefits

	<u>June 30, 2023</u>	<u>June 30, 2022</u>
	(1)	(2)
1. Active members		
a. Service retirement benefits	\$ 149,716,425	\$ 135,218,407
b. Deferred termination benefits	0	0
c. Refunds	526,804	388,583
d. Pre-retirement death benefits	1,111,865	925,528
e. Disability retirement benefits	17,584,393	13,917,290
f. Total	<u>\$ 168,939,487</u>	<u>\$ 150,449,808</u>
2. Retired members		
a. Service retirements	\$ 117,706,554	\$ 103,813,246
b. Disability retirements	6,184,344	5,328,581
c. Beneficiaries	4,461,154	4,328,617
d. Post-retirement death benefits	0	0
e. Total	<u>\$ 128,352,052</u>	<u>\$ 113,470,444</u>
3. Inactive members	\$ 3,628,023	\$ 1,555,948
4. Total actuarial present value of future benefits	\$ 300,919,562	\$ 265,476,200
5. Determination of actuarial accrued liability		
a. Total actuarial present value of future benefits	\$ 300,919,562	\$ 265,476,200
b. Less present value of future normal costs	<u>(63,810,910)</u>	<u>(55,488,189)</u>
c. Actuarial accrued liability (a + b)	\$ 237,108,652	\$ 209,988,011

## Table 4

### Schedule of Funding Progress

Valuation Date	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL) (3)-(2)	Funded Ratio (2)/(3)	Annual Covered Payroll	UAAL as % of Payroll (4)/(6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
June 30, 2007 <sup>1</sup>	45,996,910	60,427,947	14,431,037	76.1%	15,836,354	91.1%
June 30, 2008	54,927,390	69,029,513	14,102,123	79.6%	16,698,764	84.5%
June 30, 2009	60,232,045	75,480,005	15,247,960	79.8%	17,096,202	89.2%
June 30, 2010	65,760,284	94,300,302	28,540,018	69.7%	19,715,070	144.8%
June 30, 2010 <sup>2</sup>	65,760,284	73,048,680	7,288,396	90.0%	19,715,070	37.0%
June 30, 2011	73,151,768	74,185,705	1,033,937	98.6%	19,711,694	5.2%
June 30, 2012	84,293,968	94,031,687	9,737,719	89.6%	23,669,619	41.1%
June 30, 2013	92,916,758	102,259,438	9,342,680	90.9%	19,904,363	46.9%
June 30, 2014 <sup>3</sup>	104,781,384	108,363,537	3,582,153	96.7%	20,814,621	17.2%
June 30, 2015	115,585,013	117,056,727	1,471,714	98.7%	19,940,052	7.4%
June 30, 2016	123,788,498	135,505,152	11,716,654	91.4%	22,555,315	51.9%
June 30, 2017	131,320,263	156,060,856	24,740,593	84.1%	22,612,234	109.4%
June 30, 2018	139,008,754	166,507,483	27,498,729	83.5%	23,455,654	117.2%
June 30, 2019	148,085,853	174,511,310	26,425,457	84.9%	26,467,266	99.8%
June 30, 2019 <sup>4</sup>	148,085,853	175,894,929	27,809,076	84.2%	26,467,266	105.1%
June 30, 2020	158,212,175	187,510,891	29,298,716	84.4%	26,805,499	109.3%
June 30, 2021	175,036,771	198,842,972	23,806,201	88.0%	26,080,257	91.3%
June 30, 2022 <sup>5</sup>	189,031,357	210,044,008	21,012,651	90.0%	26,401,081	79.6%
June 30, 2023	202,820,349	237,108,652	34,288,303	85.5%	29,680,436	115.5%

<sup>1</sup> Restated for Article 22 (2008).

<sup>2</sup> Restated after reflecting the Rhode Island Retirement Security Act of 2011.

<sup>3</sup> Restated after reflecting impact of Article 21.

<sup>4</sup> June 30, 2019 actuarial value after changes of actuarial assumptions.

<sup>5</sup> June 30, 2022 actuarial value after changes of actuarial assumptions.

## Table 5

### Notes to Required Supplementary Information

Valuation date	June 30, 2023
Actuarial cost method	Entry Age Normal
Amortization method	Level percentage, closed
Remaining amortization period	16 years
Asset valuation method	5-Year smoothed market
Actuarial assumptions:	
Investment rate of return *	7.00%
Projected salary increase *	4.00% to 12.00%
Cost of living adjustment **	2.10%

\* Includes inflation at 2.50%.

\*\*

COLAs are currently suspended for all judges and state police until the aggregate funding level of their plans exceeds 80%. In the original RIRSA legislation, the COLAs suspended through 2027 were advance recognized due to the funding level of the plans; and all subsequent valuations have continued to reference this same timeframe. However, an interim COLA may be granted in four-year intervals while the COLA is suspended.

## Table 6

### Plan Net Assets (Assets at Market or Fair Value)

Item	June 30, 2023	June 30, 2022
(1)	(2)	(3)
1. Cash and cash equivalents	\$ 210,824	\$ 602,696
2. Receivables:		
a. Employer and member contributions	\$ 6,293	\$ 419,925
b. Transfers receivable	0	0
c. Miscellaneous	22,138	29,554
d. Total receivables	<u>\$ 28,431</u>	<u>\$ 449,479</u>
3. Investments		
a. Pooled trust	\$ 205,853,697	\$ 189,553,471
b. Plan specific investments	0	0
c. Total	<u>\$ 205,853,697</u>	<u>\$ 189,553,471</u>
4. Invested securities lending collateral	\$ 0	\$ 0
5. Property and equipment (net of depreciation)	\$ 0	\$ 0
6. Total assets	\$ 206,092,952	\$ 190,605,646
7. Liabilities		
a. Other post-employment benefit liability, net	\$ 0	\$ 0
b. Securities lending liability	0	0
c. Other reserves and payables	74,902	82,933
d. Total liabilities	<u>\$ 74,902</u>	<u>\$ 82,933</u>
8. Total market value of assets available for benefits		
Total (Item 6 - Item 7)	\$ 206,018,050	\$ 190,522,713

## Table 7

### Reconciliation of Plan Net Assets

	June 30, 2023	June 30, 2022
1. Market value of assets as of beginning of year		
a. Market value of assets as of beginning of year	\$ 190,522,713	\$ 196,304,642
b. Adjustment for market value of assets	0	0
c. Adjusted market value of assets as of beginning of year	\$ 190,522,713	\$ 196,304,642
2. Contributions		
a. Members	\$ 2,593,367	\$ 2,387,036
b. State	6,209,247	5,210,604
c. Service purchases	7,134	16,056
d. Miscellaneous revenue	24	44
e. Total	\$ 8,809,772	\$ 7,613,740
3. Investment earnings, net of investment and administrative expenses	\$ 16,066,484	\$ (5,546,317)
4. Expenditures for the year		
a. Benefit payments	\$ (9,298,964)	\$ (7,688,916)
b. Cost-of-living adjustments	(56,579)	(56,141)
c. Death benefits	0	0
d. Social security supplements	0	0
e. Supplemental pensions	0	0
f. Refunds	(28,836)	(104,295)
g. Total expenditures	\$ (9,384,379)	\$ (7,849,352)
5. Transfers and other adjustments	\$ 0	\$ 0
6. Market value of assets at end of year	\$ 206,014,590	\$ 190,522,713

## Table 8

### Development of Actuarial Value of Assets

	Year Ending June 30, 2023																																																								
1. Market value of assets at beginning of year	\$ 190,522,713																																																								
2. Net new investments																																																									
a. Contributions (includes misc revenues)	\$ 8,809,772																																																								
b. Benefits paid	(9,355,543)																																																								
c. Refunds	(28,836)																																																								
e. Subtotal	(574,607)																																																								
3. Market value of assets at end of year	\$ 206,014,590																																																								
4. Net earnings (3-1-2)	\$ 16,066,484																																																								
5. Assumed investment return rate for fiscal year	7.00%																																																								
6. Expected return	\$ 13,316,479																																																								
7. Excess return (4-6)	\$ 2,750,005																																																								
8. Development of amounts to be recognized as of June 30, 2023:																																																									
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Fiscal Year End</th> <th style="text-align: center;">Remaining Deferrals of Excess (Shortfall) of Investment Income*</th> <th style="text-align: center;">Offsetting of Gains/(Losses)</th> <th style="text-align: center;">Net Deferrals Remaining</th> <th style="text-align: center;">Years Remaining</th> <th style="text-align: center;">Recognized for this valuation</th> <th style="text-align: center;">Remaining after this valuation</th> </tr> <tr> <th></th> <th style="text-align: center;">(1)</th> <th style="text-align: center;">(2)</th> <th style="text-align: center;">(3) = (1) + (2)</th> <th style="text-align: center;">(4)</th> <th style="text-align: center;">(5) = (3) / (4)</th> <th style="text-align: center;">(6) = (3) - (5)</th> </tr> </thead> <tbody> <tr> <td>2019</td> <td style="text-align: right;">\$ 0</td> <td style="text-align: right;">\$ 0</td> <td style="text-align: right;">\$ 0</td> <td style="text-align: center;">1</td> <td style="text-align: right;">\$ 0</td> <td style="text-align: right;">\$ 0</td> </tr> <tr> <td>2020</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: center;">2</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> </tr> <tr> <td>2021</td> <td style="text-align: right;">1,491,356</td> <td style="text-align: right;">0</td> <td style="text-align: right;">1,491,356</td> <td style="text-align: center;">3</td> <td style="text-align: right;">497,119</td> <td style="text-align: right;">994,237</td> </tr> <tr> <td>2022</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: center;">4</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> </tr> <tr> <td>2023</td> <td style="text-align: right; border-bottom: 1px solid black;">2,750,005</td> <td style="text-align: right; border-bottom: 1px solid black;">0</td> <td style="text-align: right; border-bottom: 1px solid black;">2,750,005</td> <td style="text-align: center;">5</td> <td style="text-align: right; border-bottom: 1px solid black;">550,001</td> <td style="text-align: right; border-bottom: 1px solid black;">2,200,004</td> </tr> <tr> <td>Total</td> <td style="text-align: right;">\$ 4,241,361</td> <td style="text-align: right;">\$ 0</td> <td style="text-align: right;">\$ 4,241,361</td> <td></td> <td style="text-align: right;">\$ 1,047,120</td> <td style="text-align: right;">\$ 3,194,241</td> </tr> </tbody> </table>	Fiscal Year End	Remaining Deferrals of Excess (Shortfall) of Investment Income*	Offsetting of Gains/(Losses)	Net Deferrals Remaining	Years Remaining	Recognized for this valuation	Remaining after this valuation		(1)	(2)	(3) = (1) + (2)	(4)	(5) = (3) / (4)	(6) = (3) - (5)	2019	\$ 0	\$ 0	\$ 0	1	\$ 0	\$ 0	2020	0	0	0	2	0	0	2021	1,491,356	0	1,491,356	3	497,119	994,237	2022	0	0	0	4	0	0	2023	2,750,005	0	2,750,005	5	550,001	2,200,004	Total	\$ 4,241,361	\$ 0	\$ 4,241,361		\$ 1,047,120	\$ 3,194,241	
Fiscal Year End	Remaining Deferrals of Excess (Shortfall) of Investment Income*	Offsetting of Gains/(Losses)	Net Deferrals Remaining	Years Remaining	Recognized for this valuation	Remaining after this valuation																																																			
	(1)	(2)	(3) = (1) + (2)	(4)	(5) = (3) / (4)	(6) = (3) - (5)																																																			
2019	\$ 0	\$ 0	\$ 0	1	\$ 0	\$ 0																																																			
2020	0	0	0	2	0	0																																																			
2021	1,491,356	0	1,491,356	3	497,119	994,237																																																			
2022	0	0	0	4	0	0																																																			
2023	2,750,005	0	2,750,005	5	550,001	2,200,004																																																			
Total	\$ 4,241,361	\$ 0	\$ 4,241,361		\$ 1,047,120	\$ 3,194,241																																																			
9. Actuarial value of assets as of June 30, 2023 (Item 3 - Item 8)	\$ 202,820,349																																																								
10. Ratio of actuarial value to market value	98.4%																																																								

\*Values of \$0 result from the beginning balance being offset by future gains or losses in the opposite direction.





## Table 9

### Distribution of Assets at Market Value (Percentage of Total Investments)

Item (1)	June 30, 2023 (2)
US Equity	25.1%
International Developed Equity	10.7%
Emerging Markets Equity	4.2%
Private Equity and Opportunistic Private Credit	12.5%
Non-Core Real Estate	2.5%
Equity Options	2.0%
EMD (50/50 Blend)	0.0%
Liquid Credit	5.0%
Private Credit	3.0%
CLOs	2.0%
Treasury Duration	5.0%
Systematic Trend	5.0%
Core Real Estate	4.0%
Private Infrastructure	4.0%
IG Corp Credit	3.3%
Securitized Credit	3.3%
Absolute Return	6.5%
Cash	2.0%
Total investments	100.0%

## Table 10

### History of Investment Return Rates

Year Ending June 30 of (1)	Market (2)	Actuarial (3)
1996	13.7%	13.7%
1997	19.1%	19.1%
1998	16.1%	16.5%
1999	10.1%	14.7%
2000	9.1%	8.8%
2001	-11.0%	4.9%
2002	-8.4%	0.9%
2003	4.5%	1.5%
2004	18.0%	4.2%
2005	10.2%	5.9%
2006	11.6%	8.8%
2007	18.1%	12.2%
2008	-5.9%	9.0%
2009	-19.1%	2.0%
2010	12.8%	1.6%
2011	19.0%	3.8%
2012	1.8%	5.9%
2013	10.7%	6.8%
2014	15.0%	8.7%
2015	2.2%	7.7%
2016	0.0%	5.8%
2017	11.7%	6.2%
2018	7.9%	6.8%
2019	6.5%	6.8%
2020	3.7%	6.1%
2021	27.0%	10.2%
2022	-2.8%	8.1%
2023	8.4%	7.6%
Average Returns:		
Last 5 Years	8.1%	7.8%
Last 10 Years	7.7%	7.4%
Since 1996	7.0%	7.6%

## Table 11a

### Analysis of Change in Employer Cost

Basis	Employer Cost
1. Employer contribution rates from prior valuation	19.65%
2. Impact of changes, gains and losses	
a. Non-salary liability experience (gain)/loss	-0.99%
b. Salary (gain)/loss	4.93%
c. Total payroll growth (gain)/loss	-0.90%
d. Investment experience (gain)/loss	-0.31%
e. Changes in assumptions	0.60%
f. Changes in plan provisions	0.00%
g. Total	3.33%
3. Employer contribution rates from current valuation	22.98%

## Table 11b

### History of Employer Contribution Rates

Valuation Date as of June 30, (1)	Effective for Fiscal Year Ending June 30, (2)	Employer Contribution Rate (3)
1999	2002	27.67%
2000	2003	27.48%
2001	2004	26.77%
2002	2005	28.87%
2003	2006	31.35%
2004	2007	31.78%
2005	2008	31.00%
2006	2009	26.03% <sup>1</sup>
2007	2010	26.03% <sup>1</sup>
2008	2011	24.58%
2009	2012	25.39%
2010	2013	11.07% <sup>2</sup>
2011	2014	14.45%
2012	2015	17.24%
2013	2016	17.22%
2014	2017	12.66% <sup>3</sup>
2015	2018	12.22%
2016	2019	14.74%
2017	2020	18.48%
2018	2021	19.82%
2019	2022	19.24%
2020	2023	20.87%
2021	2024	20.66%
2022	2025	19.65%
2023	2026	22.98%

<sup>1</sup> Revised pursuant to Article 22 (2008).

<sup>2</sup> Restated after reflecting the Rhode Island Retirement Security Act of 2011.

<sup>3</sup> Restated to reflect impact of Article 21.

## Table 11c

### Analysis of Change in UAAL

Basis (1)	June 30, 2023 (2)
1. UAAL as of June 30, 2022	\$ 20,957
2. Impact of changes, gains and losses	
a. Interest at 7.00% for one year	923
b. Expected amortization payments	(1,721)
c. Investment experience (gain)/loss	(1,152)
d. Salary (gain)/loss	16,826
e. Non-salary liability experience (gain)/loss	(1,605)
f. Changes in assumptions	60
g. Changes in plan provisions	0
i. Total	\$ 13,331
3. UAAL as of June 30, 2023	\$ 34,288

Note: All dollar figures are shown in thousands.

## Table 12

### Membership Data (State Police)

	June 30, 2023 (1)	June 30, 2022 (2)
1. Active members		
a. Number	238	267
b. Number eligible to retire	55	55
c. Total payroll supplied by State (for benefits)	\$ 29,680,436	\$ 26,401,081
d. Average salary	\$ 124,708	\$ 98,880
e. Average age	38.7	38.1
f. Average service	11.9	11.2
2. Inactive members		
a. Number	73	62
3. Service retirees		
a. Number	100	88
b. Total annual benefits	\$ 8,822,394	\$ 7,752,000
c. Average annual benefit	88,224	88,091
d. Average age	58.1	57.4
4. Disabled retirees		
a. Number	6	5
b. Total annual benefits	\$ 445,175	\$ 384,440
c. Average annual benefit	74,196	76,888
d. Average age	56.2	57.0
5. Beneficiaries and spouses		
a. Number	10	9
b. Total annual benefits	\$ 326,503	\$ 316,609
c. Average annual benefit	32,650	35,179
d. Average age	58.2	57.6

## Table 13

### Historical Summary of Active Member Data

Valuation as of June 30,	Active Members		Covered Payroll*		Average Salary*		Average Age	Average Service
	Number	Percent Increase	Amount	Percent Increase	Amount	Percent Increase		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2000	152	16.9%	\$8,916,914	18.9%	\$58,664	1.7%	33.7	5.5
2001	151	-0.7%	\$9,139,418	2.5%	\$60,526	3.2%	34.7	6.6
2002	150	-0.7%	\$10,933,360	19.6%	\$72,889	20.4%	35.5	7.5
2003	150	0.0%	\$11,286,365	3.2%	\$75,242	3.2%	36.6	8.4
2004	148	-1.3%	\$11,421,880	1.2%	\$77,175	2.6%	37.6	9.5
2005	181	22.3%	\$13,225,400	15.8%	\$73,069	-5.3%	36.9	8.6
2006	179	-1.1%	\$13,474,588	1.9%	\$75,277	3.0%	37.9	9.6
2007	179	0.0%	\$15,836,354	17.5%	\$88,471	17.5%	38.9	10.6
2008	177	-1.1%	\$16,698,764	5.4%	\$94,343	6.6%	39.9	11.6
2009	176	-0.6%	\$17,096,202	2.4%	\$97,138	3.0%	40.9	12.6
2010	211	19.9%	\$19,715,070	15.3%	\$93,436	-3.8%	39.5	11.5
2011	206	-2.4%	\$19,711,694	0.0%	\$95,688	2.4%	40.7	12.6
2012	231	12.1%	\$23,669,619	20.1%	\$102,466	7.1%	39.6	12.0
2013	222	-3.9%	\$19,904,363	-15.9%	\$89,659	-12.5%	40.3	12.6
2014	250	12.6%	\$20,814,621	4.6%	\$83,258	-7.1%	39.1	11.6
2015	237	-5.2%	\$19,940,052	-4.2%	\$84,135	1.1%	39.5	12.0
2016	246	3.8%	\$22,555,315	13.1%	\$91,688	9.0%	38.2	10.9
2017	232	-5.7%	\$22,612,234	0.3%	\$97,467	6.3%	38.5	11.1
2018	226	-2.6%	\$23,455,654	3.7%	\$103,786	6.5%	39.5	12.1
2019	260	15.0%	\$26,467,266	12.8%	\$101,797	-1.9%	38.7	11.4
2020	251	-3.5%	\$26,805,499	1.3%	\$106,795	4.9%	39.5	12.2
2021	242	-3.6%	\$26,080,257	-2.7%	\$107,770	0.9%	40.1	12.8
2022	267	10.3%	\$26,401,081	1.2%	\$98,880	-8.2%	38.1	11.2
2023	238	-10.9%	\$29,680,436	12.4%	\$124,708	26.1%	38.7	11.9

\*Based on salary used for benefits prior to year 2012. Effective 2013, only base salary, holiday pay and clothing allowance are recorded in salary.

## Table 14

### Distribution of Active Members by Age and by Years of Service As of June 30, 2023

	Years of Credited Service												Total
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	
Attained Age	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.
Under 25	0 \$0	12 \$81,529	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	12 \$81,529
25-29	0 \$0	11 \$82,811	0 \$0	0 \$0	14 \$94,515	4 \$106,573	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	29 \$91,739
30-34	0 \$0	5 \$82,983	0 \$0	0 \$0	16 \$94,532	27 \$102,334	5 \$111,080	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	53 \$98,978
35-39	0 \$0	1 \$80,978	0 \$0	0 \$0	4 \$94,503	17 \$103,641	24 \$118,034	1 \$191,958	0 \$0	0 \$0	0 \$0	0 \$0	47 \$111,610
40-44	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	6 \$105,637	16 \$118,918	10 \$156,499	0 \$0	0 \$0	0 \$0	0 \$0	32 \$128,172
45-49	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	5 \$137,328	11 \$159,332	4 \$173,143	0 \$0	0 \$0	0 \$0	20 \$156,593
50-54	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	11 \$138,210	7 \$184,924	11 \$207,844	0 \$0	0 \$0	0 \$0	29 \$175,899
55-59	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	1 \$145,341	3 \$166,331	10 \$213,271	0 \$0	0 \$0	0 \$0	14 \$198,360
60-64	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	2 \$219,331	0 \$0	0 \$0	0 \$0	2 \$219,331
65 & Over	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0
<b>Total</b>	0 \$0	29 \$82,247	0 \$0	0 \$0	34 \$94,522	54 \$103,427	50 \$119,551	34 \$152,213	14 \$177,574	23 \$211,203	0 \$0	0 \$0	238 \$124,708



## **APPENDIX A**

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### **SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS**

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## APPENDIX A

### SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

#### I. Valuation Date

The valuation date is June 30th of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

#### II. Actuarial Cost Method

The actuarial valuation uses the Entry Age Normal actuarial cost method. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) a rate that will amortize the unfunded actuarial accrued liability (UAAL).

1. First, the actuarial present value of future benefits is determined by discounting the projected benefits for each member back to the valuation date using the assumed investment return rate as the discount rate. For active members, the projected benefits are based on the member's age, service, sex and compensation, and based on the actuarial assumptions. The calculations take into account the probability of the member's death, disability, or termination of employment prior to becoming eligible for a retirement benefit, as well as the possibility of the member will remain in service and receive a service retirement benefit. Future salary increases are anticipated. The present value of the expected benefits payable to all active members is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits. Liabilities for future members are not included.
2. The employer contributions required to support the benefits are determined as a level percentage of salary, and consist of a normal contribution and an amortization contribution.
3. The normal contribution is determined using the Entry Age Normal method. Under this method, a calculation is made to determine the rate of contribution which, if applied to the compensation of each individual member during the entire period of anticipated covered service, would be required to meet the cost of all benefits payable on his behalf. The salary-weighted average of these rates is the normal cost rate. This calculation reflects the plan provisions that apply to each individual member.
4. The employer normal cost rate is equal to (i) the normal cost rate, minus (ii) the member contribution rate.
5. The actuarial accrued liability is equal to the present value of all benefits less the present value of future normal costs. The unfunded actuarial accrued liability (UAAL) is then determined as (i) the actuarial accrued liability, minus (ii) the actuarial value of assets.

## APPENDIX A (Continued)

6. The amortization contribution rate is the level percentage of payroll required to reduce the UAAL to zero over the remaining amortization period. The employer contribution rate determined by this valuation will not be effective until two years after the valuation date. The determination of the contribution rate reflects this deferral. The amortization payment for the applicable fiscal year is first determined based on the individual amortization bases. The covered payroll is projected forward for two years, and we then determine the amortization rate by dividing the amortization payment by the projected payroll. Contributions are assumed to be made monthly throughout the year.

(a) In conjunction with The Rhode Island Retirement Security Act of 2011, the amortization period was reset to 25 years as of June 30, 2010 for the UAAL that existed at that time. New gains and losses each year will be amortized over individual 20 year periods. At any time that the System is in an overfunded status, the amortization schedule will be a rolling 20 year amortization of any surplus.

### III. Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income. Offsetting unrecognized gains and losses are immediately recognized, with the shortest remaining bases recognized first and the net remaining bases continue to be recognized on their original timeframe. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses.

### IV. Actuarial Assumptions

#### A. Economic Assumptions

1. Investment return: 7.00% per year, compounded annually, composed of an assumed 2.50% inflation rate and a 4.50% net real rate of return. This rate represents the assumed return, net of all investment and administrative expenses.



2. Salary increase rate: The sum of (i) a 3.25% wage inflation assumption (composed of a 2.75% price inflation assumption and a 0.50% additional general increase), and (ii) a service-related component as shown below:

Years of Service	Service-Related Component	Total Increase
0	5.00%	8.25%
1	4.75	8.00
2	4.75	8.00
3	8.75	23.00
4	5.75	9.00
5	4.00	7.25
6	2.00	5.25
7	2.00	5.25
8	1.75	5.00
9	1.50	5.00
10-14	1.50	4.75
15-19	1.25	4.50
20-24	1.00	4.25
25&up	0.75	4.00

Salary increases are assumed to occur once a year, on July 1. Therefore the pay used for the period between the valuation date and the first anniversary of the valuation date is equal to the reported pay for the prior year, increased by the salary increase assumption.

3. Payroll growth rate: In the amortization of the unfunded frozen liability, payroll is assumed to increase 3.00% per year. This assumption includes no allowance for future membership growth.
4. Post-retirement Benefit Increase: Post-retirement benefit increases are assumed to be 2.10%, per annum, while the plan has a funding level that exceeds 80%; however, an interim COLA will be granted in four-year intervals while the COLA is suspended. The second such COLA was applicable in Calendar Year 2021. In the original RIRSA legislation, the COLAs suspended through 2027 were advance recognized due to the funding level of the plans; and all subsequent valuations have continued to reference this same timeframe. The actual amount of the COLA is determined based on 50% of the plan's five-year average investment rate of return minus 5.00% which will range from zero to 4.0%, and 50% of the lesser of 3% or last year's CPI-U increase for a total maximum increase of 3.50%.

B. Demographic Assumptions

1. Post-termination mortality rates

- a. Healthy males – PUB(10) Median Table for Healthy General Employee Males, loaded by 115%, projected with Scale MP21 with immediate convergence.
- b. Healthy females - PUB(10) Median Table for Healthy General Employee Females, loaded by 111%, projected with Scale MP21 with immediate convergence.
- c. Disabled males – PUB(10) Tables for Disabled Retirees by Occupation for males, projected with Scale MP21 with immediate convergence.
- d. Disabled females – PUB(10) Tables for Disabled Retirees by Occupation for females, projected with Scale MP21 with immediate convergence.

2. Pre-retirement mortality

- a. Males – PUB(10) Tables for Employees by Occupation for males, projected with Scale MP21 with immediate convergence
- b.. Females - PUB(10) Tables for Employees by Occupation for females, projected with Scale MP21 with immediate convergence.

3. Disability rates – Rates are applied, with 75% of disabilities considered work related, and no recoveries assumed once disabled:

Age	Rate
20	0.12%
25	0.17
30	0.22
35	0.29
40	0.44
45	0.72
50	1.21

Disabilities that are not work-related are assumed to result in a refund. The disability rates for non work-related causes stop once the member is eligible for retirement.

4. Termination rates – None

5. Retirement rates – State police are assumed to retire in accordance with the probabilities as shown below. Any member of the State police, other than the superintendent of State police may retire at any time subsequent to the date the member’s retirement allowance equals or exceeds 50% of average compensation, provided that a member may retire at or after the date of the attainment of a 50% benefit multiplier. 100% are assumed to retire upon the first to occur of (i) the date the member’s retirement allowance equals 65%; or (ii) the age 70 if still active.

State Police Employed Before July 1, 2007	
Service	Ret. Rate
20	5.0%
21	8.0%
22	11.0%
23	14.0%
24	17.0%
25+	45.0%

State Police Employed On or After July 1, 2007	
Service	Ret. Rate
25	35.0%
26	25.0%
27	20.0%
28	30.0%
29+	40.0%

C. Other Assumptions

1. Percent married: 85% of employees are assumed to be married.
2. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.
3. Remarriage: It is assumed that no surviving spouse will remarry and there will be no children's benefit.
4. Investment and administrative expenses: The assumed investment return rate represents the anticipated net return after payment of all investment and administrative expenses.
5. Overtime: Members eligible for overtime are assumed to work and contribute on 400 hours of overtime during their final averaging period.

V. Participant Data

Participant data was supplied in electronic files for active and retired members. The data for active members included birth date, sex, service, salary and employee contribution account balance. For retired members and beneficiaries, the data included date of birth, sex, spouse's date of birth (where applicable), amount of monthly benefit, date of retirement, and a form of payment code.

## **APPENDIX B**

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### **SUMMARY OF BENEFIT PROVISIONS**

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## APPENDIX B

### Summary of Benefit Provisions

1. Effective Date and Authority: The State Police Retirement Benefits Trust (SPRBT) became effective on July 1, 1989 for State police officers originally hired on or after July 1, 1987. Benefits are described in Rhode Island General Laws, Title 42, Chapter 28.
2. Plan Year: A twelve-month period ending June 30th.
3. Administration: The State Police Retirement Benefits Trust is administered by the State of Rhode Island Retirement Board. However, the State Treasurer is responsible for the investment of the trust assets, including the establishment of the asset allocation policy. Assets are commingled for investment purposes with those of the Employees' Retirement System of Rhode Island and various other plans and programs.
4. Type of Plan: The State Police Retirement Benefits Trust is a qualified governmental defined benefit retirement plan. For Governmental Accounting Standards Board purposes, it is a single-employer plan.
5. Eligibility: All State police officers, and the Superintendent of State Police, hired on or after July 1, 1987, participate in this plan. Benefits for State police officers hired before July 1, 1987 are being paid by the State from the general assets of the State, on a pay-as-you-go basis. Eligible employees become members at their date of employment.
6. Salary for Contribution Purposes: Salary includes the member's base earnings plus any payments under a regular longevity or incentive plan. Salary excludes, unused sick and vacation leave, severance pay, and other extraordinary compensation. Members may contribute on up to 400 hours of overtime during their final averaging period to be included in the determination of their benefit. Certain amounts that are excluded from taxable wages, such as amounts sheltered under a Section 125 plan or amounts picked up by the employer under IRC Section 414(h), are not excluded from salary.
7. Employee Contributions: State police officers contribute 8.75% of their salary per year. The State "picks up" the members' contributions for its employees under the provisions of Internal Revenue Code (IRC) Section 414(h).
8. Employer Contributions: The State contributes an actuarially determined percentage of the member's annual salary. Contributions determined in a given actuarial valuation go into effect two years after the actuarial valuation.
9. Service: Employees receive credit for service while a member. In addition, a member may purchase credit for certain periods by making an additional contribution to purchase the additional service. Special rules and limits govern the purchase of additional service and the contribution required.
10. Final Salary (Salary for Benefit Purposes): Final Salary includes base pay, longevity increases, up to 400 hours of overtime pay, holiday pay and the member's clothing allowance. For members who work more than 25 years, their Final Salary shall not be more than the Final Salary in the 25<sup>th</sup> year.



## APPENDIX B (Continued)

11. Final Average Compensation (FAC): For members eligible to retire after June 30, 2012, their FAC will be based on the average of the highest five consecutive years of compensation, which includes base pay, longevity, up to 400 hours of overtime pay and holiday pay.
12. Retirement
  - a. Eligibility:
    - (i) Members other than Superintendent of State Police can retire on or after the attainment of a 50% benefit multiplier.
    - (ii) The Superintendent of State Police may retire on or after age 60 if he has credit for 10 years of service.
  - b. Monthly Benefit:
    - (i) For members hired before June 30, 2007:
      - (1) For members eligible to retire as of June 30, 2012, their benefit multiplier will be two and one half percent (2.5%) for a member's first twenty (20) total years, plus three percent (3%) for years after 20. Their monthly benefit will be Final Salary times the benefit multiplier divided by 12.
      - (2) For members who become eligible to retire after July 1, 2012, their benefit multiplier will be two and one half percent (2.5%) for a member's years of service prior to July 1, 2012, plus two percent (2%) for years thereafter. Their monthly benefit will be FAC times the benefit multiplier divided by 12.
    - (ii) For members hired after June 30, 2007: Their benefit multiplier is two percent (2.0%) for all years of service. Their monthly benefit will be FAC times the benefit multiplier divided by 12.
    - (iii) The Superintendent of State Police receives a minimum benefit of 50% of FAC. The member also earns an additional 3% of FAC for each year of service in excess of 25.
    - (iv) In no event shall a member's original retirement allowance exceed sixty-five percent (65%) of FAC.
    - (v) Benefits accrued as of June 30, 2012 are protected.
  - c. Payment Form: Benefits are paid as a monthly life annuity. There are no optional forms of payment available.
  - d. Death benefit: After the death of a retired member, if the member was married, a benefit will be paid to the spouse equal to 2.00% of the member's Final Salary for each year of service. There is a minimum benefit of 25% of Final Salary. Benefits are increased one-third for each dependent child. The maximum benefit is 50% of Final Salary. Benefits may not begin before the spouse is age 40, and benefits stop upon the spouse's death or remarriage. Effective July 1, 2012, death benefits will be based on FAC, and not Final Salary.

## APPENDIX B (Continued)

### 13. Disability Retirement

- a. Eligibility: A member is eligible if the disability is work-related. (Non work-related disabilities result in a refund.)
- b. Occupational Disability Benefit: 75% of Final Salary.
- c. Payment Form: The disability benefit commences immediately upon the member's retirement. Benefits cease upon recovery or reemployment. Disability benefits are payable as a monthly life annuity. The same provisions that apply upon the death of a retired member apply upon the death of a disabled member.

### 14. Refunds

- a. Eligibility: All members leaving covered employment prior to eligibility for other benefits.
- b. Benefit: A lump-sum payment equal to the sum of his/her employee contributions. No interest is credited on these contributions.

### 15. Death Benefit of Active Members

- a. Eligibility: Death must have occurred from a service-related cause, or the member must have 10 or more years of service.
- b. Ordinary Benefit: After the death of an active member, if the member was married, a benefit will be paid to the spouse equal to 2.00% of the member's Final Salary for each year of service. There is a minimum benefit of 25% of Final Salary. Benefits are increased one-third for each dependent child. The maximum benefit is 50% of Final Salary. Benefits may not begin before the spouse is age 40 without a dependent child, and benefits stop upon the spouse's death or remarriage. Effective July 1, 2012, death benefits will be based on FAC, and not Final Salary.
- c. Duty-related Death Benefit: 75% of Final Salary, paid to the spouse or other dependent relative. Benefits cease when the spouse or other relatives die or are no longer dependent.

16. Post-retirement Benefit Increase:

- a. The first COLA will be granted at the later of age 55 and the member's third anniversary of retirement for retirees as of June 30, 2012 and the later of SSNRA and the member's third anniversary of retirement for all other current and future retirees.
- b. Effective July 1, 2012, the following provisions will apply to all members:
  - (i) The COLA will be suspended for all state employees, teachers, BHDDH nurses, correctional officers, judges and state police until the aggregate funding level of their plans exceeds 80%; however, an interim COLA will be granted in four-year intervals while the COLA is suspended. The first interim COLA may begin January 1, 2017.
  - (ii) Effective July 1, 2015, the COLA is determined based on 50% of the plan's five-year average investment rate of return less 5.5% limited to a range of 0.0% to 4.0%, plus 50% of the lesser of 3.0% or last year's CPI-U increase for a total maximum increase of 3.50%. Previously, it was the plan's five-year average investment rate of return less 5.5% limited to a range of 0.0% to 4.0%
  - (iii) The COLA will be limited to the first \$25,000 of the member's annual pension benefit. For retirees and beneficiaries who retired on or before July 1, 2015, years in which a COLA is payable based on the every fourth year provision described in (i) above will be limited to the first \$30,000. These limits will be indexed annually to increase in the same manner as COLAs, with the known values as follows:

<u>Year</u>	<u>COLA Limit</u>
2014	\$ 25,000
2015	\$ 25,168
2016	\$ 25,855
2017	\$ 26,098
2018	\$ 26,291
2019	\$ 26,687
2020	\$ 27,184
2021	\$ 27,608
2022	\$ 27,901
2023	\$ 28,878
2024	\$ 29,776
2025	\$ 30,622

- c. In addition to the increases described in section (b) above, there will be a one-time 2% COLA paid in FY2016 on the first \$25,000 of pension benefit for all retirees and beneficiaries who retired on or before June 30, 2012. There will also be two one-time stipends of \$500 payable in FY2016 and FY2017 to retirees and beneficiaries who retired on or before June 30, 2015.

## **APPENDIX C**

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### **RISKS ASSOCIATED WITH MEASURING THE ACCRUED LIABILITY AND ACTUARIALLY DETERMINED CONTRIBUTION**

## APPENDIX C

### Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

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 due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. Investment risk – actual investment returns may differ from the expected returns;
2. Asset/Liability mismatch – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. Contribution risk – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
4. Salary and Payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
5. Longevity risk – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
6. Other demographic risks – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

## APPENDIX C (Continued)

The effects of certain trends in experience can generally be anticipated. For example if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The computed contribution rate shown on page 9 may be considered as a minimum contribution rate that complies with the Board's funding policy. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

### PLAN MATURITY MEASURES

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

	<u>June 30, 2023</u>	<u>June 30, 2022</u>	<u>June 30, 2021</u>	<u>June 30, 2022</u>
Ratio of the market value of assets to total payroll	6.9	7.2	9.2	5.7
Ratio of actuarial accrued liability to payroll	8.0	8.0	7.6	7.0
Ratio of actives to retirees and beneficiaries	2.1	2.6	2.8	2.6
Ratio of net cash flows to market value of assets	-0.3%	-0.1%	0.4%	0.7%
Duration of the present value of benefits	11.3	11.3	11.3	11.3

### RATIO OF MARKET VALUE OF ASSETS TO PAYROLL

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 4.0 times the payroll, a return on assets 5% different than assumed would equal 20% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

### RATIO OF ACTUARIAL ACCRUED LIABILITY TO PAYROLL

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 5.5 times the payroll, a change in liability 2% other than assumed would equal 11% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.



## APPENDIX C (Continued)

### RATIO OF ACTIVES TO RETIREES AND BENEFICIARIES

A young plan with many active members and few retirees will have a high ratio of active to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

### RATIO OF NET CASH FLOW TO MARKET VALUE OF ASSETS

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

### DURATION OF PRESENT VALUE OF BENEFITS

The duration of the present value of benefits (PVB) may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, duration of 10 indicates that the PVB would increase approximately 10% if the assumed rate of return were lowered 1%.

### ADDITIONAL RISK ASSESSMENT

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.

## Low-Default-Risk Obligation Measure

Actuarial Standards of Practice No. 4 (ASOP No. 4) was revised and reissued in December 2021 by the Actuarial Standards Board (ASB). It includes a new calculation called a low-default-risk obligation measure (LDROM) to be prepared and issued annually for defined benefit pension plans. The transmittal memorandum for ASOP No. 4 includes the following explanation:

*“The ASB believes that the calculation and disclosure of this measure provides appropriate, useful information for the intended user regarding the funded status of a pension plan. The calculation and disclosure of this additional measure is not intended to suggest that this is the “right” liability measure for a pension plan. However, the ASB does believe that this additional disclosure provides a more complete assessment of a plan’s funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.”*

The LDROM estimates the amount of money the plan would need to invest in low risk securities to provide the benefits with greater certainty. The current model expects lower costs but with higher risk, which creates less certainty and a possibility of higher costs. The LDROM model creates higher expected costs but more predictability when compared to the current model. Thus, the difference between the two measures (Valuation and LDROM) is one illustration of the possible costs the sponsor could incur if there was a reduction in the investment risk in comparison to the current diversified portfolio. However, the downside risk would be limited in the scenarios where the current portfolio would fail to achieve returns in excess of the low-default-risk discount, in this case 4.90%.





The following information has been prepared in compliance with this new requirement. Unless otherwise noted, the measurement date, actuarial cost methods, and assumptions used are the same as for the funding valuation covered in this actuarial valuation report.

LDRM measure of benefits earned as of the measurement date:	\$305 million
Valuation liability (IEAN) at 7% on measurement date:	<u>237 million</u>
Cost to mitigate investment risk in the System's portfolio:	\$ 68 million

The ERSRI benefit structure has several risk sharing provisions that are contingent on the investment returns of the portfolio and thus if the portfolio was changed to expect lower returns, the expected liabilities that are contingent on those returns would also decrease. If these provisions were not contingent on the investment performance, it would have increased the LDRM by another \$9.1 million, meaning these provisions reduced the impact of lowering the discount rate from 7.0% to 4.9%, which is an illustration that a portion of the investment risk is currently being borne by the Members and not the Employers.

ASOP 4 requires commentary to help the intended user understand the significance of the LDRM with respect to the funded status of the plan, plan contributions, and the security of participant benefits. Specifically, if plan assets were changed to be invested exclusively in low-default-risk securities, the funded status would be lower and the contributions would have to immediately be higher. In addition, since the future benefit adjustments are depending on funded status and investment performance, the benefit payments would also be lower. While investing in a portfolio with low-default-risk securities may be more likely to reduce the standard deviation of investment volatility, the higher necessary contributions would produce a larger ratio of assets to payroll, and thus it is not self-evident that the volatility of the employer contributions would be any lower. In addition, the portfolio would be expected to generate less investment earnings over time, thus it also would be more likely to result in higher employer contributions and/or lower benefits.

Disclosures: Discount rate used to calculate LDRM: 4.90% Intermediate FTSE Pension Discount Curve as of June 30, 2023. Other significant assumptions that differ from those used for the funding valuation: Future assumed COLAs would decrease from 2.1% per year to 1.1% per year. This measure is not appropriate for assessing the need for or amount of future contributions as the current portfolio is expected to generate significantly more investment earnings than the low-default-risk portfolio. This measure is also not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligation as this measure includes projections of salary increases and the ability for current members to continue to accrue eligibility and vesting service.



## GLOSSARY

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## Glossary

**Actuarial Accrued Liability (AAL):** That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Plan Benefits which is not provided for by future Normal Costs. It is equal to the Actuarial Present Value of Future Plan Benefits minus the actuarial present value of future Normal Costs.

**Actuarial Assumptions:** Assumptions as to future experience under the Fund. These include assumptions about the occurrence of future events affecting costs or liabilities, such as:

- mortality, withdrawal, disablement, and retirement;
- future increases in salary;
- future rates of investment earnings and future investment and administrative expenses;
- characteristics of members not specified in the data, such as marital status;
- characteristics of future members;
- future elections made by members; and
- other relevant items.

**Actuarial Cost Method or Funding Method:** A procedure for allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability. These items are used to determine the ARC.

**Actuarial Gain or Actuarial Loss:** A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., the Fund's assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results that produce actuarial liabilities which are larger than projected. Actuarial gains will shorten the time required for funding of the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.

**Actuarially Equivalent:** Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.

**Actuarial Present Value (APV):** The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:

- a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.)
- b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned, and
- c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.

## Glossary (Continued)

**Actuarial Present Value of Future Plan Benefits:** The Actuarial Present Value of those benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members either entitled to a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.

**Actuarial Valuation:** The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB 67, such as the funded ratio and the ADC.

**Actuarial Value of Assets or Valuation Assets:** The value of the Fund's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly actuaries use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ADC.

**Actuarially Determined:** Values which have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.

**Amortization Method:** A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.

**Amortization Payment:** That portion of the pension plan contribution or ARC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

**Actuarially Determined Contribution (ADC):** The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, calculated to systematically fund the Plan following the funding policy adopted by the Plan. The ADC consists of the Employer Normal Cost and the Amortization Payment.

**Closed Amortization Period:** A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Funding Period and Open Amortization Period.

**Decrements:** Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or termination.



**Defined Benefit Plan:** A retirement plan that is not a Defined Contribution Plan. Typically a defined benefit plan is one in which benefits are defined by a formula applied to the member's compensation and/or years of service.

**Defined Contribution Plan:** A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, and the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.

**Employer Normal Cost:** The portion of the Normal Cost to be paid by the employers. This is equal to the Normal Cost less expected member contributions.

**Experience Study:** A periodic review and analysis of the actual experience of the Fund which may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.

**Funded Ratio:** The ratio of the actuarial value of assets (AVA) to the actuarial accrued liability (AAL). Plans sometimes calculate a market funded ratio, using the market value of assets (MVA), rather than the AVA.

**Funding Period or Amortization Period:** The term "Funding Period" is used in two ways. In the first sense, it is the period used in calculating the Amortization Payment as a component of the ARC. This funding period is chosen by the Board of Trustees. In the second sense, it is a calculated item: the number of years in the future that will theoretically be required to amortize (i.e., pay off or eliminate) the Unfunded Actuarial Accrued Liability, based on the statutory employer contribution rate, and assuming no future actuarial gains or losses.

**GASB:** Governmental Accounting Standards Board.

**GASB 67 and GASB 68:** Governmental Accounting Standards Board Statements No. 67 and No. 68. These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 67 sets the rules for the systems themselves.

**Normal Cost:** That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method. Any payment in respect of an Unfunded Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits which are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated. Under the entry age normal cost method, the Normal Cost is intended to be the level cost (when expressed as a percentage of pay) needed to fund the benefits of a member from hire until ultimate termination, death, disability or retirement.

**Open Amortization Period:** An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.



**Unfunded Actuarial Accrued Liability:** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus.

**Valuation Date or Actuarial Valuation Date:** The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Plan Benefits is determined. The expected benefits to be paid in the future are discounted to this date.

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# Rhode Island Teachers' Survivors Benefit Plan

ACTUARIAL VALUATION REPORT

As of June 30, 2023

DRAFT





December 15, 2023

Retirement Board  
40 Fountain Street, First Floor  
Providence, RI 02903-1854

Dear Members of the Board:

**Subject: Teachers' Survivors Benefit Plan as of June 30, 2023**

This is the June 30, 2023 actuarial valuation of the Rhode Island Teachers' Survivors Benefit Plan (TSB). The TSB provides survivor benefits for teachers who do not participate in Social Security. This report describes the current actuarial condition of TSB. The last valuation was prepared as of June 30, 2022.

### **Current Actuarial Conditions**

As of June 30, 2023, the market value of TSB assets was \$423,914,539. The actuarial present value of future benefits under the plan, measured at this same date, is \$242,126,699. Therefore, the plan has an asset surplus of \$181,787,840. This surplus ignores the present value of future member and employer contributions. These results are summarized in Table 1.

Therefore, if future plan experience followed exactly the expected experience based on the actuarial assumptions, the plan would have more than enough funds to continue paying benefits for the current membership, even if no further contributions were made. The actuarial present value of future member and employer contributions for the current active membership is \$9.7 million, and these contributions will serve to increase this surplus.

Contributions to the Fund now cover only about 11.7% of the benefit payments and refunds. This implies that the funds needed to cover the rest of the benefit payments are coming from investment earnings. This is not necessarily a problem, however, since the intent of prefunding is to use investment earnings to pay part of the cost of the benefit.

### **Progress toward realization of financing objectives**

The actuarial accrued liability (AAL) is \$232,457,631. With \$423,914,539 in assets, the plan has a funded surplus of \$191,456,908, and a funded ratio of 182%. As shown, the plan is very well funded. Please note that the funded status alone is not appropriate for assessing the need for future contributions. The funded status is also not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.

The normal cost under the entry age normal method is \$1,267,32. Because the plan is over-funded (assets are greater than the liabilities), the 30-year amortization payment is a credit of \$14,954,882. Therefore, the Actuarially Determined Employer Contribution (ADEC) is \$0 because the sum of the normal cost and the amortization credit is less than zero.



### **Assets**

Exhibit 4 summarizes the TSB assets for the last ten years. All assets are shown at fair market value. The TSB is commingled with the assets of ERSRI for investment purposes. It shows a reconciliation of the assets between years, and it shows the funds net rate of return and the ratio of contributions to benefit payments and refunds.

### **Benefit Provisions**

The plan's provisions are summarized in Appendix B. There were no changes to the benefit provisions since the prior report.

### **Assumptions and Methods**

Assumptions and methods are described in Appendix A. Except for the assumptions specific to this plan, they are the same as the assumptions used for the teachers in the Employees' Retirement System of Rhode Island (ERSRI). In particular, a 7.00% investment return assumption is used.

The assumptions are unchanged from the last actuarial valuation and were approved by the Board on May 17, 2023. We believe the assumptions are internally consistent and are reasonable, based on the actual experience of ERSRI.

The results of the actuarial valuation are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities and the calculated contribution rates.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

We should note that, unlike ERSRI, we used the level-dollar version of the entry age normal actuarial cost method, because the spouse's benefit is \$1,375/month for almost all active members, and determining a level dollar normal cost seemed more appropriate for a plan with an essentially level benefit and an essentially fixed \$115/year employer contribution. The market value of assets was used as the actuarial value, in part because of the fixed nature of the TSB contributions and the significantly overfunded position of the plan. In determining the ADEC (actuarially determined employer contribution) the UAAL, which is actually a surplus, was amortized as a level dollar amount over 30 years. Because the plan is overfunded, the use of a 30-year amortization period is conservative. Appendix A is a summary of the actuarial assumptions and methods used in this valuation report.

#### Data

The System's staff supplied member data for covered active members, covered retirees and beneficiaries receiving benefits. This data was prepared as of June 30, 2023. We did not audit this data, but we did apply a number of tests to the data, and we concluded that it was reasonable and consistent. The System's staff also supplied asset data as of June 30, 2023. Exhibits 5 and 6 summarize the member data.

#### Certification

All of our work conforms with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of Rhode Island law, and, where applicable, with the Statements of the Governmental Accounting Standards Board.

The undersigned are independent actuaries. All three are Enrolled Actuaries and/or Members of the American Academy of Actuaries. They all meet the Qualification Standards of the American Academy of Actuaries and they are experienced in performing valuations for large public retirement systems.

Respectfully submitted,



Joseph P. Newton, FSA, MAAA, EA  
Pension Market Leader and Actuary



Paul T. Wood, ASA, MAAA, FCA  
Senior Consultant and Actuary

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## EXHIBITS

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# Summary of Actuarial Valuation Results

## Exhibit 1

	<u>06/30/2023</u>	<u>06/30/2022</u>
1. Actuarial present value of future benefits		
a. Current covered active members	\$ 58,567,155	\$ 60,611,685
b. Current covered retired teachers	76,044,720	78,854,185
c. Beneficiaries receiving benefits	106,289,350	97,951,081
d. Deferred members	990,289	882,180
e. NonVested Inactive members	<u>235,185</u>	<u>231,872</u>
f. Totals	\$ 242,126,699	\$ 238,531,003
2. Actuarial Accrued Liability		
a. Present value of benefits for active members ( Item 1a)	\$ 58,567,155	\$ 60,611,685
b. Less: Present value of future normal costs	<u>(9,669,068)</u>	<u>(12,929,245)</u>
c. Actuarial accrued liability for active members	\$ 48,898,087	\$ 47,682,440
d. Actuarial accrued liability for all other members (Sum of Items 1b, 1c, 1d, and 1e)	<u>183,559,544</u>	<u>177,919,318</u>
e. Total (Item 2c + Item 2d)	232,457,631	225,601,758
3. Market value of assets	\$ 423,914,539	\$ 401,796,557
4. Unfunded actuarial accrued liability (UAAL) (Item 2.e. - Item 3.)	\$ (191,456,908)	\$ (176,194,799)
5. Funded Ratio	182%	178%
6. Actuarially determined employer contribution		
a. Normal Cost	\$ 1,267,332	\$ 1,644,800
b. Amortization of UAAL	<u>(14,954,882)</u>	<u>(13,762,744)</u>
c. Total (a + b)	\$ (13,687,550)	\$ (12,117,944)
d. Employer Contribution (Item 6c, not less than zero)	\$ 0	\$ 0

## Schedule of Funding Progress

### Exhibit 2

Date	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL) (3) - (2)	Funded Ratio (2)/(3)	Annual Covered Payroll	UAAL as a Percent of Payroll (4)/(6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
July 1, 2002	\$ 159,723,350	\$ 83,399,488	\$ (76,323,862)	192%	\$ 327,658,099	-23%
July 1, 2005	204,844,810	126,416,468	(78,428,342)	162%	432,219,020	-18%
July 1, 2007	259,851,904	116,599,601	(143,252,303)	223%	466,208,437	-31%
July 1, 2009	186,737,083	129,110,000	(57,627,083)	145%	509,416,780	-11%
July 1, 2011	242,885,805	133,569,376	(109,316,429)	182%	537,264,193	-20%
July 1, 2013	261,365,155	175,233,723	(86,131,432)	149%	544,090,898	-16%
July 1, 2014	293,921,803	192,124,126	(101,797,677)	153%	542,756,917	-19%
July 1, 2016	286,485,057	186,913,175	(99,571,882)	153%	522,968,886	-19%
July 1, 2017	311,960,433	230,838,179	(81,122,254)	135%	544,320,446	-15%
July 1, 2018	327,793,239	219,909,971	(107,883,268)	149%	562,365,576	-19%
July 1, 2019	339,417,231	226,678,677	(112,738,554)	150%	575,889,277	-20%
July 1, 2019 <sup>1</sup>	339,417,231	218,083,861	(121,333,370)	156%	575,889,277	-21%
July 1, 2020	342,259,317	222,970,421	(119,288,896)	153%	588,439,146	-20%
July 1, 2021	423,973,743	221,346,139	(202,627,604)	192%	592,624,822	-34%
July 1, 2022 <sup>2</sup>	401,796,557	219,188,305	(182,608,252)	183%	612,611,767	-30%
July 1, 2023	423,914,539	232,457,631	(191,456,908)	182%	632,169,479	-30%

<sup>1</sup>June 30, 2019 actuarial value after changes of actuarial assumptions

<sup>2</sup>June 30, 2022 actuarial value after changes of actuarial assumptions



# Notes for Financing Statements

## Exhibit 3

Valuation Date	June 30, 2023
Actuarial cost method	Entry Age Normal
Amortization method	Level dollar, open
Remaining amortization period	30 Years
Asset valuation method	Market
Actuarial assumptions:	
Investment rate of return *	7.00%
Projected salary increase *	3.00% to 12.50%
* Includes inflation at:	2.50%
Cost-of-living adjustment:	2.50%

## Fund Assets

### Exhibit 4

Fiscal Year Ended June 30:	2015	2016	2017	2018	2019	2020	2021	2022	2023
	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Market value (beginning of year)	\$ 293,921,803	\$ 293,811,653	\$ 286,485,057	\$ 311,960,433	\$ 327,793,239	\$ 339,417,231	\$ 342,259,317	\$ 423,973,743	\$ 401,796,557
Current year prior period adjustments	-	-	-	-	-	-	1	-	-
Adjusted market value of assets at BOY	\$ 293,921,803	\$ 293,811,653	\$ 286,485,057	\$ 311,960,433	\$ 327,793,239	\$ 339,417,231	\$ 342,259,318	\$ 423,973,743	\$ 401,796,557
Member contributions	603,388	642,276	589,883	744,035	745,856	745,760	736,193	755,501	755,501
Employer contributions	603,388	642,276	589,883	744,035	745,856	745,760	736,193	755,501	755,501
Misc.	-	-	4	-	-	-	-	-	-
Total contributions	1,206,776	1,284,552	1,179,770	1,488,070	1,491,712	1,491,520	1,472,386	1,511,002	1,511,002
Benefits paid	(7,750,955)	(8,097,068)	(8,405,648)	(9,602,180)	(10,236,365)	(10,436,948)	(10,650,980)	(11,259,389)	(12,065,421)
Refunds	(241,426)	(195,600)	(266,523)	(275,134)	(454,153)	(592,550)	(805,371)	(753,831)	(797,394)
Total benefits and refunds	(7,992,381)	(8,292,668)	(8,672,171)	(9,877,314)	(10,690,518)	(11,029,498)	(11,456,351)	(12,013,220)	(12,862,815)
Net investment income	6,675,455	(318,480)	32,967,777	24,222,050	20,822,798	12,380,064	91,698,390	(11,674,968)	33,469,795
Market value (end of year)	\$ 293,811,653	\$ 286,485,057	\$ 311,960,433	\$ 327,793,239	\$ 339,417,231	\$ 342,259,317	\$ 423,973,743	\$ 401,796,557	\$ 423,914,539
Net return	2.3%	-0.1%	11.7%	7.9%	6.4%	3.7%	27.2%	-2.8%	8.4%
Ratio of contributions to disbursements	15.1%	15.5%	13.6%	15.1%	14.0%	13.5%	12.9%	12.6%	11.7%





# Distribution of Covered Active Members by Age and by Years of Service

As of 06/30/2023

## Exhibit 5

Attained Age	Years of Credited Service												Total	
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over		
Under 25	22	40	10	0	0	0	0	0	0	0	0	0	0	72
25-29	42	107	112	72	57	62	0	0	0	0	0	0	0	452
30-34	22	58	62	52	54	381	38	0	0	0	0	0	0	667
35-39	18	48	41	26	41	245	331	70	0	0	0	0	0	820
40-44	23	37	23	32	28	149	215	390	124	0	0	0	0	1,021
45-49	7	32	22	15	25	116	127	256	562	51	0	0	0	1,213
50-54	20	24	9	9	15	96	98	151	434	380	42	0	0	1,278
55-59	4	8	7	7	8	63	73	114	211	209	256	32	0	992
60-64	3	8	3	1	2	29	46	72	167	130	81	60	0	602
65 & Over	0	1	4	3	1	12	12	33	79	67	28	30	0	270
<b>Total</b>	<b>161</b>	<b>363</b>	<b>293</b>	<b>217</b>	<b>231</b>	<b>1,153</b>	<b>940</b>	<b>1,086</b>	<b>1,577</b>	<b>837</b>	<b>407</b>	<b>122</b>	<b>0</b>	<b>7,387</b>
Average:		Age		46.58		Number of employees:		Males		1,573				
		Service		16.05				Females		5,814				



# Membership Data

## Exhibit 6

	<u>06/30/2023</u>	<u>06/30/2022</u>
1. Covered active members		
a. Number	7,387	7,328
b. Total payroll	\$ 632,169,479	\$ 612,611,767
c. Average salary	\$ 85,579	\$ 83,599
d. Average age	46.58	46.65
e. Average service	16.05	16.13
f. Total of member contribution accounts	\$ 10,501,662	\$ 10,433,531
g. Average contributions	\$ 1,422	\$ 1,424
2. Covered retired members		
a. Number	3,222	3,199
b. Average age	74.14	73.44
c. Total annual benefits	\$ 53,158,050	\$ 52,783,500
d. Average annual benefit	\$ 16,498	\$ 16,500
3. Survivors receiving benefits		
a. Number	616	600
b. Average age	78.60	78.50
c. Total benefits	\$ 12,703,568	\$ 11,616,583
d. Average benefit	\$ 20,623	\$ 19,361
4. Inactive, nonretired vested members		
a. Number	874	801
b. Average age	52.22	51.94
c. Total of member contribution accounts	\$ 990,289	\$ 882,180
d. Average contributions	\$ 1,133	\$ 1,101
5. Inactive, nonretired nonvested members		
a. Number	1,293	1,281
b. Average age	48.29	48.34
c. Total of member contribution accounts	\$ 235,185	\$ 231,872
d. Average contributions	\$ 182	\$ 181

## **APPENDIX A**

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### **SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS**

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# APPENDIX A

## Summary of Actuarial Methods and Assumptions

### A. Basic Actuarial Assumptions

Except for special assumptions that are specific to the Teachers' Survivors Benefit Plan, described below, the actuarial assumptions used in this valuation are the same as the ones used for Teachers in the June 30, 2023 actuarial valuation of the Employees' Retirement System of Rhode Island (ERSRI). I.e., this valuation uses the same 7.00% investment return rate, the same salary increase rates, the same mortality, disability, and retirement rates used in that valuation.

### B. Special TSB Assumptions

1. Family Makeup: The following schedule shows the assumptions about the makeup of the member's family at the time of death:

Family Makeup	Probability (By Attained Age)								
	20	25	30	35	40	45	50	60	65
Spouse Only	5%	14%	14%	10%	11%	15%	32%	75%	70%
Spouse and 1 Child	5%	12%	20%	17%	22%	23%	18%	0%	0%
Spouse and 2 or More Children	4%	13%	36%	46%	41%	35%	24%	0%	0%
One Child Alone	5%	6%	3%	7%	8%	10%	6%	0%	0%
Two Children Alone	3%	7%	4%	7%	6%	3%	1%	0%	0%
Three or More Children Alone	1%	4%	4%	5%	4%	1%	1%	0%	0%
Dependent Parent Alone	0%	0%	0%	0%	0%	0%	0%	0%	0%
No Dependents	77%	44%	19%	8%	8%	13%	18%	25%	30%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

2. Ages: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses. Parents are assumed to be 30 years older than the member, and children are assumed to be 30 years younger than the member. All children are assumed to remain in school until age 23.
3. Remarriage: It was assumed that no spouses would remarry after the member's death.

## APPENDIX A (Continued)

4. Refunds at Retirement: Please refer to the Family Makeup grid above for the assumed percentage of members will elect a refund at retirement. (it is the proportion of the membership assumed to be without an eligible dependent.)
5. Deferred beneficiaries: No specific data was available for deferred beneficiaries—those spouses of deceased members who are not yet age 60 and who are not receiving family benefits. They will be entitled to receive a spouse’s benefit upon reaching age 60. To estimate this liability, we assumed that these members would receive an immediate refund of their TSB contributions.
6. Inactive members with contributions on deposit: It was assumed that 100% of members who are inactive, nonretired, and nonvested would receive an immediate refund of their TSB contributions.
7. Cost-of-living adjustment (COLA): COLAs are assumed to be 2.50% per year, since that is the ERSRI inflation assumption.

### C. Actuarial Methods

1. Valuation date: The TSB plan is valued as of June 30, the last day of the plan’s fiscal year. Valuations in the future will be done biennially, in every odd year.
2. Actuarial cost method: The Entry Age Normal actuarial cost method is used to determine the normal cost and actuarial accrued liability. The normal cost is the level dollar amount (not the level percentage of pay used for ERSRI) required to fund a members benefit from entry age to ultimate retirement. The level-dollar version of the Entry Age Normal method was used for consistency with the current contribution requirement of \$115.00/year for almost all members.
3. Actuarial asset method: The market value of fund assets is used as the actuarial value, rather than using a smoothed value.

### D. Participant Data

Participant data was supplied on electronic files. There were separate files for (i) covered active and inactive, nonretired members, (ii) retirees who had left their contributions on deposit, and (iii) survivors receiving benefits. For active and inactive/nonretired members, we used the same participant data that we used for the valuation of ERSRI, but excluded members not covered under the TSB. For covered retirees, we received a file showing each member’s date of birth, sex, TSB contribution account balance (without interest), and final average salary. For beneficiaries receiving benefits, we received a file that included for each deceased member the spouse’s (or child’s) date of birth, sex, the amount of the monthly benefit, and a code indicating the kind of benefit being paid (e.g., spouse’s benefit, family benefit with two or more children, child’s benefit, etc.).

## **APPENDIX B**

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### **SUMMARY OF BENEFIT PROVISIONS**

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# APPENDIX B

## Summary of Benefit Provisions

1. Plan: The Teachers' Survivors Benefit Plan (TSB) is a qualified governmental plan designed to provide death benefits in the form of a monthly annuity to survivors of covered employees and retirees.
2. Authority: Benefits under the TSB are established by the Rhode Island General Laws, Sections 16-16-25 through 16-16-38
3. Administration: The TSB is administered by the Retirement Board for the Employees' Retirement System of Rhode Island (ERSRI). However, the State investment commission is responsible for the investment of the trust assets, including the establishment of the asset allocation policy.
4. Trust Fund: All contributions are credited to the Teachers' Survivors Benefits Fund, and all benefit payments and refunds are paid from this fund. The fund is commingled with ERSRI for investment purposes.
5. Plan Year: A twelve-month period ending June 30.
6. Coverage and Eligibility: The TSB covers Rhode Island teachers who are (i) covered by the Employees' Retirement System of Rhode Island (ERSRI) but (ii) are not covered under Social Security. State employees, school support personnel, and teachers whose employment is covered by Social Security may not participate. Participation is mandatory for eligible teachers, and all teachers covered by the plan must make contributions. Survivors are eligible for benefits if the member has made contributions for at least six months prior to death or retirement. A covered teacher remains covered after retirement unless the teacher withdraws his or her contributions.
7. Districts Covered: The following school districts are not covered under Social Security, so all of their teachers participate in this plan:

Barrington	Johnston
Bristol/Warren Regional	Lincoln
Burrillville	Little Compton
Central Falls Collaborative	Middletown
Coventry	Newport
Cranston	North Smithfield
Cumberland	Northern RI Collaborative
East Greenwich	Portsmouth
East Providence	Scituate
Foster	Smithfield
Foster-Glocester	Tiverton
Glocester	Westerly

In addition, there are a number of active teachers who teach for districts that are now covered by Social Security, but at one time were not covered. When the district elected to be covered by Social Security, some teachers opted to remain outside that system. These teachers continue to participate in the TSB.



## APPENDIX B (Continued)

8. **Contributions:** An annual contribution of 2% of salary, up to \$230 per year, is required. This contribution is divided equally between members and their employers. I.e., members contribute 1.00% of salary, up to \$115 per year.
9. **Salary:** For TSB, the salary used for contribution purposes and to determine the amount of the survivor benefit is the same salary used for ERSRI.
10. **Benefit Schedule:** Benefits are paid as a monthly annuity to survivors upon the death of a covered active teacher or a covered retiree. To determine the benefit payable in any situation, the basic monthly spouse's benefit must first be determined. The basic monthly spouse's benefit is a function of the member's highest annual salary, as shown in the following schedule:

Highest Annual Salary	Basic Monthly Spouse's Benefit
\$17,000 or less	\$ 825.00
\$17,001 - \$25,000	\$ 962.50
\$25,001 - \$33,000	\$ 1,100.00
\$33,001 - \$40,000	\$ 1,237.50
More than \$40,000	\$ 1,375.00

If the member is retired at the time of death, the salary used is the highest annual salary that the member earned while teaching.

11. **Spouse's benefit:** If a covered, married, active or retired member dies, the spouse is entitled to receive the basic monthly spouse's benefit. If there are other survivors entitled to benefits, as described below, this benefit may be increased. The benefit paid to the spouse may not begin prior to age 60, unless family benefits are payable. Benefits to the spouse cease if the spouse remarries.
12. **Family Benefit:** If at the time of the member's death, the member is married and there are one or more eligible children, then a monthly benefit is payable to the spouse, even if younger than age 60. An eligible child is one under age 18, or under age 23 if a full-time student, or any age, if disabled prior to age 18. The family benefit is a multiple of the basic monthly spouse's benefit. If there is only one eligible child, then the multiple is 150%. If there are two or more eligible children, the multiple is 175%. The benefit continues as long as the spouse is alive and there is at least one eligible child. If the spouse remarries, benefits cease, although children's benefits will be due if there are still eligible children. If family benefits cease because there are no children who remain eligible, spouse's benefits will be paid when the spouse reaches age 60, if he or she has not remarried.
13. **Children's Benefits:** If a covered member dies, and there is no eligible spouse but there are one or more eligible children, then a child's benefit is payable. The amount payable by the plan is a multiple of the basic monthly spouse's benefit: 75% if there is only one eligible child, 150% if there are two eligible children, and 175% if there are three or more eligible children. Benefits cease when there are no children eligible.



## APPENDIX B (Continued)

14. Dependent Parent's Benefits: If a member dies with no surviving spouse and no eligible children, but the member has a dependent parent, a benefit equal to the basic monthly spouse's benefit is paid to the dependent parent for life. For this purpose, a dependent parent is one who:
- a. Is at least 60 years of age,
  - b. Was dependent on the member for at least half his or her support,
  - c. Has not remarried since the member's death, and
  - d. Is not entitled to Social Security benefit from his or her own earnings equal to or greater the TSB benefit

15. Summary of benefits: The following table summarizes the benefit multiples that apply in the different family situations:

Recipients	Multiple of Basic Spouse's Benefit
Spouse alone	100%
Spouse and 1 Child	150%
Spouse and 2 or More Children	175%
One Child Alone	75%
Two Children Alone	150%
Three or More Children Alone	175%
Dependent Parent	100%

16. Refunds: If, prior to retirement, a member terminates service in ERSRI or ceases to be covered under TSB for any other reason, a refund equal to the sum of the member's TSB contributions will be paid to him or her. No interest is credited on these contributions.

If a covered, active teacher dies without an eligible spouse, eligible child or dependent parent, the accumulated member contribution balance, with interest credited at 5.00%, is refunded to the member's beneficiary or estate.

At the time a member retires, the member must choose whether or not to remain covered under the TSB during retirement. If the member chooses not to remain covered, then a refund of the member's contributions, accumulated with interest at 5.00%, is paid to the member. If the member chooses to remain covered, no action is necessary. Retired members who do not elect a refund at the time of retirement may not later elect a refund.

If a covered retired teacher dies without an eligible spouse, eligible child or dependent parent, no benefit is payable, and the member's contribution account remains in the fund.

## APPENDIX B (Continued)

17. Post-retirement Benefit Increases: Spouses over age 60 receive a cost-of-living adjustment (COLA), each year, in January. The COLA is expressed as a percentage increase in the benefit, equal to the percentage cost-of-living increase provided to Social Security recipients. This increase is a function of increases in the Consumer Price Index. No COLA is paid on children's or family benefits.

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## **APPENDIX C**

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### **RISKS ASSOCIATED WITH MEASURING THE ACCRUED LIABILITY AND ACTUARIALLY DETERMINED CONTRIBUTION**

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## APPENDIX C

### Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

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 due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. Investment risk – actual investment returns may differ from the expected returns;
2. Asset/Liability mismatch – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. Contribution risk – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
4. Salary and Payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
5. Longevity risk – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
6. Other demographic risks – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

## APPENDIX C (Continued)

The effects of certain trends in experience can generally be anticipated. For example if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The computed contribution rate shown on page 9 may be considered as a minimum contribution rate that complies with the Board's funding policy. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

### PLAN MATURITY MEASURES

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

	<u>June 30, 2023</u>	<u>June 30, 2022</u>	<u>June 30, 2021</u>
Ratio of the market value of assets to total payroll	0.7	0.7	0.7
Ratio of actuarial accrued liability to payroll	0.4	0.4	0.4
Ratio of actives to retirees and beneficiaries	1.9	1.9	1.9
Ratio of net cash flows to market value of assets	-2.8%	-2.5%	-2.9%
Duration of the present value of benefits	14.0	14.3	14.5

### RATIO OF MARKET VALUE OF ASSETS TO PAYROLL

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 4.0 times the payroll, a return on assets 5% different than assumed would equal 20% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

### RATIO OF ACTUARIAL ACCRUED LIABILITY TO PAYROLL

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 5.5 times the payroll, a change in liability 2% other than assumed would equal 11% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

## APPENDIX C (Continued)

### RATIO OF ACTIVES TO RETIREES AND BENEFICIARIES

A young plan with many active members and few retirees will have a high ratio of active to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

### RATIO OF NET CASH FLOW TO MARKET VALUE OF ASSETS

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

### DURATION OF ACTUARIAL ACCRUED LIABILITY

The duration of the actuarial accrued liability may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, duration of 10 indicates that the liability would increase approximately 10% if the assumed rate of return were lowered 1%.

### ADDITIONAL RISK ASSESSMENT

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability

## Low-Default-Risk Obligation Measure

Actuarial Standards of Practice No. 4 (ASOP No. 4) was revised and reissued in December 2021 by the Actuarial Standards Board (ASB). It includes a new calculation called a low-default-risk obligation measure (LDROM) to be prepared and issued annually for defined benefit pension plans. The transmittal memorandum for ASOP No. 4 includes the following explanation:

*“The ASB believes that the calculation and disclosure of this measure provides appropriate, useful information for the intended user regarding the funded status of a pension plan. The calculation and disclosure of this additional measure is not intended to suggest that this is the “right” liability measure for a pension plan. However, the ASB does believe that this additional disclosure provides a more complete assessment of a plan’s funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.”*

The LDROM estimates the amount of money the plan would need to invest in low risk securities to provide the benefits with greater certainty. The current model expects lower costs but with higher risk, which creates less certainty and a possibility of higher costs. The LDROM model creates higher expected costs but more predictability when compared to the current model. Thus, the difference between the two measures (Valuation and LDROM) is one illustration of the possible costs the sponsor could incur if there was a reduction in the investment risk in comparison to the current diversified portfolio. However, the downside risk would be limited in the scenarios where the current portfolio would fail to achieve returns in excess of the low-default-risk discount, in this case 4.90%.

## APPENDIX C (Continued)

The following information has been prepared in compliance with this new requirement. Unless otherwise noted, the measurement date, actuarial cost methods, and assumptions used are the same as for the funding valuation covered in this actuarial valuation report.

LDRM measure of benefits earned as of the measurement date:	\$306 million
Valuation liability (IEAN) at 7% on measurement date:	<u>232million</u>
Cost to mitigate investment risk in the System's portfolio:	\$ 74 million

The ERSRI benefit structure has several risk sharing provisions that are contingent on the investment returns of the portfolio and thus if the portfolio was changed to expect lower returns, the expected liabilities that are contingent on those returns would also decrease.

ASOP 4 requires commentary to help the intended user understand the significance of the LDRM with respect to the funded status of the plan, plan contributions, and the security of participant benefits. Specifically, if plan assets were changed to be invested exclusively in low-default-risk securities, the funded status would be lower and the contributions would have to immediately be higher. In addition, since the future benefit adjustments are depending on funded status and investment performance, the benefit payments would also be lower. While investing in a portfolio with low-default-risk securities may be more likely to reduce the standard deviation of investment volatility, the higher necessary contributions would produce a larger ratio of assets to payroll, and thus it is not self-evident that the volatility of the employer contributions would be any lower. In addition, the portfolio would be expected to generate less investment earnings over time, thus it also would be more likely to result in higher employer contributions and/or lower benefits.

Disclosures: Discount rate used to calculate LDRM: 4.90% Intermediate FTSE Pension Discount Curve as of June 30, 2023. This measure is not appropriate for assessing the need for or amount of future contributions as the current portfolio is expected to generate significantly more investment earnings than the low-default-risk portfolio. This measure is also not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligation as this measure includes projections of salary increases and the ability for current members to continue to accrue eligibility and vesting service.

**GLOSSARY**

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DRAFT



# Glossary

**Actuarial Accrued Liability (AAL):** That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Plan Benefits which is not provided for by future Normal Costs. It is equal to the Actuarial Present Value of Future Plan Benefits minus the actuarial present value of future Normal Costs.

**Actuarial Assumptions:** Assumptions as to future experience under the Fund. These include assumptions about the occurrence of future events affecting costs or liabilities, such as:

- mortality, withdrawal, disablement, and retirement;
- future increases in salary;
- future rates of investment earnings and future investment and administrative expenses;
- characteristics of members not specified in the data, such as marital status;
- characteristics of future members;
- future elections made by members; and
- other relevant items.

**Actuarial Cost Method or Funding Method:** A procedure for allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability. These items are used to determine the ARC.

**Actuarial Gain or Actuarial Loss:** A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., the Fund's assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results that produce actuarial liabilities which are larger than projected. Actuarial gains will shorten the time required for funding of the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.

**Actuarially Equivalent:** Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.

## Glossary (Continued)

**Actuarial Present Value (APV):** The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:

- a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.)
- b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned, and
- c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.

**Actuarial Present Value of Future Plan Benefits:** The Actuarial Present Value of those benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members either entitled to a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.

**Actuarial Valuation:** The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial valuation for a governmental retirement system typically also includes calculations of items needed reporting purposes, such as the funded ratio and the ADEC.

**Actuarial Value of Assets or Valuation Assets:** The value of the Fund's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly actuaries use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ARC.

**Actuarially Determined:** Values which have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.

**Amortization Method:** A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.



## Glossary (Continued)

**Amortization Payment:** That portion of the pension plan contribution or ARC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

**Actuarially Determined Employer Contribution (ADEC):** The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation. The ADEC consists of the Employer Normal Cost and the Amortization Payment

**Closed Amortization Period:** A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Funding Period and Open Amortization Period.

**Decrements:** Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or termination.

**Defined Benefit Plan:** A retirement plan that is not a Defined Contribution Plan. Typically a defined benefit plan is one in which benefits are defined by a formula applied to the member's compensation and/or years of service.

**Defined Contribution Plan:** A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, and the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.

**Employer Normal Cost:** The portion of the Normal Cost to be paid by the employers. This is equal to the Normal Cost less expected member contributions.

**Experience Study:** A periodic review and analysis of the actual experience of the Fund which may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.

**Funded Ratio:** The ratio of the actuarial value of assets (AVA) to the actuarial accrued liability (AAL). Plans sometimes calculate a market funded ratio, using the market value of assets (MVA), rather than the AVA.

**Funding Period or Amortization Period:** The term "Funding Period" is used in two ways. In the first sense, it is the period used in calculating the Amortization Payment as a component of the ARC. This funding period is chosen by the Board of Trustees. In the second sense, it is a calculated item: the number of years in the future that will theoretically be required to amortize (i.e., pay off or eliminate) the Unfunded Actuarial Accrued Liability, based on the statutory employer contribution rate, and assuming no future actuarial gains or losses.

## Glossary (Continued)

**GASB:** Governmental Accounting Standards Board.

**GASB 67** and **GASB 68:** Governmental Accounting Standards Board Statements No. 67 and No. 68. These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 67 sets the rules for the systems themselves.

**Normal Cost:** That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method. Any payment in respect of an Unfunded Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits which are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated. Under the entry age normal cost method, the Normal Cost is intended to be the level cost (when expressed as a percentage of pay) needed to fund the benefits of a member from hire until ultimate termination, death, disability or retirement.

**Open Amortization Period:** An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.

**Unfunded Actuarial Accrued Liability:** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus.

**Valuation Date or Actuarial Valuation Date:** The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Plan Benefits is determined. The expected benefits to be paid in the future are discounted to this date.



## 4.2. Administration, Audit, Risk & Compliance Committee Recommendation on Actuarial Valuations as of June 30, 2023

For Discussion and Recommendation to the Full  
Board

Presented by Jean Rondeau



## 4.3. Discuss and Distribute Evaluation Package for the Executive Director Evaluation

## Charter for the Executive Director - Board Governance

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### **A. POLICY:**

1. The Executive Director is the senior executive of ERSRI and serves at the pleasure of the Board.
2. The Executive Director reports directly to the Board.
3. The powers and duties delegated by the board to the Executive Director are set out in this charter and related policies.

### **B. DUTIES AND RESPONSIBILITIES:**

The Executive Director shall:

1. Be in charge of administration of the Retirement System, and shall serve as secretary to the Retirement Board;
2. Be responsible for the formulation of a monthly agenda and board minutes;
3. Be responsible for the day-to-day administration of the retirement system including the promulgation of administrative decisions;
4. Submit to the Board for its approval an annual budget for the administrative operation of the retirement system;
5. Provide an organizational chart of the retirement system to the board;
6. Make available to the Board the findings of all external and internal audits of the Retirement System;
7. Secure the services of a medical advisor and such physicians, as required, to conduct medical examinations as required by law or as requested by the Retirement Board or the Disability Subcommittee;
8. Secure the services of lawyers, as necessary, to serve as hearing officers in conjunction with Section 1.4 of the promulgated rules of the Employees' Retirement System;
9. Represent the system as necessary before the Legislature and the State Investment Commission (SIC);
10. Represent the system and the State of Rhode Island within the National Association of State Retirement Administrators, the National Council on Teacher Retirement and other national public retirement organizations;
11. Be responsible for recommending, to the full Board, the appointment of an Assistant Executive Director who shall serve as director and/or secretary in the absence of the director. The Executive Director shall be responsible for establishing goals for and evaluating the Assistant Executive Director on an

## Charter for the Executive Director - Board Governance

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- annual basis and for reporting the results to the Board, and shall make recommendations as to the compensation of the Assistant Executive Director.;
12. Perform such other duties as assigned by the Board or required by its committees.

### **C. Performance Evaluation**

The Board will:

1. Annually review the performance of the Executive Director, subject to the provisions of Section C(2) below;
2. Ensure that the evaluation meets the following objectives:
  - a. to assist the Board in establishing and communicating clear and meaningful goals and performance targets for the benefit of the Executive Director,
  - b. to ensure the Executive Director receives useful and objective performance feedback from the Board on a periodic basis, and
  - c. to ensure that evaluation criteria are objective and measurable and pertain only to outcomes over which the Executive Director has a reasonable degree of control;
3. Establish evaluation criteria including, but not limited to:
  - a. achievement of appropriate performance targets for ERSRI,
  - b. implementation of the strategic plan,
  - c. implementation of board policies and associated reporting to the board,
  - d. compliance with the provisions in the executive director charter,
  - e. leadership, management, and related qualities and skills, and
  - f. other criteria the board may determine; and
  - g. use evaluation forms or surveys as necessary to facilitate the receipt of trustee input on all of the above criteria.

### **D. Performance Evaluation Process**

1. At or prior to the January board meeting each year, the Executive Director will distribute and discuss the evaluation package with the Board. The evaluation package will contain instructions and a self-addressed envelope to be mailed to Board Counsel or, the evaluation package may be electronically transmitted



## Charter for the Executive Director - Board Governance

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- to the Board with the ability for Board members to electronically transmit the evaluation to Board Counsel. Members of the Board may request either option.
2. The Governance Committee may recommend to the full Board, at or prior to the January Board meeting, that the Performance Evaluation of the Executive Director be suspended for the year in review. The Governance Committee Chairperson shall provide the Board the reason or reasons for the suspension. The suspension of the evaluation, for the year in review, will require two thirds ( $\frac{2}{3}$ ) majority vote of the Board. However, notwithstanding any other provisions of this paragraph, the Board shall conduct an evaluation of the Executive Director not less than once every two (2) years.
  3. The Executive Director will also provide a self-evaluation to Board Counsel in connection with his or her performance review.
  4. Board members will complete evaluation forms anonymously and return them to Board Counsel within two weeks of receipt of the package.
  5. In January, a "360" review will be administered by a third-party firm. The review will include input from senior staff who directly report to the Executive Director, namely the Assistant Executive Director, the Chief Financial Officer, the Deputy General/Internal Counsel and the Director of Member Services. The review will also include input from the Treasurer's Chief of Staff.
  6. Board Counsel will then collect the evaluations from the Board as well as the 360 reviews from the third-party firm and compile and provide a summary of the scores and comments for review by the Governance Committee.
  7. In February, the Governance Committee will meet to review the results and prepare a draft executive summary to be provided to the full Board for its consideration.
  8. Prior to the full Board meeting, the Governance Committee will meet with the Executive Director and discuss the results of the performance evaluation with him or her and will make any adjustments it feels appropriate based upon the Executive Director's feedback and will thereafter finalize an executive summary for the full Board. The draft Executive Summary will be shared with the Executive Director.
  9. The executive summary from the Governance Committee shall then be considered by the full Board.

## Charter for the Executive Director - Board Governance

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10. If the executive summary is not approved by the full Board, it will be remanded to the Governance Committee with documented reasons. The Governance Committee will thereafter meet with the Executive Director to discuss any proposed revisions with him or her and to solicit feedback, and will thereafter either finalize a revised executive summary for consideration by the full Board, or take any other appropriate action as directed by the Board.
11. The Governance Committee chair will ensure that the evaluation and summaries thereof are placed in the executive director's confidential personnel file.

### **E. Review**

The Governance Committee will review this charter at least every three (3) years to ensure that it remains relevant and appropriate.

### **F. History**

This policy was adopted by the Governance Committee in December 2017 and Approved by the Board on March 14, 2018.

This policy was revised by the Governance Committee in February 2022, with revisions Approved by the Board on March 16, 2022.



## 5. Approval of the November 2023 Pensions as Presented by ERSRI

For Vote

Presented by Treasurer James A. Diossa

NOVEMBER 2023 NEW RETIREE REPORT

NAME	RTMT TYPE	RTMT OPTION	RTMT DATE	PLAN CODE	PLAN	EMPLOYER	AGE	MONTHLY PENSION	ANNUAL PENSION	CREDITED SERVICE
COLLINS, MICHAEL	Service	SRAP	10/13/23	ERS	Correctional Officer	DOC	55	\$ 5,161.43	\$ 61,937.16	30.56
DISLA-FABIAN, SILKA	Service	SRA	10/11/23	ERS	Correctional Officer	DOC	55	\$ 3,377.82	\$ 40,533.84	25.05
PETRARCA, DELLA	Service	SRAP	10/01/23	ERS	Correctional Officer	DOC	59	\$ 6,496.27	\$ 77,955.24	32.95
ARRUDA, JUDY	Service	SRA	10/01/23	ERS	State Employee	DOH	69	\$ 3,727.35	\$ 44,728.20	49.29
AUCOIN, KEVIN	Service	Option2	09/09/23	ERS	State Employee	DCYF	65	\$ 10,151.36	\$ 121,816.32	39.79
BETTOSI, DONNA	Service	SRA	09/30/23	ERS	State Employee	RIC	67	\$ 1,477.33	\$ 17,727.96	27.79
BROWN, DENISE	Disability	SRA	07/30/23	ERS	State Employee	URI	60	\$ 927.96	\$ 11,135.52	19.68
CARVALHO, LINDA	Service	SRA	09/30/23	ERS	State Employee	JUDICIAL	61	\$ 2,586.33	\$ 31,035.96	32.83
COOPER, BOB	Service	SRA	10/01/23	ERS	State Employee	GOVERNOR'S OFFICE	70	\$ 6,612.63	\$ 79,351.56	44.73
DA COSTA, MIGUEL	Service	Option2	09/02/23	ERS	State Employee	OHHS	68	\$ 3,651.38	\$ 43,816.60	31.06
D'ANTONIO JR, CARLO	Service	SRA	10/01/23	ERS	State Employee	DOT	60	\$ 3,158.26	\$ 37,899.12	35.51
DEGRANGE, ROBIN	Service	SRA	10/01/23	ERS	State Employee	AUDITOR GENERAL'S OFFICE	66	\$ 700.22	\$ 8,402.64	11.75
DENMAN, DANA	Service	Option2	11/01/23	ERS	State Employee	DHS	59	\$ 3,792.85	\$ 45,514.20	33.05
ELMAN, AUDREY	Service	SRA	07/01/23	ERS	State Employee	DOC	67	\$ 1,167.58	\$ 14,010.96	15.83
FINDLAY, JENNIFER	Service	SRA	11/01/23	ERS	State Employee	DOA	66	\$ 1,538.08	\$ 18,456.96	13.20
GENGARELLA, PATRICK	Service	Option1	10/01/23	ERS	State Employee	DOR	63	\$ 3,286.81	\$ 39,441.72	27.23
GEORGIO, VITO	Service	SRA	07/08/23	ERS	State Employee	DOT	60	\$ 4,304.74	\$ 51,656.88	35.44
GORDON, KATHARINE	Service	SRA	09/30/23	ERS	State Employee	DHS	66	\$ 283.63	\$ 3,403.56	6.35
LAVIGNE, DAVID	Service	SRA	09/30/23	ERS	State Employee	URI	70	\$ 308.25	\$ 3,699.00	9.06
MAGNER, DANIEL	Service	Option1	10/02/23	ERS	State Employee	BHDDH	67	\$ 2,431.79	\$ 29,181.48	31.70
MAGUIRE HEATH, NANCY	Service	SRA	09/09/23	ERS	State Employee	DOE	69	\$ 1,339.39	\$ 16,072.68	11.19
MARCOS, MARY	Service	SRAP	09/01/23	ERS	State Employee	DHS	60	\$ 6,303.70	\$ 75,644.40	37.94
MARIANI, THOMAS	Service	Option1	09/23/23	ERS	State Employee	DOC	62	\$ 4,300.65	\$ 51,607.80	32.89
MARTINEZ, WILFREDO	Service	SRA	09/30/23	ERS	State Employee	DOR	62	\$ 3,896.53	\$ 46,758.36	31.33
MOYNIHAN, RUTH	Service	SRA	08/01/23	ERS	State Employee	DOR	65	\$ 2,346.51	\$ 28,158.06	30.98
MURPHY, JAMES	Service	SRA	09/30/23	ERS	State Employee	RIC	70	\$ 814.92	\$ 9,779.04	18.98
PAOLANTONIO, ANTHONY	Service	SRA	10/25/23	ERS	State Employee	LEGISLATURE	66	\$ 1,137.50	\$ 13,650.00	15.79
PHILLIPS, TIMOTHY	Disability	SRA	07/16/23	ERS	State Employee	JUDICIAL	58	\$ 480.97	\$ 5,771.64	12.76
PINEDA, GLORIA	Service	SRA	10/11/23	ERS	State Employee	VETERANS ADMINISTRATION	66	\$ 532.85	\$ 6,394.20	14.44
RATSOMBATH, SANDY	Service	Option1	09/24/23	ERS	State Employee	BHDDH	63	\$ 2,515.72	\$ 30,188.64	32.85
ROGERS-KING, JANE	Service	Option2	09/01/23	ERS	State Employee	OHHS	68	\$ 1,086.82	\$ 13,041.84	17.09
RYAN JR, JAMES	Service	Option1	09/30/23	ERS	State Employee	DPS	68	\$ 1,217.89	\$ 14,614.68	20.10
SILVA, GARY	Service	Option2	11/01/23	ERS	State Employee	DEM	67	\$ 3,061.51	\$ 36,738.12	36.26
SILVA, JAY	Service	Option1	09/30/23	ERS	State Employee	DOT	64	\$ 9,785.70	\$ 117,428.40	40.29
SIMONSEN, CHRISTIAN	Service	SRA	10/01/23	ERS	State Employee	URI	66	\$ 1,076.88	\$ 12,922.56	21.97
SURIANI, MICHAEL	Service	SRA	09/29/23	ERS	State Employee	Dept of Business Regulation	63	\$ 3,871.54	\$ 46,458.48	32.76
ANTHONY, ANNE	Service	Option1	10/12/23	ERS	Teacher	Little Compton School Dept.	65	\$ 2,119.66	\$ 25,435.92	22.75
BONAS, CHRISTINE	Service	Option2	09/02/23	ERS	Teacher	West Warwick School Dept.	59	\$ 4,101.17	\$ 49,214.04	33.00
CARMOSINO, ARLENE	Service	SRA	08/30/23	ERS	Teacher	Warwick School Dept.	61	\$ 1,651.13	\$ 19,813.56	24.75
CHIN, SUSAN	Service	Option1	07/01/23	ERS	Teacher	PROVIDENCE 12 MONTH BI-WEEKLY	60	\$ 7,483.17	\$ 89,798.04	36.50
D'ANTUONO, MARY	Service	Option1	10/05/23	ERS	Teacher	Pawtucket School Dept.	59	\$ 5,165.70	\$ 61,988.40	36.15
DASILVA, ANTONIO	Service	Option2	10/01/23	ERS	Teacher	Providence School Dept.	57	\$ 3,940.40	\$ 47,284.80	32.72
DEVITT, JANICE	Service	SRA	09/18/23	ERS	Teacher	Cranston School Dept.	65	\$ 798.34	\$ 9,580.08	17.47
HERRERA, MIGUEL	Service	SRA	07/01/23	ERS	Teacher	Providence School Dept.	68	\$ 1,841.09	\$ 22,093.05	18.83
KASPARIAN, DEBORAH	Service	Option1	07/01/23	ERS	Teacher	Warwick School Dept.	67	\$ 1,672.16	\$ 20,065.92	19.72
KIMBALL, ROBERT	Service	Option2	10/06/23	ERS	Teacher	South Kingstown School Dept.	59	\$ 4,712.29	\$ 56,547.48	33.75
MCKIVERGAN, JAYNE	Service	Option1	11/14/23	ERS	Teacher	Warwick School Dept.	65	\$ 2,363.82	\$ 28,365.84	25.00
MILLAR, SUSAN	Service	SRA	11/11/23	ERS	Teacher	Exeter/West Greenwich Reg. Schools	63	\$ 2,714.79	\$ 32,577.48	24.00
MURPHY, GREGORY	Service	SRA	07/01/23	ERS	Teacher	Foster/Glocester Reg. School Dist.	60	\$ 5,067.62	\$ 60,811.44	36.50
ORMEROD, DEBORAH	Service	SRA	10/07/23	ERS	Teacher	East Providence Schools	64	\$ 4,903.07	\$ 58,836.84	36.00
PINHEIRO-FEOLA, LINDA	Service	SRA	10/07/23	ERS	Teacher	Cranston School Dept.	63	\$ 2,360.56	\$ 28,326.72	24.50
ROBERT, DORIS	Service	Option1	08/01/23	ERS	Teacher	Cranston School Dept.	68	\$ 2,434.58	\$ 29,214.96	26.00
RUSSELL, JUDITH	Service	SRA	09/11/23	ERS	Teacher	SHEILA C NOWELL LEADERSHIP ACADEMY	66	\$ 614.18	\$ 7,370.16	9.80
SPAGNUOLO, ANTHONY	Service	SRA	10/05/23	ERS	Teacher	Central Falls Collaborative	66	\$ 392.82	\$ 4,713.84	7.00
SWARTZ, SERENA	Disability	Option1	01/15/22	ERS	Teacher	Providence School Dept.	62	\$ 560.61	\$ 6,727.32	9.91
THEROUX, ANDREA	Service	SRA	11/29/23	ERS	Teacher	South Kingstown School Dept.	52	\$ 2,122.05	\$ 25,464.60	25.91
WINTERS, NANCY	Disability	Option2	10/07/23	ERS	Teacher	Providence School Dept.	63	\$ 2,447.37	\$ 29,368.44	25.08
BUCKLEY, LESLIE	Service	SRA	08/19/23	MERS	General Municipal	North Kingstown School Dept. (NC)	64	\$ 1,119.98	\$ 13,439.76	20.79

**NOVEMBER 2023 NEW RETIREE REPORT**

NAME	RTMT TYPE	RTMT OPTION	RTMT DATE	PLAN CODE	PLAN	EMPLOYER	AGE	MONTHLY PENSION	ANNUAL PENSION	CREDITED SERVICE
DOREGO, FERNANDO	Service	Option1	08/01/23	MERS	General Municipal	City of East Providence	62	\$ 1,109.45	\$ 13,313.40	20.98
FONTES, DAVID	Service	SRA	08/08/23	MERS	General Municipal	Middletown Public Schools (NC)	66	\$ 786.61	\$ 9,439.32	9.30
KING, KURT	Service	Option1	10/26/23	MERS	General Municipal	Town of Smithfield (COLA)	62	\$ 3,124.25	\$ 37,491.00	33.63
KITTELL, KAREN	Disability	SRA	09/02/23	MERS	General Municipal	North Providence School Dept. (NC)	58	\$ 531.68	\$ 6,380.16	20.51
PROVOST, ROBERT	Service	SRA	09/09/23	MERS	General Municipal	City of Pawtucket	67	\$ 1,584.63	\$ 19,015.58	25.40
RODRIGUES, MARGARET	Service	SRA	09/09/23	MERS	General Municipal	Bristol Warren Reg. School Dist. (NC)	67	\$ 1,515.77	\$ 18,189.27	30.87
TROIA, BRENDA-LEE	Service	SRA	09/30/23	MERS	General Municipal	Johnston School Dept. (NC)	62	\$ 2,500.94	\$ 30,011.28	25.02
USENIA, ANTONETTE	Disability	SRA	06/28/23	MERS	General Municipal	Town of North Providence	49	\$ 1,875.41	\$ 22,504.92	28.38
VAILLANCOURT, NATALIE	Service	SRA	09/02/23	MERS	General Municipal	City of Pawtucket	65	\$ 1,599.41	\$ 19,192.92	23.53
VALDEZ, MARIO	Service	Option1	07/29/23	MERS	General Municipal	Central Falls School Dist. (NC)	65	\$ 653.38	\$ 7,840.56	16.25
CARDON, SCOTT	Disability	Option1	10/21/23	MERS	Police and Fire	Cranston Fire	57	\$ 4,864.67	\$ 58,376.04	25.45
CORIO, SCOTT	Service	SRA	08/26/23	MERS	Police and Fire	North Providence Fire Dept.	50	\$ 4,700.74	\$ 56,408.88	28.13
PAULL III, EDWARD	Disability	SRA	12/24/22	MERS	Police and Fire	Barrington Fire Dept. (25 Plan)	48	\$ 1,929.71	\$ 23,156.52	16.40
SGAGLIARDICH, JOHN	Disability	SRA	09/23/23	MERS	Police and Fire	Barrington Police Dept.	39	\$ 5,444.67	\$ 65,336.04	15.85



## 6. Legal Counsel Report

For Report

Presented by Michael P. Robinson

**EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND  
REPORT AS OF DECEMBER 2023  
ON LITIGATED MATTERS FILED BY OR AGAINST ERSRI**

**I. MATTERS WITH PROCEDURAL OR SUBSTANTIVE CHANGES**

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**Raymond Lamont v. Municipal Employees' Retirement System**

**Workers' Compensation Court; 202306589**

**Change.** Petitioner, a South Kingstown police officer, appeals the denial of his application for an Accidental Disability Retirement pursuant to R.I.G.L. § 45-21.2-9. **A pre-trial conference was conducted on November 29, 2023 before Judge Susan Pepin Fay, and an additional pre-trial conference has been scheduled for January 11, 2024. MERS' Designation of Administrative Record is due by December 11, 2023.**

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**Sean O'Connell v. Retirement Board, Employees' Retirement System of the State of Rhode Island; Frank J. Karpinski, Executive Director, Employees' Retirement System of the State of Rhode Island; James A. Diossa, Chairman of the Retirement Board, Employees' Retirement System of the State of Rhode Island**

**Providence County Superior Court; PC-2023-03076**

**Sean O'Connell v. Employees' Retirement System of Rhode Island**

**Workers' Compensation Court; 202303812**

**Change.** Plaintiff, a Deputy Sheriff with the Rhode Island Department of Public Safety, Division of Sheriffs, appeals ERSRI's denial of his Application for Accidental Retirement pursuant to R.I. Gen. Laws § 36-10-14. An appeal was filed in both the Superior Court and the Workers' Compensation Court. A pre-trial hearing was conducted in the Workers' Compensation Court on September 14, 2023 and the Court entered a briefing schedule. **ERSRI has filed a Motion to Dismiss for lack of subject matter jurisdiction and Plaintiff has filed an Opposition. The Motion to Dismiss is scheduled for oral argument on January 22, 2024.**

ERSRI has filed an Answer and Designation of Record of Administrative Appeal in the Superior Court action.

---

**The Retirement Board of the Employees' Retirement System of the State of Rhode Island  
v. Paul LaFrance**

**Providence County Superior Court; C.A. No. PC-2016-1524**

**Change.** This is an action to revoke or reduce Mr. LaFrance’s pension pursuant to the Public Employee Pension Revocation and Reduction Act. Mr. LaFrance, a former teacher for the Warwick School Department, pled *nolo contendere* to felony charges related to third degree sexual assault of a student. An Answer to the Complaint has been filed, and the parties are engaged in discovery. **The depositions of Mr. LaFrance and his wife, who is asserting a claim to some or all of his pension benefits as an innocent spouse, were conducted on November 16, 2023.**

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**Michael Bronson v. Employees’ Retirement System of Rhode Island**

**Workers’ Compensation Court; 202201111**

**Change.** Plaintiff, a police officer with the South Kingstown Police Department, appeals MERS’ denial of his Application for Accidental Disability Retirement pursuant to R.I. Gen. Laws § 45-21.2-9. MERS has filed a Designation of Record of Administrative Appeal with the Court. A pretrial conference took place on March 21, 2022 at which time a pro forma denial of the appeal was entered, and Bronson thereafter filed a claim for trial. An initial hearing was conducted on August 19, 2022. A status conference was conducted on September 7, 2023 at which time depositions were admitted into evidence. **An initial hearing was conducted on December 5, 2023 for submission of additional evidence, and the trial has been scheduled for February 5, 2024.**

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**II. MATTERS WITH NO PROCEDURAL OR SUBSTANTIVE CHANGES**

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**Robert Bell v. Employees’ Retirement System of Rhode Island**

**Workers’ Compensation Court; 202200815**

No change. Plaintiff, a former Fire Captain with the North Providence Fire Department, appeals MERS’ denial of his Application for Accidental Disability Retirement pursuant to R.I. Gen. Laws § 45-21.2-9. MERS has filed a Designation of Record of Administrative Appeal with the Court. A pretrial conference took place on March 7, 2022 at which time a pro forma denial of the appeal was entered, and Mr. Bell thereafter filed a claim for trial. Initial hearings have been conducted. The Court scheduled the matter for trial on September 27, 2022, at which time Mr. Bell appeared and presented testimony. Based upon Mr. Bell’s trial testimony, the parties are cooperating on securing updated medical records from a variety of medical care providers. The continued trial was conducted on April 26, 2023. Post-trial memoranda have been filed and the matter was taken under advisement by the Court.

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**Dawn Eidam v. Employees’ Retirement System of Rhode Island (ERSRI).**

**Kent County Superior Court; C.A. No. KC-2022-0659**



No change. Plaintiff, a Community Living Aide with the State of Rhode Island/RICLAS, challenges the Retirement Board's approval of her application for an accidental disability pension at the 50% benefit allowance pursuant to R.I.G.L. §36-10-15(b). The Designation of Administrative Record and an Answer have been filed with the court, along with a stipulated briefing schedule. Plaintiff and ERSRI have filed their Briefs with the Superior Court. A Motion to Assign the matter for decision was heard and granted, and the matter is in the process of being assigned to a justice of the Superior Court for decision.

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**Alyssa S. Lahar; Alyssa S. Lahar as parent and friend of Matthew S. Lahar; Alyssa S. Lahar, as parent and friend of William J. Lahar; Alyssa S. Lahar as the Executrix of the Estate of John C. Lahar; Jack G. Lahar v. James Diossa, in his capacity as the General Treasurer of the State of Rhode Island and Employee Retirement System of the State of Rhode Island**

**Providence County Superior Court; C.A. No. PC-2023-02217**

No change. Plaintiff, Alyssa S. Lahar filed this action seeking to be named as the beneficiary of her late husband John Lahar's pension benefits. John Lahar was employed by the City of Warwick and Town of North Smithfield as a schoolteacher prior to his death. The Answer to the Complaint was filed on June 22, 2023.

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**Anganie Williams v. Employees' Retirement System of Rhode Island (ERSRI).**

**Providence Superior Court; C.A. No. PC-2022-06276**

No change. Plaintiff, an employee at the Rhode Island Department of Motor Vehicles, challenges the Retirement Board's denial of her application for an accidental disability pension. The Designation of Administrative Record and an Answer have been filed with the court, and the parties have agreed upon a briefing schedule. Plaintiff and ERSRI have filed their Briefs with the Superior Court. The matter has been assigned to Justice Rodgers for decision.

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**The Retirement Board of the Employees' Retirement System of the State of Rhode Island v. Shanice In**

**Providence County Superior Court; C.A. No. PC-2020-07704**

No change. This is an action to revoke or reduce Defendant, Shanice In's pension pursuant to the Public Employee Pension Revocation and Reduction Act. Ms. In, a former Clerk for the Bureau of Criminal Identification Department for the State of Rhode Island, pled *nolo contendere* to felony charges related to illegally tampering with records at the Attorney General's BCI Office for the purpose of fraudulently clearing the criminal records of other individuals. Ms. In was served on

July 14, 2021. The Court granted ERSRI's application for default for Ms. In's failure to answer the Complaint.

---

**Richard P. D'Addario v. Employees' Retirement System of Rhode Island and Rhode Island State Employees' Retirement Board**

**Providence Superior Court; C.A. No. PC-2019-10351**

No change. Plaintiff, a probate judge in the Town of Tiverton, appeals from the Retirement Board's determination that he is not eligible for membership in the Retirement System. The Designation of Record and Answer have been filed with the Court.

---

**Retirement Board v. Ambulai Sheku**

**Providence County Superior Court; C.A. No. PC-2017-3146**

No change. This is an action to revoke or reduce Mr. Sheku's pension pursuant to the Public Employee Pension Revocation and Reduction Act. Mr. Sheku, a former employee of the Rhode Island Department of Labor and Training, pled guilty to charges of conspiracy to commit mail fraud, theft of government funds, and accessing a protected computer to commit fraud, all in connection with his public employment. Mr. Sheku has been defaulted for failure to respond to the Complaint.

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**Margaret Provoyeur v. Employees' Retirement System of the State of Rhode Island**

**Providence Superior Court; C.A. No. PC-2015-2609**

No change. Plaintiff, a Providence schoolteacher, appeals the denial of her application for an accidental disability pension. On August 24, 2016, Plaintiff filed a motion to remand the matter to the Disability Committee for the consideration of additional evidence. ERSRI filed an objection, and on October 28, 2016, the Superior Court denied the motion to remand.

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**Albert DelMastro, Jr. v. Employees' Retirement System of Rhode Island**

**Providence County Superior Court; C.A. No. PC-2014-1850**

No change. Plaintiff, an electrician with the Community College of Rhode Island, appeals the denial of his application for an accidental disability pension. The Retirement System has filed an Answer and the Designation of Record of Administrative Appeal with the Court.

---

**Retirement Board v. Rachel Arruda**

**Providence County Superior Court; C.A. No. PC-2014-6174**

No change. This is an action to revoke or reduce Ms. Arruda's pension pursuant to the Public Employee Pension Revocation and Reduction Act. Ms. Arruda, a former employee of the City of Woonsocket, pled *nolo contendere* to a felony charge related to conversion of funds in connection with her municipal employment. At a hearing on January 29, 2015, Arruda stipulated to the suspension of her pension pending adjudication of the action.

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**The Retirement Board of the Employees' Retirement System of the State of Rhode Island v. Gerard M. Martineau**

**Providence County Superior Court; C.A. No. PC-2015-1268**

No change. This is an action to revoke or reduce Mr. Martineau's pension pursuant to the Public Employee Pension Revocation and Reduction Act. Mr. Martineau, a former elected official of the State of Rhode Island, pled *nolo contendere* to charges of Honest Services Mail Fraud in connection with his public employment. Mr. Martineau was served with the Complaint on April 2, 2015. Mr. Martineau has agreed to voluntarily relinquish any entitlement to a pension or other benefit he might otherwise have been entitled to, and documents necessary to obtain court approval of revocation of his pension have been sent to him for review.

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**Benita Fernandez v. Employee's Retirement System of Rhode Island**

**Providence County Superior Court; C.A. No. PC-2015-5489**

No change. Plaintiff, a Social Caseworker II with DCYF, appeals the denial of her application for an accidental disability pension. The Retirement System has filed an Answer and the Designation of Record of Administrative Appeal with the Court.

---

**Employees' Retirement System of Rhode Island v. Thomas McSoley, Marlene A. Palumbo, and Michael E. McSoley.**

**Providence Superior Court; C.A. No. PC-2016-1144**

No change. ERSRI brought suit to recover monies overpaid to a direct deposit account of Thomas McSoley, following his death in 2011. The defendants are believed to be joint account holders with the decedent. ERSRI effectuated service of process, and sought an injunction preventing the defendants from accessing or withdrawing the funds. On March 18, 2016, the parties entered into a Consent Order that restrains the defendants from accessing, withdrawing, encumbering, or otherwise spending or disposing of the funds on account until further order of the Court.



## 7. Committee Reports



## 7.1. Disability Committee

For Vote

Presented by Dr. Laura Shawhughes



## 7.1.1. December 1, 2023 Disability Committee Recommendations

For Vote

Presented by Dr. Laura Shawhughes

**Disability Committee  
Case Summary**

**Friday, December 1, 2023**

**Hearing**

**Cathleen Hickey**

School Nurse, Portsmouth School Department  
(estimated service credits: 10 years 5 months 4 days)

**NEA  
Portsmouth**

**NO RECOMMENDATION**

**The Disability Committee voted to reverse its original decision and approve Ms. Hickey's application for accidental at 66 2/3%  
VOTE: 5-0**

**Accidental Previously Postponed**

**Krislynn Mattschek**

Customer Service Representative 3, Department of Motor Vehicles (estimated service credits: 5 years 2 months 21 days)

**AFSCME 94  
Local 2874**

**NO RECOMMENDATION**

**Accidental and Ordinary Denied  
VOTE: 5-0**

**Accidental**

**Shawn Lindell**

Firefighter, City of Cranston (estimated service credits: 8 years 8 months 1 day)

**IAFF  
Local 1363**

**NO RECOMMENDATION**

**Accidental Denied  
VOTE: 5-0**

1. **Shawn Lindell**

Firefighter, City of Cranston (estimated service credits: 8 years 8 months 1 day)

**IAFF  
Local 1363**

**Ordinary Approved  
VOTE: 5-0**

**Shawn Richards**

University Police Officer, University of Rhode Island (estimated service credits: 19 years 4 months 21 days)

**PTAA**

**NO RECOMMENDATION**

**Accidental Denied  
VOTE: 5-0**

2. **Shawn Richards**

University Police Officer, University of Rhode Island (estimated service credits: 19 years 4 months 21 days)

**PTAA**

**Ordinary Approved  
VOTE: 4-0, 1 Recusal**

3. **Thomas Fagan** Firefighter/EMT, Pascoag Fire District (estimated service credits: 13 years 7 months 14 days (66 2/3%)  
**Accidental Approved**  
**VOTE: 5-0** IAFF  
**Local 4908**

4. **Timothy Gleason** Correctional Officer, Department of Corrections (estimated service credits: 19 years 4 months 10 days)  
**Accidental Approved at 50%**  
**VOTE: 5-0** RIBCO

**Ordinary**

5. **Kim Alix** Teacher, Central Falls School District (estimated service credits: 27 years 0 months 0 days)  
**Approved**  
**VOTE: 5-0** RIFT  
**Local 1567**

6. **Joanne Schondek** Preschool Teacher, Central Falls School District (estimated service credits: 21 years 4 months 0 days)  
**Approved**  
**VOTE: 5-0** RIFT  
**Local 1567**

7. **Doris White** Art Teacher, Central Falls School District (estimated service credits: 27 years 0 months 0 days)  
**Approved**  
**VOTE: 5-0** AFT  
**Local 1567**

**Consideration and Approval of Decisions** **Approved**  
**VOTE: 5-0**

8. **Meredith Miller** Special Education Teacher, Coventry Public Schools (estimated service credits; 16 years 11 months 4 days)  
**Ordinary Denied**  
**VOTE: 5-0** AFT  
**Local 1075**



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## 8. Adjournment

For Vote

Presented by Treasurer James A. Diossa



## 9. Appendix



## 10. Post Retirement Employment - December 2023

For Reference

# ERSRI Memorandum

**ERSRI BOARD:**

James A. Diossa  
*General Treasurer Chair*

John P. Maguire  
*Vice Chair*

Roger P. Boudreau

Mark A. Carruolo

Joseph Codega

Paul L. Dion

Matthew K. Howard

Brenna McCabe

Claire M. Newell

Andrew E. Nota

Raymond J. Pouliot

Jean Rondeau

Laura Shawhughes

Michael J. Twohey

Lisa A. Whiting

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Frank J. Karpinski  
*Executive Director*

Date: December 12, 2023  
To: Retirement Board  
From: Frank J. Karpinski, Executive Director  
Subject: Post Retirement Employment Reports

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**Enclosed are the listings of reported retirees working under the various post-retirement employment statutes.**

**For the K-12 schools, registered nurses and municipalities, the column *Number of Days* lists the up-to-date totals of working days provided by the agency(ies) to ERSRI.**

A retired member who returned to work as a substitute teacher is indicated by a *Title/Function* column as *PRSB*.

A retired member who returned to work as an administrator, guidance counselor, or other certified position in a school department, and is working in a vacant position is labeled in the *Title/Function* column as *PRAM*. Certification letters (good faith letters) need to be provided by the agency and forwarded to ERSRI consistent with RIGL §16-16-24.

A retired member who retired from service as a registered nurse may be employed for the purpose of providing professional nursing care and/or services at a state-operated facility in Rhode Island, including employment as a faculty member of a nursing program at a state-operated college or university. That is indicated by a *Title/Function* column as *PRNR*.

Municipal retirees returning to work in a school system are indicated in the *Title/Function* column as *PRMS*. Municipal retirees returning to work for a participating city/town are indicated by a *Title/Function* column as *PRME*.

**For the state colleges/universities (recently included Driver's Education Report, (the column *Earnings (gross)* lists the up-to-date dollar earnings.**

If a retired member is returning to work for the purpose of providing classroom instruction, academic advising of students and/or coaching, that is labeled in *Title/Function* column as *PRIS*.

If a retired member is returning to work for the purpose of providing classroom instruction in driver education courses and/or motorcycle driver education courses, that is labeled in *Title/Function* as *PRDE*.



**TEACHER RETIREES AND NON-CERTIFIED RETIREES WORKING 2023-2024 SCHOOL YEAR  
 PRSB--SUBSTITUTE AND IN A STATE SCHOOL SUB; PRAM--VACANCY; PRMS--MUNICIPAL IN A SCHOOL REPORT DTD 12-5-2023**

<b>First Name</b>	<b>Middle Initial</b>	<b>Last Name</b>	<b>Employer Code</b>	<b>Employer</b>	<b>Title/Function</b>	<b>Number of Days</b>	<b>Footnote</b>
MICHAEL	C	TRAFICANTE	1111	Cranston School Dept.	PRAM	76.00	
JEAN	M	CARMODY	1111	Cranston School Dept.	PRSB	53.00	
BEVERLY		BERNIER	1113	Cranston School Dept. (NC)	PRMS	52.50	
MICHAEL		TOPAZIO	1001	Barrington Public Schools	PRSB	43.50	
PATRICIA		AMORE	1613	West Warwick School Dept (NC)	PRMS	43.00	
KATHERINE		SIPALA	1271	Jamestown School Dept.	PRAM	41.50	
JOSEPH		CROWLEY	1491	South Kingstown School Dept.	PRAM	41.05	
ROBERT	E	LITTLEFIELD	1491	South Kingstown School Dept.	PRAM	41.00	
CATHERINE	E	FOX	1281	Johnston School Dept.	PRSB	40.50	
PATRICIA	A	WILLIAMS	1111	Cranston School Dept.	PRSB	40.00	
CAROLE	A	REGO	1161	East Providence Schools	PRSB	39.00	
CHRISTINE	F	EGAN	1073	Chariho Regional School Dist. (NC)	PRMS	39.00	
LAURIE	G	SULLIVAN	1571	Warwick School Dept.	PRSB	39.00	
MARY	B	CULLEN	1441	Providence School Dept.	PRAM	39.00	
BERNADETTE	A	BOWEN	1111	Cranston School Dept.	PRSB	38.50	
JUDY	P	CAMBIO	1911	Times2 Academy	PRAM	38.50	
MAUREEN	A	PINKSAW	1441	Providence School Dept.	PRSB	38.00	
MAUREEN	H	AVENO	1121	Cumberland School Dept.	PRSB	38.00	
DONNA		PERROTTA	1441	Providence School Dept.	PRSB	37.00	
JAYNE	G	BOUCHARD	1621	Westerly School Dept.	PRSB	37.00	
LAWRENCE	P	BYRNE	1441	Providence School Dept.	PRSB	37.00	
JUAN	A	RODRIGUEZ	1441	Providence School Dept.	PRSB	36.00	
LESLIE	R	WALTON	1441	Providence School Dept.	PRSB	36.00	
LOUIS		TORO	1441	Providence School Dept.	PRSB	35.50	
ELLEN	S	HOUSE	1441	Providence School Dept.	PRSB	35.00	
FRANK	C	PICCIRILLI	1441	Providence School Dept.	PRAM	35.00	
FRANCIS	A	PALAZZI	1441	Providence School Dept.	PRSB	34.00	
RAFAEL	E	LUNA	1441	Providence School Dept.	PRSB	34.00	
DENISE	M	MORETTI-FOGGO	1613	West Warwick School Dept (NC)	PRMS	33.00	
GLADYS		OLAGBEGI-FAKUNLE	1441	Providence School Dept.	PRSB	33.00	
SALLY		GARABEDIAN	1441	Providence School Dept.	PRSB	33.00	
BARBARA		RIX	1001	Barrington Public Schools	PRSB	32.00	
DONNA	E	NASSA	1571	Warwick School Dept.	PRAM	32.00	
LISA	D	MACCHIONI	1441	Providence School Dept.	PRSB	32.00	
DOROTHY		MURRAY	1031	Burrillville School Dept.	PRAM	31.00	
ANTHONY		DELSIGNORE	1111	Cranston School Dept.	PRSB	30.00	
GEORGIA		FORTUNATO	1321	Middletown Public Schools	PRSB	30.00	
ARLENE		KIBARIAN	1441	Providence School Dept.	PRSB	29.00	
DAVID	M	VALEDOFSKY	1441	Providence School Dept.	PRSB	29.00	
EMILY	M	ELLIS	1441	Providence School Dept.	PRSB	29.00	

**TEACHER RETIREES AND NON-CERTIFIED RETIREES WORKING 2023-2024 SCHOOL YEAR  
 PRSB--SUBSTITUTE AND IN A STATE SCHOOL SUB; PRAM--VACANCY; PRMS--MUNICIPAL IN A SCHOOL REPORT DTD 12-5-2023**

<b>First Name</b>	<b>Middle Initial</b>	<b>Last Name</b>	<b>Employer Code</b>	<b>Employer</b>	<b>Title/Function</b>	<b>Number of Days</b>	<b>Footnote</b>
SANDRA	G	LEWIS	1441	Providence School Dept.	PRSB	29.00	
SHIRLEY	A	MCBRIDE	1441	Providence School Dept.	PRSB	29.00	
HELAINÉ	F	HAGER	1441	Providence School Dept.	PRSB	28.00	
JOHN		CANNADY	1441	Providence School Dept.	PRSB	27.00	
CAROLYN	J	ROSEMAN	1281	Johnston School Dept.	PRSB	26.00	
MARY	E	FARGNOLI-LEONE	1571	Warwick School Dept.	PRAM	26.00	
JOHN	A	ABBATE	1033	Burrillville School Dept. (NC)	PRMS	25.50	
SARA		MELIN	1441	Providence School Dept.	PRSB	25.50	
ALEXIS		MEYER	1491	South Kingstown School Dept.	PRAM	25.00	
ANN-MARIE		D AMBROSIO	1441	Providence School Dept.	PRSB	25.00	
DONNA		LOMBARDI	1441	Providence School Dept.	PRSB	25.00	
RICHARD	D	D'AGOSTINO	1411	Pawtucket School Dept.	PRSB	25.00	
ANN	L	BUCKLEY	1161	East Providence Schools	PRSB	24.00	
CINDY	A	NORMAND	1341	New Shoreham School Dist.	PRAM	24.00	
DENNIS	T	RINALDI	1441	Providence School Dept.	PRSB	24.00	
DONNA	M	HEROUX-EVERSON	1441	Providence School Dept.	PRSB	24.00	
JOSEPH	D	HURLEY	1001	Barrington Public Schools	PRAM	24.00	
LINDA MARIE		LE PAGE	1531	Tiverton School Dept.	PRSB	24.00	
RICHARD		ZAGRODNY	1631	Woonsocket School Dept.	PRSB	24.00	
THERESA	A	HAWKINS	1373	North Kingstown School Dept. (NC)	PRMS	24.00	
MICHAEL		PETRARCA	1191	Foster School Dist.	PRAM	23.50	
SANDRA	A	SHAW	1001	Barrington Public Schools	PRAM	23.50	
LORY	I	FITZGERALD	1441	Providence School Dept.	PRSB	23.00	
ANTHONY		FASCIA	1441	Providence School Dept.	PRSB	22.00	
CAROL		BLISS	1441	Providence School Dept.	PRSB	22.00	
CLAUDE	M	WATSKY	1491	South Kingstown School Dept.	PRSB	22.00	
JUDITH	H	SMITH	1271	Jamestown School Dept.	PRSB	22.00	
KATHLEEN	M	PERRY	1111	Cranston School Dept.	PRSB	22.00	
MARILYN	A	LADD	1373	North Kingstown School Dept. (NC)	PRMS	22.00	
MARY	W	THAKE	1441	Providence School Dept.	PRSB	22.00	
ZITA		BUTLER	1411	Pawtucket School Dept.	PRSB	22.00	
ANDY		BARNES	1491	South Kingstown School Dept.	PRSB	21.00	
CAROL		PIZZUTI	1731	The Greene School	PRAM	21.00	
DEBORAH	A	MANCUSO	1281	Johnston School Dept.	PRSB	21.00	
GERALD	A	FOGEL	1441	Providence School Dept.	PRSB	21.00	
PATRICIA	A	SMITH	1531	Tiverton School Dept.	PRSB	21.00	
PEARL		HOLLOWAY	1441	Providence School Dept.	PRSB	21.00	
SANDRA		LENORE	1471	Smithfield School Dept.	PRSB	21.00	
SUSAN		CHIN	1441	Providence School Dept.	PRSB	21.00	
THOMAS		MCGHEE	1441	Providence School Dept.	PRSB	21.00	



**TEACHER RETIREES AND NON-CERTIFIED RETIREES WORKING 2023-2024 SCHOOL YEAR  
 PRSB--SUBSTITUTE AND IN A STATE SCHOOL SUB; PRAM--VACANCY; PRMS--MUNICIPAL IN A SCHOOL REPORT DTD 12-5-2023**

<b>First Name</b>	<b>Middle Initial</b>	<b>Last Name</b>	<b>Employer Code</b>	<b>Employer</b>	<b>Title/Function</b>	<b>Number of Days</b>	<b>Footnote</b>
EILEEN		LARIVIERE	1631	Woonsocket School Dept.	PRSB	20.50	
KENNETH	L	PECKHAM	1631	Woonsocket School Dept.	PRSB	20.50	
GAIL	M	PALUMBO	1473	Smithfield School Dept. (NC)	PRMS	20.00	
MICHAEL	J	GERAGHTY	1441	Providence School Dept.	PRSB	20.00	
BRIAN	R	BUCK	1321	Middletown Public Schools	PRSB	19.50	
CAROL	A	ROSA	1421	Portsmouth School Dept.	PRSB	19.50	
ANDY		BARNES	1491	South Kingstown School Dept.	PRAM	19.00	
ANNE	M	DIAMOND	1441	Providence School Dept.	PRSB	19.00	
JUDITH ANN		ANTONIO	1161	East Providence Schools	PRSB	19.00	
PATRICIA	L	GIARRUSSO	1491	South Kingstown School Dept.	PRSB	19.00	
TERESA		EAGAN	1341	New Shoreham School Dist.	PRAM	18.50	
ALISON		ARRUDA	1421	Portsmouth School Dept.	PRAM	18.00	
CHARLAYNE	R	EKELUND	1111	Cranston School Dept.	PRSB	18.00	
DIANE	M	DESIMONE	1441	Providence School Dept.	PRSB	18.00	
DIANNE	E	PINTO	1161	East Providence Schools	PRSB	18.00	
LAURENCE		HALL	1111	Cranston School Dept.	PRSB	18.00	
LINDA	M	LOMAX	1411	Pawtucket School Dept.	PRAM	18.00	
MARYELLEN		PIERCE	1373	North Kingstown School Dept. (NC)	PRMS	18.00	
PATRICIA	L	ROCK	1111	Cranston School Dept.	PRSB	18.00	
RALPH	A	MONTELLA	1911	Times2 Academy	PRAM	17.50	
DEBORAH		STELLMACH	1441	Providence School Dept.	PRSB	17.00	
FRANCES		COLA	1441	Providence School Dept.	PRSB	17.00	
JUDITH		FAHEY	1161	East Providence Schools	PRSB	17.00	
MARCIA	A	LINBACK	1123	Cumberland School Dept. (NC)	PRMS	17.00	
MARIA	J	MANSELLA	1031	Burrillville School Dept.	PRAM	17.00	
CAROL		LANOIE	1631	Woonsocket School Dept.	PRSB	16.50	
SUSAN		VERRECCHIA	1441	Providence School Dept.	PRSB	16.50	
ANA	M	FEENSTRA	1441	Providence School Dept.	PRSB	16.00	
ANN		BARRY	1411	Pawtucket School Dept.	PRSB	16.00	
ANN	C	CAMPBELL	1123	Cumberland School Dept. (NC)	PRMS	16.00	
BARBARA		MCARDLE	1441	Providence School Dept.	PRSB	16.00	
CARMEN	M	ROBICHAUD	1441	Providence School Dept.	PRSB	16.00	
MICHELLE	C	JAQUES	1031	Burrillville School Dept.	PRSB	16.00	
ROBIN		FRICCHIONE	1421	Portsmouth School Dept.	PRSB	16.00	
RUSSELL	D	NOBLE	1001	Barrington Public Schools	PRSB	16.00	
THERESA	M	CONNOR	1441	Providence School Dept.	PRSB	16.00	
LEONARDA	A	URENA	1441	Providence School Dept.	PRSB	15.50	
CATHERINE	A	CHATOWSKY	1411	Pawtucket School Dept.	PRSB	15.00	
CINDY	D	ENGELHARDT	1441	Providence School Dept.	PRSB	15.00	
DAVID	F	DESJARDINS	1781	South Side Elementary Charter School	PRSB	15.00	

**TEACHER RETIREES AND NON-CERTIFIED RETIREES WORKING 2023-2024 SCHOOL YEAR  
 PRSB--SUBSTITUTE AND IN A STATE SCHOOL SUB; PRAM--VACANCY; PRMS--MUNICIPAL IN A SCHOOL REPORT DTD 12-5-2023**

<b>First Name</b>	<b>Middle Initial</b>	<b>Last Name</b>	<b>Employer Code</b>	<b>Employer</b>	<b>Title/Function</b>	<b>Number of Days</b>	<b>Footnote</b>
DEBRA	A	SIMONE	1031	Burrillville School Dept.	PRSB	15.00	
EILEEN	A	MULLANEY	1441	Providence School Dept.	PRSB	15.00	
JOHN	J	SCANLON	1111	Cranston School Dept.	PRSB	15.00	
MARY		PALUMBO	1491	South Kingstown School Dept.	PRSB	15.00	
PAUL	W	VIGEANT	1731	The Greene School	PRAM	15.00	
PAULA	J	VENTRONE	1441	Providence School Dept.	PRSB	15.00	
PERLA		MCGUINNESS	1441	Providence School Dept.	PRSB	15.00	
REBECCA	A	FLORI	1441	Providence School Dept.	PRSB	15.00	
LORI		MARSHALL	1671	International Charter School	PRAM	14.50	
JOHN		JASIONOWSKI	1413	Pawtucket School Dept. (NC)	PRMS	14.10	
EILEEN		AFONSO	1441	Providence School Dept.	PRSB	14.00	
ELIZABETH	A	HURLEY	1441	Providence School Dept.	PRSB	14.00	
ELIZABETH	L	BOEHMKE	1001	Barrington Public Schools	PRAM	14.00	
JOAO		ARRUDA	1421	Portsmouth School Dept.	PRSB	14.00	
JOSE		DAJER	1441	Providence School Dept.	PRSB	14.00	
JOYCE		BERNAU	1441	Providence School Dept.	PRSB	14.00	
PETER		SMITH	1441	Providence School Dept.	PRSB	14.00	
FRANCIS		LALIBERTE	1411	Pawtucket School Dept.	PRAM	13.50	
NANCY		SOUZA	1421	Portsmouth School Dept.	PRSB	13.50	
PATRIZIA		DEWEY	1321	Middletown Public Schools	PRSB	13.50	
BARBARA		RUGGIERI	1113	Cranston School Dept. (NC)	PRMS	13.00	
DEBORAH	A	LOCKWOOD	1441	Providence School Dept.	PRSB	13.00	
DEBRA	L	MORIARTY	1123	Cumberland School Dept. (NC)	PRMS	13.00	
KATHLEEN		CUSHING	1441	Providence School Dept.	PRSB	13.00	
KATHLEEN	A	CONNELL	1471	Smithfield School Dept.	PRSB	13.00	
MAUREEN	T	BRACEWELL	1441	Providence School Dept.	PRSB	13.00	
PAMELA	L	LAW	1071	Chariho Regional School Dist.	PRSB	13.00	
PAULA	M	CHIODO	1441	Providence School Dept.	PRSB	13.00	
ROBERT	D	MELVIN	1113	Cranston School Dept. (NC)	PRMS	13.00	
ROSE	M	CACCHIOTTI	1441	Providence School Dept.	PRSB	13.00	
STEVEN	B	KENNY	1091	Coventry Public Schools	PRSB	12.50	
NETTIE	L	ALEXANDER	1441	Providence School Dept.	PRSB	12.00	
AGNES	M	SUMMERLY	1441	Providence School Dept.	PRSB	11.50	
KATHLEEN	E	MARDO	1121	Cumberland School Dept.	PRSB	11.50	
MARIE	F	LUPINO	1111	Cranston School Dept.	PRSB	11.50	
SUSAN	G	SQUILLANTE	1091	Coventry Public Schools	PRSB	11.50	
ANTHONY	J	TUTALO	1441	Providence School Dept.	PRSB	11.00	
FRANCES	D	BEAUPRE	1621	Westerly School Dept.	PRSB	11.00	
JAMES	E	HAWORTH	1111	Cranston School Dept.	PRSB	11.00	
KAREN	A	KING	1191	Foster School Dist.	PRSB	11.00	

**TEACHER RETIREES AND NON-CERTIFIED RETIREES WORKING 2023-2024 SCHOOL YEAR**  
**PRSB--SUBSTITUTE AND IN A STATE SCHOOL SUB; PRAM--VACANCY; PRMS--MUNICIPAL IN A SCHOOL REPORT DTD 12-5-2023**

First Name	Middle Initial	Last Name	Employer Code	Employer	Title/Function	Number of Days	Footnote
KATHY		DIAS	1441	Providence School Dept.	PRSB	11.00	
LINDA		COLVIN	1031	Burrillville School Dept.	PRSB	11.00	
MARIE		FERAGNE	1441	Providence School Dept.	PRSB	11.00	
NANCY	P	MCGOVERN	1111	Cranston School Dept.	PRSB	11.00	
ROUAIDA	J	AGHIA	1441	Providence School Dept.	PRSB	11.00	
WILLIAM	J	PARE	1441	Providence School Dept.	PRSB	11.00	
YVETTE	Y	LAMBERT	1123	Cumberland School Dept. (NC)	PRMS	11.00	
DAVID	F	DESJARDINS	1781	South Side Elementary Charter School	PRAM	10.50	
EDNA	M	DUNN	1151	East Greenwich School Dept.	PRSB	10.50	
CLAUDIA		VIEIRA	1411	Pawtucket School Dept.	PRSB	10.00	
DEBRA		MCLELLAND	1411	Pawtucket School Dept.	PRSB	10.00	
ELIZABETH	E	MORRIS	1441	Providence School Dept.	PRSB	10.00	
KAREN		POTTER	1323	Middletown Public Schools (NC)	PRMS	10.00	
LINDA		KARSULAVITCH	1411	Pawtucket School Dept.	PRAM	10.00	
LINDA	A	TERRANOVA	1621	Westerly School Dept.	PRSB	10.00	
PATRICIA	L	FEDELI	1111	Cranston School Dept.	PRSB	10.00	
RONALD	F	MARA	1441	Providence School Dept.	PRSB	10.00	
THELMA	E	BURBANK	1411	Pawtucket School Dept.	PRSB	10.00	
WILLIAM	L	SMITH	1091	Coventry Public Schools	PRAM	10.00	
RUSSELL	E	SPENCER	1153	East Greenwich School Dist. (NC)	PRMS	9.50	
BRENDA	L	WARNOCK	1411	Pawtucket School Dept.	PRSB	9.00	
CAROL		SCHLINK	1441	Providence School Dept.	PRSB	9.00	
CHRISTOPHER	D	ROBERTSON	1161	East Providence Schools	PRSB	9.00	
CYNTHIA		AUBIN	1441	Providence School Dept.	PRSB	9.00	
ELIZABETH	A	CLESAS	1441	Providence School Dept.	PRSB	9.00	
FRANCES		LANDRY	1691	Blackstone Academy Charter School, Inc.	PRAM	9.00	
GIL	S	MONTEIRO	1441	Providence School Dept.	PRSB	9.00	
LORNA		O'CONNELL	1411	Pawtucket School Dept.	PRSB	9.00	
MARYANNE		GREGORY	1121	Cumberland School Dept.	PRSB	9.00	
ROSANNE		BADWAY	1411	Pawtucket School Dept.	PRSB	9.00	
SALLY	A.	MITCHELL	1191	Foster School Dist.	PRSB	9.00	
SUSAN	A	MARTIN	1441	Providence School Dept.	PRSB	9.00	
SUZANNE	M	SOUZA	1111	Cranston School Dept.	PRSB	9.00	
CAROL	A	MUNDY	1121	Cumberland School Dept.	PRSB	8.50	
MARY LYNNE		MILLER	1121	Cumberland School Dept.	PRSB	8.50	
WILLIAM		WEBB	1281	Johnston School Dept.	PRSB	8.50	
AUDREY	A	KILSEY	1441	Providence School Dept.	PRSB	8.00	
DANIEL		LILLEY	1441	Providence School Dept.	PRSB	8.00	
DAVID	R	BENTLEY	1273	Jamestown School Dept. (NC)	PRMS	8.00	
DEBORAH	C	RUDE	1123	Cumberland School Dept. (NC)	PRMS	8.00	

**TEACHER RETIREES AND NON-CERTIFIED RETIREES WORKING 2023-2024 SCHOOL YEAR  
 PRSB--SUBSTITUTE AND IN A STATE SCHOOL SUB; PRAM--VACANCY; PRMS--MUNICIPAL IN A SCHOOL REPORT DTD 12-5-2023**

<b>First Name</b>	<b>Middle Initial</b>	<b>Last Name</b>	<b>Employer Code</b>	<b>Employer</b>	<b>Title/Function</b>	<b>Number of Days</b>	<b>Footnote</b>
DENISE	T	ZAVOTA	1471	Smithfield School Dept.	PRSB	8.00	
ERIC	S	PETTINE	1621	Westerly School Dept.	PRSB	8.00	
GIANNA		ZANNINI	1441	Providence School Dept.	PRSB	8.00	
KIMBERLY	R	ALVES	1441	Providence School Dept.	PRSB	8.00	
LINDA	A	BEVILAQUA	1571	Warwick School Dept.	PRSB	8.00	
LISA	J	TUTAJ-HARPIN	1031	Burrillville School Dept.	PRAM	8.00	
NANCY		INZER	1031	Burrillville School Dept.	PRSB	8.00	
PHYLLIS	R	OELBAUM	1441	Providence School Dept.	PRSB	8.00	
ROSEMARY HAYES		SANTOS	1441	Providence School Dept.	PRSB	8.00	
CATHY	A	FALES	1001	Barrington Public Schools	PRSB	7.50	
JOHANNA	L	CADORET	1321	Middletown Public Schools	PRSB	7.50	
DIANE		DYER	1153	East Greenwich School Dist. (NC)	PRMS	7.00	
FRANCESCA		ORSINI	1441	Providence School Dept.	PRSB	7.00	
KAREN	T	MUIR	1441	Providence School Dept.	PRSB	7.00	
PAMELA	R	RINALDI	1411	Pawtucket School Dept.	PRSB	7.00	
PAUL	W	VIGEANT	1491	South Kingstown School Dept.	PRAM	7.00	
ROBERT	J	LECHMAN	1473	Smithfield School Dept. (NC)	PRMS	7.00	
SUSAN		MROCZKA	1631	Woonsocket School Dept.	PRSB	7.00	
CHERYL		LARIVIERE	1301	Lincoln School Dept.	PRSB	6.50	
MARY JO		REIDY	1111	Cranston School Dept.	PRSB	6.50	
THOMAS		RICHARDSON	1073	Chariho Regional School Dist. (NC)	PRMS	6.50	
CLAUDIA		BARRETT	1441	Providence School Dept.	PRSB	6.00	
DIANE		ENGELS	1631	Woonsocket School Dept.	PRSB	6.00	
DONNA		DINUCCI	1441	Providence School Dept.	PRSB	6.00	
ELIZABETH	S	PERRY	1007	Barrington COLA NonCertifieds	PRMS	6.00	
JAMES	H	DILLON	1091	Coventry Public Schools	PRAM	6.00	
KENDRA	L	HAGGERTY	1441	Providence School Dept.	PRSB	6.00	
MARIA		MARQUIS	1441	Providence School Dept.	PRSB	6.00	
SHEILA		MORGAN	1091	Coventry Public Schools	PRSB	6.00	
ELIZABETH	M	RUEST	1111	Cranston School Dept.	PRSB	5.50	
JUDITH	A	CALABRETTA	1321	Middletown Public Schools	PRSB	5.50	
LAURA	J	PELLEGRINO	1621	Westerly School Dept.	PRSB	5.50	
PATRICIA	J	BRISSETTE	1001	Barrington Public Schools	PRSB	5.50	
PAULEEN	M	SLATER	1121	Cumberland School Dept.	PRSB	5.50	
ANN	M	LIGUORI	1621	Westerly School Dept.	PRSB	5.00	
CAROL	A	SHEA	1161	East Providence Schools	PRSB	5.00	
CAROLYN	M	PELZMAN	1471	Smithfield School Dept.	PRSB	5.00	
DEBORAH		BOLTON	1411	Pawtucket School Dept.	PRSB	5.00	
DEBRA	J	ZEPP	1491	South Kingstown School Dept.	PRSB	5.00	
ELIZABETH	S	STONER	1001	Barrington Public Schools	PRSB	5.00	

**TEACHER RETIREES AND NON-CERTIFIED RETIREES WORKING 2023-2024 SCHOOL YEAR  
 PRSB--SUBSTITUTE AND IN A STATE SCHOOL SUB; PRAM--VACANCY; PRMS--MUNICIPAL IN A SCHOOL REPORT DTD 12-5-2023**

<b>First Name</b>	<b>Middle Initial</b>	<b>Last Name</b>	<b>Employer Code</b>	<b>Employer</b>	<b>Title/Function</b>	<b>Number of Days</b>	<b>Footnote</b>
GENE	P	DUFAULT	1091	Coventry Public Schools	PRSB	5.00	
JAMES	C	WILDE	1441	Providence School Dept.	PRSB	5.00	
JAYNE	S	BAILEY	1091	Coventry Public Schools	PRSB	5.00	
LISA		WALSH	1491	South Kingstown School Dept.	PRSB	5.00	
MAUREEN	E	FARRELL	1441	Providence School Dept.	PRSB	5.00	
ROSEMARY		STEIN	1471	Smithfield School Dept.	PRSB	5.00	
SANDRA	M	REGO	1091	Coventry Public Schools	PRSB	5.00	
SHARON		DUNN	1341	New Shoreham School Dist.	PRAM	5.00	
JANICE	E	DEFRANCES	1781	South Side Elementary Charter School	PRAM	4.50	
LISA	A	MOTT	1281	Johnston School Dept.	PRSB	4.50	
MARY KATE		CORRY	1413	Pawtucket School Dept. (NC)	PRMS	4.50	
C	T	BONZAGNI	1441	Providence School Dept.	PRSB	4.00	
CAROL	A	BROWN	1151	East Greenwich School Dept.	PRAM	4.00	
CYNTHIA	D	FERREIRA	1123	Cumberland School Dept. (NC)	PRMS	4.00	
DENNIS	T	RINALDI	1441	Providence School Dept.	PRAM	4.00	
JANE	P	DOYLE	1273	Jamestown School Dept. (NC)	PRMS	4.00	
JANICE	E	ABRAHAM	1091	Coventry Public Schools	PRSB	4.00	
LAURA		BARRETO	1413	Pawtucket School Dept. (NC)	PRMS	4.00	
LAURIE	A	MAGNETTE	1441	Providence School Dept.	PRSB	4.00	
LINDA	M	LEFEBVRE	1441	Providence School Dept.	PRSB	4.00	
ROSINA	J	GUISE	1411	Pawtucket School Dept.	PRSB	4.00	
SARAH	S	GOLDBERG	1123	Cumberland School Dept. (NC)	PRMS	4.00	
TERESA		SANGERMANO	1441	Providence School Dept.	PRSB	4.00	
ANN		SAN ANTONIO	1441	Providence School Dept.	PRSB	3.00	
BRADLEY	W	MORGAN	1633	Woonsocket School Dept. (NC)	PRMS	3.00	
CANDACE	A	MCCALL	1441	Providence School Dept.	PRSB	3.00	
DEBBI	A	MICELI	1071	Chariho Regional School Dist.	PRSB	3.00	
PAMELA	M	ARDIZZONE	1441	Providence School Dept.	PRSB	3.00	
PATRICIA	J	GEARY	1441	Providence School Dept.	PRSB	3.00	
PAULA M	M	SEROWIK	1161	East Providence Schools	PRSB	3.00	
RICHARD	F	KINSLOW	1411	Pawtucket School Dept.	PRAM	3.00	
SCOTT	M	NELSON	1341	New Shoreham School Dist.	PRAM	3.00	
THOMAS	R	HINES	1471	Smithfield School Dept.	PRSB	3.00	
VIOLETTE		FALK	1441	Providence School Dept.	PRAM	3.00	
VIOLETTE		FALK	1441	Providence School Dept.	PRSB	3.00	
KENNETH	C	PERRY	1441	Providence School Dept.	PRAM	2.50	
PATRICIA		LYNCH	1321	Middletown Public Schools	PRSB	2.50	
STEVEN	W	COOPER	1413	Pawtucket School Dept. (NC)	PRMS	2.50	
ALISON		ARRUDA	1421	Portsmouth School Dept.	PRSB	2.00	
BARBARA		SWIENTON	1341	New Shoreham School Dist.	PRAM	2.00	

**TEACHER RETIREES AND NON-CERTIFIED RETIREES WORKING 2023-2024 SCHOOL YEAR  
 PRSB--SUBSTITUTE AND IN A STATE SCHOOL SUB; PRAM--VACANCY; PRMS--MUNICIPAL IN A SCHOOL REPORT DTD 12-5-2023**

<b>First Name</b>	<b>Middle Initial</b>	<b>Last Name</b>	<b>Employer Code</b>	<b>Employer</b>	<b>Title/Function</b>	<b>Number of Days</b>	<b>Footnote</b>
CHARLES	M	MOREAU	1007	Barrington COLA NonCertifieds	PRMS	2.00	
CLAIRE		LAQUERRE	1631	Woonsocket School Dept.	PRSB	2.00	
DONNA		LANGTON	1411	Pawtucket School Dept.	PRSB	2.00	
GEORGIA		FORTUNATO	1401	Northern Rhode Island Collaborative	PRAM	2.00	
KENNETH	C	PERRY	1441	Providence School Dept.	PRSB	2.00	
LAWRENCE	A	OLIVIERI	1441	Providence School Dept.	PRSB	2.00	
SCOTT	M	NELSON	1343	New Shoreham School Dist. (NC)	PRMS	2.00	
THOMAS	J	DIPIPPO	1441	Providence School Dept.	PRSB	2.00	
ANN		HORGAN	1091	Coventry Public Schools	PRSB	1.50	
DIANE	L	BRENNAN	1201	Foster/Glocester Reg. School Dist.	PRAM	1.50	
FAITH		PARADIS	1001	Barrington Public Schools	PRSB	1.50	
KRISTINE		BELL	1073	Chariho Regional School Dist. (NC)	PRMS	1.50	
MARGARET		MCCABE	1413	Pawtucket School Dept. (NC)	PRMS	1.50	
MICHAEL	T	CAHILL	1413	Pawtucket School Dept. (NC)	PRMS	1.50	
BRIAN	M	DELAIRE	1001	Barrington Public Schools	PRSB	1.00	
CAROL		VESCERA	1411	Pawtucket School Dept.	PRSB	1.00	
DOLORES	E	O'ROURKE	1091	Coventry Public Schools	PRSB	1.00	
ELEANOR		VANHOUWE	1631	Woonsocket School Dept.	PRSB	1.00	
ELGERINE		ROBERTS	1441	Providence School Dept.	PRSB	1.00	
ELIZABETH		LESPERANCE	1411	Pawtucket School Dept.	PRSB	1.00	
IRENE	B	SULLIVAN	1271	Jamestown School Dept.	PRSB	1.00	
JEANNINE	I	RUE	1123	Cumberland School Dept. (NC)	PRMS	1.00	
JO-ANN	E	WUNSCHER	1411	Pawtucket School Dept.	PRSB	1.00	
JOHN	D	MAZZOCCA	1441	Providence School Dept.	PRSB	1.00	
JOHN	E	LAWRENCE	1471	Smithfield School Dept.	PRSB	1.00	
JOHN L	P	BREGUET	1471	Smithfield School Dept.	PRSB	1.00	
JUDITH		VALENTE	1201	Foster/Glocester Reg. School Dist.	PRAM	1.00	
KATHRYN		MANSFIELD	1631	Woonsocket School Dept.	PRSB	1.00	
MARGUERITE		DELPONTE	1381	North Providence School Dept.	PRAM	1.00	
MARIA	G	JONES	1621	Westerly School Dept.	PRSB	1.00	
NANCY	E	PHILLIPS	1631	Woonsocket School Dept.	PRSB	1.00	
RAYMOND		PITA	1411	Pawtucket School Dept.	PRSB	1.00	
SUSAN	A	MARTIN	1491	South Kingstown School Dept.	PRSB	1.00	
BETTY	A	NADROWSKI	1091	Coventry Public Schools	PRSB	0.50	
DIANE		ASKAR	1631	Woonsocket School Dept.	PRSB	0.50	
JOSEPH		BRAGANCA	1413	Pawtucket School Dept. (NC)	PRMS	0.50	
RAYMOND		MCGEE	1413	Pawtucket School Dept. (NC)	PRMS	0.50	

**PRME--RETIRES WORKING MUNICIPALITIES IN 2023 CALENDAR YEAR --REPORT DTD 12-05-2023**

<b>First Name</b>	<b>Middle Initial</b>	<b>Last Name</b>	<b>Employer Code</b>	<b>Employer</b>	<b>Title/Function</b>	<b>Number of Days</b>	<b>Footnote</b>
EMERSON	J	MARVEL	1162	City of East Providence	PRME	217.00	Suspended Pension
MICHAEL	A	DEMELLO	1015	Bristol Fire Dept.	PRME	207.00	Suspended Pension
DENNIS	J	DE JESUS	1112	City of Cranston	PRME	73.00	Close to limit
MICHAEL	D	CASSIDY	1412	City of Pawtucket	PRME	73.00	Close to limit
MICHAEL		WILDENHAIN	1412	City of Pawtucket	PRME	71.00	Close to limit
JEANNE	L	HODGE	1412	City of Pawtucket	PRME	69.00	Close to limit
JESSICA		DESROCHERS	1632	City of Woonsocket	PRME	69.00	Close to limit
MICHAEL	L	HOULE	1632	City of Woonsocket	PRME	68.50	Close to limit
ROBERTA	A	TURCHETTA	1112	City of Cranston	PRME	68.00	Close to limit
JOHN	J	TOOLAN	1009	Barrington COLA Group	PRME	66.50	Close to limit
RICHARD		ARPIN JR	1122	Town of Cumberland	PRME	66.50	Close to limit
NORA		HAWKINS	1116	Cranston Housing Auth.	PRME	66.00	Close to limit
THEODORE	J	PRZYBYLA	1462	Town of Scituate	PRME	65.00	Close to limit
WAYNE		BARNES	1162	City of East Providence	PRME	65.00	Close to limit
ROBERT	F	STROM	1012	Town of Bristol	PRME	64.00	
DANIEL	J	MEUNIER	1157	EAST GREENWICH-COLA	PRME	63.00	
KAREN	M	ASSELIN	1412	City of Pawtucket	PRME	63.00	
DONNA		PINTO	1412	City of Pawtucket	PRME	61.50	
LOUIS	A	LANNI	1382	Town of North Providence	PRME	60.00	
LYNN	L	BURKHARDT	1009	Barrington COLA Group	PRME	59.50	
BRENDA	C	PANNONE	1382	Town of North Providence	PRME	59.00	
CHARLENE	R	GAGNON	1412	City of Pawtucket	PRME	59.00	
JOAO		PATITA	1610	West Warwick School NC (Legacy)	PRME	59.00	
KENNETH	A	BROWN JR	1474	Smithfield Police Dept.	PRME	59.00	
ARNOLD		VECCHIONE	1286	Johnston Housing Auth.	PRME	57.50	
THOMAS	E	DUQUETTE	1602	Town of West Greenwich	PRME	57.50	
GLORIA	J	RADO	1412	City of Pawtucket	PRME	57.00	
GREGORY	A	JONES	1125	Cumberland Fire Dist.	PRME	57.00	Accidental Disability
MARY	A	MICHALCZYK	1356	Newport Housing Auth.	PRME	57.00	
JOANNE		TOLCHINSKY	1116	Cranston Housing Auth.	PRME	56.50	
EDWARD	A	BURNETT	1352	City of Newport	PRME	56.00	
EDWARD	R	FRATELLI	1478	Town of Smithfield (COLA)	PRME	55.00	
SCOTT		GOODWIN	1392	Town of North Smithfield	PRME	55.00	
KATHLEEN		SAWKA	1412	City of Pawtucket	PRME	54.00	
LAURIE	S	SIMPSON	1412	City of Pawtucket	PRME	54.00	
PAULINE	S	PAYEUR	1632	City of Woonsocket	PRME	52.50	
LOUIS	J	CHARELLO	1705	Lincoln Fire Dept	PRME	52.00	
PAUL		FAGAN	1352	City of Newport	PRME	51.50	

PRME--RETIRES WORKING MUNICIPALITIES IN 2023 CALENDAR YEAR --REPORT DTD 12-05-2023

First Name	Middle Initial	Last Name	Employer Code	Employer	Title/Function	Number of Days	Footnote
LINDA	M	DIPRETE	1112	City of Cranston	PRME	51.00	
DONALD	L	GAGNON	1632	City of Woonsocket	PRME	49.50	
JOHN N	N	BUCCI	1112	City of Cranston	PRME	48.50	
RONALD	J	WOODS	1032	Town of Burrillville	PRME	45.00	
DEBRA	A	MCDOLE	1412	City of Pawtucket	PRME	44.00	
RUSSELL	E	SPENCER	1158	EAST GREENWICH-COLA-NC	PRME	43.50	
GAIL		TOPAKIAN	1112	City of Cranston	PRME	43.00	
ROBERT	E	BENSON	1412	City of Pawtucket	PRME	41.50	
KEVIN		CROKE	1162	City of East Providence	PRME	41.00	
ANNA	E	MARINO	1112	City of Cranston	PRME	40.50	
KENNETH	R	MASON	1112	City of Cranston	PRME	39.50	
LAURA	A	SILVIA	1009	Barrington COLA Group	PRME	38.00	
JOSEPH	D	ANDREOZZI	1386	North Providence Hsg. Auth.	PRME	37.60	
DAVID		ARUSSO	1286	Johnston Housing Auth.	PRME	37.50	
MICHAEL	J	DELYI	1272	Town of Jamestown	PRME	37.00	
DIANE	M	WALSH	1112	City of Cranston	PRME	36.00	
PAMELA	J	GOULD	1322	Town of Middletown	PRME	36.00	
PRUDENCE	M	FALLON	1532	Town of Tiverton	PRME	35.00	
ANGELA	M	JALETTE	1034	Burrillville Police Dept.	PRME	34.00	
LEE	A	SOITO	1004	Barrington Police Dept.	PRME	34.00	
ERNEST	R	HUTTON	1412	City of Pawtucket	PRME	33.50	
FRANK	E	JUDGE	1082	Town of Charlestown	PRME	33.50	
LINDA	C	ARCHETTO	1112	City of Cranston	PRME	33.50	
DAVID	M	BEAUCHEMIN	1034	Burrillville Police Dept.	PRME	33.00	
WILLIAM	A	HANLEY II	1352	City of Newport	PRME	32.00	
JEROME	D	MOYNIHAN	1632	City of Woonsocket	PRME	30.00	
CATHERINE	T	OCHS	1610	West Warwick School NC (Legacy)	PRME	29.00	
DENNIS	P	MANN	1412	City of Pawtucket	PRME	27.50	
STEVEN	M	IACOBUCCI	1112	City of Cranston	PRME	26.50	
ERNEST		DE PARI	1112	City of Cranston	PRME	26.25	
LOUIS	M	PRATA	1282	Town of Johnston	PRME	18.50	
JOHN		RAO JR	1158	EAST GREENWICH-COLA-NC	PRME	18.00	
LINDA	H	JAMES	1009	Barrington COLA Group	PRME	18.00	
PETER	S	LAPOLLA	1112	City of Cranston	PRME	17.00	
MADELYN		GERMANI	1382	Town of North Providence	PRME	16.50	
JUNE		REGAN	1342	Town of New Shoreham	PRME	16.00	
CARL	E	VIEIRA	1372	Town of North Kingstown	PRME	15.00	
DENNIS	J	MCLAUGHLIN	1412	City of Pawtucket	PRME	14.00	



PRME--RETIRES WORKING MUNICIPALITIES IN 2023 CALENDAR YEAR --REPORT DTD 12-05-2023

First Name	Middle Initial	Last Name	Employer Code	Employer	Title/Function	Number of Days	Footnote
LARETO	P	GUGLIETTA	1034	Burrillville Police Dept.	PRME	14.00	
SALLY	A	INGEGNERI-SIMONE	1282	Town of Johnston	PRME	14.00	
KAREN	M	LECLAIRE	1412	City of Pawtucket	PRME	13.00	
MICHAEL	C	RHEAUME	1474	Smithfield Police Dept.	PRME	12.00	
LOUIS	P	CIRILLO	1009	Barrington COLA Group	PRME	11.50	
ERNEST		MARINARO	1157	EAST GREENWICH-COLA	PRME	11.00	
JANET	A	EBERTS	1478	Town of Smithfield (COLA)	PRME	10.00	
MARY	E	MADONNA	1412	City of Pawtucket	PRME	9.50	
JANET	C	RICHARDSON	1009	Barrington COLA Group	PRME	9.00	
ROBERT		ST ANDRE	1148	Cumberland Rescue	PRME	9.00	
DAVID	E	DESJARLAIS	1154	East Greenwich Police Dept.	PRME	8.00	
HARRY	N	MCCRAY	1372	Town of North Kingstown	PRME	8.00	
EDWARD	A	DAVIDSON	1282	Town of Johnston	PRME	7.50	
RICHARD	J	DENICE	1154	East Greenwich Police Dept.	PRME	7.00	
CHRISTOPHER		RAFFERTY	1154	East Greenwich Police Dept.	PRME	6.00	
STEVEN		GAMACHE	1632	City of Woonsocket	PRME	6.00	
CAROL ANN		AQUILANTE	1382	Town of North Providence	PRME	5.00	
STEPHANIE		SUSI	1282	Town of Johnston	PRME	4.50	
JOHN	T	OHARA	1154	East Greenwich Police Dept.	PRME	3.50	
DAVID	A	CARPENTER	1392	Town of North Smithfield	PRME	3.00	
MICHAEL	K	MOONEY	1382	Town of North Providence	PRME	3.00	
DAVID		ARUSSO	1282	Town of Johnston	PRME	2.00	
ELIZABETH		RYNDA	1162	City of East Providence	PRME	2.00	
MARIE	A	FISHER	1116	Cranston Housing Auth.	PRME	2.00	
WILLIAM	S	HIGGINS	1154	East Greenwich Police Dept.	PRME	2.00	
PAUL	G	MASSE	1412	City of Pawtucket	PRME	1.50	
ARTHUR	M	RHODES	1154	East Greenwich Police Dept.	PRME	1.00	
CAROL ANN		AQUILANTE	1352	City of Newport	PRME	1.00	
CATHY	A	KEIGHLEY	1016	Bristol Housing Authority	PRME	1.00	
DAVID	B	HULING	1157	EAST GREENWICH-COLA	PRME	1.00	
GAIL	G	DIPIERRO	1009	Barrington COLA Group	PRME	1.00	
JUDITH		QUATTRUCCI	1162	City of East Providence	PRME	0.50	

**RETIREES WORKING UNDER 18K AT STATE COLLEGES/UNIVS (EMPLOYER CODE = 2000)**  
**PRIS--State colleges/univs/--Instructor at a state school - Calendar Year 2023--Report dtd -12-05-2023**

First Name	Middle Initial	Last Name	Employer Code	Employer	Title/Function	Earnings	Footnote
ANDRES	R	ZUNIGA	2000	CCRI	PRIS	\$ 24,434.87	At limit
RICHARD	G	SWEARINGEN	2000	CCRI	PRIS	\$ 21,030.06	At limit
ANDREW		EGAN	2000	CCRI	PRIS	\$ 17,547.82	Close to limit
BRUNA	M	BOYLE	2000	URI	PRIS	\$ 16,973.85	Close to limit
DAVID		NEVES	2000	URI	PRIS	\$ 16,511.36	Close to limit
WILLIAM	T	BEHREND JR	2000	URI	PRIS	\$ 14,253.54	
CAROL	A	SPAZIANO	2000	CCRI	PRIS	\$ 14,252.60	
ROBERT	N	MASSE	2000	CCRI	PRIS	\$ 14,100.38	
MICHELLE		BROUSSEAU	2000	CCRI	PRIS	\$ 13,500.62	
EILEEN	P	ZISK	2000	CCRI	PRIS	\$ 12,874.50	
CLAIRE		DUMAS	2000	CCRI	PRIS	\$ 12,873.56	
THOMAS	H	MITCHELL	2000	CCRI	PRIS	\$ 12,873.56	
GAIL	S	O'ROURKE	2000	CCRI	PRIS	\$ 12,615.07	
BONNIE	B	RIPSTEIN	2000	RIC	PRIS	\$ 12,268.50	
JOHN ALAN	A	LONGIARU	2000	CCRI	PRIS	\$ 12,150.00	
ANDREW	A	BONNER	2000	CCRI	PRIS	\$ 12,080.64	
NORMAN	P	FORTIN	2000	URI	PRIS	\$ 11,700.00	
LORRAINE	E	BELLO	2000	CCRI	PRIS	\$ 11,565.74	
DONNA M		PATCH	2000	CCRI	PRIS	\$ 11,462.50	
VANESSA	G	DELGIUDICE	2000	RIC	PRIS	\$ 11,392.00	
WENDY		ARONOFF	2000	CCRI	PRIS	\$ 11,225.00	
WILLIAM	C	OKERHOLM JR	2000	CCRI	PRIS	\$ 10,222.75	
ALFRED	R	CRUDALE	2000	URI	PRIS	\$ 8,661.93	
WILLIAM	H	GREEN	2000	CCRI	PRIS	\$ 8,592.66	
LAWRENCE	P	BYRNE	2000	CCRI	PRIS	\$ 8,559.48	
ALFRED	L	PERROTTI	2000	CCRI	PRIS	\$ 8,464.00	
MARIE	H	BAGUCHINSKY	2000	URI	PRIS	\$ 8,289.75	
PETER	J	PETRONE	2000	CCRI	PRIS	\$ 6,918.36	
VICTOR	R	OSTERMAN	2000	CCRI	PRIS	\$ 6,893.50	
WILLIAM	A	TRIBELLI	2000	CCRI	PRIS	\$ 6,887.62	
GEORGE		PAGE	2000	CCRI	PRIS	\$ 6,801.60	
GARY	C	COMUNALE	2000	URI	PRIS	\$ 6,130.48	
SUSAN	L	HAWKSLEY	2000	CCRI	PRIS	\$ 5,760.48	

**RETIREES WORKING UNDER 18K AT STATE COLLEGES/UNIVS (EMPLOYER CODE = 2000)**  
**PRIS--State colleges/univs/--Instructor at a state school - Calendar Year 2023--Report dtd -12-05-2023**

<b>First Name</b>	<b>Middle Initial</b>	<b>Last Name</b>	<b>Employer Code</b>	<b>Employer</b>	<b>Title/Function</b>	<b>Earnings</b>	<b>Footnote</b>
LESLIE	H	ARCHIBALD	2000	CCRI	PRIS	\$ 5,279.04	
GERALD		SILBERMAN	2000	CCRI	PRIS	\$ 5,160.48	
JO-ANN		PHILLIPS	2000	URI	PRIS	\$ 4,983.41	
PATRICIA	A	ROSE	2000	CCRI	PRIS	\$ 4,797.07	
HUGO	J	DEASCENTIS JR	2000	CCRI	PRIS	\$ 4,320.00	
ANTHONY	J	CIOTOLA	2000	CCRI	PRIS	\$ 3,519.36	
THOMAS	A	CONBOY	2000	CCRI	PRIS	\$ 3,519.36	
CHARLES	P	LEHOURITES	2000	CCRI	PRIS	\$ 2,646.04	
SUSANNE	M	RACCA	2000	CCRI	PRIS	\$ 2,581.38	
PAUL	C	MELARAGNO	2000	CCRI	PRIS	\$ 2,536.00	
JAMES	E	GUARINO	2000	CCRI	PRIS	\$ 2,234.39	
MARLYCE	L	ADAMS	2000	RIC	PRIS	\$ 2,136.00	
KARIN	E	LUKOWICZ	2000	CCRI	PRIS	\$ 1,632.00	
MICHAEL	J	PAUL	2000	RIC	PRIS	\$ 1,628.00	
KIRK		LAMBOY	2000	CCRI	PRIS	\$ 1,417.50	
WILLIAM	J	IZZI	2000	RIC	PRIS	\$ 780.00	
DAVID	C	MARANDOLA	2000	CCRI	PRIS	\$ 712.00	
RICHARD	J	BENEDUCE	2000	CCRI	PRIS	\$ 256.00	

**RETIREES WORKING UNDER DRIVER'S EDUCATION INSTRUCTION and/or MOTORCYCLE DRIVER EDUCATION COURSES - (EMPLOYER CODE = 2000)**  
**PRDE--State colleges/univs/ - Calendar Year 2023--Report dtd -12-05-2023**

<b>First Name</b>	<b>Middle Initial</b>	<b>Last Name</b>	<b>Employer Code</b>	<b>Employer</b>	<b>Title/Function</b>	<b>Earnings</b>	<b>Footnote</b>
KATHLEEN	D	HUDSON	2000	CCRI	PRDE	\$ 14,290.08	Close to limit
PETER	V	RIVELLI	2000	CCRI	PRDE	\$ 11,969.14	
LORENZO		TETREAULT	2000	CCRI	PRDE	\$ 9,641.24	
KATHLEEN		CRESCENZO	2000	CCRI	PRDE	\$ 5,245.60	
ALBERT	K	AUBIN	2000	CCRI	PRDE	\$ 4,833.53	
PATRICIA	L	DIONNE	2000	CCRI	PRDE	\$ 3,300.86	
DAYUS		METTS	2000	CCRI	PRDE	\$ 1,963.25	

**RETIRED REGISTERED NURSES WORKING AT A STATE-OPERATED FACILITY IN RI INCLUDING EMPLOYMENT AS A FACULTY MEMBER OF A NURSING PROGRAM AT A STATE-OPERATED COLLEGE OR UNIVERSITY--CALENDAR YEAR 2023 (EMPLOYER CODE --2000)--REPORT DTD 12-05-2023**

<b>First Name</b>	<b>Middle Initial</b>	<b>Last Name</b>	<b>Employer Code</b>	<b>Employer</b>	<b>Title/Function</b>	<b>Number of Days</b>	<b>Footnote</b>
LINDA		MASSE	2000	BHDDH--ZAMBARANO	PRNR	61	
ERIN	M	SCANLON	2000	BHDDS--ESH	PRNR	35	
KEVIN	M	WILKS	2000	RIC	PRNR	16	

# ERSRI Memorandum

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**ERSRI BOARD:**

James A. Diossa  
*General Treasurer Chair*

John P. Maguire  
*Vice Chair*

Roger P. Boudreau

Mark A. Carruolo

Joseph Codega

Paul L. Dion

Matthew K. Howard

Brenna McCabe

Claire M. Newell

Andrew E. Nota

Raymond J. Pouliot

Jean Rondeau

Laura Shawhughes

Michael J. Twohey

Lisa A. Whiting

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Frank J. Karpinski  
*Executive Director*

Date: December 12, 2023

To: Retirement Board

From: Frank J. Karpinski, Executive Director

Subject: West Warwick Schools Post Retirement Employment  
Report

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**Enclosed please find the listing of the West Warwick Schools' Legacy Plan's reported retirees working as of November 2023**

November 2023 10/29/23-12/02/23

Name 1610	DOB	Monthly Hours	Monthly Earnings	YTD Hours	YTD Earnings
Amaral, Pamela	1/28/1955	20.5	\$473.76	536	\$12,046.94
Kelly, Mary	2/3/1955	31	\$671.77	231	\$4,916.94
Ledford, Celeste	2/15/1957	0	\$0.00	155	\$3,420.80
Martin, Linda	10/20/1948	35	\$816.40	875	\$18,923.72
O'Connell, Mary	10/17/1951	58.75	\$1,297.20	388.25	\$8,442.18
Paul, Suzanne	4/10/1966	6.5	\$140.86	54.5	\$1,162.63
Rainville, Henrietta	6/18/1941	85	\$1,876.80	203	\$4,482.24
Rotenberg, Nancy	7/27/1951	80	\$1,952.80	764	\$18,367.02
Silveira, Gloria	6/7/1957	68	\$1,659.88	708	\$16,986.92
Simpson, Karen	5/21/1953	93.25	\$2,131.58	839	\$18,376.25
Swanson, Janet	5/26/1954	6.6	\$145.73	39.6	\$291.46
Patita, Joao	7/20/1958	165.75	\$4,462.50	1112.63	\$33,252.00
Ochs, Catherine 1617	7/29/1957	72.5	\$1,985.00	526.75	\$15,468.50



## 10.1. Report of Contributions

For Reference





**Employees' Retirement System of Rhode Island**

**Report of Received Contributions**  
**Period Ending: 11/30/2023**


	Organization	Frequency	Received Employer/Employee Contributions	Delinquent Contributions	Delinquent Loss/Earnings Calculation
1001	Barrington Public Schools	BIWK	\$228,895.01		
1007	Barrington COLA Non-Certified	BIWK	\$28,464.19		
1009	Barrington COLA Group	BIWK	\$20,109.03		
1012	Town of Bristol	BIWK	\$13,991.82		
1014	Bristol Police Department	BIWK	\$22,987.80		
1016	Bristol Housing Authority	WKLY	\$3,168.55		
1019	Town of Bristol EE Highway	BIWK	\$12,036.59		
1021	Bristol Warren Reg. School District	BIWK	\$283,624.53		
1023	Bristol Warren Reg. School District (NC)	BIWK	\$39,378.31		
1031	Burrillville School Department	BIWK	\$176,422.58		
1032	Town of Burrillville	BIWK	\$27,862.99		
1033	Burrillville School Department (NC)	BIWK	\$23,053.84		
1036	Burrillville Housing Authority	WKLY	\$1,189.16		
1052	City of Central Falls	BIWK	\$12,121.77		
1054	Central Falls Police	BIWK	\$5,892.66		
1056	Central Falls Housing Authority	WKLY	\$8,072.17		
1061	Central Falls Collaborative	BIWK	\$451,996.12	^	\$7,046.38
1063	Central Falls School District (NC)	BIWK	\$83,767.14	^	\$3,592.61
1071	Chariho Regional School District	BIWK	\$195,241.15		
1073	Chariho Regional School District (NC)	BIWK	\$59,578.24		
1082	Town of Charlestown	BIWK	\$12,750.13		
1091	Coventry Public Schools	BIWK	\$291,317.92		
1095	Coventry Fire District	BIWK	\$3,374.44		
1096	Coventry Housing Authority	BIWK	\$3,525.02		
1098	Coventry Lighting District	BIWK	\$257.28		
1111	Cranston School Department	BIWK	\$781,642.95		
1112	City of Cranston	BIWK	\$44,249.94		
1113	Cranston School Department (NC)	BIWK	\$73,280.46		
1114	Cranston Police Department	BIWK	\$56,200.66	*	
1115	Cranston Fire Department	BIWK	\$69,837.76	*	
1116	Cranston Housing Authority	BIWK	\$5,681.34		
1121	Cumberland School Department	BIWK	\$279,356.86		
1122	Town of Cumberland	BIWK	\$40,919.26		
1123	Cumberland School Department (NC)	BIWK	\$27,733.41		
1126	Cumberland Housing Authority	WKLY	\$2,724.70		
1151	East Greenwich School Department	BIWK	\$168,799.74		
1152	Town of East Greenwich	WKLY	\$7,560.90		
1153	East Greenwich School District (NC)	BIWK	\$2,554.98		
1156	East Greenwich Housing Authority	BIWK	\$1,267.71		
1157	East Greenwich - COLA	WKLY	\$16,917.84		
1158	East Greenwich - COLA - NC	BIWK	\$16,721.06		
1159	East Greenwich Fire District (NC)	WKLY	\$206.24		
1161	East Providence School Department	BIWK	\$321,123.63		
1162	City of East Providence	BIWK	\$85,260.68		
1163	East Providence School Department (NC)	BIWK	\$39,313.40		
1166	East Providence Housing Authority	WKLY	\$5,639.70		
1181	Exeter/West Greenwich Reg. School Department	BIWK	\$66,061.29		



**Employees' Retirement System of Rhode Island**

**Report of Received Contributions**  
**Period Ending: 11/30/2023**

	Organization	Frequency	Received Employer/Employee Contributions	Delinquent Contributions	Delinquent Loss/Earnings Calculation
1183	Exeter/West Greenwich Reg. School Department (NC)	BIWK	\$16,502.06		
1191	Foster School District	BIWK	\$18,196.84		
1192	Town of Foster	WKLY	\$5,269.30		
1193	Foster School District (NC)	BIWK	\$3,460.70		
1201	Foster/Glocester Reg. School District	BIWK	\$83,131.12		
1203	Foster/Glocester Reg. School District (NC)	BIWK	\$12,331.73		
1211	Glocester School District	BIWK	\$43,920.69		
1212	Town of Glocester	BIWK	\$15,748.43		
1213	Glocester School District (NC)	BIWK	\$9,758.67		
1227	Greenville Water District	WKLY	\$1,612.76		
1242	Hope Valley-Wyoming Fire District	BIWK	\$1,188.68		
1255	Hopkins Hill Fire Department	BIWK	\$4,583.24		
1262	Town of Hopkinton	BIWK	\$9,277.95		
1271	Jamestown School Department	BIWK	\$20,778.90		
1272	Town of Jamestown	BIWK	\$13,404.83		
1273	Jamestown School Department (NC)	BIWK	\$7,165.30		
1281	Johnston School Department	BIWK	\$170.57		
1282	Town of Johnston	BIWK	\$21,526.58		
1283	Johnston School Department (NC)	BIWK	\$0.00		
1286	Johnston Housing Authority	WKLY	\$2,311.23		
1293	Limerock Adm. Services	WKLY	\$258.08		
1301	Lincoln School Department	BIWK	\$324,097.55		
1302	Town of Lincoln	BIWK	\$2,201.06		
1303	Lincoln School Department (NC)	BIWK	\$1,618.11		
1306	Lincoln Housing Authority	BIWK	\$3,583.50		
1311	Little Compton School Department	BIWK	\$22,189.68		
1321	Middletown Public Schools	BIWK	\$118,275.90		
1322	Town of Middletown	BIWK	\$10,043.82		
1323	Middletown Public School Department (NC)	BIWK	\$14,625.08		
1331	Narragansett School Department	BIWK	\$64,941.68		
1336	Narragansett Housing Authority	MNLY	\$1,255.26		
1341	New Shoreham School District	BIWK	\$16,126.92		
1342	Town of New Shoreham	BIWK	\$12,557.06		
1343	New Shoreham School District (NC)	BIWK	\$2,896.04		
1351	Newport School Department	BIWK	\$191,997.91		
1352	City of Newport	BIWK	\$76,692.74		
1353	Newport School Department (NC)	BIWK	\$27,039.18		
1354	City of Newport - Monthly	MNLY	\$21.66		
1356	Newport Housing Authority	WKLY	\$8,412.77		
1364	Newport Police Department	BIWK	\$8,493.84		
1371	North Kingstown School Department	BIWK	\$160,923.25		
1372	Town of North Kingstown	BIWK	\$33,661.09		
1373	North Kingstown School Department (NC)	BIWK	\$31,423.44		
1381	North Providence School Department	BIWK	\$124,920.69		
1382	Town of North Providence	BIWK	\$27,834.42		
1383	North Providence School Department (NC)	BIWK	\$18,344.22		
1386	North Providence Housing Authority	BIWK	\$939.29		

		<b>Employees' Retirement System of Rhode Island</b>			
		<b>Report of Received Contributions</b> <b>Period Ending: 11/30/2023</b>			
	Organization	Frequency	Received Employer/Employee Contributions	Delinquent Contributions	Delinquent Loss/Earnings Calculation
1391	North Smithfield School Department	BIWK	\$104,129.47		
1392	Town of North Smithfield	BIWK	\$11,711.93		
1393	North Smithfield School Department (NC)	BIWK	\$11,934.84		
1401	Northern Rhode Island Collaborative	BIWK	\$0.00		
1403	Northern Rhode Island Collaborative (NC)	BIWK	\$1,940.04		
1411	Pawtucket School Department	BIWK	\$537,026.96		
1412	City of Pawtucket	WKLY	\$83,096.26		
1413	Pawtucket School Department (NC)	BIWK	\$70,315.77		
1416	Pawtucket Housing Authority	WKLY	\$22,674.90		
1421	Portsmouth School Department	BIWK	\$156,551.69		
1441	Providence School Department	BIWK	\$790,125.66		
1447	Providence School Department Long Term Subs	WKLY	\$4,137.22		



**Employees' Retirement System of Rhode Island**

**Report of Received Contributions**  
**Period Ending: 11/30/2023**

	<b>Organization</b>	<b>Frequency</b>	<b>Received Employer/Employee Contributions</b>	<b>Delinquent Contributions</b>	<b>Delinquent Loss/Earnings Calculation</b>
1448	Providence School Department - 12 Month Bi-Weekly	BIWK	\$140,028.20		
1452	Town of Richmond	BIWK	\$6,469.28		
1461	Scituate School Department	BIWK	\$91,047.69		
1462	Town of Scituate	BIWK	\$9,883.59		
1463	Scituate School Department (NC)	BIWK	\$8,787.81		
1471	Smithfield School Department	BIWK	\$151,513.83		
1473	Smithfield School Department (NC)	BIWK	\$18,965.79		
1476	Smithfield Housing Authority	BIWK	\$541.80		
1478	Town of Smithfield (COLA)	WKLY	\$21,047.19		
1491	South Kingstown School Department	BIWK	\$116,563.42		
1492	Town of South Kingstown	BIWK	\$40,032.61		
1493	South Kingstown School Department (NC)	BIWK	\$23,379.97		
1496	South Kingstown Housing Authority	WKLY	\$1,198.32		
1515	Union Fire District	BIWK	\$1,668.49		
1531	Tiverton School Department	BIWK	\$118,619.62		
1532	Town of Tiverton	BIWK	\$9,624.70		
1533	Tiverton School Department (NC)	BIWK	\$14,361.66		
1538	Tiverton Local 2670A	BIWK	\$8,431.79		
1541	Urban Collaborative Schools	BIWK	\$6,746.30		
1562	Town of Warren	BIWK	\$6,078.42		
1566	Warren Housing Authority	BIWK	\$2,898.47		
1571	Warwick School Department	BIWK	\$369,880.40		
1591	West Bay Collaborative	BIWK	\$7,196.95		
1602	Town of West Greenwich	WKLY	\$7,305.96		
1611	West Warwick School Department	BIWK	\$150,344.61		
1612	Town of West Warwick	WKLY	\$6,108.25		
1613	West Warwick School Department (NC)	BIWK	\$8,365.13		
1616	West Warwick Housing Authority	BIWK	\$3,976.42		
1621	Westerly School Department	BIWK	\$272,009.58		
1631	Woonsocket School Department	BIWK	\$223,283.30		
1632	City of Woonsocket	BIWK	\$30,910.03		
1633	Woonsocket School Department (NC)	BIWK	\$37,707.33		
1634	Woonsocket Police Department	WKLY	\$30,499.91		
1635	Woonsocket Fire Department	BIWK	\$30,798.72		
1641	Highlander Charter School	SMON	\$33,324.82		
1651	Paul Cuffee School	BIWK	\$33,515.70		
1661	Kingston Hill Academy School	BIWK	\$15,818.88		
1671	International Charter School	BIWK	\$34,410.46		
1681	The Compass School	SMON	\$9,197.46		
1691	Blackstone Academy Charter School, Inc.	SMON	\$12,165.76		
1701	Beacon Charter School of Woonsocket	SMON	\$13,651.55		
1711	The Learning Community Charter School	BIWK	\$18,510.36		
1712	Harrisville Fire District - Municipal	WKLY	\$1,063.15		
1721	Segue Institute of Learning	BIWK	\$9,014.00		
1731	The Greene School	BIWK	\$6,322.02		
1741	Trinity Academy	SMON	\$8,319.29		
1751	RI Nurses Institute	SMON	\$12,925.49		



**Employees' Retirement System of Rhode Island**

**Report of Received Contributions**  
**Period Ending: 11/30/2023**

	<b>Organization</b>	<b>Frequency</b>	<b>Received Employer/Employee Contributions</b>	<b>Delinquent Contributions</b>
				<b>Delinquent Loss/Earnings Calculation</b>
1761	The Village Green Virtual Charter School	SMON	\$5,967.41	
1771	Nowell Leadership Academy	BIWK	\$13,100.26	
1781	South Side Elementary Charter School	BIWK	\$3,316.80	
1791	Charette Charter School	SMON	\$5,127.69	
1901	Providence Preparatory Charter School	WKLY	\$16,000.78	
1911	Times 2 Academy	WKLY	\$1,239.72	
1921	Nuestro Mundo Charter School	BIWK	\$3,729.12	
2000	State	BIWK	\$3,199,312.15	
2300	Narragansett Bay Commission	BIWK	\$26,178.58	
			<b>\$12,969,978.50</b>	
	<b>Column Definitions:</b>			
	<b>Frequency = BIWK = Bi-Weekly; WKLY = Weekly; SMON = Semi-Monthly</b>			
	<b>Received Employer/Employee contributions = Contributions received during the reporting period</b>			



**Employees' Retirement System of Rhode Island**

**Report of Received Contributions**  
**Period Ending: 11/30/2023**

Organization	Frequency	Received Employer/Employee Contributions	Delinquent Contributions	Delinquent Loss/Earnings Calculation
<p>* Cranston Police and Fire have not withheld DC plan contributions on holiday and longevity payments for its MERS police officers and holiday payments for its firefighters. The City may be liable for loss earnings to employees for delayed contributions. Amounts due are currently under analysis.</p>				
<p>^ Central Falls School Department has determined that the three employees (previously in question) are eligible to participate in the defined contribution plan. The CFSD is working with TIAA-CREF to calculate and post the required contributions for the prior periods. Once the contributions are posted TIAA-CREF will prepare a lost earnings calculation.</p>				



Employees' Retirement System of Rhode Island

Employer Aging  
 Period Ending: 11/15/23

	Organization	Employer Group	Balance as of 11/15/2023	0 -30 days Due under 30	30 - 60 days Due over 30	60 - 90 days Due over 60	90 + days	Comments
1021	Bristol/Warren Regional School Department	ERS	208,014.97	-	-	-	-	
1031	Burrillville School Department	ERS	7,099.77	-	-	-	-	
1191	Foster School District	ERS	20,798.97	-	-	-	-	
1201	Foster-Glocester Regional School District	ERS	87,670.01	-	-	-	-	
1211	Glocester School District	ERS	38,229.79	-	-	-	-	
1281	Johnston School Department	ERS	14,652.50	-	-	-	-	
1311	Little Compton School Department	ERS	429.40	-	-	-	-	
1341	New Shoreham School Department	ERS	18,518.61	-	-	-	-	
1381	North Providence School Department	ERS	204,382.71	-	-	-	-	
1411	Pawtucket School Department	ERS	540,128.40	-	-	-	-	
1441	Providence School Department	ERS	2,623,031.96	1,474.47	-	-	-	
1447	Providence School Department Long-Term Substitutes	ERS	9,844.21	-	-	-	-	
1448	Providence School Department 12 month BiWkly	ERS	331,581.80	-	-	-	-	
1471	Smithfield School Department	ERS	155,242.66	-	-	-	-	
1531	Tiverton School Department	ERS	9,097.72	-	-	-	-	
1541	Urban Collaborative School Department	ERS	10,434.57	-	-	-	-	
1571	Warwick School Department	ERS	666,274.02	-	-	-	-	
1621	Westerly School Department	ERS	9,163.78	-	-	-	-	
1631	Woonsocket School Department	ERS	13,870.83	-	-	-	-	
1661	Kingston Hill Academy, Inc.	ERS	23,828.81	-	-	-	-	
1671	International Charter School	ERS	93,789.85	-	-	-	-	
1731	The Greene School	ERS	9,893.88	-	-	-	-	
1761	Village Green Virtual Charter School	ERS	10,898.13	-	-	-	-	
1791	Charette Charter School	ERS	5,705.40	-	-	-	-	
1921	Nuestro Mundo Charter School	ERS	11,687.93	11,687.93	-	-	-	
<b>Grand total</b>			<b>6,192,691.24</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	
			<b>100.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	



Employees' Retirement System of Rhode Island

Employer Aging  
 Period Ending: 11/15/23

	Organization	Employer Group	Balance as of 11/15/2023	0 - 30 days Due under 30	30 - 60 days Due over 30	60 - 90 days Due over 60	90 + days	Comments
1016	Bristol Housing Authority	MERS	564.70	-	-	-	-	
1056	Central Falls Housing Authority	MERS	4,204.67	-	-	-	-	
1125	Cumberland Fire Department	MERS	27,239.17	-	-	-	-	
1166	East Providence Housing Authority	MERS	1,253.31	-	-	-	-	
1177	East Smithfield Water District	MERS	1,036.00	-	-	-	-	
1193	Foster School District Non-Certified Employees	MERS	3,245.50	-	-	-	-	
1203	Foster-Glocester Regional School District Non-Certified Employees	MERS	13,235.96	-	-	-	-	
1212	Town of Glocester	MERS	10,464.27	-	-	-	-	
1213	Glocester School District Non-Certified Employees	MERS	6,050.72	-	-	-	-	
1214	Glocester Police Department	MERS	18,119.81	-	-	-	-	
1227	Greenville Water District	MERS	229.06	-	-	-	-	
1283	Johnston School Department Non-Certified Employees	MERS	663.81	-	-	-	-	
1286	Johnston Housing Authority	MERS	1,129.32	-	-	-	-	
1293	Limerock Administrative Services	MERS	255.09	-	-	-	-	
1295	Limerock Fire District	MERS	4,196.98	-	-	-	-	
1342	Town of New Shoreham	MERS	9,058.16	-	-	-	-	
1343	New Shoreham School Department Non-Certified	MERS	2,076.55	-	-	-	-	
1344	New Shoreham Police Department	MERS	3,819.01	-	-	-	-	
1356	Newport Housing Authority	MERS	9,005.99	-	-	-	-	
1383	North Providence School Department Non-Certified Employees	MERS	11,399.97	-	-	-	-	
1403	Northern RI Collaborative Non-Certified Employees	MERS	1,678.05	-	-	-	-	
1416	Pawtucket Housing Authority	MERS	2,494.28	-	-	-	-	
1424	Portsmouth Police Department	MERS	13,233.12	-	-	-	-	
1425	Portsmouth Fire Department	MERS	12,515.61	-	-	-	-	
1463	Scituate School Department Non-Certified Employees	MERS	13,174.30	-	-	-	-	
1465	Smithfield Fire Department	MERS	12,644.42	-	-	-	-	
1473	Smithfield School Department Non-Certified Employees	MERS	17,292.62	-	-	-	-	
1474	Smithfield Police Department	MERS	18,042.96	-	-	-	-	
1476	Smithfield Housing Authority	MERS	437.98	-	-	-	-	
1484	Scituate Police Department - 7/1/16	MERS	5,911.96	-	-	-	-	
1493	South Kingstown School Department Non-Certified Employees	MERS	112.32	-	112.32	-	-	
1515	Union Fire District	MERS	523.02	-	-	-	-	
1555	Valley Falls Fire District	MERS	6,977.07	-	-	-	-	
1562	Town of Warren	MERS	-	-	-	-	-	Invoices need to be loaded and paid
1564	Warren Police Department	MERS	-	-	-	-	-	Invoices need to be loaded and paid
1602	Town of West Greenwich	MERS	7,880.44	-	-	-	-	
1604	West Greenwich Police and Rescue	MERS	16,118.04	-	-	-	-	
1609	Town of West Warwick - legacy	MERS	40,788.81	-	-	-	-	
1612	Town of West Warwick - new	MERS	2,106.17	-	-	-	-	
1614	West Warwick Police Department - new	MERS	2,929.07	-	-	-	-	
1615	West Warwick Fire Department - new	MERS	2,922.62	-	-	-	-	
1617	West Warwick Police Department - legacy	MERS	60,273.41	-	-	-	-	
1618	West Warwick Fire Department - legacy	MERS	60,570.03	-	-	-	-	
1619	West Warwick Library - legacy	MERS	4,268.97	-	-	-	-	
1633	Woonsocket School Department Non-Certified Employees	MERS	822.17	-	-	-	-	
1705	Lincoln Fire District	MERS	5,156.20	-	-	-	-	
1802	Pascoag Fire District - Administration	MERS	108.09	-	-	-	-	
1805	Pascoag Fire District	MERS	1,014.04	-	-	-	-	
<b>Grand total</b>			<b>437,243.82</b>	<b>0.00</b>	<b>112.32</b>	<b>0.00</b>	<b>0.00</b>	



			100.00%	0.00%	0.03%	0.00%	0.00%	
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## 10.2. State Investment Commission (SIC)

For Reference

# **MONTHLY PERFORMANCE REPORT - (NET)**

## **State of Rhode Island Pension Plan**

**October 31, 2023**

**Kevin Leonard, Partner**

**Douglas W. Moseley, Partner**

**Alexandra Sollers, Sr. Consulting Specialist**



BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | PORTLAND | SAN FRANCISCO

# SIC MEETING AGENDA AND MINUTES

NEPC, LLC

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**State Investment Commission  
Monthly Meeting Minutes  
Wednesday, November 8th, 2023  
9:00 a.m.**

**2<sup>nd</sup> Floor Conference Room, 50 Service Ave, Warwick, RI**

**[dial-in: +1 312 626 6799; Webinar ID: (884 7616 0572); link: (<https://bit.ly/3MKIAqH>)**

A Monthly Meeting of the State Investment Commission (“SIC”) was called to order at 9:00 AM, Wednesday, November 8<sup>th</sup>, 2023, in the 2<sup>nd</sup> Floor Conference Room, 50 Service Ave, Warwick, RI.

## **I. Roll Call of Members**

The following members were present: Mr. Frank Karpinski, Ms. Sylvia Maxfield, Mr. Paul Dion, Mr. Michael Costello, Ms. Karen Hazard, Mr. Thomas Fay, Mr. Al Cumplido, and Treasurer James A. Diossa.

Also in attendance: Mr. Kevin Leonard, Mr. Robert Goldthorpe, & Mr. Matt Maleri, NEPC; Mr. Thomas Lynch, Cliffwater; Mr. Colin Hill & Ms. Abigail Fischer, Meketa; Mr. Matthew Waters, Adler Pollock & Sheehan, legal counsel; Mr. Eric Baggesen, Chief Investment Officer; and other members of the Treasurer’s Staff.

Treasurer Diossa called the meeting to order at 9:00 AM.

## **II. Approval of Minutes**

On a motion by Mr. Thomas Fay and seconded by Ms. Sylvia Maxfield, it was unanimously **VOTED: to approve the draft meeting minutes of the September 27<sup>th</sup>, 2023 meeting of the State Investment Commission.**

## **III. ERSRI Asset/Liability Analysis**

Mr. Justin Maistrow, Deputy Chief Investment Officer, introduced the presentation at a high level, recapping September’s discussion where a set of alternative portfolio mixes was reviewed. Mr. Maistrow explained that NEPC will be diving deeper into two of these portfolio mixes and providing a final recommendation.

Mr. Matt Maleri, NEPC, began by explaining the current market environment where we are seeing a new interest rate trend. Mr. Maleri described a chart plotting the risk and return profile of the current portfolio compared to two alternatives, as well as a third option of the current portfolio ex. Emerging Market Debt. Mr. Maleri elaborated on these three options compared to the current portfolio in greater detail, showing a chart that depicts how the weighting for each option would be re-structured. Furthermore, Mr. Maleri displayed the forecasted risk/return, liquidity, and other portfolio characteristics of each mix. Mr. Maleri also reviewed the Plan’s forecasted funded status and contribution rate through a stochastic analysis for each option.

November 8<sup>th</sup>, 2023

Mr. Maleri described the portfolio risk decomposition and explained that the similar return/ lower risk portfolio has a lower overall risk and that this risk is more diversified across buckets than the other options. The funded ratio and contribution rate for each portfolio mix was depicted in each of the 5 economic regimes, demonstrating how each option would be anticipated to fare in different economic conditions. Mr. Maleri showed the effect the current interest rate has on each portfolio by comparing returns based on the current capital market assumptions and the capital market assumptions of 2021, which was characterized by a much lower interest rate environment. Finally, Mr. Maleri presented NEPC's final recommendation.

Mr. Maistrow relayed to the Board the thoughts and opinions of the two SIC members who could not be present to vote. Mr. Maistrow explained that a vote was needed from the Board members in attendance regarding which portfolio mix to adopt.

The Board asked questions.

On a motion by Mr. Michael Costello and seconded by Mr. Thomas Fay, it was unanimously **VOTED: to approve the adoption of the strategic asset allocation labeled, "Current Target ex. EMD", within the NEPC meeting materials.**

#### **IV. Legal Counsel Report**

There was no legal counsel report.

#### **V. Chief Investment Officer Report**

Mr. Eric Baggesen, Chief Investment Officer, described the performance of the fund, stating that, in the first three months of the fiscal year, almost every asset class had declined. Mr. Baggesen explained that the concentration of return was driven by the five largest companies in the S&P 500 Index. The weight of these top five companies is over 20% of the index. Mr. Baggesen elaborated that this high concentration in only a few companies poses some degree of risk. Mr. Baggesen stated that fiscal year to date, the fund is down 1.25% but, calendar year to date, performance is still up over 9.7%, which is still well in excess of the assumed rate of return. He highlighted private equity, income, and the volatility protection bucket as the biggest positive contributors thus far.

The Board asked questions.

#### **VI. Treasurer's General Comments**

Treasurer Diossa asked if there were any further comments or questions and thanked the Board and Staff.

**The meeting was adjourned at 10:06 AM.**

Respectfully submitted,

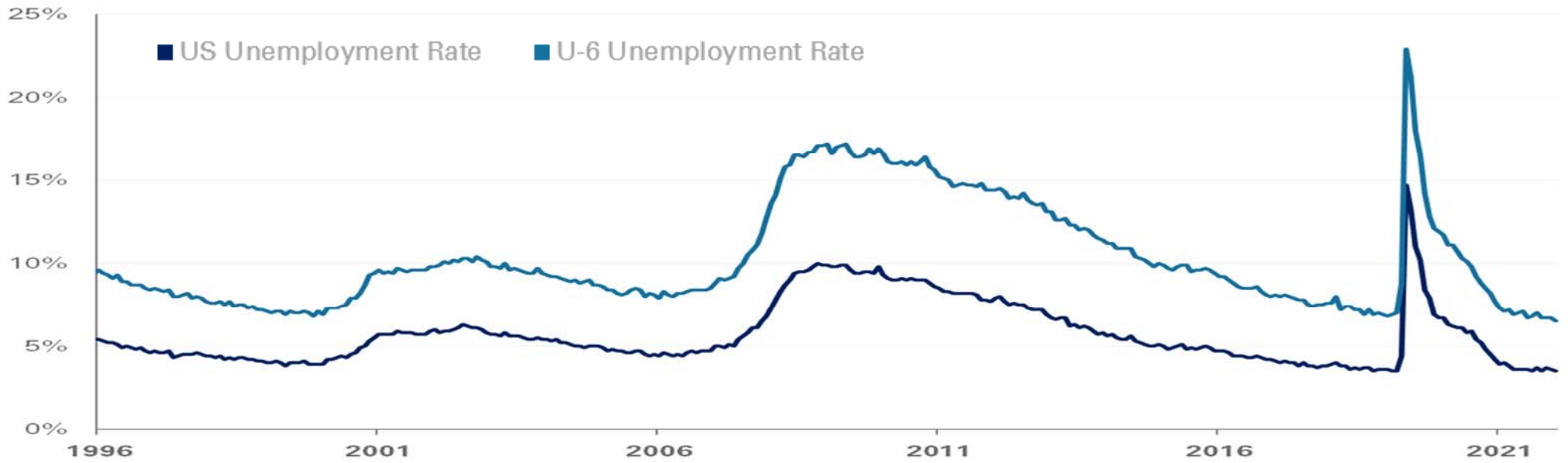
**James A. Diossa,  
General Treasurer**

November 8<sup>th</sup>, 2023

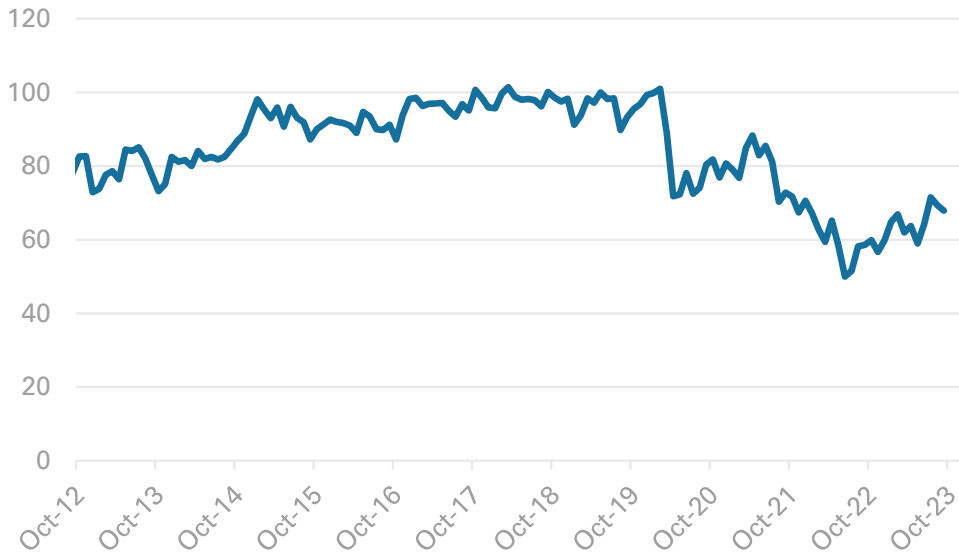


# MARKET OVERVIEW

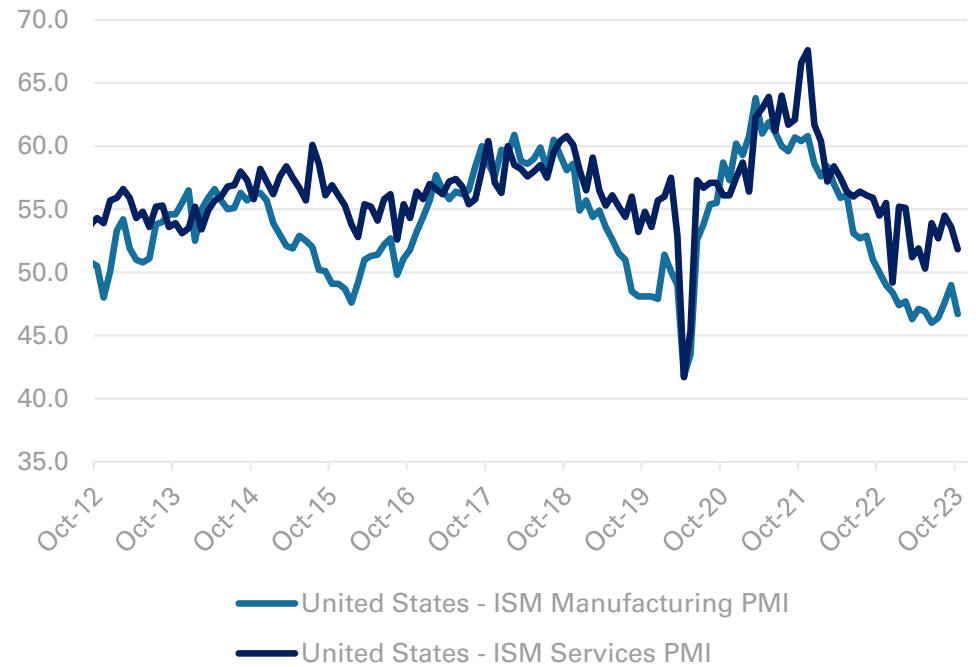
# US UNEMPLOYMENT RATE



# CONSUMER SENTIMENT



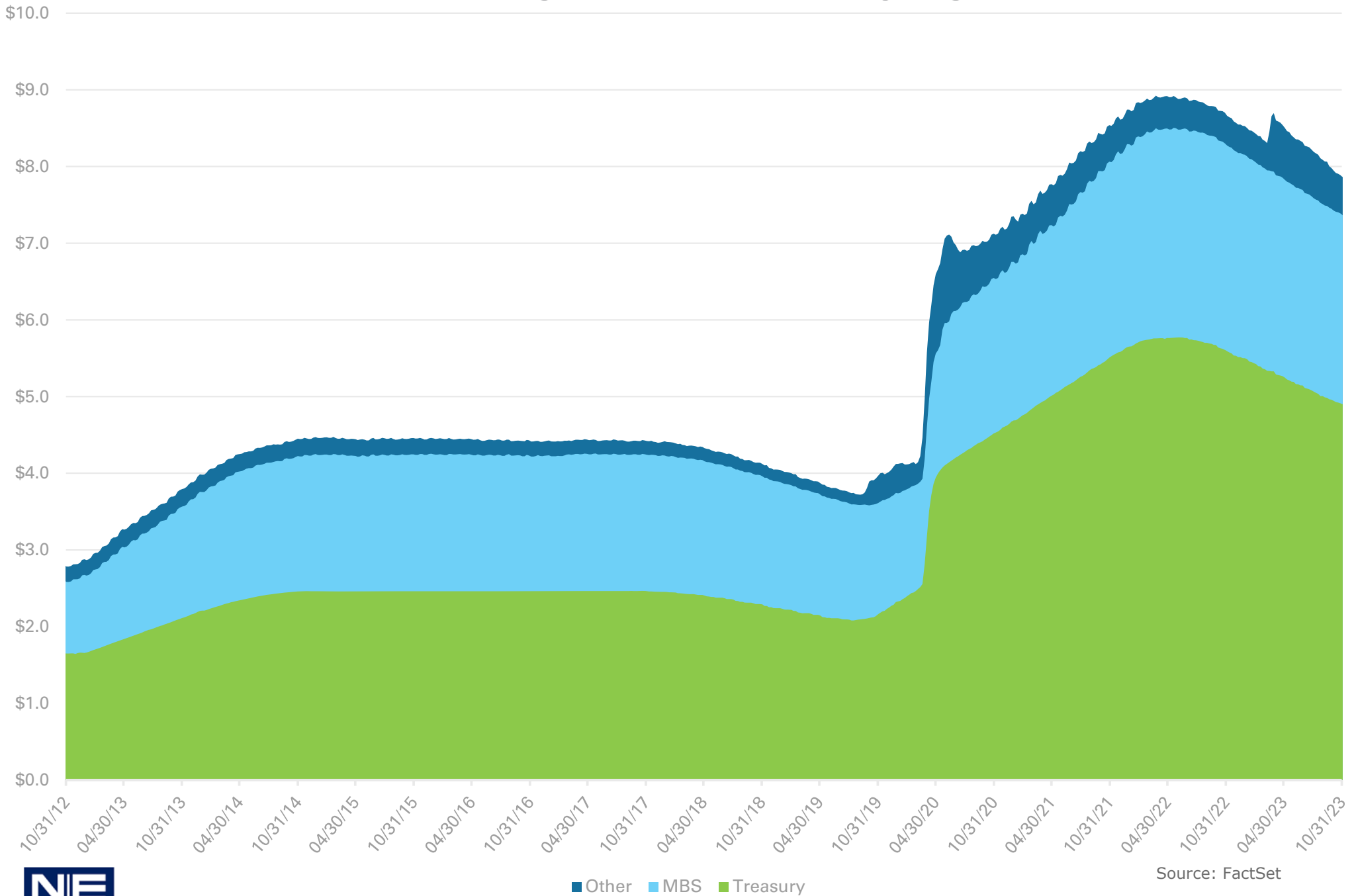
# ISM REPORT OF BUSINESS



Source: FactSet



# FEDERAL RESERVE: BALANCE SHEET



Other MBS Treasury

Source: FactSet

# BENCHMARK TRAILING PERFORMANCE

Equity						
	Oct	YTD	1 YR	3 YR	5 YR	10 YR
Russell 3000	-2.7%	9.4%	8.4%	9.2%	10.2%	10.5%
MSCI US Min. Vol.	-0.9%	0.5%	2.2%	6.5%	7.0%	9.1%
MSCI ACWI	-3.0%	6.7%	10.5%	6.7%	7.5%	6.8%
MSCI ACWI ex US	-4.1%	1.0%	12.1%	3.0%	3.5%	2.5%
MSCI ACWI ex US Min. Vol.	-3.1%	1.0%	9.1%	2.2%	2.4%	3.6%
MSCI World	-2.9%	7.9%	10.5%	8.1%	8.3%	7.5%
MSCI EM	-3.9%	-2.1%	10.8%	-3.7%	1.6%	1.2%
Credit						
	Oct	YTD	1 YR	3 YR	5 YR	10 YR
BC US Agg	-1.6%	-2.8%	0.4%	-5.6%	-0.1%	0.9%
BC US HY	-1.2%	4.6%	6.2%	1.2%	3.1%	3.9%
BC Long Treasuries	-4.9%	-13.1%	-8.5%	-16.3%	-3.2%	0.1%
JPM EMBI Glob Div (EMD Hard Currency)	-1.4%	0.4%	8.4%	-5.0%	-0.2%	2.1%
JPM GBI -EM Glob Div (EMD Local Currency)	-0.5%	3.7%	13.5%	-3.0%	0.3%	-1.2%
Real Assets						
	Oct	YTD	1 YR	3 YR	5 YR	10 YR
BBG Commodity	0.3%	-3.2%	-3.0%	15.8%	6.7%	-0.6%
Alerian Midstream Index	-0.3%	6.8%	4.2%	29.0%	9.3%	3.9%
NAREIT Composite Index	-3.5%	-8.5%	-7.8%	2.7%	2.2%	5.2%







# TOTAL FUND OVERVIEW

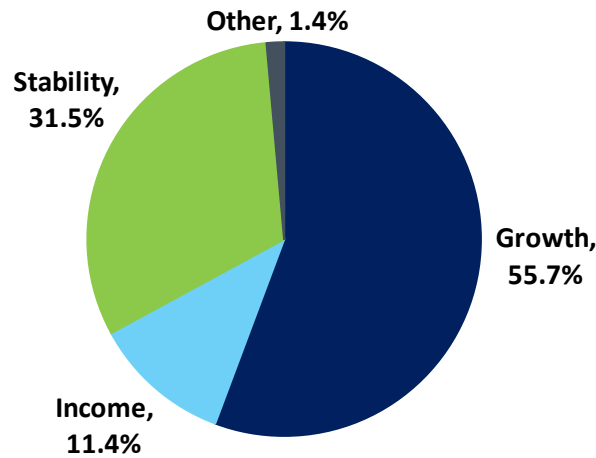
NEPC, LLC

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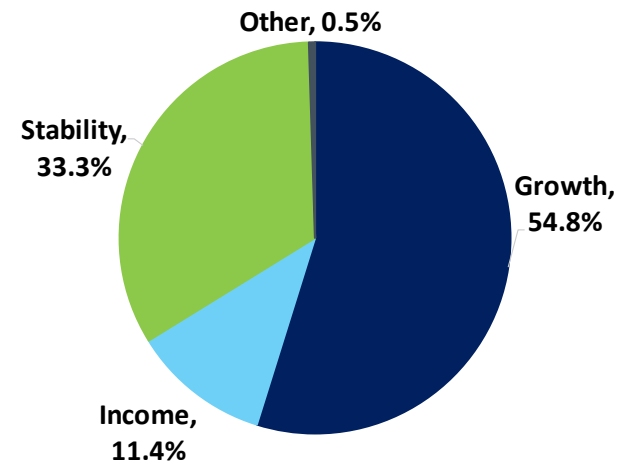
# ASSET ALLOCATION (OVERLAY) VS TARGET

Asset Allocation vs. Target						
	Current Balance	Current Allocation	Current Allocation (w/ Overlay)	Strategic Benchmark Allocation	Difference	Difference (w/ Overlay)
 Growth	\$5,667,867,263	55.7%	54.8%	55.0%	0.7%	-0.2%
 Income	\$1,157,828,976	11.4%	11.4%	12.0%	-0.6%	-0.6%
 Stability	\$3,203,620,146	31.5%	33.3%	33.0%	-1.5%	0.3%
 Other	\$145,053,197	1.4%	0.5%	0.0%	1.4%	0.5%

Current Asset Allocation



Current Asset Allocation (w/ Overlay)



# TOTAL FUND ATTRIBUTION ANALYSIS – 1 YEAR

	Policy Weights	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effect	Total Effects
Global Equity	40.00%	10.34%	10.50%	-0.16%	-0.06%	-0.18%	0.01%	-0.24%
Private Growth	15.00%	5.52%	0.98%	4.54%	0.70%	-0.12%	0.16%	0.74%
Income	12.00%	9.56%	11.32%	-1.76%	-0.13%	0.23%	-0.06%	0.03%
Crisis Protection	10.00%	-7.29%	-12.68%	5.39%	0.50%	-0.20%	0.06%	0.36%
Inflation Protection	8.00%	-1.35%	-1.52%	0.17%	0.01%	0.00%	0.00%	0.02%
Volatility Protection	15.00%	5.48%	2.40%	3.08%	0.67%	0.15%	-0.21%	0.61%
Other*		-0.14%						
<b>State of Rhode Island Total Plan</b>	<b>100.00%</b>	<b>5.98%</b>	<b>4.61%</b>	<b>1.51%</b>	<b>1.68%</b>	<b>-0.12%</b>	<b>-0.05%</b>	<b>1.51%</b>

\*Other includes short-term cash, overlay, and rebalancing activity.

Note: Plan attribution is a static, return based calculation and the results reflect the composites shown. As a result, the total returns shown may vary from the calculated returns shown on the performance summary.

**Asset Allocation Effect** - Measures an investment manager's ability to effectively allocate their portfolio's assets to various sectors. The allocation effect determines whether the overweighting or underweighting of sectors relative to a benchmark contributes positively or negatively to the overall portfolio return. Positive allocation occurs when the portfolio is over weighted in a sector that outperforms the benchmark. Negative allocation occurs when the portfolio is over weighted in a sector that underperforms the benchmark and underweighted in a sector that outperforms the benchmark.

**Selection Effect** - Measures the investment manager's ability to select securities within a given sector relative to a benchmark. The over or underperformance of the portfolio is weighted by the benchmark weight, therefore, selection is not affected by the manager's allocation to the sector. The weight of the security in the portfolio determines the size of the effect -- the larger the security, the larger the effect is, positive or negative.

**Interaction Effect** - The interaction effect measures the combined impact of an investment manager's selection and allocation decisions within a sector. For example, if an investment manager had superior selection and over weighted that particular sector, the interaction effect is positive. If an investment manager had superior selection, but underweighted that sector, the interaction effect is negative. In this case, the investment manager did not take advantage of the superior selection by allocating more assets to that sector. Since many investment managers consider the interaction effect to be part of the selection or the allocation, it is often combined with either effect.



State of Rhode Island Pension Plan

# TOTAL FUND PERFORMANCE DETAIL - (NET)

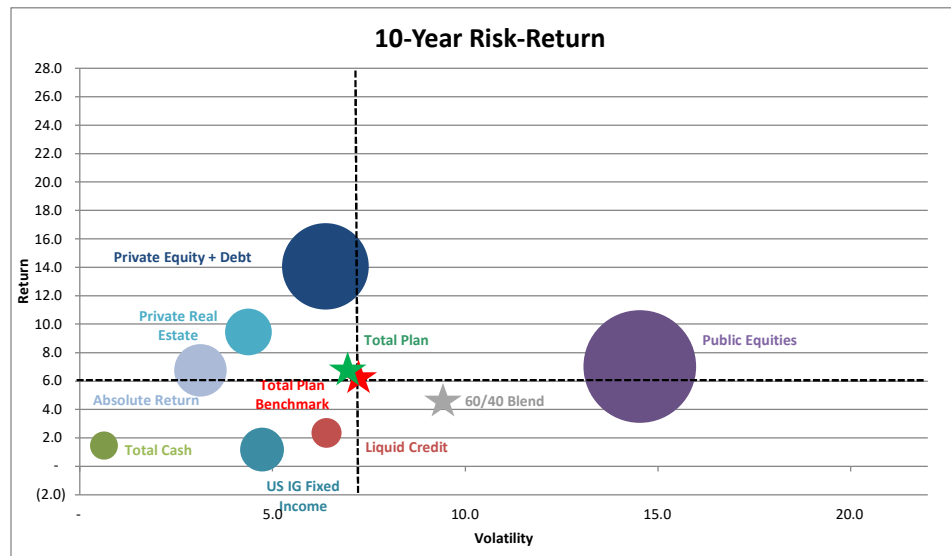
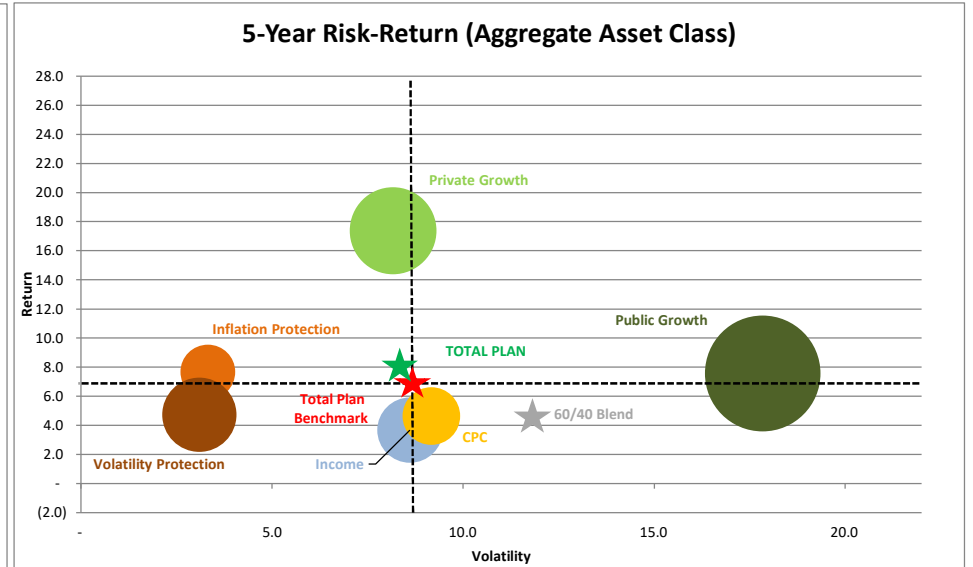
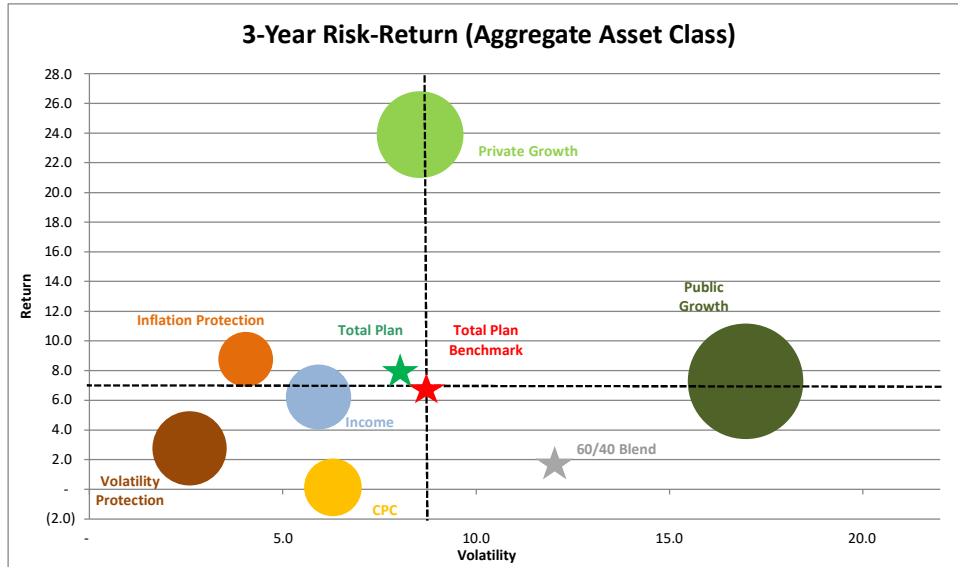
	Allocation			Performance (%)									
	Market Value (\$)	% of Portfolio	Strategic Benchmark Allocation (%)	1 Mo (%)	FYTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	15 Yrs (%)	Inception (%)	Inception Date
<b>State of Rhode Island Total Plan</b>	<b>10,174,369,582</b>	<b>100.00</b>	<b>100.00</b>	<b>-1.38</b>	<b>-2.61</b>	<b>4.11</b>	<b>5.98</b>	<b>8.20</b>	<b>8.03</b>	<b>6.71</b>	<b>7.99</b>	<b>5.56</b>	<b>Jul-00</b>
<i>Strategic Benchmark Allocation</i>				-1.61	-3.73	2.95	4.63	6.79	6.88	6.06	7.64	-	
<i>60% MSCI ACWI (Net) / 40% Bloomberg Aggregate</i>				-2.44	-5.66	2.93	6.46	1.83	4.73	4.63	6.68	4.67	
<b>Global Equity</b>	<b>3,623,174,349</b>	<b>35.61</b>	<b>40.00</b>	<b>-3.05</b>	<b>-6.09</b>	<b>6.99</b>	<b>10.34</b>	<b>7.28</b>	<b>7.58</b>	<b>7.03</b>	<b>9.37</b>	<b>5.19</b>	<b>Jul-00</b>
<i>MSCI AC World Index (Net)</i>				-3.01	-6.31	6.75	10.50	6.68	7.47	6.81	8.98	4.82	
<b>Private Growth</b>	<b>2,044,692,914</b>	<b>20.10</b>	<b>15.00</b>	<b>0.06</b>	<b>2.53</b>	<b>4.93</b>	<b>5.52</b>	<b>23.90</b>	<b>17.38</b>	-	-	<b>17.66</b>	<b>Jul-17</b>
<i>Private Growth Allocation Index</i>				0.06	1.29	3.42	1.34	16.72	12.55	-	-	12.83	
<i>Private Growth Custom Benchmark</i>				0.06	1.13	3.03	0.98	15.99	12.00	-	-	12.51	
<b>Income</b>	<b>1,157,828,976</b>	<b>11.38</b>	<b>12.00</b>	<b>-0.64</b>	<b>0.01</b>	<b>6.96</b>	<b>9.56</b>	<b>6.23</b>	<b>3.68</b>	-	-	<b>3.46</b>	<b>Jul-17</b>
<i>Income Allocation Index</i>				-0.17	1.24	9.53	12.26	7.55	3.84	-	-	3.45	
<i>Income Custom Benchmark</i>				-0.37	0.46	8.56	11.32	7.02	4.09	-	-	3.99	
<b>Crisis Protection</b>	<b>898,513,052</b>	<b>8.83</b>	<b>10.00</b>	<b>-1.59</b>	<b>-8.15</b>	<b>-6.27</b>	<b>-7.29</b>	<b>0.15</b>	<b>4.65</b>	-	-	<b>2.56</b>	<b>Jun-17</b>
<i>CPC Custom Benchmark</i>				-1.75	-10.10	-10.91	-12.68	-2.88	1.09	-	-	-	
<b>Inflation Protection</b>	<b>810,842,076</b>	<b>7.97</b>	<b>8.00</b>	<b>0.01</b>	<b>-1.24</b>	<b>-1.82</b>	<b>-1.35</b>	<b>8.77</b>	<b>7.67</b>	-	-	<b>7.27</b>	<b>Jul-17</b>
<i>Inflation Protection Allocation Index</i>				0.12	-0.14	-0.35	0.07	8.59	7.08	-	-	6.65	
<i>Inflation Protection Custom Benchmark</i>				0.01	-0.67	-1.63	-1.52	8.66	6.96	-	-	6.56	
<b>Volatility Protection</b>	<b>1,494,265,017</b>	<b>14.69</b>	<b>15.00</b>	<b>-0.34</b>	<b>0.30</b>	<b>3.45</b>	<b>5.48</b>	<b>2.76</b>	<b>4.73</b>	-	-	<b>4.16</b>	<b>Jul-17</b>
<i>Volatility Protection Custom Benchmark</i>				-1.30	-2.39	-0.05	2.40	-1.48	1.66	-	-	1.37	

October's investment gain/loss for the ERSRI was -\$142,771,071.48

Last 12 months' investment gain/loss for the ERSRI was \$602,133,119.46

Fiscal Year ends June 30th.





# MANAGER PERFORMANCE

NEPC, LLC

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State of Rhode Island Pension Plan

# TOTAL FUND PERFORMANCE DETAIL - (NET)

	Allocation			Performance (%)									
	Market Value (\$)	% of Portfolio	Strategic Benchmark Allocation (%)	1 Mo (%)	FYTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	15 Yrs (%)	Inception (%)	Inception Date
<b>State of Rhode Island Total Plan</b>	<b>10,174,369,582</b>	<b>100.00</b>	<b>100.00</b>	<b>-1.38</b>	<b>-2.61</b>	<b>4.11</b>	<b>5.98</b>	<b>8.20</b>	<b>8.03</b>	<b>6.71</b>	<b>7.99</b>	<b>5.56</b>	<b>Jul-00</b>
<i>Strategic Benchmark Allocation</i>				-1.61	-3.73	2.95	4.63	6.79	6.88	6.06	7.64	-	
<i>60% MSCI ACWI (Net) / 40% Bloomberg Aggregate</i>				-2.44	-5.66	2.93	6.46	1.83	4.73	4.63	6.68	4.67	
<b>Growth</b>	<b>5,667,867,263</b>	<b>55.71</b>	<b>55.00</b>	<b>-1.96</b>	<b>-3.20</b>	<b>6.44</b>	<b>8.87</b>	<b>11.85</b>	<b>10.31</b>	<b>-</b>	<b>-</b>	<b>9.77</b>	<b>Jul-17</b>
<i>Growth Allocation index</i>				-2.01	-3.81	5.54	7.19	9.32	8.92	-	-	8.39	
<i>Growth Composite Benchmark</i>				-2.17	-4.28	5.87	8.03	9.52	9.15	-	-	8.85	
<b>Global Equity</b>	<b>3,623,174,349</b>	<b>35.61</b>	<b>40.00</b>	<b>-3.05</b>	<b>-6.09</b>	<b>6.99</b>	<b>10.34</b>	<b>7.28</b>	<b>7.58</b>	<b>7.03</b>	<b>9.37</b>	<b>5.19</b>	<b>Jul-00</b>
<i>MSCI AC World Index (Net)</i>				-3.01	-6.31	6.75	10.50	6.68	7.47	6.81	8.98	4.82	
SSGA Russell 3000 Index	1,315,240,656	12.93		-2.64	-5.82	9.25	8.25	9.27	10.33	10.59	-	12.15	Nov-12
<i>Russell 3000 Index</i>				-2.65	-5.82	9.41	8.38	9.19	10.23	10.52	-	12.08	
SSGA MSCI EAFE Index	474,167,564	4.66		-4.02	-8.09	2.92	14.59	6.08	4.46	3.38	-	5.62	Sep-12
<i>MSCI EAFE (Net)</i>				-4.05	-8.00	2.74	14.40	5.73	4.10	3.05	-	5.30	
SSGA MSCI Canada Index	55,566,561	0.55		-5.57	-9.13	-1.32	-0.37	9.10	6.70	3.72	-	4.24	Sep-12
<i>MSCI Canada (Net)</i>				-5.63	-9.44	-2.06	-1.24	8.20	5.81	2.97	-	3.49	
SSGA Emerging Market Index	382,933,204	3.76		-3.84	-6.70	-2.18	10.66	-3.80	1.47	1.03	-	1.95	Sep-12
<i>MSCI Emerging Markets (Net)</i>				-3.89	-6.70	-2.14	10.80	-3.67	1.59	1.19	-	2.12	
SSGA QVM	1,395,256,961	13.71		-2.73	-5.23	9.70	11.62	9.57	8.29	-	-	9.45	Oct-15
<i>MSCI World Index (Net)</i>				-2.90	-6.26	7.88	10.48	8.14	8.27	-	-	9.07	
<b>Private Growth</b>	<b>2,044,692,914</b>	<b>20.10</b>	<b>15.00</b>	<b>0.06</b>	<b>2.53</b>	<b>4.93</b>	<b>5.52</b>	<b>23.90</b>	<b>17.38</b>	<b>-</b>	<b>-</b>	<b>17.66</b>	<b>Jul-17</b>
<i>Private Growth Allocation Index</i>				0.06	1.29	3.42	1.34	16.72	12.55	-	-	12.83	
<i>Private Growth Custom Benchmark</i>				0.06	1.13	3.03	0.98	15.99	12.00	-	-	12.51	
<b>Private Equity</b>	<b>1,801,040,184</b>	<b>17.70</b>	<b>12.50</b>	<b>0.08</b>	<b>2.83</b>	<b>5.77</b>	<b>6.85</b>	<b>25.71</b>	<b>19.39</b>	<b>15.73</b>	<b>12.99</b>	<b>10.96</b>	<b>Feb-89</b>
<i>Private Equity Custom Benchmark</i>				0.08	1.68	4.37	2.23	19.38	15.95	15.56	12.21	15.35	
<b>Non-Core Real Estate</b>	<b>243,652,730</b>	<b>2.39</b>	<b>2.50</b>	<b>-0.07</b>	<b>0.35</b>	<b>-0.96</b>	<b>-3.48</b>	<b>18.16</b>	<b>10.83</b>	<b>-</b>	<b>-</b>	<b>13.34</b>	<b>Jul-17</b>
<i>Non-Core Real Estate Custom Benchmark</i>				-0.07	-1.62	-3.47	-5.14	9.00	7.26	-	-	8.42	

State of Rhode Island Pension Plan

# TOTAL FUND PERFORMANCE DETAIL - (NET)

	Allocation			Performance (%)									
	Market Value (\$)	% of Portfolio	Strategic Benchmark Allocation (%)	1 Mo (%)	FYTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	15 Yrs (%)	Inception (%)	Inception Date
<b>Income</b>	<b>1,157,828,976</b>	<b>11.38</b>	<b>12.00</b>	<b>-0.64</b>	<b>0.01</b>	<b>6.96</b>	<b>9.56</b>	<b>6.23</b>	<b>3.68</b>	-	-	<b>3.46</b>	<b>Jul-17</b>
Income Allocation Index				-0.17	1.24	9.53	12.26	7.55	3.84	-	-	3.45	
Income Custom Benchmark				-0.37	0.46	8.56	11.32	7.02	4.09	-	-	3.99	
<b>Equity Options</b>	<b>175,542,732</b>	<b>1.73</b>	<b>2.00</b>	<b>-0.43</b>	<b>-1.43</b>	<b>9.04</b>	<b>11.04</b>	<b>8.34</b>	-	-	-	<b>6.11</b>	<b>Feb-20</b>
CBOE S&P 500 PutWrite Index				0.13	-2.74	9.46	11.88	11.06	-	-	-	6.60	
Neuberger Berman US Equity Index Putwrite Fund LLC	175,542,732	1.73		-0.43	-1.43	9.04	11.04	8.34	-	-	-	6.11	Feb-20
<b>Liquid Credit</b>	<b>255,612,694</b>	<b>2.51</b>	<b>3.00</b>	<b>-2.52</b>	<b>-3.81</b>	<b>2.10</b>	<b>3.26</b>	<b>0.05</b>	<b>1.36</b>	<b>2.36</b>	-	<b>2.40</b>	<b>May-13</b>
ICE BofAML US High Yield TR*				-1.23	-0.70	4.72	5.90	0.84	1.98	3.00	-	3.07	
PIMCO	88,728,051	0.87		-1.18	-0.62	4.62	6.25	1.08	1.97	2.85	-	2.83	May-13
Loomis Sayles	86,862,401	0.85		-1.11	-0.80	3.82	5.99	0.64	1.61	-	-	1.61	Nov-18
Advent US Balanced	80,021,796	0.79		-5.39	-9.87	-2.32	-2.53	-	-	-	-	0.83	Jul-22
<b>EMD Blended</b>	<b>164,787,582</b>	<b>1.62</b>	<b>2.00</b>	<b>-1.60</b>	<b>-4.68</b>	<b>2.08</b>	<b>11.27</b>	<b>-3.35</b>	-	-	-	<b>0.03</b>	<b>Apr-20</b>
50% JPM EMBI Gbl Div/ 50% JPM GBI-EM Gbl Div				-0.94	-3.66	2.07	10.93	-3.97	-	-	-	-0.01	
Wellington EMD Fund	164,787,582	1.62		-1.60	-4.68	2.08	11.26	-3.35	-	-	-	0.03	Apr-20
<b>CLO Mezz/Equity</b>	<b>226,490,652</b>	<b>2.23</b>	<b>2.00</b>	<b>0.55</b>	<b>5.38</b>	<b>12.51</b>	<b>14.99</b>	-	-	-	-	<b>7.02</b>	<b>Aug-21</b>
JPM CLO BB Index (CLOIE)				-0.15	6.83	15.86	22.81	-	-	-	-	6.15	
Neuberger CLO Equity Mezzanine	100,031,831	0.98		0.18	11.37	20.61	21.68	-	-	-	-	6.86	Jul-21
Sycamore Tree CLO Fund	126,458,821	1.24		0.80	0.82	4.86	8.56	-	-	-	-	5.81	Aug-21
<b>Private Credit</b>	<b>335,391,573</b>	<b>3.30</b>	<b>3.00</b>	<b>0.38</b>	<b>2.80</b>	<b>8.67</b>	<b>9.08</b>	<b>9.82</b>	<b>5.52</b>	-	-	<b>5.48</b>	<b>Jul-17</b>
Private Credit Custom Benchmark				0.38	2.32	11.27	8.94	8.11	6.22	-	-	8.16	



# TOTAL FUND PERFORMANCE DETAIL - (NET)

	Allocation			Performance (%)									
	Market Value (\$)	% of Portfolio	Strategic Benchmark Allocation (%)	1 Mo (%)	FYTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	15 Yrs (%)	Inception (%)	Inception Date
<b>Stability</b>	<b>3,203,620,146</b>	<b>31.49</b>	<b>33.00</b>	<b>-0.61</b>	<b>-2.59</b>	<b>-0.77</b>	<b>-0.08</b>	<b>3.36</b>	<b>5.28</b>	-	-	<b>4.45</b>	<b>Jul-17</b>
<i>Stability Custom Benchmark</i>				-1.12	-4.36	-3.80	-3.29	1.79	3.54	-	-	2.82	
<i>Stability Allocation Index</i>				-1.02	-3.96	-3.33	-2.98	0.88	3.05	-	-	2.40	
<b>Crisis Protection</b>	<b>898,513,052</b>	<b>8.83</b>	<b>10.00</b>	<b>-1.59</b>	<b>-8.15</b>	<b>-6.27</b>	<b>-7.29</b>	<b>0.15</b>	<b>4.65</b>	-	-	<b>2.56</b>	<b>Jun-17</b>
<i>CPC Custom Benchmark</i>				-1.75	-10.10	-10.91	-12.68	-2.88	1.09	-	-	-	
<b>Treasury Duration</b>	<b>437,306,351</b>	<b>4.30</b>	<b>5.00</b>	<b>-4.35</b>	<b>-15.86</b>	<b>-13.15</b>	<b>-8.11</b>	<b>-16.59</b>	<b>-3.30</b>	-	-	<b>-3.75</b>	<b>Jun-17</b>
<i>Bloomberg US Treasury Long TR</i>				-4.93	-16.18	-13.07	-8.50	-16.29	-3.16	-	-	-3.34	
<b>Systematic Trend</b>	<b>461,206,701</b>	<b>4.53</b>	<b>5.00</b>	<b>1.18</b>	<b>-0.03</b>	<b>0.86</b>	<b>-7.03</b>	<b>18.14</b>	<b>11.89</b>	-	-	<b>8.03</b>	<b>Jun-17</b>
<i>Credit Suisse Liquid Alt Beta</i>				1.44	-3.92	-9.55	-17.87	10.47	3.96	-	-	1.22	
Aspect Capital	152,750,536	1.50		1.50	1.03	5.99	-1.36	18.21	12.13	-	-	7.40	Nov-17
Credit Suisse	155,325,050	1.53		1.46	-3.44	-8.04	-15.75	19.78	10.39	-	-	6.95	Jun-17
Crabel Capital	153,131,115	1.51		0.58	2.48	4.92	-3.58	16.41	12.97	-	-	9.27	Jun-17
<b>Inflation Protection</b>	<b>810,842,076</b>	<b>7.97</b>	<b>8.00</b>	<b>0.01</b>	<b>-1.24</b>	<b>-1.82</b>	<b>-1.35</b>	<b>8.77</b>	<b>7.67</b>	-	-	<b>7.27</b>	<b>Jul-17</b>
<i>Inflation Protection Allocation</i>				0.12	-0.14	-0.35	0.07	8.59	7.08	-	-	6.65	
<i>Inflation Protection Custom Benchmark</i>				0.01	-0.67	-1.63	-1.52	8.66	6.96	-	-	6.56	
<b>Core Real Estate</b>	<b>380,594,105</b>	<b>3.74</b>	<b>4.00</b>	<b>-0.03</b>	<b>-3.73</b>	<b>-8.85</b>	<b>-8.36</b>	<b>8.86</b>	<b>6.52</b>	-	-	<b>6.50</b>	<b>Jul-17</b>
<i>NFI-ODCE BM 2</i>				-0.03	-2.91	-11.04	-10.76	7.03	5.55	-	-	5.80	
<b>Private Real Assets (ex-Real Estate)</b>	<b>430,247,971</b>	<b>4.23</b>	<b>4.00</b>	<b>0.04</b>	<b>1.04</b>	<b>5.32</b>	<b>5.73</b>	<b>12.62</b>	<b>12.07</b>	-	-	<b>10.86</b>	<b>Mar-15</b>
<i>Private Real Assets (ex-Real Estate) Custom BM</i>				0.04	1.58	8.39	8.29	12.95	10.55	-	-	11.21	

State of Rhode Island Pension Plan

# TOTAL FUND PERFORMANCE DETAIL - (NET)

	Allocation			Performance (%)									
	Market Value (\$)	% of Portfolio	Strategic Benchmark Allocation (%)	1 Mo (%)	FYTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	15 Yrs (%)	Inception (%)	Inception Date
<b>Volatility Protection</b>	<b>1,494,265,017</b>	<b>14.69</b>	<b>15.00</b>	<b>-0.34</b>	<b>0.30</b>	<b>3.45</b>	<b>5.48</b>	<b>2.76</b>	<b>4.73</b>	-	-	<b>4.16</b>	<b>Jul-17</b>
<i>Volatility Protection Custom Benchmark</i>				-1.30	-2.39	-0.05	2.40	-0.79	1.92	-	-	1.58	
<b>Investment Grade Fixed Income (ex-Treasuries)</b>	<b>546,258,236</b>	<b>5.37</b>	<b>6.50</b>	<b>-1.89</b>	<b>-4.77</b>	<b>-2.11</b>	<b>1.84</b>	<b>-5.06</b>	-	-	-	<b>-3.65</b>	<b>Jun-20</b>
<i>IG Fixed Income (ex-Treas) BM</i>				-1.92	-5.30	-2.92	1.08	-5.88	-	-	-	-4.96	
Fidelity Corporate Bonds	275,841,367	2.71		-1.90	-4.74	-1.69	3.07	-5.44	-	-	-	-3.60	Jun-20
Loomis Securitized Bond	270,416,869	2.66		-1.88	-4.78	-2.53	0.62	-4.68	-	-	-	-3.72	Jun-20
<b>Absolute Return</b>	<b>787,750,429</b>	<b>7.74</b>	<b>6.50</b>	<b>0.59</b>	<b>3.79</b>	<b>7.45</b>	<b>8.27</b>	<b>10.36</b>	<b>9.10</b>	-	-	<b>8.63</b>	<b>Jul-17</b>
<i>HFRI Fund of Funds Composite Index</i>				-1.22	-0.70	1.57	2.89	3.25	3.74	-	-	3.32	
<b>Cash</b>	<b>160,236,538</b>	<b>1.57</b>	<b>2.00</b>	<b>0.49</b>	<b>1.83</b>	<b>4.45</b>	<b>5.34</b>	<b>1.74</b>	<b>1.96</b>	-	-	<b>1.86</b>	<b>Feb-17</b>
<i>ICE BofA 0-1 Yr. U.S. Treasury Notes &amp; Bonds</i>				0.44	1.75	3.94	4.68	1.55	1.75	-	-	1.63	
<b>Other</b>	<b>145,053,198</b>	<b>1.43</b>	<b>0.00</b>	<b>-1.02</b>	<b>0.97</b>	<b>6.60</b>	<b>10.38</b>	<b>2.05</b>	<b>1.39</b>	<b>1.07</b>	-	<b>1.01</b>	<b>Nov-12</b>
<b>Shott Capital</b>	<b>49,855,351</b>	<b>0.49</b>	<b>0.00</b>	<b>-3.78</b>	<b>1.25</b>	<b>25.89</b>	<b>25.75</b>	<b>15.21</b>	<b>10.19</b>	<b>11.83</b>	<b>11.48</b>	<b>0.26</b>	<b>Jul-00</b>
<b>Short-Term Cash</b>	<b>64,501,202</b>	<b>0.63</b>	<b>0.00</b>	<b>0.37</b>	<b>1.41</b>	<b>3.51</b>	<b>4.09</b>	<b>1.79</b>	<b>2.21</b>	-	-	<b>2.06</b>	<b>Jul-17</b>
<i>90 Day U.S. Treasury Bill</i>				0.45	1.77	4.06	4.77	1.85	1.77	-	-	1.72	
<b>Russell Overlay Fund</b>	<b>30,696,644</b>	<b>0.30</b>	<b>0.00</b>	<b>0.00</b>	<b>-0.05</b>	<b>-0.22</b>	<b>-0.18</b>	<b>-0.31</b>	<b>-0.06</b>	<b>-0.04</b>	<b>-0.01</b>	<b>-0.06</b>	<b>Sep-08</b>

- Please note returns are provided by BNY Mellon: returns may not match the custodian due to rounding.
- Fiscal Year end is June 30th.
- Russell Overlay returns do not represent returns for the individual account but rather Russell's impact at the total plan level.
- Liquid Credit Benchmark: Prior to July 2021 the benchmark consisted of 50% BofAML US High Yield TR/ 50% CS Lev Loan Index.
- The Investment Grade Fixed Income Composite includes \$4,040 of interest income from McKay Shields.



# DISCLAIMERS & DISCLOSURES

Past performance is no guarantee of future results.

Returns for pooled funds, e.g. mutual funds and collective investment trusts, are collected from third parties; they are not generally calculated by NEPC. Returns for separate accounts, with some exceptions, are calculated by NEPC. Returns are reported net of manager fees unless otherwise noted.

A “since inception” return, if reported, begins with the first full month after funding, although actual inception dates (e.g. the middle of a month) and the timing of cash flows are taken into account in Composite return calculations.

NEPC’s preferred data source is the plan’s custodian bank or record-keeper. If data cannot be obtained from one of the preferred data sources, data provided by investment managers may be used. Information on market indices and security characteristics is received from additional providers. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within. In addition, some index returns displayed in this report or used in calculation of a policy index, allocation index or other custom benchmark may be preliminary and subject to change.

All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.

The opinions presented herein represent the good faith views of NEPC as of the date of this presentation and are subject to change at any time. Neither fund performance nor universe rankings contained in this report should be considered a recommendation by NEPC.

This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.

Source of private fund performance benchmark data: Cambridge Associates, via Refinitiv

# ASSET ALLOCATION

NEPC, LLC

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State of Rhode Island  
Office of the General Treasurer

**James Diosa**  
General Treasurer

State Investment Commission  
State of Rhode Island, State House  
Providence, Rhode Island

This is to certify that the amounts so listed on this page belong to the credit of the Employees' Retirement, Municipal Employees', State Police and Judicial Retirement Systems of the State of Rhode Island at the close of business on October 31<sup>st</sup>, 2023.

**Employees' Retirement System of Rhode Island  
Composite Reporting Investment Valuation  
October 31, 2023**

Asset Class	Base Market Value
<b>Grand Total</b>	<b>10,168,872,959</b>
CASH EQUIVALENT*	356,342,216
GLOBAL PUBLIC EQUITY	3,598,806,089
EQUITY OPTIONS	0
EMERGING MARKET DEBT	164,786,773
CREDIT	165,761,679
CLOs	226,259,052
PRIVATE EQUITY**	2,136,431,757
REAL ESTATE**	624,246,835
HEDGE FUNDS**	787,749,762
INFRASTRUCTURE**	430,247,971
US TRADITIONAL FIXED	535,553,350
CPC PROGRAM	888,308,302

Plan Allocations	%	Base Market Value
<b>Grand Total</b>	<b>100.00%</b>	<b>10,168,872,959</b>
STATE EMP RET PLAN	72.20%	7,341,546,211
MUNI EMP RET PLAN	20.46%	2,080,263,186
TEACHER'S SURVIVOR BENEFIT	4.00%	407,183,481
STATE POLICE RET PL	1.96%	199,117,953
JUDICIAL RET PLAN	1.00%	101,408,470
NON-CONT ST POL RET	0.38%	38,505,775
NON-CONTRIB JUD RET	0.01%	847,884

\* Cash & Short-Term Investments, as shown, also includes amounts available within specific active-manager mandates, and thus as aggregated will not tie directly to separate cash allocations as reported elsewhere.

\*\* Alternative Investments – comprising the five components as indicated – have varying degrees of liquidity and may not have readily determinable market values. As such, they may be based on appraisals only.

ERSRI Asset Allocation Tracking

Functional Bucket	Aggregate Asset Class	Aggregate Allocation Weight	Asset Class	(a) Strategic Benchmark Weight/Target Allocation	(b) Actual exposure as of 10/31/23	(b) - (a)
GROWTH	Global Equity	40.0%	US Equity	25.1%	22.4%	-2.7%
			International Developed Equity	10.7%	9.5%	-1.2%
			EM Equity	4.2%	3.8%	-0.5%
	Private Growth	15.0%	Private Equity	12.5%	17.7%	5.2%
			Non-Core Real Estate	2.5%	2.4%	-0.1%
INCOME	Income	12.0%	Equity Options	2.0%	1.7%	-0.3%
			EMD (50/50 Blend)	2.0%	1.6%	-0.4%
			Liquid Credit	3.0%	2.5%	-0.5%
			Private Credit	3.0%	3.3%	0.3%
			CLOs	2.0%	2.2%	0.2%
STABILITY	CPC	10.0%	Treasury Duration	5.0%	4.3%	-0.7%
			Systematic Trend	5.0%	4.5%	-0.5%
	Inflation Protection	8.0%	Core Real Estate	4.0%	3.7%	-0.3%
			Private Real Assets (ex-Real Estate)	4.0%	4.2%	0.2%
			TIPs	0.0%	0.0%	0.0%
	Volatility Protection	15.0%	Investment Grade Fixed Income (ex-Treasuries)	6.5%	5.4%	-1.1%
			Absolute Return	6.5%	7.7%	1.2%
			Strategic Cash	2.0%	1.6%	-0.4%
OTHER	Short-term Tactical	-	Short-Term Cash	-	0.6%	0.6%
			Russell Overlay	-	0.3%	0.3%
			Distribution Management	-	0.5%	0.5%
<b>TOTAL</b>	<b>Total</b>	<b>100.0%</b>		<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>



# PRIVATE EQUITY & PRIVATE CREDIT

NEPC, LLC

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### Portfolio Summary

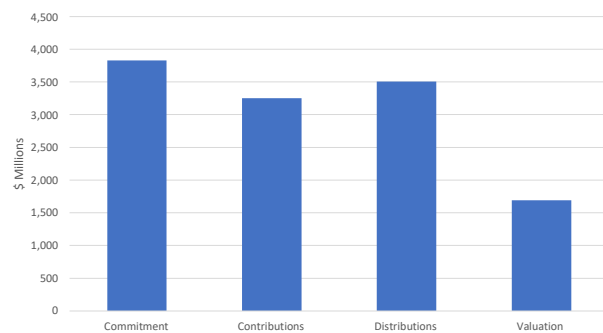
3/31/2023

All Investments

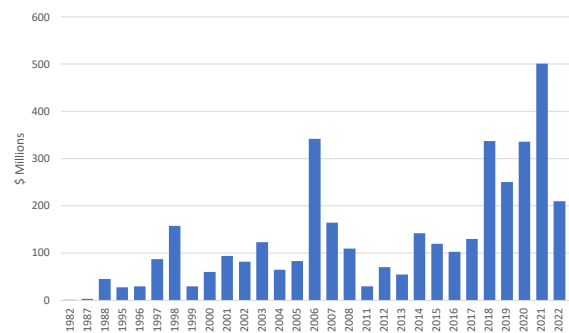
### Performance Summary

Asset Class	Investment Type	Number of Investments	Commitment	Contributions	Distributions	Valuation	Multiple of Cost	IRR	TWR
Private Equity Funds									
<b>Total: Private Equity Funds</b>		189	3,827,207,034	3,249,110,409	3,507,663,218	1,692,445,996	1.60	14.08%	12.44%

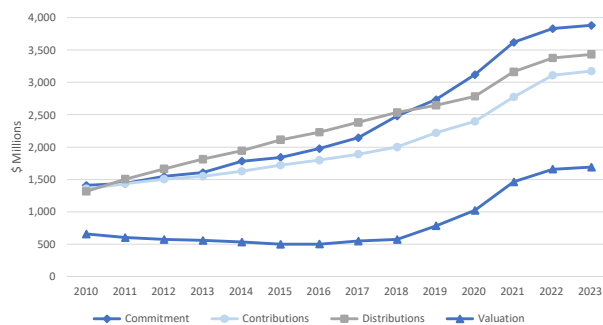
#### Cash Flow and Valuation Summary



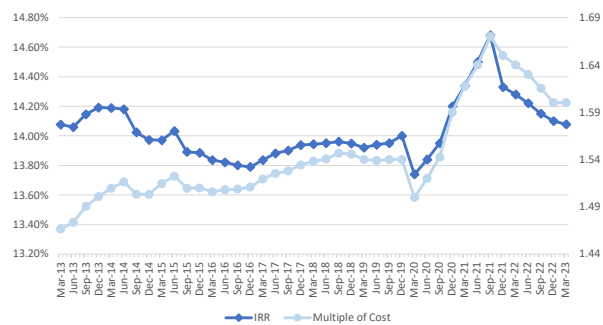
#### Commitment by Vintage Year



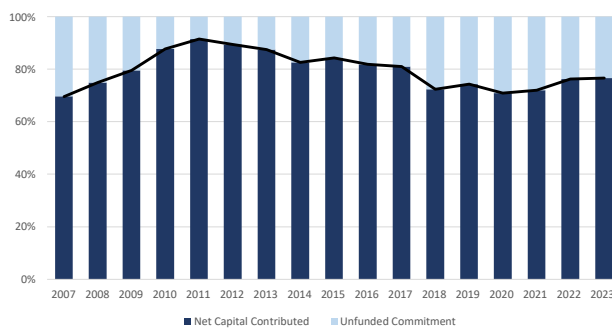
#### Historical Cash Flows and Valuation



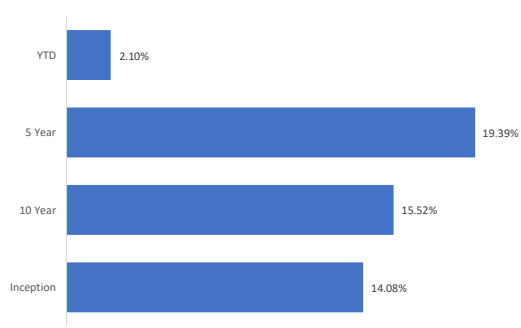
#### Historical Performance



#### Historical Percent Funded



#### Period IRRs



**Employees' Retirement System of Rhode Island Private Equity Performance - Active Portfolio**

**3/31/2023**

Sorted by Type and Vintage Year

Current Partnerships	Vintage Year/ Initial Investment	Type	Amount Committed (in \$ unless otherwise noted)	Cumulative Cash Flows (\$)			Cumulative Performance *		
				Amount Drawn	Amount Distributed	Amount Unfunded (\$)	Valuation (\$)	Net IRR (%)	Net Multiple of Investment
Nautic Partners V, L.P.	2000	Buyout	20,000,000	20,336,124	40,732,256	631,354	1,526,276	17.03%	2.08
CVC European Equity Partners III	2001	Buyout	20,000,000	23,760,732	59,551,716	297,277	1,412,885	41.02%	2.57
Parthenon Investors II, L.P.	2001	Buyout	23,960,000	23,409,381	37,994,886	1,821,022	438,766	12.34%	1.64
Leeds Equity Partners IV, L.P.	2003	Buyout	10,000,000	10,209,327	13,390,948	1,099,639	17,427	4.27%	1.31
Nordic Capital Fund V	2003	Buyout	15,882,652	21,398,689	58,883,260	-	52,837	20.20%	2.65
TPG Partners IV, L.P.	2003	Buyout	15,000,000	16,672,684	31,829,124	64,421	29,491	15.36%	1.91
Birch Hill Equity Partners III	2005	Buyout	13,299,444	18,973,636	36,236,586	163,390	178,369	13.34%	2.11
CVC European Equity Partners IV	2005	Buyout	17,930,475	21,302,146	41,386,006	2,078,511	29,138	16.63%	1.95
Providence Equity Partners V	2005	Buyout	25,000,000	31,142,231	36,427,740	2,200,572	108,725	3.05%	1.17
First Reserve Fund XI, L.P.	2006	Buyout	20,000,000	22,125,580	15,632,464	(1)	9,010	-8.63%	0.71
Nordic Capital Fund VI	2006	Buyout	16,300,432	22,447,436	34,287,801	-	47,069	8.61%	1.73
TPG Fund V	2006	Buyout	20,000,000	20,697,887	28,206,248	409,139	60,063	4.81%	1.37
Green Equity Investors V	2007	Buyout	20,000,000	20,422,420	47,788,493	1,731,093	306,889	18.17%	2.36
Nautic Partners VI, L.P.	2007	Buyout	20,000,000	24,247,711	55,518,808	518,351	1,672,580	17.28%	2.36
Providence Equity Partners VI	2007	Buyout	25,000,000	29,906,685	41,516,032	971,235	604,641	6.05%	1.41
Trilantic Capital Partners IV L.P.	2007	Buyout	11,098,351	11,656,454	17,666,701	1,679,627	594,646	13.12%	1.57
Bain Capital Fund X, L.P.	2008	Buyout	25,000,000	24,563,642	36,437,996	498,858	3,237,978	9.03%	1.62
CVC European Equity Partners V	2008	Buyout	21,733,910	29,451,077	57,150,680	316,078	555,987	20.20%	2.27
TPG Fund VI	2008	Buyout	10,000,000	14,027,947	18,726,596	332,283	157,024	7.88%	1.35
Advent International GPE VII-C, L.P.	2012	Buyout	20,000,000	19,200,000	30,879,034	800,000	4,124,043	13.56%	1.82
Providence Equity Partners VII	2012	Buyout	25,000,000	38,072,907	55,115,459	1,580,860	21,415,372	22.29%	2.01
EnCap Energy Capital Fund IX, L.P.	2013	Buyout	18,000,000	20,725,817	22,001,663	700,210	7,987,393	10.42%	1.45
Nordic Capital Fund VIII	2013	Buyout	16,300,432	21,746,429	29,739,954	1,361,726	6,095,057	14.52%	1.66
Riverside Capital Appreciation Fund VI	2013	Buyout	20,000,000	20,133,547	26,166,365	2,528,726	6,040,284	12.13%	1.60
Carlyle Asia Partners IV, LP	2014	Buyout	30,000,000	35,762,383	45,268,657	1,900,445	13,361,359	12.59%	1.64
CVC Capital Partners Fund VI	2014	Buyout	16,300,432	20,237,996	22,182,830	1,514,672	17,386,688	17.71%	2.01
Nautic Partners VII, L.P.	2014	Buyout	20,000,000	20,453,988	43,514,241	1,546,012	6,608,503	43.93%	2.45
Riverside Micro-Cap Fund III	2014	Buyout	20,000,000	21,874,016	98,255,269	2,411,698	31,034,076	36.75%	5.91
Sorenson Capital Partners III, L.P.	2014	Buyout	30,000,000	38,449,025	34,307,672	1,460,845	25,509,164	11.52%	1.56
Baring Asia Private Equity Fund VI, LP	2015	Buyout	15,000,000	16,690,364	16,833,771	1,577,551	13,704,502	15.15%	1.83
Centerbridge Capital Partners III, L.P.	2015	Buyout	25,000,000	32,953,660	31,268,039	2,046,811	24,339,499	18.57%	1.69
EnCap Energy Capital Fund X, L.P.	2015	Buyout	25,000,000	25,690,854	23,168,951	1,066,584	24,119,444	15.36%	1.84
Paine Schwartz Food Chain Fund IV, L.P.	2015	Buyout	30,000,000	28,227,870	14,535,141	5,691,520	24,026,841	7.79%	1.37
Advent International GPE VIII	2016	Buyout	20,000,000	20,000,000	14,608,992	(0)	25,723,764	18.58%	2.02
Nautic Partners VIII	2016	Buyout	20,000,000	21,348,614	23,589,322	2,218,288	13,701,585	44.12%	1.75
Southvest Fund VII, L.P.	2016	Buyout	37,500,000	32,455,302	9,006,209	5,625,020	43,656,068	19.53%	1.62
Tenex Capital Partners II	2016	Buyout	25,000,000	28,036,588	34,092,351	2,876,795	25,723,961	25.02%	2.13
CVC Capital Partners Fund VII, L.P.	2017	Buyout	38,034,342	38,512,676	10,087,338	3,234,597	56,354,356	24.34%	1.76
EnCap Energy Capital Fund XI, L.P.	2017	Buyout	50,000,000	43,129,355	7,222,565	8,205,912	57,799,893	19.20%	1.51
RLH IV	2017	Buyout	40,000,000	37,291,382	16,914,997	12,669,409	27,966,051	8.85%	1.20
Altaris Constellation Partners IV	2018	Buyout	6,000,000	6,094,927	4,264,044	336,219	6,201,649	23.24%	1.72

**Employees' Retirement System of Rhode Island Private Equity Performance - Active Portfolio**

**3/31/2023**

Sorted by Type and Vintage Year

Current Partnerships	Vintage Year/ Initial Investment	Type	Amount Committed (in \$ unless otherwise noted)	Cumulative Cash Flows (\$)			Cumulative Performance *		
				Amount Drawn	Amount Distributed	Amount Unfunded (\$)	Valuation (\$)	Net IRR (%)	Net Multiple of Investment
Altaris Health Partners IV	2018	Buyout	24,000,000	23,510,290	24,006,953	2,160,929	18,867,859	27.40%	1.82
Baring Asia Private Equity Fund VII, LP	2018	Buyout	50,000,000	48,437,866	28,541,589	18,921,738	51,151,061	29.87%	1.65
Carlyle Asia Partners V	2018	Buyout	50,000,000	38,768,590	11,056,077	21,580,157	32,619,135	7.97%	1.13
German Equity Partners V (ECM GEP V)	2018	Buyout	23,363,953	16,068,585	3,532,265	10,818,073	15,777,543	12.16%	1.26
Level Equity Opportunities Fund 2018	2018	Buyout	15,000,000	11,294,504	10,556,666	3,705,496	17,424,656	52.51%	2.48
Paine Schwartz Food Chain Fund V	2018	Buyout	50,000,000	41,573,988	5,704,730	13,215,656	54,628,869	26.95%	1.45
Siris Partners IV, L.P.	2018	Buyout	50,000,000	42,045,012	5,950,309	11,608,871	58,475,990	17.86%	1.53
Advent International GPE IX	2019	Buyout	30,000,000	27,301,925	2,998,802	2,698,075	37,703,000	24.41%	1.49
Eureka IV	2019	Buyout	20,000,000	14,362,401	919,577	5,635,737	15,331,889	13.31%	1.13
Hastings Equity IV, L.P.	2019	Buyout	25,000,000	19,288,921	11,951,744	5,711,079	25,965,661	30.52%	1.97
Nautic Partners IX, L.P.	2019	Buyout	25,000,000	22,394,925	6,245,199	5,115,036	27,271,791	28.28%	1.50
Riverside Micro-Cap Fund V, L.P.	2019	Buyout	25,000,000	20,790,728	-	4,209,272	31,103,403	19.43%	1.50
Vinci Capital Partners III	2019	Buyout	30,000,000	22,962,507	473,186	7,692,720	29,116,941	13.54%	1.29
Endeavour Capital Fund VIII, L.P.	2020	Buyout	50,000,000	21,703,453	-	28,296,547	24,612,911	12.64%	1.13
Hastings Equity Co-Invest RI, L.P.	2020	Buyout	7,500,000	3,767,346	-	3,732,654	4,182,425	5.65%	1.11
Odyssey Investment Partners Fund VI, LP	2020	Buyout	50,000,000	33,444,744	18,933	16,574,189	42,411,873	14.45%	1.27
Parthenon Investors VI, L.P.	2020	Buyout	45,000,000	20,407,161	-	24,591,404	25,077,312	17.52%	1.23
Pollen Street Capital IV, L.P.	2020	Buyout	43,467,819	23,994,256	3,352,532	21,380,795	25,673,524	16.25%	1.19
Riverside Micro Cap Fund IV B, L.P.	2020	Buyout	20,000,000	19,048,773	-	951,227	36,910,205	32.63%	1.94
Thoma Bravo Discover Fund III, L.P.	2020	Buyout	30,000,000	27,733,402	-	2,266,598	30,284,321	6.15%	1.09
Wynnchurch Capital Partners V	2020	Buyout	40,000,000	25,329,409	270,902	14,749,860	31,483,265	19.91%	1.25
PSP RI Co-Investment Fund, L.P.	2021	Buyout	15,000,000	147,019	-	14,852,981	29,605	N/M	N/M
Charlesbank Equity Fund X, L.P.	2021	Buyout	25,000,000	10,909,097	97,895	14,098,517	12,289,760	N/M	N/M
Charlesbank Fund X Overage	2021	Buyout	10,000,000	7,229,195	52,729	2,778,245	8,221,805	N/M	N/M
CVC Capital Partners VIII	2021	Buyout	43,467,819	24,858,587	142,359	18,483,916	26,710,371	N/M	N/M
Nautic Partners X, L.P.	2021	Buyout	50,000,000	16,822,327	266,347	33,444,019	17,406,479	N/M	N/M
Riverside Micro-Cap Fund VI, L.P.	2021	Buyout	50,000,000	13,904,849	-	36,095,151	13,837,203	N/M	N/M
Shamrock Capital Growth Fund V, L.P.	2021	Buyout	30,000,000	14,238,295	4,249	15,761,705	12,675,290	N/M	N/M
Tenex Capital Partners III	2021	Buyout	30,000,000	17,045,380	10,714,512	15,478,861	20,808,224	N/M	N/M
Thoma Bravo Fund XIV, L.P.	2021	Buyout	20,000,000	19,701,244	-	298,756	19,614,970	N/M	N/M
Baring Asia Private Equity Fund VIII, LP	2021	Buyout	50,000,000	-	-	50,000,000	(50,692)	N/M	N/M
Paine Schwartz Food Chain Fund VI	2022	Buyout	30,000,000	10,102,838	3,647,079	23,524,781	5,903,593	N/M	N/M
Havencrest Healthcare Partners II	2022	Buyout	40,000,000	1,720,927	-	38,279,073	594,231	N/M	N/M
Thoma Bravo XV	2022	Buyout	25,000,000	13,417,405	5,417	11,582,595	13,340,444	N/M	N/M
Advent International GPE X	2022	Buyout	45,000,000	3,375,000	-	41,625,000	2,758,014	N/M	N/M
Thoma Bravo Discover Fund IV	2022	Buyout	35,000,000	11,638,110	-	23,361,890	12,012,600	N/M	N/M
Parthenon Investors VII	2023	Buyout	35,000,000	-	-	35,000,000	-	N/M	N/M
Eureka III	2019	Direct Secondary	25,000,000	19,771,170	33,397,560	7,657,415	6,064,171	35.92%	2.00
Centerbridge Capital Partners	2006	Distressed Debt	15,000,000	23,764,738	41,758,584	992,471	591,031	19.20%	1.78
MHR Institutional Partners III LP	2006	Distressed Debt	20,000,000	20,817,143	25,328,707	3,478,626	3,811,485	5.66%	1.40
WLR Recovery Fund IV	2007	Distressed Debt	8,000,000	7,277,318	9,764,939	275,492	4,886	7.29%	1.34

**Employees' Retirement System of Rhode Island Private Equity Performance - Active Portfolio**  
**3/31/2023**

Sorted by Type and Vintage Year

Current Partnerships	Vintage Year/ Initial Investment	Type	Amount Committed (in \$ unless otherwise noted)	Cumulative Cash Flows (\$)			Cumulative Performance *		
				Amount Drawn	Amount Distributed	Amount Unfunded (\$)	Valuation (\$)	Net IRR (%)	Net Multiple of Investment
Oaktree European Principal Fund III	2011	Distressed Debt	20,000,000	17,686,000	19,768,019	5,247,415	6,952,991	7.10%	1.51
Centerbridge Special Credit Partners II, L.P.	2012	Distressed Debt	25,000,000	22,500,000	23,086,545	2,500,000	664,644	1.30%	1.06
Davidson Kempner Long-Term Distressed Opportuniti	2018	Distressed Debt	50,000,000	47,425,008	52,568,056	3,428,402	33,728,804	17.88%	1.82
Clearlake Opportunities Partners II, L.P.	2019	Distressed Debt	30,000,000	20,142,481	5,979,633	11,648,772	17,181,539	10.05%	1.15
Davidson Kempner Long-Term Distressed Opportuniti	2020	Distressed Debt	35,000,000	32,281,155	882,459	3,597,413	36,347,746	8.66%	1.15
Clearlake Opportunities Partners III, L.P.	2021	Distressed Debt	30,000,000	3,313,351	14,384	26,686,649	3,239,159	N/M	N/M
GCM Grosvenor Advance Fund	2022	Fund of Funds	10,000,000	4,791,298	38,935	5,292,452	5,419,143	N/M	N/M
Level Equity Growth Partners V	2021	Growth Equity	30,000,000	10,279,057	-	19,720,943	10,241,661	N/M	N/M
Level Equity Opportunities Fund 2021	2021	Growth Equity	20,000,000	4,898,369	-	15,101,621	4,898,379	N/M	N/M
Clearlake Flagship Plus Partners, L.P.	2021	Opportunistic Credit	10,000,000	9,791,152	2,589,924	2,357,822	8,213,322	N/M	N/M
Coller International Partners V, L.P.	2006	Secondary	15,000,000	12,620,912	17,394,636	150,000	56,236	7.45%	1.38
Leapfrog Ventures II, L.P.	2005	Venture Capital	10,000,000	9,815,000	7,749,019	185,000	1,424,742	-1.07%	0.93
Alta Partners VIII	2006	Venture Capital	15,000,000	15,000,000	34,026,008	-	3,511,077	16.39%	2.50
Point 406 Ventures I, L.P.	2006	Venture Capital	10,000,000	11,567,207	15,720,501	(0)	2,362,819	6.58%	1.56
Paladin III, L.P.	2008	Venture Capital	10,000,000	13,922,641	28,122,870	154,998	3,847,315	13.17%	2.30
Industry Ventures Partnership Holdings III	2014	Venture Capital	25,000,000	23,339,744	42,196,532	1,722,958	36,120,797	23.94%	3.36
Industry Ventures Partnership Holdings III-C	2015	Venture Capital	15,000,000	13,667,381	12,264,594	1,332,619	21,944,285	22.56%	2.50
Industry Ventures Partnership Holdings IV	2015	Venture Capital	10,000,000	9,030,000	3,367,669	970,000	18,290,442	23.43%	2.40
Level Equity Growth Partners IV, L.P.	2018	Venture Capital	17,500,000	17,031,524	14,401,846	947,112	27,225,685	47.49%	2.44
Industry Ventures Partnership Holdings IV- Secondary	2019	Venture Capital	10,032,361	7,974,690	2,874,924	2,057,671	18,349,632	45.43%	2.66
Industry Ventures Partnership Holdings V	2019	Venture Capital	30,000,000	25,800,000	752,319	4,200,000	54,282,315	34.75%	2.13
DCVC Bio II, L.P.	2020	Venture Capital	20,000,000	9,300,000	3,044,804	10,700,000	8,103,102	18.20%	1.20
GGV Capital VIII L.P.	2021	Venture Capital	18,000,000	10,170,000	-	7,830,000	11,561,404	N/M	N/M
GGV Capital VIII Plus L.P.	2021	Venture Capital	4,500,000	2,070,000	-	2,430,000	2,148,412	N/M	N/M
GGV Discovery III, L.P.	2021	Venture Capital	7,500,000	3,487,500	-	4,012,500	5,164,381	N/M	N/M
Industry Ventures Partnership Holdings VI	2021	Venture Capital	30,000,000	9,323,362	58,015	20,692,182	9,939,294	N/M	N/M
TCG Crossover Fund I, L.P.	2021	Venture Capital	25,000,000	17,625,000	1,675,441	7,375,000	20,297,244	N/M	N/M
The Column Group Opportunity III, L.P.	2022	Venture Capital	12,500,000	2,174,798	-	10,325,202	1,987,583	N/M	N/M
The Column Group V, LP	2022	Venture Capital	12,500,000	802,847	-	11,697,153	575,446	N/M	N/M
GGV Capital IX	2023	Venture Capital	6,400,000	-	-	6,400,000	-	N/M	N/M
GGV Capital IX Plus	2023	Venture Capital	1,600,000	-	-	1,600,000	-	N/M	N/M
GGV Discovery IV (U.S.)	2023	Venture Capital	7,000,000	-	-	7,000,000	-	N/M	N/M
Other Funds in Aggregate**			10,000,000	12,291,159	5,007,411	2,719,966	11,749,940	N/M	N/M
<b>Total</b>			<b>2,784,672,423</b>	<b>2,154,930,555</b>	<b>1,856,731,586</b>	<b>888,936,205</b>	<b>1,692,445,996</b>		

**Employees' Retirement System of Rhode Island Private Equity Performance - Active Portfolio**  
**3/31/2023**

Sorted by Type and Vintage Year

Current Partnerships	Vintage Year/ Initial Investment	Type	Amount Committed (in \$ unless otherwise noted)	Cumulative Cash Flows (\$)			Valuation (\$)	Cumulative Performance *	
				Amount Drawn	Amount Distributed	Amount Unfunded (\$)		Net IRR (%)	Net Multiple of Investment

\*IRR refers to the fund's Internal Rate of Return, or the annualized compounded yield on an investment. This calculation is typically applied in private equity where there are multiple points at which capital is invested (capital called) and at which it is distributed. A positive IRR means that the fund's current value plus any cash distributions are greater than the cash value contributed and management fees paid. Typically a fund will have a negative IRR during the first few years of its life, a period referred to as the "J-Curve", because cash is invested upfront and it takes time to generate value. It is important to consider a fund's start date (vintage year) when assessing IRRs. Multiple of investment is another indicator of returns, and is calculated by dividing the fund's cumulative distributions and current value, after fees, by the amount of capital paid in. Please note that performance calculations are specific to the ERSRI investment, and were not prepared, reviewed or approved by the General Partners.

\*\*Other funds in aggregate are the total commitments to and amounts drawn and distributed by funds whose confidentiality provisions do not permit the disclosure of their performance data. These funds include Braemar Energy Ventures III, Constellation Ventures III, Thomas, McNerney & Partners and Thomas McNerney & Partners II.

**Employees' Retirement System of Rhode Island Private Equity Performance - Active Portfolio**

**3/31/2023**

Sorted by Type and Partnership Name

Current Partnerships	Vintage Year/ Initial Investment	Type	Cumulative Cash Flows (\$)				Cumulative Performance *		
			Amount Committed (in \$ unless otherwise noted)	Amount Drawn	Amount Distributed	Amount Unfunded (\$)	Valuation (\$)	Net IRR (%)	Net Multiple of Investment
Advent International GPE IX	2019	Buyout	30,000,000	27,301,925	2,998,802	2,698,075	37,703,000	24.41%	1.49
Advent International GPE VII-C, L.P.	2012	Buyout	20,000,000	19,200,000	30,879,034	800,000	4,124,043	13.56%	1.82
Advent International GPE VIII	2016	Buyout	20,000,000	20,000,000	14,608,992	(0)	25,723,764	18.58%	2.02
Advent International GPE X	2022	Buyout	45,000,000	3,375,000	-	41,625,000	2,758,014	N/M	N/M
Altaris Constellation Partners IV	2018	Buyout	6,000,000	6,094,927	4,264,044	336,219	6,201,649	23.24%	1.72
Altaris Health Partners IV	2018	Buyout	24,000,000	23,510,290	24,006,953	2,160,929	18,867,859	27.40%	1.82
Bain Capital Fund X, L.P.	2008	Buyout	25,000,000	24,563,642	36,437,996	498,858	3,237,978	9.03%	1.62
Baring Asia Private Equity Fund VI, LP	2015	Buyout	15,000,000	16,690,364	16,833,771	1,577,551	13,704,502	15.15%	1.83
Baring Asia Private Equity Fund VII, LP	2018	Buyout	50,000,000	48,437,866	28,541,589	18,921,738	51,151,061	29.87%	1.65
Baring Asia Private Equity Fund VIII, LP	2021	Buyout	50,000,000	-	-	50,000,000	(50,692)	N/M	N/M
Birch Hill Equity Partners III	2005	Buyout	13,299,444	18,973,636	36,236,586	163,390	178,369	13.34%	2.11
Carlyle Asia Partners IV, LP	2014	Buyout	30,000,000	35,762,383	45,268,657	1,900,445	13,361,359	12.59%	1.64
Carlyle Asia Partners V	2018	Buyout	50,000,000	38,768,590	11,056,077	21,580,157	32,619,135	7.97%	1.13
Centerbridge Capital Partners III, L.P.	2015	Buyout	25,000,000	32,953,660	31,268,039	2,046,811	24,339,499	18.57%	1.69
Charlesbank Equity Fund X, L.P.	2021	Buyout	25,000,000	10,909,097	97,895	14,098,517	12,289,760	N/M	N/M
Charlesbank Fund X Overage	2021	Buyout	10,000,000	7,229,195	52,729	2,778,245	8,221,805	N/M	N/M
CVC Capital Partners Fund VI	2014	Buyout	16,300,432	20,237,996	22,182,830	1,514,672	17,386,688	17.71%	2.01
CVC Capital Partners Fund VII, L.P.	2017	Buyout	38,034,342	38,512,676	10,087,338	3,234,597	56,354,356	24.34%	1.76
CVC Capital Partners VIII	2021	Buyout	43,467,819	24,858,587	142,359	18,483,916	26,710,371	N/M	N/M
CVC European Equity Partners III	2001	Buyout	20,000,000	23,760,732	59,551,716	297,277	1,412,885	41.02%	2.57
CVC European Equity Partners IV	2005	Buyout	17,930,475	21,302,146	41,386,006	2,078,511	29,138	16.63%	1.95
CVC European Equity Partners V	2008	Buyout	21,733,910	29,451,077	57,150,680	316,078	555,987	20.20%	2.27
EnCap Energy Capital Fund IX, L.P.	2013	Buyout	18,000,000	20,725,817	22,001,663	700,210	7,987,393	10.42%	1.45
EnCap Energy Capital Fund X, L.P.	2015	Buyout	25,000,000	25,690,854	23,168,951	1,066,584	24,119,444	15.36%	1.84
EnCap Energy Capital Fund XI, L.P.	2017	Buyout	50,000,000	43,129,355	7,222,565	8,205,912	57,799,893	19.20%	1.51
Endeavour Capital Fund VIII, L.P.	2020	Buyout	50,000,000	21,703,453	-	28,296,547	24,612,911	12.64%	1.13
Eureka IV	2019	Buyout	20,000,000	14,362,401	919,577	5,635,737	15,331,889	13.31%	1.13
First Reserve Fund XI, L.P.	2006	Buyout	20,000,000	22,125,580	15,632,464	(1)	9,010	-8.63%	0.71
German Equity Partners V (ECM GEP V)	2018	Buyout	23,363,953	16,068,585	3,532,265	10,818,073	15,777,543	12.16%	1.26
Green Equity Investors V	2007	Buyout	20,000,000	20,422,420	47,788,493	1,731,093	306,889	18.17%	2.36
Hastings Equity Co-Invest RI, L.P.	2020	Buyout	7,500,000	3,767,346	-	3,732,654	4,182,425	5.65%	1.11
Hastings Equity IV, L.P.	2019	Buyout	25,000,000	19,288,921	11,951,744	5,711,079	25,965,661	30.52%	1.97
Havencrest Healthcare Partners II	2022	Buyout	40,000,000	1,720,927	-	38,279,073	594,231	N/M	N/M
Leeds Equity Partners IV, L.P.	2003	Buyout	10,000,000	10,209,327	13,390,948	1,099,639	17,427	4.27%	1.31
Level Equity Opportunities Fund 2018	2018	Buyout	15,000,000	11,294,504	10,556,666	3,705,496	17,424,656	52.51%	2.48
Nautic Partners IX, L.P.	2019	Buyout	25,000,000	22,394,925	6,245,199	5,115,036	27,271,791	28.28%	1.50
Nautic Partners V, L.P.	2000	Buyout	20,000,000	20,336,124	40,732,256	631,354	1,526,276	17.03%	2.08
Nautic Partners VI, L.P.	2007	Buyout	20,000,000	24,247,711	55,518,808	518,351	1,672,580	17.28%	2.36
Nautic Partners VII, L.P.	2014	Buyout	20,000,000	20,453,988	43,514,241	1,546,012	6,608,503	43.93%	2.45
Nautic Partners VIII	2016	Buyout	20,000,000	21,348,614	23,589,322	2,218,288	13,701,585	44.12%	1.75

**Employees' Retirement System of Rhode Island Private Equity Performance - Active Portfolio**  
**3/31/2023**

Sorted by Type and Partnership Name

Current Partnerships	Vintage Year/ Initial Investment	Type	Cumulative Cash Flows (\$)				Cumulative Performance *			
			Amount Committed (in \$ unless otherwise noted)	Amount Drawn	Amount Distributed	Amount Unfunded (\$)	Valuation (\$)	Net IRR (%)	Net Multiple of Investment	
Nautic Partners X, L.P.	2021	Buyout	50,000,000	16,822,327	266,347	33,444,019	17,406,479	N/M	N/M	
Nordic Capital Fund V	2003	Buyout	15,882,652	21,398,689	58,883,260	-	52,837	20.20%	2.65	
Nordic Capital Fund VI	2006	Buyout	16,300,432	22,447,436	34,287,801	-	47,069	8.61%	1.73	
Nordic Capital Fund VIII	2013	Buyout	16,300,432	21,746,429	29,739,954	1,361,726	6,095,057	14.52%	1.66	
Odyssey Investment Partners Fund VI, LP	2020	Buyout	50,000,000	33,444,744	18,933	16,574,189	42,411,873	14.45%	1.27	
Paine Schwartz Food Chain Fund IV, L.P.	2015	Buyout	30,000,000	28,227,870	14,535,141	5,691,520	24,026,841	7.79%	1.37	
Paine Schwartz Food Chain Fund V	2018	Buyout	50,000,000	41,573,988	5,704,730	13,215,656	54,628,869	26.95%	1.45	
Paine Schwartz Food Chain Fund VI	2022	Buyout	30,000,000	10,102,838	3,647,079	23,524,781	5,903,593	N/M	N/M	
Parthenon Investors II, L.P.	2001	Buyout	23,960,000	23,409,381	37,994,886	1,821,022	438,766	12.34%	1.64	
Parthenon Investors VI, L.P.	2020	Buyout	45,000,000	20,407,161	-	24,591,404	25,077,312	17.52%	1.23	
Parthenon Investors VII	2023	Buyout	35,000,000	-	-	35,000,000	-	N/M	N/M	
Pollen Street Capital IV, L.P.	2020	Buyout	43,467,819	23,994,256	3,352,532	21,380,795	25,673,524	16.25%	1.19	
Providence Equity Partners V	2005	Buyout	25,000,000	31,142,231	36,427,740	2,200,572	108,725	3.05%	1.17	
Providence Equity Partners VI	2007	Buyout	25,000,000	29,906,685	41,516,032	971,235	604,641	6.05%	1.41	
Providence Equity Partners VII	2012	Buyout	25,000,000	38,072,907	55,115,459	1,580,860	21,415,372	22.29%	2.01	
PSP RI Co-Investment Fund, L.P.	2021	Buyout	15,000,000	147,019	-	14,852,981	29,605	N/M	N/M	
Riverside Capital Appreciation Fund VI	2013	Buyout	20,000,000	20,133,547	26,166,365	2,528,726	6,040,284	12.13%	1.60	
Riverside Micro Cap Fund IV B, L.P.	2020	Buyout	20,000,000	19,048,773	-	951,227	36,910,205	32.63%	1.94	
Riverside Micro-Cap Fund III	2014	Buyout	20,000,000	21,874,016	98,255,269	2,411,698	31,034,076	36.75%	5.91	
Riverside Micro-Cap Fund V, L.P.	2019	Buyout	25,000,000	20,790,728	-	4,209,272	31,103,403	19.43%	1.50	
Riverside Micro-Cap Fund VI, L.P.	2021	Buyout	50,000,000	13,904,849	-	36,095,151	13,837,203	N/M	N/M	
RLH IV	2017	Buyout	40,000,000	37,291,382	16,914,997	12,669,409	27,966,051	8.85%	1.20	
Shamrock Capital Growth Fund V, L.P.	2021	Buyout	30,000,000	14,238,295	4,249	15,761,705	12,675,290	N/M	N/M	
Siris Partners IV, L.P.	2018	Buyout	50,000,000	42,045,012	5,950,309	11,608,871	58,475,990	17.86%	1.53	
Sorenson Capital Partners III, L.P.	2014	Buyout	30,000,000	38,449,025	34,307,672	1,460,845	25,509,164	11.52%	1.56	
Southwest Fund VII, L.P.	2016	Buyout	37,500,000	32,455,302	9,006,209	5,625,020	43,656,068	19.53%	1.62	
Tenex Capital Partners II	2016	Buyout	25,000,000	28,036,588	34,092,351	2,876,795	25,723,961	25.02%	2.13	
Tenex Capital Partners III	2021	Buyout	30,000,000	17,045,380	10,714,512	15,478,861	20,808,224	N/M	N/M	
Thoma Bravo Discover Fund III, L.P.	2020	Buyout	30,000,000	27,733,402	-	2,266,598	30,284,321	6.15%	1.09	
Thoma Bravo Discover Fund IV	2022	Buyout	35,000,000	11,638,110	-	23,361,890	12,012,600	N/M	N/M	
Thoma Bravo Fund XIV, L.P.	2021	Buyout	20,000,000	19,701,244	-	298,756	19,614,970	N/M	N/M	
Thoma Bravo XV	2022	Buyout	25,000,000	13,417,405	5,417	11,582,595	13,340,444	N/M	N/M	
TPG Fund V	2006	Buyout	20,000,000	20,697,887	28,206,248	409,139	60,063	4.81%	1.37	
TPG Fund VI	2008	Buyout	10,000,000	14,027,947	18,726,596	332,283	157,024	7.88%	1.35	
TPG Partners IV, L.P.	2003	Buyout	15,000,000	16,672,684	31,829,124	64,421	29,491	15.36%	1.91	
Trilantic Capital Partners IV L.P.	2007	Buyout	11,098,351	11,656,454	17,666,701	1,679,627	594,646	13.12%	1.57	
Vinci Capital Partners III	2019	Buyout	30,000,000	22,962,507	473,186	7,692,720	29,116,941	13.54%	1.29	
Wynnchurch Capital Partners V	2020	Buyout	40,000,000	25,329,409	270,902	14,749,860	31,483,265	19.91%	1.25	
Eureka III	2019	Direct Secondary	25,000,000	19,771,170	33,397,560	7,657,415	6,064,171	35.92%	2.00	
Centerbridge Capital Partners	2006	Distressed Debt	15,000,000	23,764,738	41,758,584	992,471	591,031	19.20%	1.78	



**Employees' Retirement System of Rhode Island Private Equity Performance - Active Portfolio**

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Clearlake Opportunities Partners II, L.P.	2019	Distressed Debt	30,000,000	20,142,481	5,979,633	11,648,772	17,181,539	10.05%	1.15
Clearlake Opportunities Partners III, L.P.	2021	Distressed Debt	30,000,000	3,313,351	14,384	26,686,649	3,239,159	N/M	N/M
Davidson Kempner Long-Term Distressed Opportunitie	2018	Distressed Debt	50,000,000	47,425,008	52,568,056	3,428,402	33,728,804	17.88%	1.82
Davidson Kempner Long-Term Distressed Opportunitie	2020	Distressed Debt	35,000,000	32,281,155	882,459	3,597,413	36,347,746	8.66%	1.15
MHR Institutional Partners III LP	2006	Distressed Debt	20,000,000	20,817,143	25,328,707	3,478,626	3,811,485	5.66%	1.40
Oaktree European Principal Fund III	2011	Distressed Debt	20,000,000	17,686,000	19,768,019	5,247,415	6,952,991	7.10%	1.51
WLR Recovery Fund IV	2007	Distressed Debt	8,000,000	7,277,318	9,764,939	275,492	4,886	7.29%	1.34
GCM Grosvenor Advance Fund	2022	Fund of Funds	10,000,000	4,791,298	38,935	5,292,452	5,419,143	N/M	N/M
Level Equity Growth Partners V	2021	Growth Equity	30,000,000	10,279,057	-	19,720,943	10,241,661	N/M	N/M
Level Equity Opportunities Fund 2021	2021	Growth Equity	20,000,000	4,898,369	-	15,101,621	4,898,379	N/M	N/M
Clearlake Flagship Plus Partners, L.P.	2021	Opportunistic Credit	10,000,000	9,791,152	2,589,924	2,357,822	8,213,322	N/M	N/M
Colter International Partners V, L.P.	2006	Secondary	15,000,000	12,620,912	17,394,636	150,000	56,236	7.45%	1.38
Alta Partners VIII	2006	Venture Capital	15,000,000	15,000,000	34,026,008	-	3,511,077	16.39%	2.50
DCVC Bio II, L.P.	2020	Venture Capital	20,000,000	9,300,000	3,044,804	10,700,000	8,103,102	18.20%	1.20
GGV Capital IX	2023	Venture Capital	6,400,000	-	-	6,400,000	-	N/M	N/M
GGV Capital IX Plus	2023	Venture Capital	1,600,000	-	-	1,600,000	-	N/M	N/M
GGV Capital VIII L.P.	2021	Venture Capital	18,000,000	10,170,000	-	7,830,000	11,561,404	N/M	N/M
GGV Capital VIII Plus L.P.	2021	Venture Capital	4,500,000	2,070,000	-	2,430,000	2,148,412	N/M	N/M
GGV Discovery III, L.P.	2021	Venture Capital	7,500,000	3,487,500	-	4,012,500	5,164,381	N/M	N/M
GGV Discovery IV (U.S.)	2023	Venture Capital	7,000,000	-	-	7,000,000	-	N/M	N/M
Industry Ventures Partnership Holdings III	2014	Venture Capital	25,000,000	23,339,744	42,196,532	1,722,958	36,120,797	23.94%	3.36
Industry Ventures Partnership Holdings III-C	2015	Venture Capital	15,000,000	13,667,381	12,264,594	1,332,619	21,944,285	22.56%	2.50
Industry Ventures Partnership Holdings IV	2015	Venture Capital	10,000,000	9,030,000	3,367,669	970,000	18,290,442	23.43%	2.40
Industry Ventures Partnership Holdings IV- Secondary	2019	Venture Capital	10,032,361	7,974,690	2,874,924	2,057,671	18,349,632	45.43%	2.66
Industry Ventures Partnership Holdings V	2019	Venture Capital	30,000,000	25,800,000	752,319	4,200,000	54,282,315	34.75%	2.13
Industry Ventures Partnership Holdings VI	2021	Venture Capital	30,000,000	9,323,362	58,015	20,692,182	9,939,294	N/M	N/M
Leapfrog Ventures II, L.P.	2005	Venture Capital	10,000,000	9,815,000	7,749,019	185,000	1,424,742	-1.07%	0.93
Level Equity Growth Partners IV, L.P.	2018	Venture Capital	17,500,000	17,031,524	14,401,846	947,112	27,225,685	47.49%	2.44
Paladin III, L.P.	2008	Venture Capital	10,000,000	13,922,641	28,122,870	154,998	3,847,315	13.17%	2.30
Point 406 Ventures I, L.P.	2006	Venture Capital	10,000,000	11,567,207	15,720,501	(0)	2,362,819	6.58%	1.56
TCG Crossover Fund I, L.P.	2021	Venture Capital	25,000,000	17,625,000	1,675,441	7,375,000	20,297,244	N/M	N/M
The Column Group Opportunity III, L.P.	2022	Venture Capital	12,500,000	2,174,798	-	10,325,202	1,987,583	N/M	N/M
The Column Group V, LP	2022	Venture Capital	12,500,000	802,847	-	11,697,153	575,446	N/M	N/M
Other Funds in Aggregate**			10,000,000	12,291,159	5,007,411	2,719,966	11,749,940	N/M	N/M
<b>Total</b>			<b>2,784,672,423</b>	<b>2,154,930,555</b>	<b>1,856,731,586</b>	<b>888,936,205</b>	<b>1,692,445,996</b>		

**Employees' Retirement System of Rhode Island Private Equity Performance - Active Portfolio**  
**3/31/2023**

Sorted by Type and Partnership Name

Current Partnerships	Vintage Year/ Initial Investment	Type	Amount Committed (in \$ unless otherwise noted)	Cumulative Cash Flows (\$)			Valuation (\$)	Cumulative Performance *	
				Amount Drawn	Amount Distributed	Amount Unfunded (\$)		Net IRR (%)	Net Multiple of Investment

\*IRR refers to the fund's Internal Rate of Return, or the annualized compounded yield on an investment. This calculation is typically applied in private equity where there are multiple points at which capital is invested (capital called) and at which it is distributed. A positive IRR means that the fund's current value plus any cash distributions are greater than the cash value contributed and management fees paid. Typically a fund will have a negative IRR during the first few years of its life, a period referred to as the "J-Curve", because cash is invested upfront and it takes time to generate value. It is important to consider a fund's start date (vintage year) when assessing IRRs. Multiple of investment is another indicator of returns, and is calculated by dividing the fund's cumulative distributions and current value, after fees, by the amount of capital paid in. Please note that performance calculations are specific to the ERSRI investment, and were not prepared, reviewed or approved by the General Partners.

\*\*Other funds in aggregate are the total commitments to and amounts drawn and distributed by funds whose confidentiality provisions do not permit the disclosure of their performance data. These funds include Braemar Energy Ventures III, Constellation Ventures III, Thomas, McNerney & Partners and Thomas McNerney & Partners II.

### Portfolio Summary

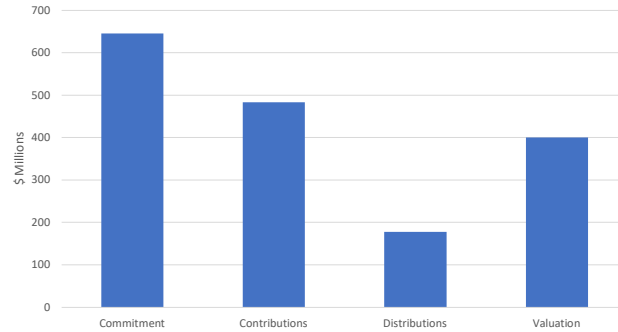
3/31/2023

All Investments

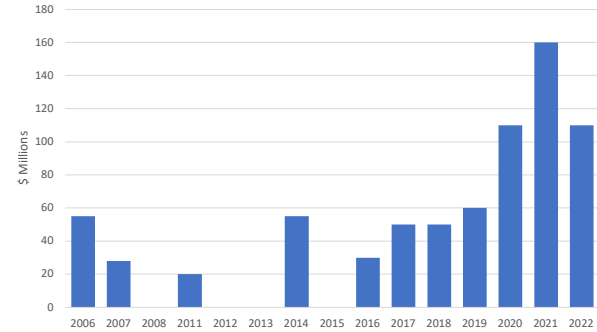
#### Performance Summary

Asset Class	Investment Type	Number of Investments	Commitment	Contributions	Distributions	Valuation	Multiple of Cost	IRR	TWR
Private Credit Funds									
<b>Total: Private Credit Funds</b>		<b>19</b>	<b>645,000,000</b>	<b>483,262,843</b>	<b>177,763,834</b>	<b>399,984,027</b>	<b>1.20</b>	<b>7.35%</b>	<b>6.74%</b>

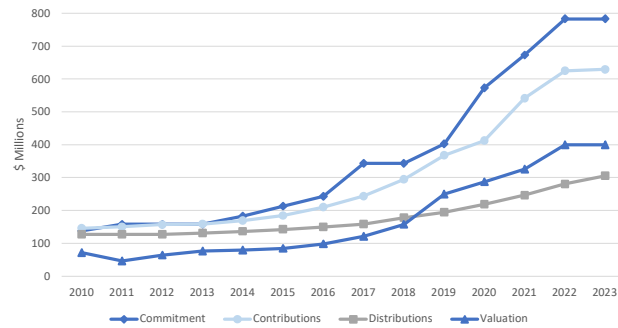
Cash Flow and Valuation Summary



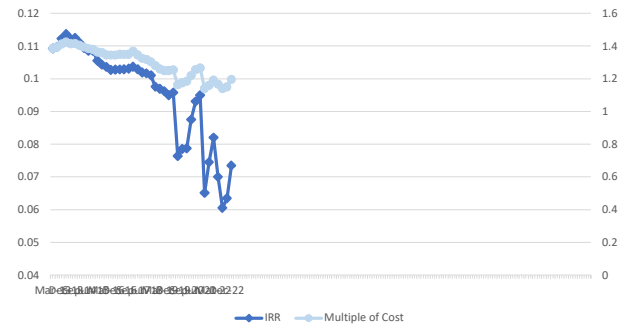
Commitment by Vintage Year



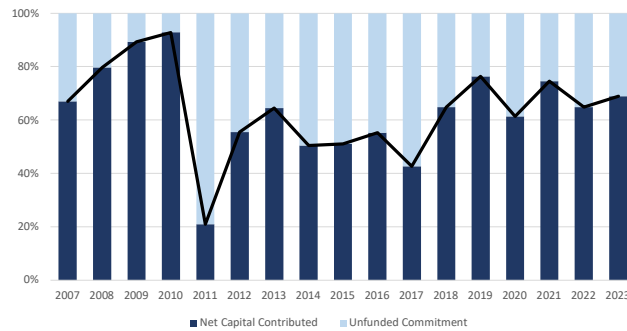
Historical Cash Flows and Valuation



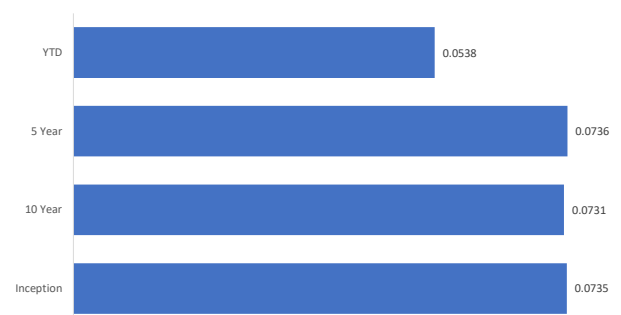
Historical Performance



Historical Percent Funded



Period IRRs



**Employees' Retirement System of Rhode Island Private Credit Performance - Active Portfolio**  
**3/31/2023**

Sorted by Type and Vintage Year

Current Partnerships	Vintage Year/ Initial Investment	Type	Amount Committed (in \$ unless otherwise noted)	Cumulative Cash Flows (\$)			Cumulative Performance *		
				Amount Drawn	Amount Distributed	Amount Unfunded (\$)	Valuation (\$)	Net IRR (%)	Net Multiple of Investment
CapitalSpring Investment Partners V	2016	Direct Lending	30,000,000	31,041,453	23,839,641	4,179,664	22,012,232	12.01%	1.48
Owl Rock Capital Corporation	2018	Direct Lending	50,000,000	50,000,000	19,125,228	-	41,005,349	5.14%	1.20
Benefit Street Senior Secured Opportunities Fund II	2019	Direct Lending	40,000,000	26,405,874	4,623,498	14,672,003	26,648,569	11.54%	1.18
CapitalSpring Investment Partners VI, LP	2020	Direct Lending	40,000,000	15,674,789	-	24,138,912	16,233,062	3.07%	1.04
Owl Rock Capital Corporation III	2020	Direct Lending	50,000,000	50,000,000	7,040,420	-	51,304,203	9.45%	1.17
HPS Specialty Loan Fund V	2021	Direct Lending	50,000,000	31,109,693	3,577,447	19,990,065	31,084,493	9.77%	1.11
Owl Rock Capital Diversified Holdings LLC	2021	Direct Lending	50,000,000	818,148	37,510	49,181,852	780,637	N/M	N/M
Deerpath Capital Advantage (US) VI, LP	2022	Direct Lending	30,000,000	15,000,000	-	15,000,000	16,228,204	N/M	N/M
Garrison Opportunity Fund IV	2014	Speciality Finance	30,000,000	28,373,532	17,369,457	-	10,229,580	-0.52%	0.97
Virgo Societas Partnership IV	2017	Speciality Finance	50,000,000	60,159,574	27,437,410	12,443	48,363,971	6.61%	1.26
Zephyrus Aviation Partners I, L.P.	2019	Speciality Finance	20,000,000	21,506,755	2,016,583	292,616	24,620,289	6.77%	1.24
Shamrock Capital Content Fund II, L.P.	2020	Speciality Finance	20,000,000	15,701,631	3,536,075	7,834,190	13,413,769	7.20%	1.08
Atalaya Asset Income Fund V LP	2021	Speciality Finance	30,000,000	28,624,226	5,973,326	3,598,330	26,997,655	9.41%	1.15
Shamrock CCF II Co-Invest I-A, L.P.	2021	Speciality Finance	10,000,000	4,329,475	1,389,552	5,670,526	4,185,986	13.05%	1.29
Virgo Specialty Finance I (Offshore), L.P.	2021	Speciality Finance	20,000,000	14,577,840	-	5,351,410	23,085,669	47.27%	1.58
Atalaya Asset Income Fund Evergreen LP	2022	Speciality Finance	50,000,000	33,805,410	1,264,812	17,039,067	35,102,799	N/M	N/M
Shamrock Capital Content Fund III, L.P.	2022	Speciality Finance	30,000,000	312,794	-	29,687,206	3,436	N/M	N/M
Other Funds in Aggregate**			45,000,000	55,821,650	60,532,874	4,212,385	8,684,123		
<b>Total</b>			<b>\$ 645,000,000</b>	<b>483,262,843</b>	<b>177,763,834</b>	<b>200,860,669</b>	<b>399,984,027</b>		

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**Employees' Retirement System of Rhode Island Private Credit Performance - Active Portfolio**  
**3/31/2023**

Sorted by Type and Partnership Name

Current Partnerships	Vintage Year/ Initial Investment	Type	Amount Committed (in \$ unless otherwise noted)	Cumulative Cash Flows (\$)			Valuation (\$)	Cumulative Performance *	
				Amount Drawn	Amount Distributed	Amount Unfunded (\$)		Net IRR (%)	Net Multiple of Investment
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Owl Rock Capital Corporation III	2020	Direct Lending	50,000,000	50,000,000	7,040,420	-	51,304,203	9.45%	1.17
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# CRISIS PROTECTION CLASS

NEPC, LLC

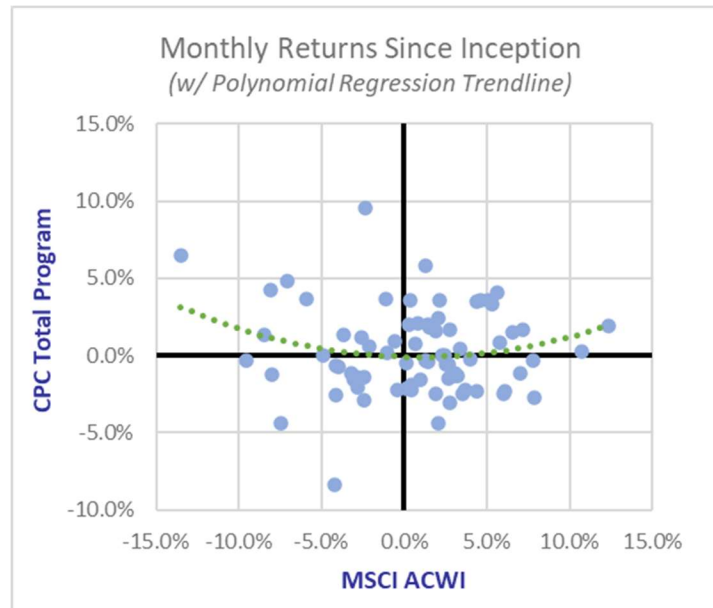
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Employees' Retirement System of Rhode Island - Crisis Protection Class Performance (10/31/2023)

CPC Returns				
CPC Program, October 31, 2023, %				
Account Name	MTD Return	Annualized Return (Since Inception)	Annualized Std. Dev (October '23)	Annualized Std. Dev (Since Inception)
Total CPC Program	-1.59	2.55	7.43	9.81
CPC Trend	1.18	8.04	14.53	14.97
CPC Long Duration	-4.35	-3.76	19.92	14.46

Return Correlation (Since Inception)					
	Total CPC Program	CPC Trend	CPC Long Duration	Total Plan Benchmark	60/40 Blend
Total CPC Program	1.00	0.73	0.57	0.05	0.01
CPC Trend		1.00	-0.15	-0.06	-0.20
CPC Long Duration			1.00	0.15	0.24
Total Plan Benchmark				1.00	0.96
60/40 Blend					1.00

MSCI ACWI Downside Analysis (Since Inception)					
	Total CPC Program	CPC Trend	CPC Long Duration	Total Plan Benchmark	60/40 Blend
Percent Months Positive when MSCI ACWI is Negative	48.1481%	70.3704%	37.0370%	7.4074%	3.7037%
Downside Capture	-5.6063%	-33.0206%	22.5917%	47.9988%	71.4219%



# ABSOLUTE RETURN

NEPC, LLC

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**Employees' Retirement System of the State of Rhode Island**

Absolute Return Portfolio  
 Portfolio Performance Summary  
 Estimated as of October 31, 2023



Fund	Market Value	Actual %	Returns								LTD Beta	Sharpe Ratio	Incep Date	
			Oct	QTD	YTD	FYTD	1 Year	3 Year	5 Year	Incep				
<b>Absolute Return Portfolio</b>														
Aristeia Partners, L.P.	78,800,682	10.0%	0.31%	0.31%	6.47%	2.39%	6.29%	-	-	5.45%	4.23%	-0.04	0.68	Jan-21
Capula Global Relative Value Fund Ltd.	91,598,861	11.6%			8.15%	4.02%	10.10%	7.43%	7.17%	6.35%	1.81%	-0.03	2.76	Dec-11
Davidson Kempner Institutional Partners, L.P.	101,826,999	12.9%	-0.12%	-0.12%	3.55%	1.33%	5.37%	5.02%	4.74%	5.30%	3.70%	0.16	1.05	Nov-11
DE Shaw Composite Fund LLC	184,815,078	23.5%			9.33%	5.03%	10.70%	19.47%	16.95%	14.58%	4.06%	0.03	3.02	Nov-11
Elliott Associates, L.P.	168,742,734	21.4%	0.30%	0.30%	5.79%	2.55%	6.23%	10.08%	9.24%	9.00%	3.37%	0.04	2.13	Nov-11
Graham Absolute Return Trading Ltd.	78,362,686	9.9%	1.46%	1.46%	7.93%	8.97%	5.00%	13.02%	8.18%	5.18%	7.36%	0.09	0.55	Jan-12
Viking Global Equities, LP	83,192,420	10.6%	0.65%	0.65%	11.53%	3.01%	14.08%	4.17%	8.86%	9.41%	8.04%	0.29	1.00	Dec-11
<b>Absolute Return Portfolio - Total</b>	<b>787,339,460</b>	<b>100.0%</b>	<b>0.59%</b>	<b>0.59%</b>	<b>7.44%</b>	<b>3.78%</b>	<b>8.26%</b>	<b>10.38%</b>	<b>9.23%</b>	<b>7.33%</b>	<b>3.07%</b>	<b>0.11</b>	<b>1.88</b>	<b>Nov-11</b>
HFRI Fund of Funds Composite Index			-1.04%	-1.04%	1.76%	-0.52%	3.07%	3.31%	3.78%	3.33%	4.71%		0.44	Nov-11
MSCI AC World Index Free - Net			-3.01%	-3.01%	6.75%	-6.31%	10.50%	6.68%	7.47%	8.24%	14.09%		0.54	Nov-11
ML 3-month T-Bills			0.45%	0.45%	4.06%	1.77%	4.77%	1.85%	1.77%	0.98%	0.41%		-	Nov-11
25% MSCI ACWI, 75% Barclays Aggregate			-1.94%	-1.94%	-0.40%	-5.13%	2.90%	-2.47%	2.03%	3.00%	5.41%		0.33	Nov-11
<b>Liquidating Portfolio</b>														
Luxor Capital Partners, LP - Liquidating SPV	324,600	0.0%	-0.53%	-0.53%	-28.43%	-12.23%	-31.48%	-18.49%	-19.74%	-10.61%	18.19%	-0.06	-0.62	Jul-16
<b>Liquidating/Redeeming - Total</b>	<b>324,600</b>	<b>0.0%</b>	<b>-0.53%</b>	<b>-0.53%</b>	<b>-28.43%</b>	<b>-12.23%</b>	<b>-31.48%</b>	<b>-25.11%</b>	<b>-22.69%</b>	<b>-9.86%</b>	<b>12.92%</b>	<b>-0.02</b>	<b>-0.82</b>	<b>Nov-11</b>
<b>Total Absolute Return Portfolio</b>	<b>787,664,060</b>	<b>100.0%</b>	<b>0.58%</b>	<b>0.58%</b>	<b>7.42%</b>	<b>3.77%</b>	<b>8.24%</b>	<b>10.34%</b>	<b>9.18%</b>	<b>6.92%</b>	<b>2.99%</b>	<b>0.11</b>	<b>1.81</b>	<b>Nov-11</b>
HFRI Fund of Funds Composite Index			-1.04%	-1.04%	1.76%	-0.52%	3.07%	3.31%	3.78%	3.33%	4.71%		-	Nov-11
<b>Market Indices</b>														
SOFR 90 Day			0.44%	0.44%	4.01%	1.73%	4.59%	1.78%	1.69%	-	-		-	Nov-11
Bloomberg US Aggregate Bond Index			-1.58%	-1.58%	-2.77%	-4.76%	0.36%	-5.57%	-0.05%	1.08%	4.17%		-0.03	Nov-11
Bloomberg US High Yield Bond Index			-1.16%	-1.16%	4.63%	-0.71%	6.23%	1.19%	3.05%	5.05%	7.11%		0.54	Nov-11
S&P 500 TR			-2.10%	-2.10%	10.69%	-5.31%	10.14%	10.36%	11.01%	12.76%	14.20%		0.83	Nov-11
MSCI EAFE - Net			-4.05%	-4.05%	2.74%	-8.00%	14.40%	5.73%	4.10%	4.99%	14.93%		0.31	Nov-11
MSCI EMF (Emerging Markets Free) - Net			-3.89%	-3.89%	-2.14%	-6.70%	10.80%	-3.67%	1.59%	1.74%	16.95%		0.11	Nov-11

\*LTD Beta is calculated with Holding Level Returns. The market benchmark is MSCI AC World Index Free - Net Index  
 Most recent month returns are based on manager estimates; prior months use final market values.

Hedge Fund Research, Inc. ("HFR") is the source and owner of the HFR data contained or reflected in this report. The HFR indices included in this report are revised by HFR for up to three months following their initial release. The revisions are reflected in the trailing period returns.

This report reflects information only through the date hereof. Our due diligence and reporting rely upon the accuracy and completeness of financial information (which may or may not be audited by the fund manager) and other information publicly available or provided to us by the fund manager, its professional staff, and references we have contacted and other third parties. We have not conducted an independent verification of the information provided other than as described in this report. Our conclusions do not reflect an audit of the investment nor should they be construed as providing legal advice. Past performance does not guarantee future performance. The information contained herein is confidential commercial or financial information, the disclosure of which would cause substantial competitive harm to you, Cliffwater LLC, or the person or entity from whom the information was obtained, and may not be disclosed except as required by applicable law.

**Employees' Retirement System of the State of Rhode Island**

Absolute Return Portfolio  
Fund Level Performance Report  
Estimated as of October 31, 2023



Fund	Trailing Returns					Calendar Year Returns					5 Yr Std Dev	ITD Beta to MSCI ACWI <sup>1</sup>	Sharpe Ratio			Start Date			
	QTD	YTD	Oct	Sep	Aug	1 Year	3 Year	5 Year	2022	2021			2020	2019	2018		3 yr	5 yr	Incep.
<b>Absolute Return</b>																			
Aristeia Partners, L.P.	0.31%	6.45%	0.31%	0.53%	1.63%	6.28%	7.54%	8.41%	8.17%	21.96%	6.15%	6.82%	5.06%	5.06%	0.09	1.03	1.18	1.13	Aug-97
Capula Global Relative Value Fund Ltd.	1.39%	9.07%				11.19%	8.02%	7.53%	1.70%	6.07%	7.98%	4.63%	3.79%	1.86%	-0.04	2.92	3.04	1.93	Oct-05
Davidson Kempner Institutional Partners, L.P.	-0.12%	3.55%	-0.12%	0.53%	0.46%	5.37%	4.83%	4.43%	6.49%	7.18%	6.70%	1.81%	6.11%	5.27%	0.16	0.72	0.45	1.24	Mar-96
DE Shaw Composite Fund LLC	0.60%	9.37%				10.74%	19.47%	16.98%	19.80%	19.97%	10.99%	11.38%	10.41%	4.08%	0.03	3.93	3.23	1.88	Mar-01
Elliott Associates, L.P.	0.30%	5.84%	0.30%	0.80%	0.50%	6.26%	10.12%	9.11%	15.14%	12.63%	6.53%	2.91%	8.80%	3.15%	0.04	2.06	1.99	1.91	Jan-90
Graham Absolute Return Trading Ltd.	1.46%	7.93%	1.46%	2.68%	2.43%	5.00%	12.38%	7.61%	4.71%	0.33%	9.54%	2.36%	-7.01%	9.16%	0.10	1.28	0.62	0.85	Jan-05
Viking Global Equities, LP	0.65%	11.53%	0.65%	0.01%	1.78%	14.08%	4.17%	8.86%	-4.30%	27.61%	18.40%	1.06%	12.45%	9.32%	0.29	0.24	0.74	1.25	Oct-99
<b>Liquidating Portfolio</b>																			
Luxor Capital Partners, LP	-0.53%	-28.43%	-0.53%	0.36%	-9.65%	-31.48%	-18.49%	-19.74%	4.35%	-33.84%	-22.83%	1.19%	54.38%	18.07%	0.03	-1.10	-1.22	0.26	Apr-02
<b>Benchmark</b>																			
HFRI Fund of Funds Composite Index	-1.04%	1.76%	-1.04%	-0.43%	-0.15%	3.07%	3.31%	3.78%	6.17%	10.88%	8.39%	-4.02%	7.77%	6.05%					Aug-90
HFRI Fund Weighted Composite Index	-1.38%	2.36%	-1.38%	-0.65%	-0.72%	3.30%	6.17%	5.33%	10.16%	11.83%	10.45%	-4.75%	8.59%	7.69%					Aug-90
<b>Market Indices</b>																			
SOFR 90 Day	0.44%	4.01%	0.44%	0.42%	0.43%	4.59%	1.78%	1.69%	0.04%	0.49%	2.26%	-	-	0.49%					Aug-87
Bloomberg Aggregate Bond Index	-1.58%	-2.77%	-1.58%	-2.54%	-0.64%	0.36%	-5.57%	-0.05%	-1.54%	7.51%	8.73%	0.02%	3.55%	5.63%					Aug-76
Bloomberg US High Yield Bond Index	-1.16%	4.63%	-1.16%	-1.18%	0.28%	6.23%	1.19%	3.05%	5.28%	7.11%	14.30%	-2.08%	7.50%	9.31%					Feb-84
S&P 500 (TR)	-2.10%	10.69%	-2.10%	-4.77%	-1.59%	10.14%	10.36%	11.01%	28.71%	18.40%	31.49%	-4.38%	21.83%	18.69%					Jan-89
MSCI EAFE - Net - USD	-4.05%	2.74%	-4.05%	-3.42%	-3.83%	14.40%	5.73%	4.10%	11.26%	7.82%	22.01%	-13.79%	25.03%	17.71%					Jul-70
MSCI EMF (EMERGING MARKETS FREE) - Net - USD	-3.89%	-2.14%	-3.89%	-2.62%	-6.16%	10.80%	-3.67%	1.59%	-2.54%	18.31%	18.44%	-14.58%	37.28%	18.91%					Jul-88

\*LTD Beta is calculated with Fund Level Returns. The market benchmark is MSCI AC World Index Free - Net Index

Note: The above is manager composite history.

1. The inception date for this calculation is equivalent to the inception date of ERSRI's initial investment into the relevant fund.

# REAL ESTATE

NEPC, LLC

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**PORTFOLIO SUMMARY**

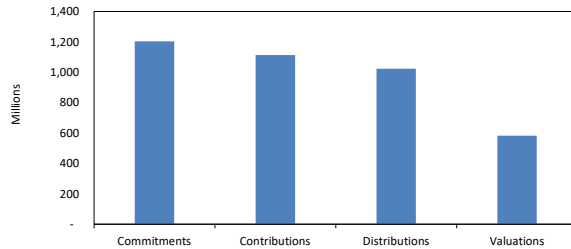
3/31/2023

All Portfolio Investments - Real Estate <sup>(1)</sup>

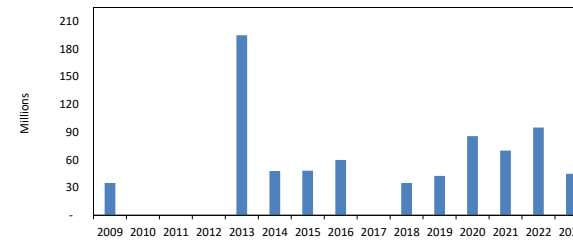
**Performance Summary**

Asset Class	Investment Type	Number of Investments <sup>(4)</sup>	Commitment	Contributions <sup>(2), (3)</sup>	Distributions <sup>(3)</sup>	Adjusted Valuation	Multiple of Cost	IRR	TWR
Real Estate Funds	Core	10	515,573,660	539,496,452	566,126,253	354,848,409	1.9x	5.7%	5.9%
	Non-Core	31	687,918,464	574,179,884	457,133,520	228,023,322	1.3x	3.7%	5.1%
<b>Total: Real Estate Funds</b>		<b>41</b>	<b>1,203,492,124</b>	<b>1,113,676,336</b>	<b>1,023,259,773</b>	<b>582,871,731</b>	<b>1.6x</b>	<b>5.2%</b>	<b>5.5%</b>
<b>Total:</b>		<b>41</b>	<b>1,203,492,124</b>	<b>1,113,676,336</b>	<b>1,023,259,773</b>	<b>582,871,731</b>			

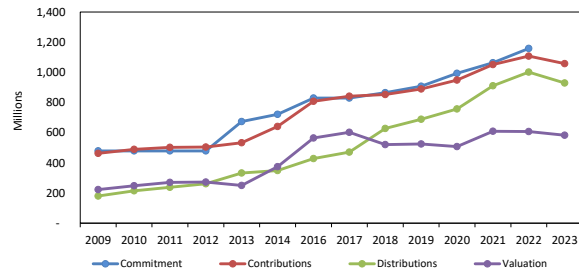
**Cash Flow and Valuation Summary**



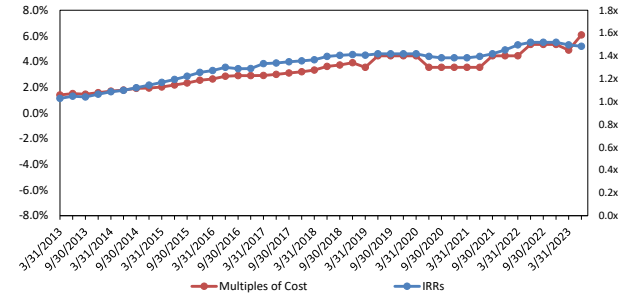
**Commitment by Vintage Year**



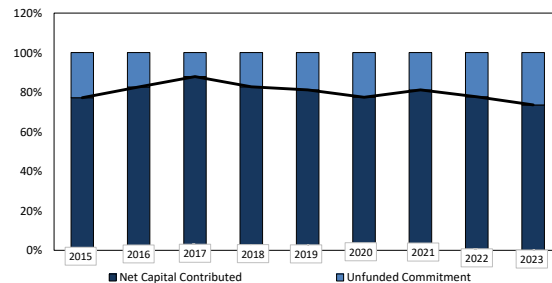
**Historical Cash Flows and Valuation**



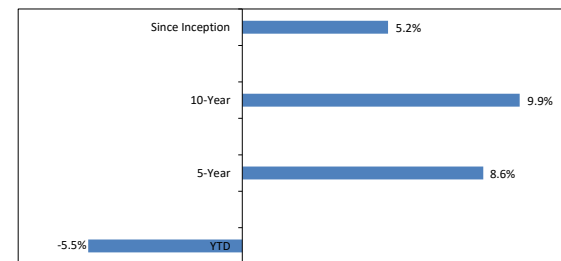
**Historical Performance**



**Historical Percent Funded**



**Period IRRs <sup>(5)</sup>**



<sup>(1)</sup> Investment information listed as of March 31, 1989 through March 31, 2023 and includes those investments which have been liquidated.

<sup>(2)</sup> Contributions are based on cash activity and are higher than commitments primarily due to reinvestments and contributions for management fees in some of the core open-end funds.

<sup>(3)</sup> Contributions and Distributions each include activity in the amount of \$33.5 million related to a simultaneous sale and purchase of shares in a core open-end fund.

<sup>(4)</sup> As of March 31, 2023 there are five core funds and eighteen non-core funds. As of March 31, 2023, AEW Essential Housing Fund, Crow Holdings Realty Partners X, Ventas Life Science & Healthcare Real Estate, and Greystar Equity Partners XI have not called capital.

<sup>(5)</sup> The YTD IRR presented is an annualized percentage.

**Employees' Retirement System of Rhode Island Real Estate Performance  
3/31/2023**

Sorted by Type and Partnership Name

Current Partnerships	Vintage Year/Initial Investment	Type	Amount Committed (In \$ unless otherwise noted)	Cumulative Cash Flows (\$)			Valuation (\$)	Cumulative Performance*	
				Amount Drawn	Amount Distributed	Amount Unfunded		Net IRR (%)	Net Multiple of Investment
AEW Core Property Trust	2010	Core	69,873,660	103,330,313	72,427,390	-	123,286,642	9.61	1.89
Heitman America Real Estate Trust	2014	Core	85,000,000	96,508,454	28,749,308	-	125,542,584	8.23	1.60
Morgan Stanley Prime Property Fund	2005	Core	60,700,000	67,030,175	39,241,632	-	106,019,183	7.54	2.17
Crow Holdings Realty Partners IX	2021	Non-Core	40,000,000	37,320,098	11,054,028	4,742,105	33,423,942	19.11	1.19
Crow Holdings Retail Fund	2015	Non-Core	24,000,000	23,509,127	25,264,428	2,113,228	11,557,032	8.84	1.57
Exeter Industrial Value Fund III	2014	Non-Core	30,000,000	30,266,965	64,514,028	900,546	650,802	30.29	2.15
Exeter Industrial Value Fund V	2020	Non-Core	25,000,000	24,615,882	-	384,118	36,721,570	31.35	1.49
GEM Realty Fund V	2013	Non-Core	50,000,000	44,191,137	36,461,824	8,875,677	15,111,821	3.54	1.17
GEM Realty Fund VI	2017	Non-Core	20,000,000	17,300,000	11,300,000	5,481,204	10,024,672	12.77	1.23
GEM Realty Fund VII	2022	Non-Core	25,000,000	1,687,500	-	23,312,500	726,172	n/a	n/a
IC Berkeley Partners IV	2016	Non-Core	30,000,000	31,646,058	49,786,080	64,754	78,077	17.36	1.58
IC Berkeley Partners V	2020	Non-Core	35,000,000	24,005,699	5,537,893	14,018,667	22,431,809	11.78	1.17
IPI Partners II	2021	Non-Core	30,000,000	19,441,934	220,011	10,811,756	18,962,683	-1.36	0.99
Linchris Capital Opportunity Fund II	2018	Non-Core	17,657,647	16,142,652	4,430,616	2,124,787	23,478,915	24.11	1.73
Lone Star Real Estate Fund IV	2015	Non-Core	24,260,817	19,445,849	19,779,410	4,814,969	6,445,510	10.97	1.35
Raith Real Estate II	2018	Non-Core	35,000,000	38,895,057	29,019,170	11,331,394	30,736,666	46.11	1.54
Raith Real Estate Fund III	2022	Non-Core	25,000,000	1,895,739	129,355	23,233,616	1,049,754	n/a	n/a
TriCon Capital Fund VII	2005	Non-Core	15,000,000	17,490,511	5,027,671	428,467	285,125	-14.64	0.30
Waterton Fund XII	2014	Non-Core	35,000,000	37,153,716	45,895,220	-	16,338,772	12.44	1.68
<b>Total</b>			<b>\$ 676,492,124</b>	<b>651,876,865</b>	<b>448,838,065</b>	<b>112,637,788</b>	<b>582,871,731</b>		

\*IRR refers to the fund's Internal Rate of Return, or the annualized compounded yield on an investment. This calculation is typically applied in private real estate where there are multiple points at which capital is invested (capital called) and at which it is distributed. A positive IRR means that the fund's current value plus any cash distributions are greater than the cash value contributed and management fees paid. Typically a fund will have a negative IRR during the first few years of its life, a period referred to as the "J-Curve", because cash is invested upfront and it takes time to generate value. It is important to consider a fund's start date (vintage year) when assessing IRRs. Multiple of investment is another indicator of returns, and is calculated by dividing the fund's cumulative distributions and current value, after fees, by the amount of capital paid in. Please note that performance calculations are specific to the ERSRI investment, and were not prepared, reviewed or approved by the General Partners.

**Employees' Retirement System of Rhode Island Real Estate Performance**

**3/31/2023**

Sorted by Type and Vintage

Current Partnerships	Vintage Year/Initial Investment	Type	Amount Committed (In \$ unless otherwise noted)	Cumulative Cash Flows (\$)			Valuation (\$)	Cumulative Performance*	
				Amount Drawn	Amount Distributed	Amount Unfunded		Net IRR (%)	Net Multiple of Investment
Morgan Stanley Prime Property Fund	2005	Core	60,700,000	67,030,175	39,241,632	-	106,019,183	7.54	2.17
AEW Core Property Trust	2010	Core	69,873,660	103,330,313	72,427,390	-	123,286,642	9.61	1.89
Heitman America Real Estate Trust	2014	Core	85,000,000	96,508,454	28,749,308	-	125,542,584	8.23	1.60
TriCon Capital Fund VII	2005	Non-Core	15,000,000	17,490,511	5,027,671	428,467	285,125	-14.64	0.30
GEM Realty Fund V	2013	Non-Core	50,000,000	44,191,137	36,461,824	8,875,677	15,111,821	3.54	1.17
Exeter Industrial Value Fund III	2014	Non-Core	30,000,000	30,266,965	64,514,028	900,546	650,802	30.29	2.15
Waterton Fund XII	2014	Non-Core	35,000,000	37,153,716	45,895,220	-	16,338,772	12.44	1.68
Crow Holdings Retail Fund	2015	Non-Core	24,000,000	23,509,127	25,264,428	2,113,228	11,557,032	8.84	1.57
Lone Star Real Estate Fund IV	2015	Non-Core	24,260,817	19,445,849	19,779,410	4,814,969	6,445,510	10.97	1.35
IC Berkeley Partners IV	2016	Non-Core	30,000,000	31,646,058	49,786,080	64,754	78,077	17.36	1.58
GEM Realty Fund VI	2017	Non-Core	20,000,000	17,300,000	11,300,000	5,481,204	10,024,672	12.77	1.23
Raith Real Estate II	2018	Non-Core	35,000,000	38,895,057	29,019,170	11,331,394	30,736,666	46.11	1.54
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Exeter Industrial Value Fund V	2020	Non-Core	25,000,000	24,615,882	-	384,118	36,721,570	31.35	1.49
IC Berkeley Partners V	2020	Non-Core	35,000,000	24,005,699	5,537,893	14,018,667	22,431,809	11.78	1.17
IPI Partners II	2021	Non-Core	30,000,000	19,441,934	220,011	10,811,756	18,962,683	-1.36	0.99
Crow Holdings Realty Partners IX	2021	Non-Core	40,000,000	37,320,098	11,054,028	4,742,105	33,423,942	19.11	1.19
GEM Realty Fund VII	2022	Non-Core	25,000,000	1,687,500	-	23,312,500	726,172	n/a	n/a
Raith Real Estate Fund III	2022	Non-Core	25,000,000	1,895,739	129,355	23,233,616	1,049,754	n/a	n/a
<b>Total</b>			<b>\$ 676,492,124</b>	<b>651,876,865</b>	<b>448,838,065</b>	<b>112,637,788</b>	<b>582,871,731</b>		

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# PRIVATE REAL ASSETS (EX-REAL ESTATE)

NEPC, LLC

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### Portfolio Summary

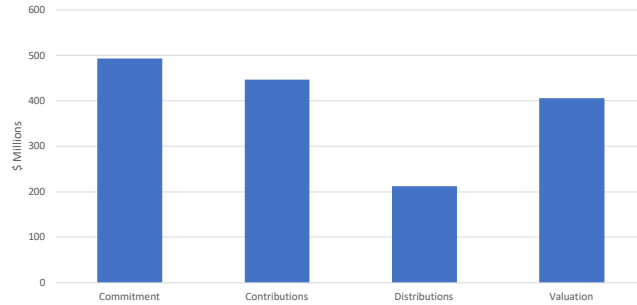
3/31/2023

All Investments

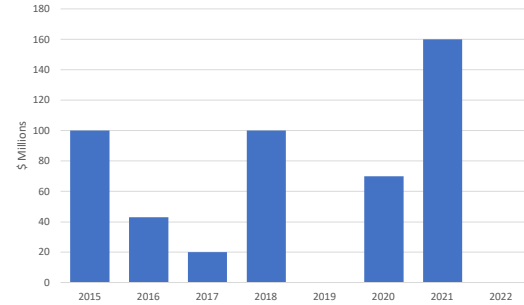
#### Performance Summary

Asset Class	Investment Type	Commitment	Contributions	Distributions	Valuation	Multiple of Cost	IRR
Infrastructure Funds							
<b>Total: Infrastructure Funds</b>		<b>493,032,902</b>	<b>446,201,479</b>	<b>211,987,701</b>	<b>406,076,879</b>	<b>1.39</b>	<b>12.76%</b>

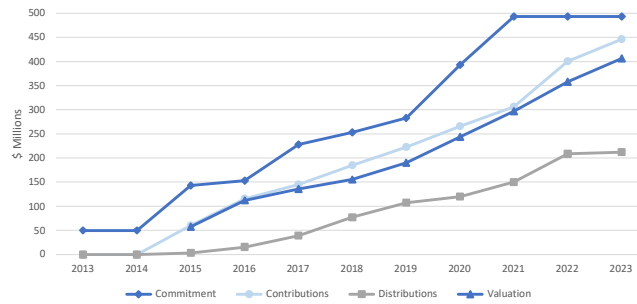
Cash Flow and Valuation Summary



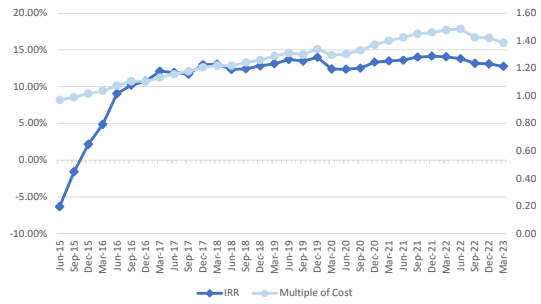
Commitment by Vintage Year



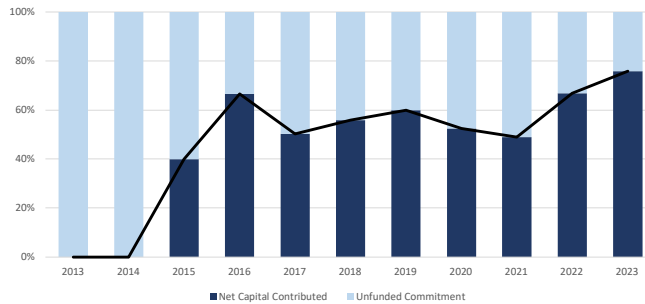
Historical Cash Flows and Valuation



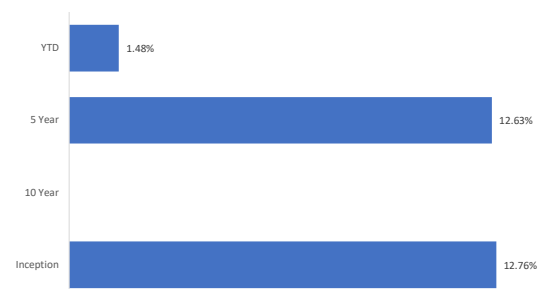
Historical Performance



Historical Percent Funded



Period IRRs





**Employees' Retirement System of Rhode Island Private Infrastructure Performance - Active Portfolio**  
**3/31/2023**

Sorted by Type and Vintage Year

Current Partnerships	Vintage Year/ Initial Investment	Type	Cumulative Cash Flows (\$)				Cumulative Performance *			
			Amount Committed (in \$ unless otherwise noted)	Amount Drawn	Amount Distributed	Amount Unfunded (\$)	Valuation (\$)	Net IRR (%)	Net Multiple of Investment	
IFM Global Infrastructure Fund	2015	Core	50,032,902	50,032,902	26,857,961	-	72,748,961	11.20%		1.99
KKR Diversified Core Infrastructure Fund L.P.	2021	Core	100,000,000	94,808,817	1,378,123	5,191,183	96,560,173	N/M	N/M	
ISQ Global Infrastructure Fund I	2015	Value-Add	50,000,000	82,221,861	73,262,272	3,785,016	48,446,087	14.66%		1.48
Stonepeak Infrastructure Partners Fund II	2016	Value-Add	43,000,000	54,494,855	67,648,061	6,285,033	12,597,158	13.59%		1.47
Stonepeak Infrastructure Partners Fund II - Master Co-Investment Partners LP	2017	Value-Add	20,000,000	20,034,236	12,690,897	466,707	21,656,791	16.85%		1.71
Homestead Capital USA Farmland Fund III, L.P.	2018	Value-Add	25,000,000	20,452,565	600,612	4,687,757	21,829,245	6.28%		1.10
ISQ Global Infrastructure Fund II	2018	Value-Add	40,000,000	41,983,359	14,750,368	6,808,575	43,034,201	13.55%		1.38
Stonepeak Infrastructure Partners Fund III	2018	Value-Add	35,000,000	36,982,104	11,119,360	4,036,878	45,158,016	17.26%		1.52
Star America Infrastructure Fund II, LP	2020	Value-Add	20,000,000	8,430,643	1,700,211	12,537,628	6,824,688	0.52%		1.01
Stonepeak Infrastructure Fund IV LP	2020	Value-Add	50,000,000	24,208,977	1,979,836	27,629,351	24,120,450	8.24%		1.08
ISQ Global Infrastructure Fund III	2021	Value-Add	50,000,000	11,445,569	-	38,548,385	11,935,704	N/M	N/M	
ISQ Global Infrastructure Fund III - Co-Invest	2021	Value-Add	10,000,000	1,105,591	-	8,889,663	1,165,405	N/M	N/M	
<b>Total</b>			<b>493,032,902</b>	<b>446,201,479</b>	<b>211,987,701</b>	<b>118,866,176</b>	<b>406,076,879</b>			

\*IRR refers to the fund's Internal Rate of Return, or the annualized compounded yield on an investment. This calculation is typically applied in private equity where there are multiple points at which capital is invested (capital called) and at which it is distributed. A positive IRR means that the fund's current value plus any cash distributions are greater than the cash value contributed and management fees paid. Typically a fund will have a negative IRR during the first few years of its life, a period referred to as the "J-Curve", because cash is invested upfront and it takes time to generate value. It is important to consider a fund's start date (vintage year) when assessing IRRs. Multiple of investment is another indicator of returns, and is calculated by dividing the fund's cumulative distributions and current value, after fees, by the amount of capital paid in. Please note that performance calculations are specific to the ERSRI investment, and were not prepared, reviewed or approved by the General Partners.

**Employees' Retirement System of Rhode Island Private Infrastructure Performance - Active Portfolio**  
**3/31/2023**

Sorted by Type and Partnership Name

Current Partnerships	Vintage Year/ Initial Investment	Type	Amount Committed (in \$ unless otherwise noted)	Cumulative Cash Flows (\$)			Cumulative Performance *		
				Amount Drawn	Amount Distributed	Amount Unfunded (\$)	Valuation (\$)	Net IRR (%)	Net Multiple of Investment
IFM Global Infrastructure Fund	2015	Core	50,032,902	50,032,902	26,857,961	-	72,748,961	11.20%	1.99
KKR Diversified Core Infrastructure Fund L.P.	2021	Core	100,000,000	94,808,817	1,378,123	5,191,183	96,560,173	N/M	N/M
Homestead Capital USA Farmland Fund III, L.P.	2018	Value-Add	25,000,000	20,452,565	600,612	4,687,757	21,829,245	6.28%	1.10
ISQ Global Infrastructure Fund I	2015	Value-Add	50,000,000	82,221,861	73,262,272	3,785,016	48,446,087	14.66%	1.48
ISQ Global Infrastructure Fund II	2018	Value-Add	40,000,000	41,983,359	14,750,368	6,808,575	43,034,201	13.55%	1.38
ISQ Global Infrastructure Fund III	2021	Value-Add	50,000,000	11,445,569	-	38,548,385	11,935,704	N/M	N/M
ISQ Global Infrastructure Fund III - Co-Invest	2021	Value-Add	10,000,000	1,105,591	-	8,889,663	1,165,405	N/M	N/M
Star America Infrastructure Fund II, LP	2020	Value-Add	20,000,000	8,430,643	1,700,211	12,537,628	6,824,688	0.52%	1.01
Stonepeak Infrastructure Fund IV LP	2020	Value-Add	50,000,000	24,208,977	1,979,836	27,629,351	24,120,450	8.24%	1.08
Stonepeak Infrastructure Partners Fund II	2016	Value-Add	43,000,000	54,494,855	67,648,061	6,285,033	12,597,158	13.59%	1.47
Stonepeak Infrastructure Partners Fund II - Master Co-Investment Partners LP	2017	Value-Add	20,000,000	20,034,236	12,690,897	466,707	21,656,791	16.85%	1.71
Stonepeak Infrastructure Partners Fund III	2018	Value-Add	35,000,000	36,982,104	11,119,360	4,036,878	45,158,016	17.26%	1.52
<b>Total</b>			<b>493,032,902</b>	<b>446,201,479</b>	<b>211,987,701</b>	<b>118,866,176</b>	<b>406,076,879</b>		

\*IRR refers to the fund's Internal Rate of Return, or the annualized compounded yield on an investment. This calculation is typically applied in private equity where there are multiple points at which capital is invested (capital called) and at which it is distributed. A positive IRR means that the fund's current value plus any cash distributions are greater than the cash value contributed and management fees paid. Typically a fund will have a negative IRR during the first few years of its life, a period referred to as the "J-Curve", because cash is invested upfront and it takes time to generate value. It is important to consider a fund's start date (vintage year) when assessing IRRs. Multiple of investment is another indicator of returns, and is calculated by dividing the fund's cumulative distributions and current value, after fees, by the amount of capital paid in. Please note that performance calculations are specific to the ERSRI investment, and were not prepared, reviewed or approved by the General Partners.

# CASH FLOW

NEPC, LLC

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**CASH FLOW ANALYSIS - INCOME & EXPENSES**

**Employees Retirement System**

<b>Fiscal Year 2024</b>	<b>Fiscal Year To Date</b>	<b>July 2023</b>	<b>August 2023</b>	<b>September 2023</b>	<b>October 2023</b>	<b>November 2023</b>	<b>December 2023</b>	<b>January 2024</b>	<b>February 2024</b>	<b>March 2024</b>	<b>April 2024</b>	<b>May 2024</b>	<b>June 2024</b>
MEMBER BENEFITS	286,832,876	71,409,930	71,700,148.92	71,848,346.94	71,874,449.69								
ADMINISTRATIVE EXP**	1,012,001	56,240.96	106,350.83	849,409.40	***								
INVESTMENT EXP	45,783,423	2,810,827	3,228,585.61	7,912,038.43	31,831,971.92								
<b>GROSS OUTFLOW</b>	<b>333,628,300</b>	<b>74,276,998</b>	<b>75,035,085.36</b>	<b>80,609,794.77</b>	<b>103,706,421.61</b>	-	-	-	-	-	-	-	-
CONTRIBUTIONS	200,023,708	60,373,843	34,234,487.00	52,481,097.00	52,934,281.00								
OTHER INCOME*	82,553,893	9,043,387	23,564,416.74	36,385,278.98	13,560,809.63								
<b>TOTAL INCOME</b>	<b>282,577,601</b>	<b>69,417,230</b>	<b>57,798,903.74</b>	<b>88,866,375.98</b>	<b>66,495,090.63</b>	-	-	-	-	-	-	-	-
<b>NET OUTFLOW (INFLOW)</b>	<b>51,050,699</b>	<b>4,859,768</b>	<b>17,236,181.62</b>	<b>(8,256,581.21)</b>	<b>37,211,330.98</b>	-	-	-	-	-	-	-	-

**Municipal Employees Retirement System**

<b>Fiscal Year 2024</b>	<b>Fiscal Year To Date</b>	<b>July 2023</b>	<b>August 2023</b>	<b>September 2023</b>	<b>October 2023</b>	<b>November 2023</b>	<b>December 2023</b>	<b>January 2024</b>	<b>February 2024</b>	<b>March 2024</b>	<b>April 2024</b>	<b>May 2024</b>	<b>June 2024</b>
MEMBER BENEFITS	46,290,056	11,421,654	11,562,896.84	11,626,756.96	11,678,747.53								
ADMINISTRATIVE EXP**	267,035	15,032.67	28,504.06	223,497.91	***								
INVESTMENT EXP	12,253,728	749,892	861,241.73	2,116,532.28	8,526,062.14								
<b>GROSS OUTFLOW</b>	<b>58,810,818</b>	<b>12,186,579</b>	<b>12,452,642.63</b>	<b>13,966,787.15</b>	<b>20,204,809.67</b>	-	-	-	-	-	-	-	-
CONTRIBUTIONS	32,757,007	8,252,771	7,010,122.00	8,774,032.00	8,720,082.00								
OTHER INCOME*	22,064,139	2,412,657	6,285,928.12	9,733,346.86	3,632,206.67								
<b>TOTAL INCOME</b>	<b>54,821,146</b>	<b>10,665,428</b>	<b>13,296,050.12</b>	<b>18,507,378.86</b>	<b>12,352,288.67</b>	-	-	-	-	-	-	-	-
<b>NET OUTFLOW (INFLOW)</b>	<b>3,989,673</b>	<b>1,521,151</b>	<b>(843,407.49)</b>	<b>(4,540,591.71)</b>	<b>7,852,521.00</b>	-	-	-	-	-	-	-	-

**State Police**

<b>Fiscal Year 2024</b>	<b>Fiscal Year To Date</b>	<b>July 2023</b>	<b>August 2023</b>	<b>September 2023</b>	<b>October 2023</b>	<b>November 2023</b>	<b>December 2023</b>	<b>January 2024</b>	<b>February 2024</b>	<b>March 2024</b>	<b>April 2024</b>	<b>May 2024</b>	<b>June 2024</b>
MEMBER BENEFITS	3,200,654	799,506	800,070.74	800,275.32	800,801.88								
ADMINISTRATIVE EXP**	28,229	1,611.98	3,060.98	23,555.70	***								
INVESTMENT EXP	1,376,978	80,725	92,363.15	231,254.61	972,635.30								
<b>GROSS OUTFLOW</b>	<b>4,605,861</b>	<b>881,843</b>	<b>895,494.87</b>	<b>1,055,085.63</b>	<b>1,773,437.18</b>	-	-	-	-	-	-	-	-
CONTRIBUTIONS	2,944,868	672,701	790,256.74	690,107.32	791,802.88								
OTHER INCOME*	2,411,680	259,720	674,129.53	1,063,475.84	414,354.44								
<b>TOTAL INCOME</b>	<b>5,356,548</b>	<b>932,421</b>	<b>1,464,386.27</b>	<b>1,753,583.16</b>	<b>1,206,157.32</b>	-	-	-	-	-	-	-	-
<b>NET OUTFLOW (INFLOW)</b>	<b>(750,687)</b>	<b>(50,578)</b>	<b>(568,891.40)</b>	<b>(698,497.53)</b>	<b>567,279.86</b>	-	-	-	-	-	-	-	-

\*includes income from Real Estate Investments, Private Equity, and Cash Accounts

\*\* Administrative expenses are reported with a one month lag; July admin expenses will be reported in August.

\*\*\* Data unavailable at the time this report was prepared

**CASH FLOW ANALYSIS - INCOME & EXPENSES**

**Judicial**

<b>Fiscal Year 2024</b>	<b>Fiscal Year To Date</b>	<b>July 2023</b>	<b>August 2023</b>	<b>September 2023</b>	<b>October 2023</b>	<b>November 2023</b>	<b>December 2023</b>	<b>January 2024</b>	<b>February 2024</b>	<b>March 2024</b>	<b>April 2024</b>	<b>May 2024</b>	<b>June 2024</b>
MEMBER BENEFITS	1,833,703	458,426	458,425.71	458,425.71	458,425.71								
ADMINISTRATIVE EXP**	13,038	735.71	1,396.92	10,905.34	***								
INVESTMENT EXP	600,992	36,712	42,154.60	103,742.00	418,382.69								
<b>GROSS OUTFLOW</b>	<b>2,447,732</b>	<b>495,874</b>	<b>501,977.23</b>	<b>573,073.05</b>	<b>876,808.40</b>	-	-	-	-	-	-	-	-
CONTRIBUTIONS	1,962,617	524,011	421,694.71	424,317.71	592,593.71								
OTHER INCOME*	1,051,106	118,116	307,673.16	447,080.13	178,236.02								
<b>TOTAL INCOME</b>	<b>3,013,723</b>	<b>642,127</b>	<b>729,367.87</b>	<b>871,397.84</b>	<b>770,829.73</b>	-	-	-	-	-	-	-	-
<b>NET OUTFLOW (INFLOW)</b>	<b>(565,990)</b>	<b>(146,253)</b>	<b>(227,390.64)</b>	<b>(298,324.79)</b>	<b>105,978.67</b>	-	-	-	-	-	-	-	-

**Retirement Systems Total**

<b>Fiscal Year 2024</b>	<b>Fiscal Year To Date</b>	<b>July 2023</b>	<b>August 2023</b>	<b>September 2023</b>	<b>October 2023</b>	<b>November 2023</b>	<b>December 2023</b>	<b>January 2024</b>	<b>February 2024</b>	<b>March 2024</b>	<b>April 2024</b>	<b>May 2024</b>	<b>June 2024</b>
MEMBER BENEFITS	338,157,288	84,089,516	84,521,542.21	84,733,804.93	84,812,424.81	-	-	-	-	-	-	-	-
ADMINISTRATIVE EXP**	1,320,302	73,621	139,312.79	1,107,368.35	-	-	-	-	-	-	-	-	-
INVESTMENT EXP	60,015,120	3,678,156	4,224,345.09	10,363,567.32	41,749,052.05	-	-	-	-	-	-	-	-
<b>GROSS OUTFLOW</b>	<b>399,492,711</b>	<b>87,841,294</b>	<b>88,885,200.09</b>	<b>96,204,740.60</b>	<b>126,561,476.86</b>	-	-	-	-	-	-	-	-
CONTRIBUTIONS	237,688,200	69,823,326	42,456,560.45	62,369,554.03	63,038,759.59	-	-	-	-	-	-	-	-
OTHER INCOME*	108,080,817	11,833,881	30,832,147.55	47,629,181.81	17,785,606.76	-	-	-	-	-	-	-	-
<b>TOTAL INCOME</b>	<b>345,769,017</b>	<b>81,657,207</b>	<b>73,288,708.00</b>	<b>109,998,735.84</b>	<b>80,824,366.35</b>	-	-	-	-	-	-	-	-
<b>NET OUTFLOW (INFLOW)</b>	<b>53,723,694</b>	<b>6,184,087</b>	<b>15,596,492.09</b>	<b>(13,793,995.24)</b>	<b>45,737,110.51</b>	-	-	-	-	-	-	-	-

\*includes income from Real Estate Investments, Private Equity, and Cash Accounts

\*\* Administrative expenses are reported with a one month lag; July admin expenses will be reported in August.

\*\*\* Data unavailable at the time this report was prepared

FISCAL YEAR 2024  
ERSRI Pooled Trust

UNAUDITED INVESTMENT MANAGER FEES, PROFESSIONAL FEES & OPERATING EXPENSES  
ESTIMATED ACCRUAL BASIS\*

	Jul-2023	Aug-2023	Sep-2023	Oct-2023	Nov-2023	Dec-2023	Jan-2024	Feb-2024	Mar-2024	Apr-2024	May-2024	Jun-2024	FYTD TOTAL
<b>PUBLIC GROWTH</b>													
SSGA Russell 3000	15,700	15,591	14,811	13,967	-	-	-	-	-	-	-	-	60,069
SSGA QVM Tilt	75,927	75,200	73,149	70,737	-	-	-	-	-	-	-	-	295,014
SSGA MSCI World Ex USA	10,863	10,444	9,728	9,196	-	-	-	-	-	-	-	-	40,231
SSGA MSCI EM	25,277	24,959	23,847	22,933	-	-	-	-	-	-	-	-	97,015
	<b>127,767</b>	<b>126,194</b>	<b>121,534</b>	<b>116,833</b>									<b>492,329</b>
<b>PRIVATE GROWTH</b>													
Private Equity**	12,878,527	22,142,958	9,824,512	3,393,518	-	-	-	-	-	-	-	-	48,239,515
Private Equity**	12,154,629	21,345,754	10,360,025	3,393,031	-	-	-	-	-	-	-	-	47,253,439
Opportunistic Private Credit**	723,898	797,204	(535,513)	487	-	-	-	-	-	-	-	-	986,076
Non-Core Real Estate**	3,249,471	2,112,158	392,343	(2,998)	-	-	-	-	-	-	-	-	5,750,974
	<b>16,127,998</b>	<b>24,255,116</b>	<b>10,216,855</b>	<b>3,390,520</b>									<b>53,990,489</b>
<b>INCOME</b>													
Loomis Sayles - Liquid Credit	18,342	18,496	18,408	18,192	-	-	-	-	-	-	-	-	73,437
PIMCO	36,192	36,533	36,333	35,890	-	-	-	-	-	-	-	-	144,948
Neuberger Berman - Equity Options	58,185	55,654	52,019	51,310	-	-	-	-	-	-	-	-	217,168
Wellington Management	37,270	36,231	35,232	34,502	-	-	-	-	-	-	-	-	143,235
Neuberger Berman - CLOs	40,300	41,513	42,353	41,999	-	-	-	-	-	-	-	-	166,165
Sycamore Tree CLO Fund**	-	-	-	-	-	-	-	-	-	-	-	-	-
Advent US Convertibles	37,357	37,058	35,770	34,269	-	-	-	-	-	-	-	-	144,454
Private Credit**	921,919	2,903,483	529,721	621,487	-	-	-	-	-	-	-	-	4,976,610
	<b>1,149,564</b>	<b>3,128,968</b>	<b>749,836</b>	<b>837,649</b>									<b>5,866,017</b>
<b>CRISIS PROTECTION</b>													
Systematic Trend Followers	315,982	549,017	269,319	481,567	-	-	-	-	-	-	-	-	1,615,886
WAMCO	17,256	17,593	17,443	16,770	-	-	-	-	-	-	-	-	69,063
	<b>333,239</b>	<b>566,610</b>	<b>286,763</b>	<b>498,338</b>									<b>1,684,949</b>
<b>INFLATION PROTECTION</b>													
Core Real Estate**	1,235,703	193,516	623,247	361,960	-	-	-	-	-	-	-	-	2,414,426
Private Infrastructure**	1,343,191	1,874,313	1,738,457	449,861	-	-	-	-	-	-	-	-	5,405,822
	<b>2,578,894</b>	<b>2,067,829</b>	<b>2,361,704</b>	<b>811,821</b>									<b>7,820,248</b>
<b>STABILITY</b>													
Fidelity	42,783	43,526	42,773	41,767	-	-	-	-	-	-	-	-	170,849
Loomis - IG Securitized	51,036	51,833	51,130	50,037	-	-	-	-	-	-	-	-	204,036
Absolute Return	2,104,614	2,113,112	3,516,256	3,029,901	-	-	-	-	-	-	-	-	10,763,882
Payden & Rygel	11,077	11,506	11,934	11,988	-	-	-	-	-	-	-	-	46,506
	<b>2,209,511</b>	<b>2,219,977</b>	<b>3,622,093</b>	<b>3,133,692</b>									<b>11,185,273</b>
<b>OTHER</b>													
Hamilton Lane	20,642	21,182	21,404	21,181	-	-	-	-	-	-	-	-	84,409
Russell Overlay	23,590	23,590	23,590	27,158	-	-	-	-	-	-	-	-	97,928
	<b>44,232</b>	<b>44,772</b>	<b>44,994</b>	<b>48,339</b>									<b>182,338</b>
<b>SUB TOTAL-INV MGMT FEES</b>	<b>22,571,204</b>	<b>32,409,468</b>	<b>17,403,778</b>	<b>8,837,193</b>									<b>81,221,643</b>
<b>PROFESSIONAL FEES</b>													
Legal	3,644	8,689	4,789	2,906	-	-	-	-	-	-	-	-	20,028
BNY Mellon - Custodial	42,213	42,213	42,213	42,213	-	-	-	-	-	-	-	-	168,850
Cliffwater	37,500	37,500	37,500	37,500	-	-	-	-	-	-	-	-	150,000
Meketa General	6,250	6,250	6,250	6,250	-	-	-	-	-	-	-	-	25,000
Meketa Real Estate	10,781	10,781	10,781	10,781	-	-	-	-	-	-	-	-	43,125
NEPC	32,917	32,917	32,917	32,917	-	-	-	-	-	-	-	-	131,667
	<b>133,304</b>	<b>138,349</b>	<b>134,450</b>	<b>132,566</b>									<b>538,669</b>
<b>TOTAL:</b>	<b>22,704,508</b>	<b>32,547,817</b>	<b>17,538,228</b>	<b>8,969,759</b>									<b>81,760,312</b>

\* Fees and expenses provided as a best-efforts estimate. As such, care should be taken when comparing these figures to data included in audit financial statements.

\*\* Fees and expenses provided on an actual (not accrual) basis as paid. Accrual basis fees may include future adjustment. As such, care should be taken when comparing these figures to data included in audit financial statements.

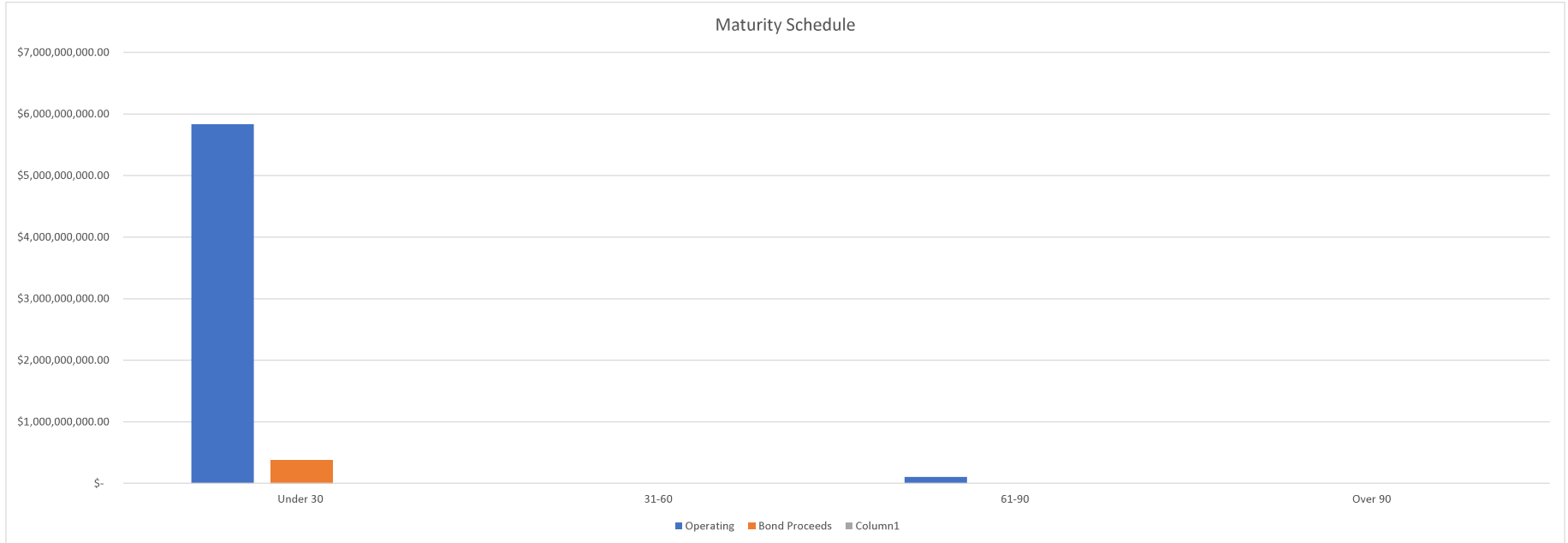
# SHORT-TERM INVESTMENTS

NEPC, LLC

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**State of Rhode Island  
Office of the General Treasurer  
Short Term Investments**

**Short-Term Investment Maturity Schedule RI SIC Guideline Compliance Report**  
Investments as of:  
Investments as of: 10/31/2023



Action (All)  
Enter Date (All)

Fund Group	Bank	Values	Maturity Date	Account Type				Grand Total
				Certificate of Deposit	Collateralized Deposit	Insured Cash Sweep	OSIP	
<b>Bond Proceeds</b>		Sum					\$ 379,678,423.08	\$ 379,678,423.08
		Percentage		0.00%	0.00%	0.00%	11.83%	11.83%
<b>Operating</b>	<b>Bank RI</b>	Sum		\$	10,635,682.70			\$ 10,635,682.70
		Percentage		0.00%	0.33%	0.00%	0.00%	0.33%
	<b>BankNewport BankLocal</b>	Sum		\$	7,596,409.97			\$ 7,596,409.97
		Percentage		0.00%	0.24%	0.00%	0.00%	0.24%
	<b>BCSB BankLocal</b>	Sum		\$	5,137,037.16			\$ 5,137,037.16
		Percentage		0.00%	0.16%	0.00%	0.00%	0.16%
	<b>Centreville</b>	Sum		\$		44,212,409.16		\$ 44,212,409.16
		Percentage		0.00%	0.00%	1.38%	0.00%	1.38%
	<b>Centreville BankLocal</b>	Sum		\$		3,726,130.58		\$ 3,726,130.58
		Percentage		0.00%	0.00%	0.12%	0.00%	0.12%
	<b>Citizens</b>	Sum		\$	45,666,362.03	\$	-	\$ 45,666,362.03
		Percentage		0.00%	1.42%	0.00%	0.00%	1.42%
	<b>Customers</b>	Sum		\$	102,618,204.29			\$ 102,618,204.29

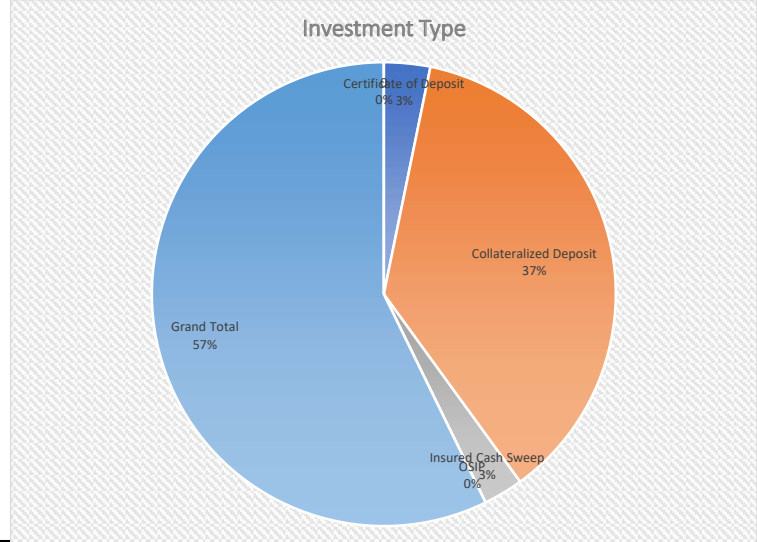
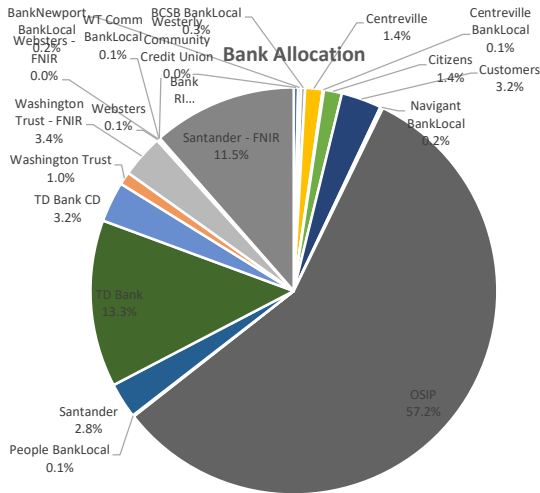


<b>Operating</b>	<b>Customers</b>	Percentage		0.00%	3.20%	0.00%	0.00%	3.20%
	<b>Freedom BankLocal</b>	Sum			\$ 5,235,205.05		\$ 5,235,205.05	
		Percentage		0.00%	0.00%	0.16%	0.00%	0.16%
	<b>Navigant BankLocal</b>	Sum	\$	6,538,191.78			\$ 6,538,191.78	
		Percentage		0.00%	0.20%	0.00%	0.00%	0.20%
	<b>OSIP</b>	Sum				\$ 1,457,312,326.36	\$ 1,457,312,326.36	
		Percentage		0.00%	0.00%	0.00%	45.40%	45.40%
	<b>People BankLocal</b>	Sum	\$	2,731,115.04			\$ 2,731,115.04	
		Percentage		0.00%	0.09%	0.00%	0.00%	0.09%
	<b>Santander</b>	Sum	\$	90,536,035.71			\$ 90,536,035.71	
		Percentage		0.00%	2.82%	0.00%	0.00%	2.82%
	<b>TD Bank</b>	Sum	\$	426,195,649.89			\$ 426,195,649.89	
		Percentage		0.00%	13.28%	0.00%	0.00%	13.28%
	<b>Washington Trust</b>	Sum			\$ 32,782,779.62		\$ 32,782,779.62	
		Percentage		0.00%	0.00%	1.02%	0.00%	1.02%
	<b>Websters</b>	Sum	\$	4,631,592.04			\$ 4,631,592.04	
		Percentage		0.00%	0.14%	0.00%	0.00%	0.14%
	<b>WT Comm BankLocal</b>	Sum			\$ 3,032,449.17		\$ 3,032,449.17	
		Percentage		0.00%	0.00%	0.09%	0.00%	0.09%
	<b>Washington Trust - FNIR</b>	Sum	\$	109,369,101.30			\$ 109,369,101.30	
		Percentage		0.00%	3.41%	0.00%	0.00%	3.41%
	<b>Websters - FNIR</b>	Sum	\$	483,255.23			\$ 483,255.23	
		Percentage		0.00%	0.02%	0.00%	0.00%	0.02%
	<b>Westerly Community Crec</b>	Sum	(blank)	\$ 175,775.88			\$ 175,775.88	
		Percentage	(blank)	0.00%	0.01%	0.00%	0.00%	0.01%
	<b>Santander - FNIR</b>	Sum	(blank)	\$ 368,452,075.95			\$ 368,452,075.95	
		Percentage	(blank)	0.00%	11.48%	0.00%	0.00%	11.48%
	<b>TD Bank 11/6/23</b>	Sum	(blank)	\$ (102,413,055.56)			\$ (102,413,055.56)	
		Percentage	11/6/2023	\$ 102,413,055.56			\$ 102,413,055.56	
		Percentage	(blank)	-3.19%	0.00%	0.00%	0.00%	-3.19%
			11/6/2023	3.19%	0.00%	0.00%	0.00%	3.19%
	<b>TD Bank 1/8/24</b>	Sum	1/8/2024	\$ 103,092,667.87			\$ 103,092,667.87	
		Percentage	1/8/2024	3.21%	0.00%	0.00%	0.00%	3.21%
<b>Total Sum</b>				\$ 103,092,667.87	\$ 1,180,766,488.97	\$ 88,988,973.58	\$ 1,836,990,749.44	\$ 3,209,838,879.86
<b>Total Percentage</b>				3.21%	36.79%	2.77%	57.23%	100.00%

**State of Rhode Island  
Office of the General Treasurer  
Short Term Investments**

**Issuer Credit Rating  
October 31, 2023**

Issuer	M/E % Portfolio	S-T Debt Rating			L-T Debt Rating		edit Outlo	Rating	Rating/Year
		Moody's	Moody's	S&P	Moody's	S&P	S&P	Veribanc	CRA Perf. Eval.
Bank of America	0.00%	Baa1	P-1	A-1	A2	A-	Stable	GREEN/***	Satisfactory/2012
Bank RI	0.33%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/***	Satisfactory/2015
BankNewport	0.24%	NR	NR	NR	NR	NR	NR	GREEN/***	
BNY Mellon	2.92%								
Bristol County Sav. Bank	2.98%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/***	Satisfactory/2012
Centreville Bank	3.36%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/***	Satisfactory/2014
Citizens Bank	28.17%	Baa1	P-1	A-2	A1	BBB+	Stable	GREEN/***	Satisfactory/2014
Customers Bank	57.23%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/*	Satisfactory/2016
Fidelity	0.09%								
Home Loan Inv. Bank	0.00%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/***	Needs Improve/2013
Navigant Credit Union	1.02%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/***	Satisfactory/2013
Ocean State Inv. Pool	3.41%	N/R	N/R	N/R	N/R	N/R	N/R	N/R	N/R
People's Credit Union	0.14%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/***	N/R
Santander Bank	0.02%	A3	P-1	A-1	A2	A	Stable	GREEN/***	N/R
SG Americas	0.00%								Satisfactory/2016
TD Bank	0.10%	Aa2	P-1	A-1+	A2	AA-	Stable	GREEN/***	Satisfactory/2016
Washington Trust	0.00%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/***	Satisfactory/2014
Webster Bank	0.00%	Baa1	P-2	A-2	A3	BBB+	Stable	GREEN/***	
Westerly Community Credit Union	0.00%	N/R	N/R	N/R	N/R	N/R	N/R	GREEN/***	



**Ratings Definitions**

<b>Moody's Short-Term Debt Ratings:</b>	<b>S&amp;P Short-Term Credit Ratings:</b>
<b>P-1</b> - Prime-1 have a superior ability for repayment of sr. S-T debt	<b>A-1</b> - Highest rated, strong capacity to meet obligations
<b>P-2</b> - Prime-1 have a strong ability for repayment of sr. S-T debt	<b>A-2</b> - Somewhat more susceptible to adverse effects of changes in fin. conditions; satisfactory
<b>P-3</b> - Prime-1 have acceptable ability for repayment of sr. S-T debt	<b>A-3</b> - Exhibits adequate protection parameters
<b>NP</b> - Not Prime	<b>B</b> - Significant speculative characteristics, faces major ongoing uncertainties
	<b>C</b> - Vulnerable to non-payment
	<b>D</b> - Payment default
	Modifiers: + or - show relative standing within the category.
<b>Moody's Issuer Rating Symbols:</b>	<b>S&amp;P Outlook Definitions:</b>
<b>Aaa</b> - Offer exceptional financial security (high-grade)	<b>Positive</b> - A rating may be raised
<b>Aa</b> - Offer excellent financial security (high-grade)	<b>Negative</b> - A rating may be lowered
<b>A</b> - Offer good financial security	<b>Stable</b> - A rating is not likely to change
<b>Baa</b> - Offer adequate financial security	<b>Developing</b> - May be raised or lowered
<b>Ba</b> - Offer questionable financial security	<b>NM</b> - Not meaningful
<b>B</b> - Offer poor financial security	
<b>Caa</b> - Offer very poor financial security	
<b>Ca</b> - Offer extremely poor financial security	
<b>C</b> - Lowest rated class, usually in default	
<b>Moody's Long-Term Debt Ratings:</b>	<b>S&amp;P Long-Term Debt Ratings:</b>
<b>Aaa</b> - Best Quality	<b>AAA</b> - Highest rating, extremely strong
<b>Aa</b> - High Quality	<b>AA</b> - Differs slightly from highest rating, very strong

<b>A</b> - Possess many favorable investment attributes	<b>A</b> - More susceptible to adverse effects of change in economic condition, strong
<b>Baa</b> - Medium-grade obligations	<b>BBB</b> - Exhibits adequate protection parameters
<b>Ba</b> - Possess speculative elements	<b>BB, B,</b> - Have significant speculative characteristics. BB least speculative
<b>B</b> - Generally lack characteristics of desirable investments	<b>CCC, CC, C</b> - C highest degree
<b>Caa</b> - Poor standing	<b>D</b> - Payment default
<b>Ca</b> - Speculative in a high degree	Modifiers: + or - show relative standing within the category.
<b>C</b> - Lowest rated class of bonds	
<b>Modifiers:</b>	<b>VERIBANC Ratings:</b>
<b>1</b> - Higher end of letter rating category	<b>GREEN</b> The institution's equity exceeds a modest percentage of its assets and had positive net income during the most recent reporting period.
<b>2</b> - Mid-range of letter rating category	<b>YELLOW</b> The institution's equity is at a minimal percentage of its assets or it incurred a net loss during the most recent reporting period.
<b>3</b> - Lower end of letter rating category	<b>RED</b> The institution's equity is less than a minimal percentage of its assets or it incurred a significant net loss during the most recent reporting period (or both).
	<b>BB</b> Blue Ribbon Bank
	Modifiers: ***-Very Strong, **-Strong, *-Moderate, No Stars-Poor

# DEFINED CONTRIBUTION PLAN

NEPC, LLC

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# State of Rhode Island

As of October 31, 2023



401(a) Monthly Performance Summary

recent returns as of 10/31/2023 all other data as of 9/30/2023

Morningstar Ranking/Number of Funds in Category displays the Funds actual rank within its Morningstar Category based on average annual total return and number of funds in that Category. The returns assume reinvestment of dividends and do not reflect any applicable sales charge. Absent expense limitation, total return would be less. Past performance does not guarantee future results. Morningstar Percentile Rankings are the Fund's total return rank relative to all the funds in the same Morningstar category, where 1 is the highest percentile rank and 100 is the lowest percentile rank.

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Investment Name	Ticker	Mgr Tenure	AUM \$M	Gross ER	Net ER	% Rank	Rev Share	Cumulative Total Return (%)			Annualized Total Return (%) [as of 9/30/2023]											Inception Date				
								1 Mo	YTD	1 Yr	Cat. Rank	% Rank	3 Yr	Cat. Rank	% Rank	5 Yr	Cat. Rank	% Rank	10 Yr	Cat. Rank	% Rank		SI			
<b>STABLE VALUE</b>																										
<b>Stable Value/Guaranteed</b>																										
TIAA Stable Value <sup>1</sup> (DC Retirement Plan)																										
TIAA Stable Value <sup>1</sup> (FICA Alternative Ret. Inc. Security Program)																										
<b>FIXED INCOME</b>																										
<b>Intermediate Core Bond</b>																										
State Street US Bond Index Securities XIV <sup>3</sup>		28.92	39,824	0.02	0.02	-	0.00	(1.59)	(2.61)	0.62	-	56	(5.22)	-	49	0.13	-	36	1.14	-	34	1.51				6/30/2011
Bloomberg US Agg Bond TR USD								(1.58)	(2.77)	0.64			(5.21)			0.10			1.13							
Intermediate Core Bond Median					0.52			(1.64)	(2.59)	0.57			(5.18)			0.01			1.03							
Intermediate Core Bond Number of Funds					452						450				427			414			364					
Morningstar Category: Intermediate Core Bond																										
<b>Inflation-Protected Bond</b>																										
PIMCO Real Return Instl	PRRIX	4.75	8,528	0.67	0.67	42	0.00	(0.81)	(1.59)	1.89	89	43	(1.94)	94	48	2.17	72	40	1.71	17	9	4.99				1/29/1997
Bloomberg US Treasury US TIPS TR USD								(0.72)	(1.50)	1.25			(1.98)			2.12			1.74							
Inflation-Protected Bond Median					0.57			(0.65)	(1.30)	1.57			(2.03)			1.94			1.42							
Inflation-Protected Bond Number of Funds					199						198				193			193			178					
Morningstar Category: Inflation Protected Bond																										

recent returns as of 10/31/2023 all other data as of 9/30/2023

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								1 Mo	YTD	1 Yr	Cat. Rank	% Rank	3 Yr	Cat. Rank	% Rank	5 Yr	Cat. Rank	% Rank	10 Yr	Cat. Rank	% Rank		SI	
<b>EQUITY</b>																								
<b>Large Cap Blend</b>																								
State Street S&P 500 Index Securities (Lending Series CI) II <sup>3</sup>		26.58	168,000	0.01	0.01	-	0.00	(2.10)	10.69	21.61	-	29	10.14	-	30	9.90	-	19	11.91	-	8	9.01	5/31/1996	
S&P 500 TR USD								(2.10)	10.69	21.62			10.15			9.92			11.91					
Vanguard FTSE Social Index Institutional	VFTNX	7.83	15,245	0.12	0.12	5	0.00	(2.15)	13.92	22.43	295	22	8.20	954	75	10.00	149	16	12.27	22	4	9.32	1/14/2003	
FTSE4Good US Select TR USD								(2.13)	14.05	22.58			8.32			10.10			12.39					
Russell 3000 TR USD								(2.65)	9.41	20.46			9.38			9.14			11.28					
Large Blend Median					0.77			(2.21)	8.77	20.34			9.31			8.73			10.54					
Large Blend Number of Funds					1,257						1,239			1,182			1,135			1,021				
Morningstar Category: Large Blend																								
<b>Mid-Cap Blend</b>																								
State Street Small Mid Cp Index Securities Series II <sup>3</sup>		26.25	31,425	0.02	0.02	-	0.00	(6.18)	2.18	14.26	-	53	5.23	-	92	5.02	-	68	8.23	-	54	6.39	6/17/2019	
Russell Small Cap Complete TR USD								(6.18)	2.12	14.13			5.16			4.98			8.16					
Mid-Cap Blend Median					0.97			(5.01)	(1.39)	13.95			9.55			5.56			7.92					
Mid-Cap Blend Number of Funds					361						358			344			330			275				
Morningstar Category: Mid-Cap Blend																								
<b>Foreign Large Blend</b>																								
State Street Global All Cap Equity Ex-U.S. Idx Securities II <sup>2, 3</sup>		13.58	26,660	0.06	0.05	-	0.00	(3.94)	1.42	21.11	-	68	3.98	-	60	2.86	-	50	3.76	-	43	4.63	5/13/2014	
MSCI ACWI Ex USA IMI NR USD								(4.33)	0.74	20.19			3.77			2.57			3.48					
Foreign Large Blend Median					0.92			(3.47)	2.15	23.38			4.30			2.80			3.62					
Foreign Large Blend Number of Funds					674						664			636			609			500				
Morningstar Category: Foreign Large Blend																								

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Investment Name	Ticker	Mgr Tenure	AUM \$M	Gross ER	Net ER	% Rank	Rev Share	Cumulative Total Return (%)			Annualized Total Return (%) [as of 9/30/2023]											Inception Date		
								1 Mo	YTD	1 Yr	Cat. Rank	% Rank	3 Yr	Cat. Rank	% Rank	5 Yr	Cat. Rank	% Rank	10 Yr	Cat. Rank	% Rank		SI	
<b>ALLOCATION</b>																								
<b>Target-Date</b>																								
<b>Vanguard Target Retirement Inc Trust Plus <sup>4</sup></b>		10.75	21,513	0.06	0.06	-	0.00	(1.41)	1.71	7.09	-	50	(0.10)	-	45	2.73	-	27	3.67	-	21	4.12	8/15/2011	
<i>Vanguard Target Retirement Income Composite</i>								(1.49)	1.70	7.31			0.10			2.97			3.84					
<i>Target-Date Retirement Median</i>					0.59			(1.68)	0.76	6.72			(0.20)			2.23			3.14					
<i>Target-Date Retirement Number of Funds</i>					161						152			152		141			106					
<i>Morningstar Category: Target-Date Retirement</i>																								
<b>Vanguard Target Retirement 2020 Trust Plus <sup>4</sup></b>		10.75	29,924	0.06	0.06	-	0.00	(1.67)	2.49	9.43	-	41	1.48	-	48	3.65	-	25	5.33	-	15	6.36	8/15/2011	
<i>Vanguard Target Retirement 2020 Composite</i>								(1.78)	2.48	9.68			1.73			3.95			5.54					
<i>Target-Date 2020 Median</i>					0.54			(1.92)	1.49	8.86			1.37			3.31			4.74					
<i>Target-Date 2020 Number of Funds</i>					155						146			139		139			89					
<i>Morningstar Category: Target-Date 2020</i>																								
<b>Vanguard Target Retirement 2025 Trust Plus <sup>4</sup></b>		10.75	66,284	0.06	0.06	-	0.00	(2.02)	3.10	11.61	-	12	2.28	-	28	4.17	-	15	5.91	-	8	7.02	8/15/2011	
<i>Vanguard Target Retirement 2025 Composite</i>								(2.17)	3.13	11.91			2.58			4.50			6.13					
<i>Target-Date 2025 Median</i>					0.58			(2.12)	1.72	9.91			1.71			3.56			5.06					
<i>Target-Date 2025 Number of Funds</i>					219						210			203		191			142					
<i>Morningstar Category: Target-Date 2025</i>																								
<b>Vanguard Target Retirement 2030 Trust Plus <sup>4</sup></b>		10.75	84,276	0.06	0.06	-	0.00	(2.28)	3.55	13.18	-	15	3.07	-	36	4.57	-	22	6.39	-	9	7.60	8/15/2011	
<i>Vanguard Target Retirement 2030 Composite</i>								(2.45)	3.56	13.51			3.39			4.91			6.62					
<i>Target-Date 2030 Median</i>					0.59			(2.37)	2.39	11.72			2.75			4.07			5.74					
<i>Target-Date 2030 Number of Funds</i>					222						212			205		186			134					
<i>Morningstar Category: Target-Date 2030</i>																								



recent returns as of 10/31/2023 all other data as of 9/30/2023

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								1 Mo	YTD	1 Yr	Cat. Rank	% Rank	3 Yr	Cat. Rank	% Rank	5 Yr	Cat. Rank	% Rank	10 Yr	Cat. Rank	% Rank		SI	
<b>ALLOCATION</b>																								
<b>Target-Date</b>																								
<b>Vanguard Target Retirement 2035 Trust Plus <sup>4</sup></b>		10.75	86,436	0.06	0.06	-	0.00	(2.41)	4.11	14.70	-	32	4.00	-	47	5.04	-	33	6.90	-	22	8.20	8/15/2011	
<i>Vanguard Target Retirement 2035 Composite</i>								(2.61)	4.10	14.99			4.31			5.37			7.14					
<i>Target-Date 2035 Median</i>					0.60			(2.58)	3.31	14.01			4.00			4.69			6.35					
<i>Target-Date 2035 Number of Funds</i>					218						203		196			185			136					
<i>Morningstar Category: Target-Date 2035</i>																								
<b>Vanguard Target Retirement 2040 Trust Plus <sup>4</sup></b>		10.75	78,583	0.06	0.06	-	0.00	(2.55)	4.68	16.23	-	45	4.90	-	58	5.48	-	31	7.36	-	24	8.69	8/15/2011	
<i>Vanguard Target Retirement 2040 Composite</i>								(2.78)	4.63	16.48			5.23			5.82			7.62					
<i>Target-Date 2040 Median</i>					0.64			(2.72)	4.20	15.96			4.99			5.15			6.81					
<i>Target-Date 2040 Number of Funds</i>					216						207		199			186			134					
<i>Morningstar Category: Target-Date 2040</i>																								
<b>Vanguard Target Retirement 2045 Trust Plus <sup>4</sup></b>		10.75	76,248	0.06	0.06	-	0.00	(2.69)	5.21	17.75	-	39	5.81	-	38	5.95	-	26	7.71	-	13	8.97	8/15/2011	
<i>Vanguard Target Retirement 2045 Composite</i>								(2.95)	5.16	17.97			6.14			6.30			7.96					
<i>Target-Date 2045 Median</i>					0.62			(2.82)	4.78	17.21			5.65			5.50			7.06					
<i>Target-Date 2045 Number of Funds</i>					212						203		196			185			136					
<i>Morningstar Category: Target-Date 2045</i>																								
<b>Vanguard Target Retirement 2050 Trust Plus <sup>4</sup></b>		10.75	67,193	0.06	0.06	-	0.00	(2.78)	5.50	18.55	-	30	6.00	-	40	6.08	-	22	7.77	-	16	9.03	8/15/2011	
<i>Vanguard Target Retirement 2050 Composite</i>								(3.06)	5.42	18.74			6.34			6.43			8.03					
<i>Target-Date 2050 Median</i>					0.63			(2.92)	5.05	17.72			5.79			5.59			7.17					
<i>Target-Date 2050 Number of Funds</i>					213						204		197			186			134					
<i>Morningstar Category: Target-Date 2050</i>																								

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								1 Mo	YTD	1 Yr	Cat. Rank	% Rank	3 Yr	Cat. Rank	% Rank	5 Yr	Cat. Rank	% Rank	10 Yr	Cat. Rank		% Rank	SI	
<b>ALLOCATION</b>																								
<b>Target-Date</b>																								
<b>Vanguard Target Retirement 2055 Trust Plus <sup>4</sup></b>		10.75	47,264	0.06	0.06	-	0.00	(2.78)	5.49	18.55	-	37	6.00	-	45	6.07	-	24	7.76	-	16	9.16	11/30/2011	
<i>Vanguard Target Retirement 2055 Composite</i>								(3.06)	5.42	18.74			6.34			6.43			8.03					
<i>Target-Date 2055 Median</i>					0.64			(2.93)	5.09	17.99			5.89			5.62			7.19					
<i>Target-Date 2055 Number of Funds</i>					212						203		196			185			123					
<i>Morningstar Category: Target-Date 2055</i>																								
<b>Vanguard Target Retirement 2060 Trust Plus <sup>4</sup></b>		10.75	24,978	0.06	0.06	-	0.00	(2.80)	5.48	18.59	-	38	6.01	-	54	6.09	-	29	7.77	-	1	8.50	3/23/2012	
<i>Vanguard Target Retirement 2060 Composite</i>								(3.06)	5.42	18.74			6.34			6.43			8.03					
<i>Target-Date 2060 Median</i>					0.64			(2.92)	5.10	17.98			5.97			5.62			7.10					
<i>Target-Date 2060 Number of Funds</i>					212						203		191			174			8					
<i>Morningstar Category: Target-Date 2060</i>																								
<b>Vanguard Target Retirement 2065 Trust Plus <sup>4</sup></b>		6.33	7,235	0.06	0.06	-	0.00	(2.77)	5.49	18.58	-	47	6.00	-	52	6.10	-	13	-	-	-	7.74	7/24/2017	
<i>Vanguard Target Retirement 2065 Composite</i>								(3.06)	5.42	18.74			6.34			6.43								
<i>Target-Date 2065+ Median</i>					0.64			(2.93)	5.36	18.15			5.81			5.78								
<i>Target-Date 2065+ Number of Funds</i>					204						158		111			9								
<i>Morningstar Category: Target-Date 2065+</i>																								
<b>Vanguard Target Retirement 2070 Trust Plus <sup>4</sup></b>		1.58	427	0.06	0.06	-	0.00	(2.75)	5.52	18.60	-	47	-	-	-	-	-	-	-	-	-	(2.51)	4/6/2022	
<i>Vanguard Target Retirement 2070 Composite</i>								(3.06)	5.42	18.74														
<i>Target-Date 2065+ Median</i>					0.64			(2.93)	5.36	18.15														
<i>Target-Date 2065+ Number of Funds</i>					204																			
<i>Morningstar Category: Target-Date 2065+</i>																								

% Rank => Percentile Ranking in Morningstar Category.

Morningstar peer rankings include fractional weights for all share classes. Morningstar peer rankings also include ETFs. Depending on the category, this may cause some variances with the category median illustrated in this report since most ETFs are index based options that can include more volatile and less mainstream indices.

SI = Since Inception Annualized Total Return; Incep. Date = Since Inception Date (SI return is calculated from this date).

1. TIAA Stable Value is not an investment for purposes of federal securities laws; it is a guaranteed insurance contract. Therefore, unlike a variable annuity or mutual fund, TIAA Stable Value does not include an identifiable expense ratio. The contract provides a guaranteed minimum rate of interest of between 1% and 3% (before deductions for contract fees). Contract Fees are described in the annuity contract and are collected on a daily basis by way of a reduction to the Declared Rate. Payment obligations and the fulfillment of the guarantees provided for in the contract in the accumulation phase are supported by the assets held in the separate account. If the assets in the separate account are insufficient to meet these obligations, the shortfall is supported by the General Account of TIAA and is therefore subject to TIAA's claims-paying ability. Past interest rates are not indicative of future interest rates. The TIAA Stable Value Inception Date represents the date that the plan's TIAA Stable Value record was initiated on TIAA's recordkeeping system which may be earlier than the date of first deposit to the contract.
2. Performance shown for periods prior to the inception date reflects the performance of an older share class of the fund/account or underlying fund. Total returns have not been restated to reflect any expense differential between any of the classes. Had the expense differential been reflected, total returns for the fund may have been higher or lower. Category ranks are not available for these time periods.
3. This Fund is a collective investment trust and is not FDIC insured, nor is it an obligation or deposit of, or guaranteed by State Street Corporation, SSGA or its affiliates. Category ranks are not available for these investment options.
4. This investment is not a mutual fund. It is a collective trust available only to tax-qualified plans and their eligible participants. This collective trust is managed by Vanguard Fiduciary Trust Company, a wholly owned subsidiary of The Vanguard Group, Inc., and is not a mutual fund. Investment objectives, risks, charges, expenses, and other important information should be considered carefully before investing. Category ranks are not available for these investment options.

You cannot invest directly in an index.

Accumulations in mutual funds not managed by TIAA-CREF may be subject to administrative charges. These charges are subject to change. Please review current documents related to your plan.

The expense ratio paid by an investor is the net expense ratio as stated in the prospectus. The net expense ratio reflects total annual fund operating expenses excluding interest expense. If interest expense was included, returns would have been lower. For definitions please visit [www.tiaa.org/public/assetmanagement](http://www.tiaa.org/public/assetmanagement).

Vanguard Index Information available at <http://www.vanguard.com>.

Investing in non-investment grade securities presents special risks, including significantly higher interest-rate and credit risk.

Small-cap and mid-cap stocks may have limited marketability and may be subject to more abrupt or erratic market movements than large-cap stocks.

The risks associated with foreign investments are often magnified in emerging markets where there is greater potential for political, currency, and economic volatility.

Funds that invest in fixed-income securities are not guaranteed and are subject to interest-rate, inflation and credit risks.

Funds that invest in foreign securities are subject to special risks, including currency fluctuation and political and economic instability.

Real estate securities are subject to various risks, including fluctuations in property values, higher expenses or lower income than expected, and potential environmental problems and liability.

Any guarantees under annuities issued by TIAA are subject to TIAA's claims-paying ability. TIAA Stable Value is a guaranteed insurance contract and not an investment for Federal Securities Law purposes.

Target Date Funds share the risks associated with the types of securities held by each of the underlying funds in which they invest. In addition to the fees and expenses associated with the Target Date Funds, there is exposure to the fees and expenses associated with the underlying mutual funds as well.

The principal value of a target date fund isn't guaranteed at any time, including at the target date, and will fluctuate with market changes. The target date represents an approximate date when investors may plan to begin withdrawing from the fund. However, you are not required to withdraw the funds at the target date.

**Investment, insurance and annuity products are not FDIC insured, are not bank guaranteed, are not deposits, are not insured by any federal government agency, are not a condition to any banking service or activity, and may lose value.**

## **Prospectus Gross Expense Ratio**

The percentage of fund assets used to pay for operating expenses and management fees, including 12b-1 fees, administrative fees, and all other asset-based costs incurred by the fund, except brokerage costs. Fund expenses are reflected in the fund's NAV. Sales charges are not included in the expense ratio.

--The expense ratio for fund of funds is the aggregate expense ratio as defined as the sum of the wrap or sponsor fees plus the estimated weighted average of the underlying fund fees.

--Often referred to as the Annual Operating Expense, the Prospectus Gross Expense Ratio is collected annually from a fund's prospectus.

## **Prospectus Net Expense Ratio**

The percentage of fund assets, net of reimbursements, used to pay for operating expenses and management fees, including 12b-1 fees, administrative fees, and all other asset-based costs incurred by the fund, except brokerage costs. Fund expenses are reflected in the fund's NAV. Sales charges are not included in the expense ratio.

--The expense ratio for fund of funds is the aggregate expense ratio as defined as the sum of the wrap or sponsor fees plus the estimated weighted average of the underlying fund fees.

--Net reimbursements, the Prospectus Net Expense Ratio is collected annually from a fund's prospectus.

--TIAA, unless noted, does not charge additional fees for record keeping a fund. 12b-1, revenue share and admin fees are all included in the Prospectus fees. -- Prospectus Net Expense Ratio % - ile rank is the percentile rank for the fund. The better the expense ratio (lower) the lower the ranking out of 100.

By communicating the information contained in this material, TIAA is not providing impartial investment advice or giving advice in a fiduciary capacity regarding any investment by, or other transaction of, the plan(s). TIAA is acting solely in a sales capacity with respect to an arms-length sale, purchase, loan, exchange or other transaction related to the investment of securities or other investment property.

# State of Rhode Island - Plan Balance Summary

401(a)/414(h)(2)

State of Rhode Island Defined Contribution Retirement Plan



Assets as of 10/31/2023

<b>Investment Name</b>	<b>Asset Class</b>		<b>Asset Balance</b>	<b>% of Assets</b>
State Street S&P 500 Index Securities (Lending Series CI) II	Equities	\$	69,768,251	4.18%
State Street Small Mid Cp Index Securities Series II	Equities	\$	38,571,239	2.31%
TIAA Stable Value	Guaranteed	\$	31,987,023	1.92%
State Street Global All Cap Equity Ex-U.S. Idx Securities II	Equities	\$	25,212,717	1.51%
Vanguard FTSE Social Index Institutional	Equities	\$	12,439,114	0.75%
State Street US Bond Index Securities XIV	Fixed Income	\$	11,805,526	0.71%
PIMCO Real Return Institutional	Fixed Income	\$	10,402,763	0.62%
<b>Vanguard Target Retirement Trust Plus Subtotal</b>		<b>\$</b>	<b>1,468,319,650</b>	<b>88.00%</b>
Vanguard Target Retirement Income Trust Plus	Multi-Asset	\$	42,587,630	2.55%
Vanguard Target Retirement 2020 Trust Plus	Multi-Asset	\$	102,125,956	6.12%
Vanguard Target Retirement 2025 Trust Plus	Multi-Asset	\$	178,839,413	10.72%
Vanguard Target Retirement 2030 Trust Plus	Multi-Asset	\$	227,165,973	13.61%
Vanguard Target Retirement 2035 Trust Plus	Multi-Asset	\$	276,568,536	16.58%
Vanguard Target Retirement 2040 Trust Plus	Multi-Asset	\$	232,897,394	13.96%
Vanguard Target Retirement 2045 Trust Plus	Multi-Asset	\$	186,153,742	11.16%
Vanguard Target Retirement 2050 Trust Plus	Multi-Asset	\$	123,125,461	7.38%
Vanguard Target Retirement 2055 Trust Plus	Multi-Asset	\$	65,790,666	3.94%
Vanguard Target Retirement 2060 Trust Plus	Multi-Asset	\$	27,521,112	1.65%
Vanguard Target Retirement 2065 Trust Plus	Multi-Asset	\$	5,329,957	0.32%
Vanguard Target Retirement 2070 Trust Plus	Multi-Asset	\$	213,811	0.01%
<b>Defined Contribution Retirement Plan Total</b>		<b>\$</b>	<b>1,668,506,283</b>	

# State of Rhode Island - Plan Balance Summary



401(a)  
Rhode Island FICA Alternative Retirement Income Security Program

Assets as of 10/31/2023

<b>Investment Name</b>	<b>Asset Class</b>		<b>Asset Balance</b>	<b>% of Assets</b>
TIAA Stable Value	Guaranteed	\$	5,356	0.13%
<b>Vanguard Target Retirement Trust Plus Subtotal</b>		<b>\$</b>	<b>4,022,806</b>	<b>99.87%</b>
Vanguard Target Retirement Income Trust Plus	Multi-Asset	\$	20,692	0.51%
Vanguard Target Retirement 2020 Trust Plus	Multi-Asset	\$	1,400,738	34.77%
Vanguard Target Retirement 2025 Trust Plus	Multi-Asset	\$	207,905	5.16%
Vanguard Target Retirement 2030 Trust Plus	Multi-Asset	\$	265,928	6.60%
Vanguard Target Retirement 2035 Trust Plus	Multi-Asset	\$	162,819	4.04%
Vanguard Target Retirement 2040 Trust Plus	Multi-Asset	\$	164,957	4.10%
Vanguard Target Retirement 2045 Trust Plus	Multi-Asset	\$	148,994	3.70%
Vanguard Target Retirement 2050 Trust Plus	Multi-Asset	\$	211,541	5.25%
Vanguard Target Retirement 2055 Trust Plus	Multi-Asset	\$	299,361	7.43%
Vanguard Target Retirement 2060 Trust Plus	Multi-Asset	\$	614,433	15.25%
Vanguard Target Retirement 2065 Trust Plus	Multi-Asset	\$	414,720	10.30%
Vanguard Target Retirement 2070 Trust Plus	Multi-Asset	\$	110,719	2.75%
<b>FICA Alternative Retirement Income Security Program Total</b>		<b>\$</b>	<b>4,028,162</b>	

# Disclosures

This material is for informational or educational purposes only and does not constitute fiduciary investment advice under ERISA, a securities recommendation under all securities laws, or an insurance product recommendation under state insurance laws or regulations. This material does not take into account any specific objectives or circumstances of any particular investor, or suggest any specific course of action. Investment decisions should be made based on the investor's own objectives and circumstances.

TIAA is providing educational services concerning plan menu construction and the plan sponsor's fiduciary duties under its plan. It is not providing investment advice and is not a plan fiduciary with respect to the education and information presented herein. Note also that TIAA cannot and does not provide legal advice and that we recommend that you seek such advice from your own legal advisors.

TIAA reported performance may differ from Morningstar source returns for the same option over the same time period. We would expect an occasional one to two basis point difference. Morningstar Direct calculates returns by one share owned by hypothetical investor over the requested time period. The return for one year is calculated using the same formula as one month. TIAA calculates returns by \$1,000 owned by hypothetical investor for one month then links returns for requested time period. Both set of returns would include dividends and capital gains, if applicable.

**Investment products may be subject to market and other risk factors. See the applicable product literature or visit [tiaa.org](http://tiaa.org) for details. You should consider the investment objectives, risks, charges and expenses carefully before investing. Go to [tiaa.org](http://tiaa.org) or call 877-518-9161 for product and fund prospectuses that contain this and other information. Please read the prospectuses carefully before investing.**

TIAA-CREF Individual & Institutional Services, LLC, Member FINRA, distributes securities products. Annuity contracts and certificates are issued by Teachers Insurance and Annuity Association of America (TIAA) and College Retirement Equities Fund (CREF), New York, NY. Each is solely responsible for its own financial condition and contractual obligations.

## TIAA.org

XPP-3238567CO-M1023P



**457 PLANS**

NEPC, LLC

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# State of Rhode Island

As of October 31, 2023



457(b) Monthly Performance Summary

recent returns as of 10/31/2023 all other data as of 9/30/2023

Morningstar Ranking/Number of Funds in Category displays the Funds actual rank within its Morningstar Category based on average annual total return and number of funds in that Category. The returns assume reinvestment of dividends and do not reflect any applicable sales charge. Absent expense limitation, total return would be less. Past performance does not guarantee future results. Morningstar Percentile Rankings are the Fund's total return rank relative to all the funds in the same Morningstar category, where 1 is the highest percentile rank and 100 is the lowest percentile rank.

The performance data quoted represents past performance and is no guarantee of future results. Your returns and the principal value of your investments will fluctuate so that your shares or accumulation units, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than the performance quoted below. For performance current to the most recent month-end, visit the TIAA Website at [www.tiaa.org](http://www.tiaa.org), or call 877 518-9161.

Investment Name	Ticker	Mgr Tenure	AUM \$M	Gross ER	Net ER	% Rank	Rev Share	Cumulative Total Return (%)			Annualized Total Return (%) [as of 9/30/2023]										Inception Date					
								1 Mo	YTD	1 Yr	Cat. Rank	% Rank	3 Yr	Cat. Rank	% Rank	5 Yr	Cat. Rank	% Rank	10 Yr	Cat. Rank		% Rank	SI			
<b>GUARANTEED</b>																										
<b>Guaranteed</b>																										
TIAA Traditional Annuity Retirement Choice Plus <sup>1</sup>								Crediting Rate as of 11/1/2023 = 6.25%	-	0.15	0.35	3.34	3.90	-	-	3.34	-	-	3.31	-	-	3.40	-	-	3.6	6/1/2006
<b>FIXED INCOME</b>																										
<b>Intermediate Core Bond</b>																										
State Street US Bond Index Securities XIV <sup>3</sup>		28.92	39,824	0.02	0.02	-	0.00	(1.59)	(2.61)	0.62	-	56	(5.22)	-	49	0.13	-	36	1.14	-	34	1.51			6/30/2011	
Bloomberg US Agg Bond TR USD								(1.58)	(2.77)	0.64			(5.21)			0.10			1.13							
Intermediate Core Bond Median					0.52			(1.64)	(2.59)	0.57			(5.18)			0.01			1.03							
Intermediate Core Bond Number of Funds					452						450			427		414			364							
Morningstar Category: Intermediate Core Bond																										
<b>Intermediate Core-Plus Bond</b>																										
PIMCO Total Return Instl	PTRX	9.08	52,460	0.49	0.49	34	0.00	(1.85)	(2.43)	1.17	310	57	(5.06)	354	73	0.24	252	52	1.25	189	55	6.12			5/11/1987	
Bloomberg US Agg Bond TR USD								(1.58)	(2.77)	0.64			(5.21)			0.10			1.13							
Intermediate Core-Plus Bond Median					0.65			(1.72)	(2.24)	1.14			(4.81)			0.20			1.29							
Intermediate Core-Plus Bond Number of Funds					610						603			561		543			479							
Morningstar Category: Intermediate Core-Plus Bond																										
<b>Inflation-Protected Bond</b>																										
American Century Inflation-Adjs Bond R6 <sup>2</sup>	AIADX	21.92	2,746	0.26	0.26	21	0.00	(0.88)	(2.20)	0.64	153	79	(1.99)	97	49	1.80	116	67	1.38		60	1.53			7/28/2017	
Bloomberg US Treasury US TIPS TR USD								(0.72)	(1.50)	1.25			(1.98)			2.12			1.74							
Inflation-Protected Bond Median					0.57			(0.65)	(1.30)	1.57			(2.03)			1.94			1.42							
Inflation-Protected Bond Number of Funds					199						198			193		193			178							
Morningstar Category: Inflation-Protected Bond																										

recent returns as of 10/31/2023 all other data as of 9/30/2023

Morningstar Ranking/Number of Funds in Category displays the Funds actual rank within its Morningstar Category based on average annual total return and number of funds in that Category. The returns assume reinvestment of dividends and do not reflect any applicable sales charge. Absent expense limitation, total return would be less. Past performance does not guarantee future results. Morningstar Percentile Rankings are the Fund's total return rank relative to all the funds in the same Morningstar category, where 1 is the highest percentile rank and 100 is the lowest percentile rank.

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Investment Name	Ticker	Mgr Tenure	AUM \$M	Gross ER	Net ER	% Rank	Rev Share	Cumulative Total Return (%)			Annualized Total Return (%) [as of 9/30/2023]											Inception Date		
								1 Mo	YTD	1 Yr	Cat. Rank	% Rank	3 Yr	Cat. Rank	% Rank	5 Yr	Cat. Rank	% Rank	10 Yr	Cat. Rank	% Rank		SI	
<b>EQUITY</b>																								
<b>Large Cap Blend</b>																								
State Street S&P 500 Index Securities (Lending Series CI) II <sup>3</sup>		26.58	168,000	0.01	0.01	-	0.00	(2.10)	10.69	21.61	-	29	10.14	-	30	9.90	-	19	11.91	-	8	9.01	5/31/1996	
S&P 500 TR USD								(2.10)	10.69	21.62			10.15			9.92			11.91					
Vanguard FTSE Social Index Institutional	VFTNX	7.83	15,245	0.12	0.12	5	0.00	(2.15)	13.92	22.43	295	22	8.20	954	75	10.00	149	16	12.27	22	4	9.32	1/14/2003	
FTSE4Good US Select TR USD								(2.13)	14.05	22.58			8.32			10.10			12.39					
Russell 3000 TR USD								(2.65)	9.41	20.46			9.38			9.14			11.28					
Large Blend Median					0.77			(2.21)	8.77	20.34			9.31			8.73			10.54					
Large Blend Number of Funds					1,257						1,239			1,182		1,135			1,021					
Morningstar Category: Large Blend																								
<b>Mid-Cap Blend</b>																								
Vanguard Mid Cap Index Institutional	VMCIX	25.42	52,092	0.04	0.04	2	0.00	(4.72)	(1.57)	12.61	266	68	7.27	291	81	6.50	92	28	9.06	32	17	9.41	5/21/1998	
CRSP US Mid Cap TR USD								(4.73)	(1.59)	12.63			7.28			6.51			9.08					
Mid-Cap Blend Median					0.97			(5.01)	(1.39)	13.95			9.55			5.56			7.92					
Mid-Cap Blend Number of Funds					361						358			344		330			275					
Morningstar Category: Mid-Cap Blend																								
<b>Small Blend</b>																								
Vanguard Small Cap Index Institutional	VSCIX	7.50	43,532	0.04	0.04	2	0.00	(5.82)	(1.83)	12.54	289	49	8.72	424	75	4.62	155	33	8.00	55	16	8.45	7/7/1997	
CRSP US Small Cap TR USD								(5.82)	(1.94)	12.40			8.66			4.57			7.96					
Small Blend Median					1.00			(5.88)	(2.96)	12.40			10.44			3.52			7.01					
Small Blend Number of Funds					571						565			555		546			479					
Morningstar Category: Small Blend																								

recent returns as of 10/31/2023 all other data as of 9/30/2023

Morningstar Ranking/Number of Funds in Category displays the Funds actual rank within its Morningstar Category based on average annual total return and number of funds in that Category. The returns assume reinvestment of dividends and do not reflect any applicable sales charge. Absent expense limitation, total return would be less. Past performance does not guarantee future results. Morningstar Percentile Rankings are the Fund's total return rank relative to all the funds in the same Morningstar category, where 1 is the highest percentile rank and 100 is the lowest percentile rank.

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Investment Name	Ticker	Mgr Tenure	AUM \$M	Gross ER	Net ER	% Rank	Rev Share	Cumulative Total Return (%)			Annualized Total Return (%) [as of 9/30/2023]											Inception Date		
								1 Mo	YTD	1 Yr	Cat. Rank	% Rank	3 Yr	Cat. Rank	% Rank	5 Yr	Cat. Rank	% Rank	10 Yr	Cat. Rank	% Rank		SI	
<b>EQUITY</b>																								
<b>Foreign Large Blend</b>																								
State Street Global All Cap Equity Ex-U.S. Idx Securities II <sup>2, 3</sup>		13.58	26,660	0.06	0.05	-	0.00	(3.94)	1.42	21.11	-	68	3.98	-	60	2.86	-	50	3.76	-		4.63	5/13/2014	
MSCI ACWI Ex USA IMI NR USD								(4.33)	0.74	20.19			3.77			2.57			3.48					
Foreign Large Blend Median					0.92			(3.47)	2.15	23.38			4.30			2.80			3.62					
Foreign Large Blend Number of Funds					674						664			636			609			500				
Morningstar Category: Foreign Large Blend																								
<b>Foreign Large Growth</b>																								
American Funds Europacific Growth R6	REGX	22.33	126,563	0.47	0.47	14	0.00	(3.13)	1.85	19.64	140	37	0.08	138	41	3.11	121	40	4.64	79	37	7.23	5/1/2009	
MSCI ACWI Ex USA NR USD								(4.13)	0.99	20.39			3.74			2.58			3.35					
Foreign Large Growth Median					0.99			(3.44)	0.54	18.44			(0.92)			2.69			4.07					
Foreign Large Growth Number of Funds					413						413			392			372			319				
Morningstar Category: Foreign Large Growth																								

recent returns as of 10/31/2023 all other data as of 9/30/2023

Morningstar Ranking/Number of Funds in Category displays the Funds actual rank within its Morningstar Category based on average annual total return and number of funds in that Category. The returns assume reinvestment of dividends and do not reflect any applicable sales charge. Absent expense limitation, total return would be less. Past performance does not guarantee future results. Morningstar Percentile Rankings are the Fund's total return rank relative to all the funds in the same Morningstar category, where 1 is the highest percentile rank and 100 is the lowest percentile rank.

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Investment Name	Ticker	Mgr Tenure	AUM \$M	Gross ER	Net ER	% Rank	Rev Share	Cumulative Total Return (%)			Annualized Total Return (%) [as of 9/30/2023]										Inception Date			
								1 Mo	YTD	1 Yr	Cat. Rank	% Rank	3 Yr	Cat. Rank	% Rank	5 Yr	Cat. Rank	% Rank	10 Yr	Cat. Rank		% Rank	SI	
<b>ALLOCATION</b>																								
<b>Target-Date</b>																								
<b>Vanguard Target Retirement Inc Trust Plus <sup>4</sup></b>		10.75	21,513	0.06	0.06	-	0.00	(1.41)	1.71	7.09	-	50	(0.10)	-	45	2.73	-	27	3.67	-	21	4.12	8/15/2011	
<i>Vanguard Target Retirement Income Composite</i>								(1.49)	1.70	7.31			0.10			2.97			3.84					
<i>Target-Date Retirement Median</i>					0.59			(1.68)	0.76	6.72			(0.20)			2.23			3.14					
<i>Target-Date Retirement Number of Funds</i>					161						152			152		141				106				
<i>Morningstar Category: Target-Date Retirement</i>																								
<b>Vanguard Target Retirement 2020 Trust Plus <sup>4</sup></b>		10.75	29,924	0.06	0.06	-	0.00	(1.67)	2.49	9.43	-	41	1.48	-	48	3.65	-	25	5.33	-	15	6.36	8/15/2011	
<i>Vanguard Target Retirement 2020 Composite</i>								(1.78)	2.48	9.68			1.73			3.95			5.54					
<i>Target-Date 2020 Median</i>					0.54			(1.92)	1.49	8.86			1.37			3.31			4.74					
<i>Target-Date 2020 Number of Funds</i>					155						146			139		139				89				
<i>Morningstar Category: Target-Date 2020</i>																								
<b>Vanguard Target Retirement 2025 Trust Plus <sup>4</sup></b>		10.75	66,284	0.06	0.06	-	0.00	(2.02)	3.10	11.61	-	12	2.28	-	28	4.17	-	15	5.91	-	8	7.02	8/15/2011	
<i>Vanguard Target Retirement 2025 Composite</i>								(2.17)	3.13	11.91			2.58			4.50			6.13					
<i>Target-Date 2025 Median</i>					0.58			(2.12)	1.72	9.91			1.71			3.56			5.06					
<i>Target-Date 2025 Number of Funds</i>					219						210			203		191				142				
<i>Morningstar Category: Target-Date 2025</i>																								
<b>Vanguard Target Retirement 2030 Trust Plus <sup>4</sup></b>		10.75	84,276	0.06	0.06	-	0.00	(2.28)	3.55	13.18	-	15	3.07	-	36	4.57	-	22	6.39	-	9	7.60	8/15/2011	
<i>Vanguard Target Retirement 2030 Composite</i>								(2.45)	3.56	13.51			3.39			4.91			6.62					
<i>Target-Date 2030 Median</i>					0.59			(2.37)	2.39	11.72			2.75			4.07			5.74					
<i>Target-Date 2030 Number of Funds</i>					222						212			205		186				134				
<i>Morningstar Category: Target-Date 2030</i>																								

recent returns as of 10/31/2023 all other data as of 9/30/2023

Morningstar Ranking/Number of Funds in Category displays the Funds actual rank within its Morningstar Category based on average annual total return and number of funds in that Category. The returns assume reinvestment of dividends and do not reflect any applicable sales charge. Absent expense limitation, total return would be less. Past performance does not guarantee future results. Morningstar Percentile Rankings are the Fund's total return rank relative to all the funds in the same Morningstar category, where 1 is the highest percentile rank and 100 is the lowest percentile rank.

The performance data quoted represents past performance and is no guarantee of future results. Your returns and the principal value of your investments will fluctuate so that your shares or accumulation units, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than the performance quoted below. For performance current to the most recent month-end, visit the TIAA Website at [www.tiaa.org](http://www.tiaa.org), or call 877 518-9161.

Investment Name	Ticker	Mgr Tenure	AUM \$M	Gross ER	Net ER	% Rank	Rev Share	Cumulative Total Return (%)			Annualized Total Return (%) [as of 9/30/2023]											Inception Date		
								1 Mo	YTD	1 Yr	Cat. Rank	% Rank	3 Yr	Cat. Rank	% Rank	5 Yr	Cat. Rank	% Rank	10 Yr	Cat. Rank	% Rank		SI	
<b>ALLOCATION</b>																								
<b>Target-Date</b>																								
<b>Vanguard Target Retirement 2035 Trust Plus <sup>4</sup></b>		10.75	86,436	0.06	0.06	-	0.00	(2.41)	4.11	14.70	-	32	4.00	-	47	5.04	-	33	6.90	-	22	8.20	8/15/2011	
<i>Vanguard Target Retirement 2035 Composite</i>								(2.61)	4.10	14.99			4.31			5.37			7.14					
<i>Target-Date 2035 Median</i>					0.60			(2.58)	3.31	14.01			4.00			4.69			6.35					
<i>Target-Date 2035 Number of Funds</i>					218						203		196			185			136					
<i>Morningstar Category: Target-Date 2035</i>																								
<b>Vanguard Target Retirement 2040 Trust Plus <sup>4</sup></b>		10.75	78,583	0.06	0.06	-	0.00	(2.55)	4.68	16.23	-	45	4.90	-	58	5.48	-	31	7.36	-	24	8.69	8/15/2011	
<i>Vanguard Target Retirement 2040 Composite</i>								(2.78)	4.63	16.48			5.23			5.82			7.62					
<i>Target-Date 2040 Median</i>					0.64			(2.72)	4.20	15.96			4.99			5.15			6.81					
<i>Target-Date 2040 Number of Funds</i>					216						207		199			186			134					
<i>Morningstar Category: Target-Date 2040</i>																								
<b>Vanguard Target Retirement 2045 Trust Plus <sup>4</sup></b>		10.75	76,248	0.06	0.06	-	0.00	(2.69)	5.21	17.75	-	39	5.81	-	38	5.95	-	26	7.71	-	13	8.97	8/15/2011	
<i>Vanguard Target Retirement 2045 Composite</i>								(2.95)	5.16	17.97			6.14			6.30			7.96					
<i>Target-Date 2045 Median</i>					0.62			(2.82)	4.78	17.21			5.65			5.50			7.06					
<i>Target-Date 2045 Number of Funds</i>					212						203		196			185			136					
<i>Morningstar Category: Target-Date 2045</i>																								
<b>Vanguard Target Retirement 2050 Trust Plus <sup>4</sup></b>		10.75	67,193	0.06	0.06	-	0.00	(2.78)	5.50	18.55	-	30	6.00	-	40	6.08	-	22	7.77	-	16	9.03	8/15/2011	
<i>Vanguard Target Retirement 2050 Composite</i>								(3.06)	5.42	18.74			6.34			6.43			8.03					
<i>Target-Date 2050 Median</i>					0.63			(2.92)	5.05	17.72			5.79			5.59			7.17					
<i>Target-Date 2050 Number of Funds</i>					213						204		197			186			134					
<i>Morningstar Category: Target-Date 2050</i>																								

recent returns as of 10/31/2023 all other data as of 9/30/2023

Morningstar Ranking/Number of Funds in Category displays the Funds actual rank within its Morningstar Category based on average annual total return and number of funds in that Category. The returns assume reinvestment of dividends and do not reflect any applicable sales charge. Absent expense limitation, total return would be less. Past performance does not guarantee future results. Morningstar Percentile Rankings are the Fund's total return rank relative to all the funds in the same Morningstar category, where 1 is the highest percentile rank and 100 is the lowest percentile rank.

The performance data quoted represents past performance and is no guarantee of future results. Your returns and the principal value of your investments will fluctuate so that your shares or accumulation units, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than the performance quoted below. For performance current to the most recent month-end, visit the TIAA Website at [www.tiaa.org](http://www.tiaa.org), or call 877 518-9161.

Investment Name	Ticker	Mgr Tenure	AUM \$M	Gross ER	Net ER	% Rank	Rev Share	Cumulative Total Return (%)			Annualized Total Return (%) [as of 9/30/2023]											Inception Date	
								1 Mo	YTD	1 Yr	Cat. Rank	% Rank	3 Yr	Cat. Rank	% Rank	5 Yr	Cat. Rank	% Rank	10 Yr	Cat. Rank	% Rank		SI
<b>ALLOCATION</b>																							
<b>Target-Date</b>																							
<b>Vanguard Target Retirement 2055 Trust Plus <sup>4</sup></b>		10.75	47,264	0.06	0.06	-	0.00	(2.78)	5.49	18.55	-	37	6.00	-	45	6.07	-	24	7.76	-	16	9.16	11/30/2011
<i>Vanguard Target Retirement 2055 Composite</i>								(3.06)	5.42	18.74			6.34			6.43			8.03				
<i>Target-Date 2055 Median</i>					0.64			(2.93)	5.09	17.99			5.89			5.62			7.19				
<i>Target-Date 2055 Number of Funds</i>					212						203		196			185			123				
<i>Morningstar Category: Target-Date 2055</i>																							
<b>Vanguard Target Retirement 2060 Trust Plus <sup>4</sup></b>		10.75	24,978	0.06	0.06	-	0.00	(2.80)	5.48	18.59	-	38	6.01	-	54	6.09	-	29	7.77	-	1	8.50	3/23/2012
<i>Vanguard Target Retirement 2060 Composite</i>								(3.06)	5.42	18.74			6.34			6.43			8.03				
<i>Target-Date 2060 Median</i>					0.64			(2.92)	5.10	17.98			5.97			5.62			7.10				
<i>Target-Date 2060 Number of Funds</i>					212						203		191			174			8				
<i>Morningstar Category: Target-Date 2060</i>																							
<b>Vanguard Target Retirement 2065 Trust Plus <sup>4</sup></b>		6.33	7,235	0.06	0.06	-	0.00	(2.77)	5.49	18.58	-	47	6.00	-	52	6.10	-	13	-	-	-	7.74	7/24/2017
<i>Vanguard Target Retirement 2065 Composite</i>								(3.06)	5.42	18.74			6.34			6.43							
<i>Target-Date 2065+ Median</i>					0.64			(2.93)	5.36	18.15			5.81			5.78							
<i>Target-Date 2065+ Number of Funds</i>					204						158		111			9							
<i>Morningstar Category: Target-Date 2065+</i>																							
<b>Vanguard Target Retirement 2070 Trust Plus <sup>4</sup></b>		1.58	427	0.06	0.06	-	0.00	(2.75)	5.52	18.60	-	47	-	-	-	-	-	-	-	-	-	(2.51)	4/6/2022
<i>Vanguard Target Retirement 2070 Composite</i>								(3.06)	5.42	18.74													
<i>Target-Date 2065+ Median</i>					0.64			(2.93)	5.36	18.15													
<i>Target-Date 2065+ Number of Funds</i>					204																		
<i>Morningstar Category: Target-Date 2065+</i>																							



% Rank => Percentile Ranking in Morningstar Category.

Morningstar peer rankings include fractional weights for all share classes. Morningstar peer rankings also include ETFs. Depending on the category, this may cause some variances with the category median illustrated in this report since most ETFs are index based options that can include more volatile and less mainstream indices.

SI = Since Inception Annualized Total Return; Incep. Date = Since Inception Date (SI return is calculated from this date).

1. It is important to remember that the TIAA Traditional Annuity is not an investment for purposes of federal securities laws; it is a guaranteed insurance contract. Therefore, unlike a variable annuity or mutual fund, the TIAA Traditional Annuity does not include an identifiable expense ratio.
2. Performance shown for periods prior to the inception date reflects the performance of an older share class of the fund/account or underlying fund. Total returns have not been restated to reflect any expense differential between any of the classes. Had the expense differential been reflected, total returns for the fund may have been higher or lower. Category ranks are not available for these time periods.
3. This Fund is a collective investment trust and is not FDIC insured, nor is it an obligation or deposit of, or guaranteed by State Street Corporation, SSGA or its affiliates. Category ranks are not available for these investment options.
4. This investment is not a mutual fund. It is a collective trust available only to tax-qualified plans and their eligible participants. This collective trust is managed by Vanguard Fiduciary Trust Company, a wholly owned subsidiary of The Vanguard Group, Inc., and is not a mutual fund. Investment objectives, risks, charges, expenses, and other important information should be considered carefully before investing. Category ranks are not available for these investment options.

You cannot invest directly in an index.

Accumulations in mutual funds not managed by TIAA-CREF may be subject to administrative charges. These charges are subject to change. Please review current documents related to your plan.

The expense ratio paid by an investor is the net expense ratio as stated in the prospectus. The net expense ratio reflects total annual fund operating expenses excluding interest expense. If interest expense was included, returns would have been lower. For definitions please visit [www.tiaa.org/public/assetmanagement](http://www.tiaa.org/public/assetmanagement).

Vanguard Index Information available at <http://www.vanguard.com>.

Investing in non-investment grade securities presents special risks, including significantly higher interest-rate and credit risk.

Small-cap and mid-cap stocks may have limited marketability and may be subject to more abrupt or erratic market movements than large-cap stocks.

The risks associated with foreign investments are often magnified in emerging markets where there is greater potential for political, currency, and economic volatility.

Funds that invest in fixed-income securities are not guaranteed and are subject to interest-rate, inflation and credit risks.

Funds that invest in foreign securities are subject to special risks, including currency fluctuation and political and economic instability.

Real estate securities are subject to various risks, including fluctuations in property values, higher expenses or lower income than expected, and potential environmental problems and liability.

Any guarantees under annuities issued by TIAA are subject to TIAA's claims-paying ability. TIAA Traditional is a guaranteed insurance contract and not an investment for Federal Securities Law purposes.

Target Date Funds share the risks associated with the types of securities held by each of the underlying funds in which they invest. In addition to the fees and expenses associated with the Target Date Funds, there is exposure to the fees and expenses associated with the underlying mutual funds as well.

The principal value of a target date fund isn't guaranteed at any time, including at the target date, and will fluctuate with market changes. The target date represents an approximate date when investors may plan to begin withdrawing from the fund. However, you are not required to withdraw the funds at the target date.

**Investment, insurance and annuity products are not FDIC insured, are not bank guaranteed, are not deposits, are not insured by any federal government agency, are not a condition to any banking service or activity, and may lose value.**

## **Prospectus Gross Expense Ratio**

The percentage of fund assets used to pay for operating expenses and management fees, including 12b-1 fees, administrative fees, and all other asset-based costs incurred by the fund, except brokerage costs. Fund expenses are reflected in the fund's NAV. Sales charges are not included in the expense ratio.

--The expense ratio for fund of funds is the aggregate expense ratio as defined as the sum of the wrap or sponsor fees plus the estimated weighted average of the underlying fund fees.

--Often referred to as the Annual Operating Expense, the Prospectus Gross Expense Ratio is collected annually from a fund's prospectus.

## **Prospectus Net Expense Ratio**

The percentage of fund assets, net of reimbursements, used to pay for operating expenses and management fees, including 12b-1 fees, administrative fees, and all other asset-based costs incurred by the fund, except brokerage costs. Fund expenses are reflected in the fund's NAV. Sales charges are not included in the expense ratio.

--The expense ratio for fund of funds is the aggregate expense ratio as defined as the sum of the wrap or sponsor fees plus the estimated weighted average of the underlying fund fees.

--Net reimbursements, the Prospectus Net Expense Ratio is collected annually from a fund's prospectus.

--TIAA, unless noted, does not charge additional fees for record keeping a fund. 12b-1, revenue share and admin fees are all included in the Prospectus fees. -- Prospectus Net Expense Ratio % - ile rank is the percentile rank for the fund. The better the expense ratio (lower) the lower the ranking out of 100.

By communicating the information contained in this material, TIAA is not providing impartial investment advice or giving advice in a fiduciary capacity regarding any investment by, or other transaction of, the plan(s). TIAA is acting solely in a sales capacity with respect to an arms-length sale, purchase, loan, exchange or other transaction related to the investment of securities or other investment property.

# State of Rhode Island - Plan Balance Summary



457(b)

State of Rhode Island 457(b) Deferred Compensation Plan

Assets as of 10/31/2023

Investment Name	Asset Class		Asset Balance	% of Assets
TIAA Traditional Annuity (Retirement Choice Plus)	Guaranteed	\$	14,036,120	25.31%
State Street S&P 500 Index Securities (Lending Series CI) II	Equities	\$	13,577,578	24.48%
Vanguard Mid-Cap Index Institutional	Equities	\$	5,951,869	10.73%
Vanguard Small-Cap Index Institutional	Equities	\$	3,364,212	6.07%
American EuroPacific Growth R6	Equities	\$	2,088,364	3.77%
Vanguard FTSE Social Index Institutional	Equities	\$	1,345,254	2.43%
State Street US Bond Index Securities XIV	Fixed Income	\$	884,950	1.60%
State Street Global All Cap Equity Ex-U.S. Idx Securities II	Equities	\$	821,438	1.48%
American Century Inflation Adjusted Bond R6	Fixed Income	\$	732,701	1.32%
PIMCO Total Return Institutional	Fixed Income	\$	687,739	1.24%
Self-Directed Brokerage	Brokerage	\$	53,405	0.10%
<b>Vanguard Target Retirement Trust Plus Subtotal</b>		<b>\$</b>	<b>11,918,298</b>	<b>21.49%</b>
Vanguard Target Retirement Income Trust Plus	Multi-Asset	\$	793,335	1.43%
Vanguard Target Retirement 2020 Trust Plus	Multi-Asset	\$	811,570	1.46%
Vanguard Target Retirement 2025 Trust Plus	Multi-Asset	\$	1,907,617	3.44%
Vanguard Target Retirement 2030 Trust Plus	Multi-Asset	\$	3,321,308	5.99%
Vanguard Target Retirement 2035 Trust Plus	Multi-Asset	\$	1,421,823	2.56%
Vanguard Target Retirement 2040 Trust Plus	Multi-Asset	\$	724,835	1.31%
Vanguard Target Retirement 2045 Trust Plus	Multi-Asset	\$	1,066,417	1.92%
Vanguard Target Retirement 2050 Trust Plus	Multi-Asset	\$	837,677	1.51%
Vanguard Target Retirement 2055 Trust Plus	Multi-Asset	\$	626,976	1.13%
Vanguard Target Retirement 2060 Trust Plus	Multi-Asset	\$	351,849	0.63%
Vanguard Target Retirement 2065 Trust Plus	Multi-Asset	\$	52,739	0.10%
Vanguard Target Retirement 2070 Trust Plus	Multi-Asset	\$	2,153	0.00%
<b>457(b) Deferred Compensation Plan Total</b>		<b>\$</b>	<b>55,461,928</b>	

# Disclosures

This material is for informational or educational purposes only and does not constitute fiduciary investment advice under ERISA, a securities recommendation under all securities laws, or an insurance product recommendation under state insurance laws or regulations. This material does not take into account any specific objectives or circumstances of any particular investor, or suggest any specific course of action. Investment decisions should be made based on the investor's own objectives and circumstances.

TIAA is providing educational services concerning plan menu construction and the plan sponsor's fiduciary duties under its plan. It is not providing investment advice and is not a plan fiduciary with respect to the education and information presented herein. Note also that TIAA cannot and does not provide legal advice and that we recommend that you seek such advice from your own legal advisors.

TIAA reported performance may differ from Morningstar source returns for the same option over the same time period. We would expect an occasional one to two basis point difference. Morningstar Direct calculates returns by one share owned by hypothetical investor over the requested time period. The return for one year is calculated using the same formula as one month. TIAA calculates returns by \$1,000 owned by hypothetical investor for one month then links returns for requested time period. Both set of returns would include dividends and capital gains, if applicable.

**Investment products may be subject to market and other risk factors. See the applicable product literature or visit [tiaa.org](http://tiaa.org) for details. You should consider the investment objectives, risks, charges and expenses carefully before investing. Go to [tiaa.org](http://tiaa.org) or call 877-518-9161 for product and fund prospectuses that contain this and other information. Please read the prospectuses carefully before investing.**

TIAA-CREF Individual & Institutional Services, LLC, Member FINRA, distributes securities products. Annuity contracts and certificates are issued by Teachers Insurance and Annuity Association of America (TIAA) and College Retirement Equities Fund (CREF), New York, NY. Each is solely responsible for its own financial condition and contractual obligations.

## TIAA.org

XPP-3238588CO-M1023P

# Monthly Plan Performance Update

STATE OF RHODE ISLAND - STATE OF RI (35835)

*Performance data shown represents past performance and is no guarantee of future results. Investment return and principal value will fluctuate, so you may have a gain or loss when shares are sold. Current performance may be higher or lower than that quoted. Visit your Fidelity website for the most recent month-end performance.*

Name	Cumulative Total Returns				Average Annual Total Returns				
	As of	1 mo	3 mo	YTD	As of	1 yr	3 yr	5 yr	10 yr
DOW JONES INDUSTRIAL AVERAGE	10/31/2023	-1.26	-6.55	1.44	09/30/2023	19.18	8.62	7.14	10.79
BLOOMBERG US AGGREGATE BOND INDEX	10/31/2023	-1.58	-4.69	-2.77	09/30/2023	0.64	-5.21	0.10	1.13
NASDAQ COMPOSITE INDEX	10/31/2023	-2.76	-10.24	23.61	09/30/2023	26.11	6.60	11.41	14.52
RUSSELL 2000 INDEX	10/31/2023	-6.82	-16.69	-4.45	09/30/2023	8.93	7.16	2.40	6.65
S&P 500 INDEX	10/31/2023	-2.10	-8.25	10.69	09/30/2023	21.62	10.15	9.92	11.91

Investment Name	Cumulative Total Returns				Average Annual Total Returns					Fees			
	As of	1 mo	3 mo	YTD	As of	1 yr	3 yr	5 yr	10 yr	Life	Short Term Trading	Expense Ratio	Inception Date

## Stock Investments

### Large Cap

FID CONTRAFUND K6	10/31/2023	-1.01	-5.12	22.38	09/30/2023	29.37	6.43	9.92	--	12.67	--	0.45% on 03/01/2023	05/25/2017
FID LARGE CAP STOCK	10/31/2023	-3.21	-8.31	9.00	09/30/2023	27.04	15.81	9.38	10.76	8.98	--	0.76% on 06/29/2023	06/22/1995
INVS DIVRS DIVD R5	10/31/2023	-2.69	-8.95	-3.33	09/30/2023	11.25	9.95	6.03	7.77	7.53	--	0.53% on 02/28/2023	12/31/2001
SS S&P 500 INDEX II	10/31/2023	-2.10	-8.25	10.69	09/30/2023	21.61	10.14	9.90	11.91	9.11	--	0.01% on 12/31/2022	02/28/1996
VAN FTSE SOC IDX ADM	10/31/2023	-2.14	-8.64	13.93	09/30/2023	22.43	8.17	9.98	12.25	6.11	--	0.14% on 12/21/2022	01/14/2003

### Mid-Cap

FID LOW PRICED STK K	10/31/2023	-2.83	-7.20	0.33	09/30/2023	17.85	12.71	7.62	8.54	12.76	--	0.84% on 09/29/2023	12/27/1989
SS RSL SMMDCP IDX II	10/31/2023	-6.18	-14.35	2.18	09/30/2023	14.26	5.24	5.02	8.23	8.08	--	0.02% on 09/30/2023	08/31/1997

### International

AF EUROPAC GROWTH R6	10/31/2023	-3.13	-11.84	1.85	09/30/2023	19.64	0.08	3.11	4.64	9.77	--	0.47% on 06/01/2023	04/16/1984
SS GACEQ EXUS IDX II	10/31/2023	-3.94	-11.02	1.42	09/30/2023	21.11	3.98	2.86	3.76	4.27	--	0.06% on 12/31/2022	04/05/2010

## Blended Investments\*

### Others

FID FREEDOM 2005	10/31/2023	-1.41	-4.56	0.39	09/30/2023	5.31	-0.58	2.12	3.45	4.18	--	0.47% on 05/30/2023	11/06/2003
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Investment Name	Cumulative Total Returns				Average Annual Total Returns					Fees			
	As of	1 mo	3 mo	YTD	As of	1 yr	3 yr	5 yr	10 yr	Life	Short Term Trading	Expense Ratio	Inception Date
FID FREEDOM 2010	10/31/2023	-1.77	-5.47	0.66	09/30/2023	6.92	0.11	2.60	4.09	5.73	--	0.48% on 05/30/2023	10/17/1996
FID FREEDOM 2015	10/31/2023	-1.98	-6.40	1.05	09/30/2023	8.53	0.74	2.99	4.65	5.18	--	0.53% on 05/30/2023	11/06/2003
FID FREEDOM 2020	10/31/2023	-2.34	-7.39	1.33	09/30/2023	10.20	1.35	3.40	5.11	6.18	--	0.57% on 05/30/2023	10/17/1996
FID FREEDOM 2025	10/31/2023	-2.54	-8.03	1.69	09/30/2023	11.49	1.97	3.77	5.59	5.85	--	0.61% on 05/30/2023	11/06/2003
FID FREEDOM 2030	10/31/2023	-2.66	-8.32	2.39	09/30/2023	12.93	2.96	4.32	6.35	6.54	--	0.66% on 05/30/2023	10/17/1996
FID FREEDOM 2035	10/31/2023	-2.76	-8.76	3.75	09/30/2023	15.91	4.77	5.22	7.18	6.67	--	0.70% on 05/30/2023	11/06/2003
FID FREEDOM 2045	10/31/2023	-3.09	-9.73	5.11	09/30/2023	19.35	6.18	5.97	7.62	6.22	--	0.75% on 05/30/2023	06/01/2006
FID FREEDOM 2050	10/31/2023	-3.05	-9.62	5.17	09/30/2023	19.36	6.17	5.98	7.63	6.11	--	0.75% on 05/30/2023	06/01/2006
FID FREEDOM 2055	10/31/2023	-3.10	-9.68	5.12	09/30/2023	19.31	6.17	5.98	7.64	7.64	--	0.75% on 05/30/2023	06/01/2011
FID FREEDOM 2060	10/31/2023	-3.04	-9.67	5.13	09/30/2023	19.31	6.19	5.98	--	7.25	--	0.75% on 05/30/2023	08/05/2014
FID FREEDOM 2065	10/31/2023	-3.04	-9.63	5.17	09/30/2023	19.29	6.20	--	--	6.92	--	0.75% on 05/30/2023	06/28/2019
FID FREEDOM INCOME	10/31/2023	-1.49	-4.53	0.15	09/30/2023	5.04	-0.95	1.89	2.82	4.20	--	0.47% on 05/30/2023	10/17/1996
<b>Large Cap</b>													
FID FREEDOM 2040	10/31/2023	-3.02	-9.44	5.00	09/30/2023	18.80	6.10	5.93	7.59	4.68	--	0.74% on 05/30/2023	09/06/2000
<b>Bond Investments</b>													
<b>Stable Value</b>													
TRP STABLE VALUE A	10/31/2023	0.21	0.65	1.98	09/30/2023	2.26	1.91	2.01	1.96	4.41	--	0.45% on 06/30/2023	09/12/1988
<b>Income</b>													
PIM TOTAL RETURN A	10/31/2023	-1.88	-4.96	-2.70	09/30/2023	0.83	-5.38	-0.10	0.89	5.70	--	0.83% on 09/29/2023	05/11/1987
SS US BOND INDX XIV	10/31/2023	-1.59	-4.70	-2.61	09/30/2023	0.62	-5.22	0.13	1.14	3.93	--	0.02% on 12/31/2022	10/01/1997
<b>Other Investments</b>													
<b>Others</b>													
BROKERAGELINK	--	--	--	--	--	--	--	--	--	--	--	--	--

Expense Ratio is the total annual fund operating expense ratio from the fund's most recent prospectus. For non-Fidelity fund of funds listed, the ratio shown may solely reflect the total operating expense ratio of the fund, or may be a combined ratio reflecting both the total operating expense ratio of the fund and the total operating expense ratios of the underlying funds in which it was invested. Please consult the fund's prospectus for more detail on a particular fund's expense ratio.

Total returns are historical and include change in share value and reinvestment of dividends and capital gains, if any. Cumulative total returns are reported as of the period indicated. Life of Fund figures are reported as of the inception date to the period indicated.

The management company may be temporarily reimbursing a portion of the fund's expenses. Absent such reimbursement, returns and yields would have been lower. A fund's expense limitation may be terminated at any time.

**For any Government or U.S. Treasury Money Market funds listed:** *You could lose money by investing in a money market fund. Although the fund seeks to preserve the value of your investment at \$1.00 per share, it cannot guarantee it will do so. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to money market funds and you should not expect that the sponsor will provide financial support to the fund at any time.* Fidelity's government and U.S. Treasury money market funds will not impose a fee upon the sale of your shares, nor temporarily suspend your ability to sell shares if the fund's weekly liquid assets fall below 30% of its total assets because of market conditions or other factors.

**For any Retail (Non Government or U.S. Treasury) Money Market Funds listed:** *You could lose money by investing in a money market fund. Although the fund seeks to preserve the value of your investment at \$1.00 per share, it cannot guarantee it will do so. The Fund may impose a fee upon the sale of your shares or may temporarily suspend your ability to sell shares if the Fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to money market funds and you should not expect that the sponsor will provide financial support to the fund at any time.*

**For any Institutional Money Market Funds listed:** *You could lose money by investing in a money market fund. Because the share price of the fund will fluctuate, when you sell your shares they may be worth more or less than what you originally paid for them. The Fund may impose a fee upon the sale of your shares or may temporarily suspend your ability to sell shares if the Fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The fund's sponsor has no legal obligation to provide financial support to money market funds and you should not expect that the sponsor will provide financial support to the fund at any time.*

A money market fund's current yield reflects the current earnings of the fund, while the total return refers to a specific past holding period.

Performance of an index is not illustrative of any particular investment and an investment cannot be made directly in an index.

Generally, among asset classes stocks are more volatile than bonds or short-term instruments and can decline significantly in response to adverse issuer, political, regulatory, market, or economic developments. Although the bond market is also volatile, lower-quality debt securities including leveraged loans generally offer higher yields compared to investment grade securities, but also involve greater risk of default or price changes. Foreign markets can be more volatile than U.S. markets due to increased risks of adverse issuer, political, market or economic developments, all of which are magnified in emerging markets.

**Before investing, consider the funds' investment objectives, risks, charges, and expenses. Contact Fidelity for a prospectus or, if available, a summary prospectus containing this information. Read it carefully.**

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Fidelity Brokerage Services LLC, Member NYSE, SIPC, 900 Salem Street, Smithfield, RI 02917

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**STATE OF RHODE ISLAND**

Balance by Fund

Data As Of: 10/31/23

DC Plan Number	DC Plan Short Name	Fund Code	Fund Name	Fund Ticker Symbol	Fund Type	Fund Distinct Count By Participant	Market Value	Asset Percentage
35835	STATE OF RI	0338	FID LARGE CAP STOCK	FLCSX	DOMESTIC EQUITY	448	\$11,419,728	5.8%
35835	STATE OF RI	0369	FID FREEDOM INCOME	FFFAX	LIFECYCLE	39	\$978,783	0.5%
35835	STATE OF RI	0371	FID FREEDOM 2010	FFFCX	LIFECYCLE	59	\$2,074,288	1.0%
35835	STATE OF RI	0372	FID FREEDOM 2020	FFFDX	LIFECYCLE	164	\$12,480,217	6.3%
35835	STATE OF RI	0373	FID FREEDOM 2030	FFFEY	LIFECYCLE	267	\$17,708,760	9.0%
35835	STATE OF RI	0718	FID FREEDOM 2040	FFFFX	LIFECYCLE	94	\$3,062,652	1.5%
35835	STATE OF RI	1312	FID FREEDOM 2005	FFFVX	LIFECYCLE	10	\$713,117	0.4%
35835	STATE OF RI	1313	FID FREEDOM 2015	FFVFX	LIFECYCLE	38	\$1,414,494	0.7%
35835	STATE OF RI	1314	FID FREEDOM 2025	FFTWX	LIFECYCLE	109	\$6,074,936	3.1%
35835	STATE OF RI	1315	FID FREEDOM 2035	FFTHX	LIFECYCLE	121	\$4,691,116	2.4%
35835	STATE OF RI	1617	FID FREEDOM 2045	FFFGX	LIFECYCLE	89	\$2,507,127	1.3%
35835	STATE OF RI	1618	FID FREEDOM 2050	FFFHX	LIFECYCLE	105	\$992,984	0.5%
35835	STATE OF RI	2095	FID LOW PRICED STK K	FLPKX	DOMESTIC EQUITY	476	\$10,648,469	5.4%
35835	STATE OF RI	2331	FID FREEDOM 2055	FDEEX	LIFECYCLE	95	\$1,944,027	1.0%
35835	STATE OF RI	2708	FID FREEDOM 2060	FDKVX	LIFECYCLE	63	\$473,585	0.2%
35835	STATE OF RI	2946	FID CONTRAFUND K6	FLCNX	DOMESTIC EQUITY	760	\$44,561,479	22.5%
35835	STATE OF RI	3415	FID FREEDOM 2065	FFSFX	LIFECYCLE	16	\$33,260	0.0%
35835	STATE OF RI	BLNK	BROKERAGELNK		OTHER	128	\$20,351,546	10.3%
35835	STATE OF RI	OE9Q	VAN FTSE SOC IDX ADM	VFTAX	DOMESTIC EQUITY	94	\$1,797,259	0.9%
35835	STATE OF RI	OGMU	TRP STABLE VALUE A		STABLE VALUE	441	\$9,810,926	5.0%
35835	STATE OF RI	OKTK	INVS DIVRS DIVD R5	DDFIX	DOMESTIC EQUITY	104	\$2,625,180	1.3%
35835	STATE OF RI	OLLN	PIM TOTAL RETURN A	PTTAX	BOND	361	\$5,047,800	2.6%
35835	STATE OF RI	OMF4	SS GACEQ EXUS IDX II		INTERNATIONAL EQUITY	301	\$2,919,521	1.5%
35835	STATE OF RI	OMF5	SS RSL SMMDCP IDX II		DOMESTIC EQUITY	363	\$4,305,187	2.2%
35835	STATE OF RI	OMF6	SS S&P 500 INDEX II		DOMESTIC EQUITY	545	\$20,004,096	10.1%
35835	STATE OF RI	OMF7	SS US BOND INDX XIV		BOND	294	\$4,430,937	2.2%
35835	STATE OF RI	OUBE	AF EUROPAC GROWTH R6	RRGX	INTERNATIONAL EQUITY	410	\$4,556,225	2.3%

5,994 \$197,627,698.67 100.0%

# PERFORMANCE UPDATE

## Voya Retirement Insurance and Annuity Company

State of RI 457b

**Average Annual Total Returns as of: 10/31/2023** (shown in percentages)

Variable annuities and mutual funds offered through a retirement plan are intended as long-term investments designed for retirement purposes. Money distributed from a 403(b) plan, 401(a)/(k) plan, or a 457 plan will be taxed as ordinary income in the year the money is distributed. Early withdrawals from a 403(b) plan and a 401(a)/(k) plan, if taken prior to age 59 1/2, will be subject to the IRS 10% premature distribution penalty tax, unless an exception applies. This IRS premature distribution penalty tax does not apply to 457 plans. Account values fluctuate with market conditions, and when surrendered the principal may be worth more or less than the original amount invested.

**The performance data quoted represents past performance. Past performance does not guarantee future results. For month-end performance which may be lower or higher than the performance data shown please call 800-232-5422. Investment return and principal value of an investment will fluctuate so that, when sold, an investment may be worth more or less than the original cost.**

The below investment options are in Separate Account D. Please note that the figures do not include an adjustment for the Voya Administrative Fund Fee (where applicable) and the deduction of the Daily Asset Charge from the Separate Account (if applicable), or other applicable contract charges. If these fees and charges were included, performance would be less favorable.

The returns assume reinvestment of all dividends (ordinary income and capital gains) and are net of management fees and other fund operating expenses.

**You should consider the investment objectives, risks and charges, and expenses of the funds carefully before investing. The prospectus contains this and other information. Anyone who wishes to obtain a free copy of the fund prospectuses may call their Voya representative or the number above. Please read the prospectus carefully before investing.**

Returns less than one year are not annualized. Fund Inception Date is the date of inception for the underlying fund, and is the date used in calculating the periodic returns. This date may also precede the portfolio's inclusion in the product.

Investment Options	Fund Benchmark ID (BM)	1-Mo Fund	1-Mo BM	3-Mo Fund	3-Mo BM	YTD Fund	YTD BM	1-Yr Fund	1-Yr BM	3-Yr Fund	3-Yr BM	5-Yr Fund	5-Yr BM	10-Yr Fund	10-Yr BM	Incept	Fund Inception Date	Gross Fund Exp %*	Net Fund Exp %*
<b>Stability of Principal</b>																			
<i>Stability of Principal</i>																			
Voya Fixed Account - 457/401 II A - 4573 (17)(18)	MFR	0.13	0.43	0.37	1.28	1.17	3.93	1.33	4.55	1.12	1.75	1.22	1.55	1.50	1.28				
<b>Bonds</b>																			
<i>High Yield Bond</i>																			
PGIM High Yield Fund - Class Z - 2482	BCUSH1IC	-1.49	-1.18	-2.97	-2.07	3.41	4.65	4.90	6.25	0.95	1.18	2.99	2.93	3.98	3.79	03/01/1996		0.51	0.51
<i>Inflation-Protected Bond</i>																			



See Performance Introduction Page for Important Information

Investment Options	Fund Benchmark ID (BM)	1-Mo		3-Mo		YTD		1-Yr		3-Yr		5-Yr		10-Yr		Fund Inception Date	Gross Fund Exp %*	Net Fund Exp %*
		Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM			
<b>Intermediate Core Bond</b>																		
PIMCO Real Return Fund - Institutional Class - 2695	LBUSTIPS	-0.81	-0.72	-3.39	-3.43	-1.59	-1.50	-0.53	-0.72	-2.01	-2.00	2.34	2.27	1.57	1.61	01/29/1997	0.67	0.67
<b>Intermediate Core-Plus Bond</b>																		
State Street U.S. Bond Index SL Series Fund - Class XIV CIT - C925	LEHM	-1.59	-1.58	-4.70	-4.69	-2.61	-2.77	0.33	0.36	-5.58	-5.57	-0.03	-0.06	0.90	0.88	06/30/2011	0.02	0.02
Voya Intermediate Bond Fund - Class I - 238 (1)(2)	LEHM	-1.70	-1.58	-4.66	-4.69	-1.79	-2.77	1.23	0.36	-5.26	-5.57	0.21	-0.06	1.45	0.88	12/15/1998	0.36	0.36
<b>Asset Allocation</b>																		
<b>Lifecycle</b>																		
Voya Solution 2025 Portfolio - Initial Class - 790 (3)(4)	SPT2025	-2.31	-2.15	-7.21	-6.56	2.23	2.11	4.90	5.09	1.51	2.68	4.23	4.60	4.78	5.04	04/29/2005	0.79	0.72
Voya Solution 2030 Portfolio - Initial Class - 6753 (3)(5)	SPT2030	-2.54	-2.39	-7.81	-7.31	3.21	2.79	5.92	5.95	2.74	3.70	5.02	5.22	5.54	5.56	10/03/2011	0.88	0.72
Voya Solution 2035 Portfolio - Initial Class - 761 (3)(6)	SP2035	-2.71	-2.62	-8.41	-8.04	4.20	3.55	6.97	6.95	3.66	4.83	5.43	5.87	5.71	6.09	04/29/2005	0.87	0.73
Voya Solution 2040 Portfolio - Initial Class - 6756 (3)(7)	SPT2040	-2.75	-2.84	-8.84	-8.67	5.15	4.19	7.83	7.78	4.77	5.69	6.25	6.38	6.42	6.48	10/03/2011	0.97	0.73
Voya Solution 2045 Portfolio - Initial Class - 764 (3)(8)	SP2045	-2.77	-2.98	-9.14	-9.10	5.53	4.58	8.41	8.25	5.45	6.23	6.54	6.68	6.36	6.72	04/29/2005	0.91	0.75
Voya Solution 2050 Portfolio - Initial Class - 6759 (3)(9)	SPT2050	-2.81	-3.06	-9.38	-9.33	5.76	4.72	8.47	8.44	5.46	6.49	6.55	6.82	6.55	6.88	10/03/2011	1.05	0.76
Voya Solution 2055 Portfolio - Initial Class - 1166 (3)(10)	SPT2055	-2.84	-3.06	-9.42	-9.34	5.77	4.73	8.51	8.48	5.54	6.61	6.58	6.88	6.41	6.96	03/08/2010	0.97	0.78
Voya Solution 2060 Portfolio - Initial Class - 3290 (3)(11)	SPT2060	-2.75	-3.09	-9.41	-9.39	5.91	4.80	8.65	8.55	5.52	6.58	6.52	6.90			02/09/2015	1.14	0.78
Voya Solution 2065 Portfolio - Initial Class - E479 (12)	SPT2065	-2.88	-3.07	-9.49	-9.39	5.83	4.84	8.59	8.53	5.54	6.65					07/29/2020	1.39	0.79
Voya Solution Income Portfolio - Initial Class - 767 (3)(13)	SPTREIN	-1.90	-1.78	-5.88	-5.52	1.00	0.92	3.15	3.71	-0.43	-0.13	2.96	2.83	3.41	3.13	04/29/2005	0.74	0.68
<b>Balanced</b>																		
<b>Allocation--50% to 70% Equity</b>																		
VY® T. Rowe Price Capital Appreciation Portfolio - Inst - 1257	SPXRE	-2.28	-2.10	-5.69	-8.25	7.18	10.69	8.76	10.14	7.50	10.36	10.03	11.01	9.83	11.18	01/24/1989	0.64	0.64
<b>Large Cap Value/Blend</b>																		
<b>Large Blend</b>																		
Vanguard® FTSE Social Index Fund - Admiral™ Shares - D591	FTSE4GUSS	-2.14	-2.13	-8.64	-8.60	13.93	14.05	12.33	12.47	8.44	8.58	10.96	11.09	11.54	11.67	05/31/2000	0.14	0.14
Voya Growth and Income Portfolio - Class I - 001 (14)	SPXRE	-0.63	-2.10	-6.22	-8.25	12.62	10.69	12.14	10.14	13.43	10.36	11.94	11.01	10.48	11.18	12/31/1979	0.68	0.67
Voya U.S. Stock Index Portfolio - Institutional Class - 829	SPXRE	-2.16	-2.10	-8.34	-8.25	10.39	10.69	9.77	10.14	10.03	10.36	10.71	11.01	10.87	11.18	05/03/2004	0.27	0.27
<b>Large Value</b>																		
BlackRock Equity Dividend Fund - Institutional Shares - 8518 (15)	RS1000V	-1.99	-3.53	-7.94	-9.75	0.49	-1.80	2.68	0.13	11.71	10.21	7.35	6.60	8.37	7.60	11/29/1988	0.70	0.69
<b>Large Cap Growth</b>																		
<b>Large Growth</b>																		
Voya Large Cap Growth Portfolio - Institutional Class - 742 (16)	RS1000G	-0.08	-1.42	-6.72	-7.62	20.75	23.20	16.16	18.95	5.26	8.70	10.24	14.21	11.44	13.82	05/03/2004	0.71	0.67
<b>Small/Mid/Specialty</b>																		
<b>Mid-Cap Blend</b>																		

See Performance Introduction Page for Important Information

Investment Options	Fund Benchmark ID (BM)	1-Mo		3-Mo		YTD		1-Yr		3-Yr		5-Yr		10-Yr		Incept	Fund Inception Date	Gross Fund Exp %*	Net Fund Exp %*
		Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM				
<b>Investment Options</b>																			
Boston Trust Walden SMID Cap CIT - CIT - F905	RS2500	-4.65	-6.07	-10.38	-14.80	-3.46	-2.70	-1.97	-4.63							3.97	12/16/2020	0.60	0.60
State Street Russell Small Mid Cap Index SL Fund - Class II - QF52	RSMCC	-6.18	-6.18	-14.35	-14.34	2.18	2.12	-1.23	-1.30	2.90	2.83	5.88	5.85	7.14	7.17		08/29/1997	0.02	0.02
<b>Mid-Cap Growth</b>																			
Principal MidCap Fund - Class R-6 - C906	RSMID	-3.30	-4.99	-9.11	-12.90	6.08	-1.28	7.01	-1.01	6.37	6.04	10.43	7.14	10.22	8.05		12/06/2000	0.59	0.59
<b>Global / International</b>																			
<b>Foreign Large Blend</b>																			
State Street Global All Cap Eq Ex-U.S. Ind SL Srs F - II CIT - D937	MSCAEUIGU	-3.94	-4.32	-11.02	-11.32	1.42	1.21	12.42	12.20	3.38	3.52	3.83	3.95	2.98	3.13		04/30/2010	0.06	0.05
<b>Foreign Large Growth</b>																			
American Funds EuroPacific Growth Fund® - Class R-4 - 573	MSCIXUS	-3.16	-4.13	-11.91	-11.35	1.56	0.99	10.04	12.07	-1.01	3.03	4.09	3.46	3.57	2.54		04/16/1984	0.82	0.82

The risks of investing in small company stocks may include relatively low trading volumes, a greater degree of change in earnings and greater short-term volatility.

Foreign investing involves special risks such as currency fluctuation and public disclosure, as well as economic and political risks.

Some of the Funds invest in securities guaranteed by the U.S. Government as to the timely payment of principal and interest; however, shares of the Funds are not insured nor guaranteed.

High yielding fixed-income securities generally are subject to greater market fluctuations and risks of loss of income and principal than are investments in lower yielding fixed-income securities.

Sector funds may involve greater-than average risk and are often more volatile than funds holding a diversified portfolio of stocks in many industries. Examples include: banking, biotechnology, chemicals, energy, environmental services, natural resources, precious metals, technology, telecommunications, and utilities.

\*The Gross Expense Ratios shown do not reflect temporary fee or expense waivers that may be in effect for a fund. The Net Expense Ratios reflect any applicable temporary fee or expense waivers. The performance of a fund with a temporary fee or expense waiver would have been lower if the gross fund fees/expenses listed had been reflected.

# PERFORMANCE UPDATE

## Voya Retirement Insurance and Annuity Company

### State of RI 457b

**Average Annual Total Returns as of: 09/30/2023** (shown in percentages)

Variable annuities and mutual funds offered through a retirement plan are intended as long-term investments designed for retirement purposes. Money distributed from a 403(b) plan, 401(a)(k) plan, or a 457 plan will be taxed as ordinary income in the year the money is distributed. Early withdrawals from a 403(b) plan and a 401(a)(k) plan, if taken prior to age 59 1/2, will be subject to the IRS 10% premature distribution penalty tax, unless an exception applies. This IRS premature distribution penalty tax does not apply to 457 plans. Account values fluctuate with market conditions, and when surrendered the principal may be worth more or less than the original amount invested.

**The performance data quoted represents past performance. Past performance does not guarantee future results. For month-end performance which may be lower or higher than the performance data shown please call 800-232-5422. Investment return and principal value of an investment will fluctuate so that, when sold, an investment may be worth more or less than the original cost.**

The below investment options are in Separate Account D. Please note that the figures do not include an adjustment for the Voya Administrative Fund Fee (where applicable) and the deduction of the Daily Asset Charge from the Separate Account (if applicable), or other applicable contract charges. If these fees and charges were included, performance would be less favorable.

The returns assume reinvestment of all dividends (ordinary income and capital gains) and are net of management fees and other fund operating expenses.

Returns less than one year are not annualized. Fund Inception Date is the date of inception for the underlying fund, and is the date used in calculating the periodic returns. This date may also precede the portfolio's inclusion in the product.

Investment Options	Fund Benchmark ID (BM)	1-Mo Fund	1-Mo BM	3-Mo Fund	3-Mo BM	YTD Fund	YTD BM	1-Yr Fund	1-Yr BM	3-Yr Fund	3-Yr BM	5-Yr Fund	5-Yr BM	10-Yr Fund	10-Yr BM	Incept	Fund Inception Date	Gross Fund Exp %*	Net Fund Exp %*
<b>Stability of Principal</b>																			
<i>Stability of Principal</i>																			
Voya Fixed Account - 457/401 II A - 4573 (17)(18)	MFR	0.12	0.41	0.36	1.26	1.03	3.48	1.29	4.33	1.11	1.61	1.22	1.49	1.50	1.23				
<b>Bonds</b>																			
<i>High Yield Bond</i>																			
PGIM High Yield Fund - Class Z - 2482	BCUSH1IC	-1.46	-1.20	0.36	0.47	4.97	5.90	8.79	10.31	1.43	1.75	2.99	2.84	4.38	4.17		03/01/1996	0.51	0.51
<i>Inflation-Protected Bond</i>																			
PIMCO Real Return Fund - Institutional Class - 2695	LBUSTIPS	-1.72	-1.85	-2.32	-2.60	-0.79	-0.78	1.88	1.25	-1.94	-1.98	2.18	2.12	1.71	1.74		01/29/1997	0.67	0.67
<i>Intermediate Core Bond</i>																			

See Performance Introduction Page for Important Information

Investment Options	Fund Benchmark ID (BM)	1-Mo		3-Mo		YTD		1-Yr		3-Yr		5-Yr		10-Yr		Fund Inception Date	Gross Fund Exp %*	Net Fund Exp %*	
		Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM				
<b>Intermediate Core-Plus Bond</b>																			
State Street U.S. Bond Index SL Series Fund - Class XIV CIT - C925	LEHM	-2.55	-2.54	-3.23	-3.23	-1.03	-1.21	0.62	0.64	-5.22	-5.21	0.13	0.10	1.14	1.13	06/30/2011	0.02	0.02	
<b>Asset Allocation</b>																			
<b>Lifecycle</b>																			
Voya Solution 2025 Portfolio - Initial Class - 790 (3)(4)	SPT2025	-3.46	-3.01	-3.29	-2.80	4.65	4.35	10.40	10.97	1.94	3.03	3.71	4.02	5.33	5.56	04/29/2005	0.79	0.72	
Voya Solution 2030 Portfolio - Initial Class - 6753 (3)(5)	SPT2030	-3.59	-3.33	-3.33	-2.98	5.89	5.30	12.57	12.96	3.21	4.08	4.32	4.51	6.14	6.14	10/03/2011	0.88	0.72	
Voya Solution 2035 Portfolio - Initial Class - 761 (3)(6)	SP2035	-3.80	-3.62	-3.47	-3.14	7.10	6.34	14.88	15.18	4.17	5.24	4.62	5.07	6.35	6.72	04/29/2005	0.87	0.73	
Voya Solution 2040 Portfolio - Initial Class - 6756 (3)(7)	SPT2040	-4.03	-3.84	-3.61	-3.23	8.12	7.23	16.91	17.06	5.25	6.16	5.34	5.53	7.08	7.15	10/03/2011	0.97	0.73	
Voya Solution 2045 Portfolio - Initial Class - 764 (3)(8)	SP2045	-4.10	-4.00	-3.68	-3.33	8.54	7.79	18.08	18.32	5.89	6.72	5.51	5.81	7.04	7.41	04/29/2005	0.91	0.75	
Voya Solution 2050 Portfolio - Initial Class - 6759 (3)(9)	SPT2050	-4.25	-4.07	-3.83	-3.36	8.82	8.03	18.59	18.84	5.92	7.01	5.50	5.93	7.23	7.60	10/03/2011	1.05	0.76	
Voya Solution 2055 Portfolio - Initial Class - 1166 (3)(10)	SPT2055	-4.22	-4.08	-3.78	-3.36	8.86	8.04	18.69	18.97	6.02	7.12	5.54	5.98	7.10	7.68	03/08/2010	0.97	0.78	
Voya Solution 2060 Portfolio - Initial Class - 3290 (3)(11)	SPT2060	-4.28	-4.08	-3.82	-3.37	8.91	8.14	18.63	19.09	5.95	7.10	5.45	6.00			6.53	02/09/2015	1.14	0.78
Voya Solution 2065 Portfolio - Initial Class - E479 (12)	SPT2065	-4.24	-4.12	-3.76	-3.37	8.97	8.16	18.82	19.00	6.01	7.16					6.27	07/29/2020	1.39	0.79
Voya Solution Income Portfolio - Initial Class - 767 (3)(13)	SPTREIN	-2.88	-2.64	-2.82	-2.61	2.96	2.75	6.52	7.38	0.07	0.22	2.76	2.59	3.83	3.48	04/29/2005	0.74	0.68	
<b>Balanced</b>																			
<b>Allocation--50% to 70% Equity</b>																			
VY® T. Rowe Price Capital Appreciation Portfolio - Inst - 1257	SPXRE	-3.04	-4.77	-1.40	-3.27	9.68	13.07	15.67	21.62	8.53	10.15	9.63	9.92	10.38	11.91	01/24/1989	0.64	0.64	
<b>Large Cap Value/Blend</b>																			
<b>Large Blend</b>																			
Vanguard® FTSE Social Index Fund - Admiral™ Shares - D591	FTSE4GUSS	-5.00	-4.99	-3.52	-3.49	16.43	16.54	22.43	22.58	8.17	8.32	9.98	10.10	12.26	12.39	05/31/2000	0.14	0.14	
Voya Growth and Income Portfolio - Class I - 001 (14)	SPXRE	-3.97	-4.77	-3.48	-3.27	13.33	13.07	22.74	21.62	13.01	10.15	10.72	9.92	11.02	11.91	12/31/1979	0.68	0.67	
Voya U.S. Stock Index Portfolio - Institutional Class - 829	SPXRE	-4.77	-4.77	-3.34	-3.27	12.83	13.07	21.24	21.62	9.84	10.15	9.63	9.92	11.61	11.91	05/03/2004	0.27	0.27	
<b>Large Value</b>																			
BlackRock Equity Dividend Fund - Institutional Shares - 8518 (15)	RS1000V	-2.72	-3.86	-3.81	-3.16	2.53	1.79	14.86	14.44	11.63	11.05	6.63	6.23	9.03	8.45	11/29/1988	0.70	0.69	
<b>Large Cap Growth</b>																			
<b>Large Growth</b>																			
Voya Large Cap Growth Portfolio - Institutional Class - 742 (16)	RS1000G	-5.91	-5.44	-4.10	-3.13	20.85	24.98	21.96	27.72	4.24	7.97	8.33	12.42	11.92	14.48	05/03/2004	0.71	0.67	
<b>Small/Mid/Specialty</b>																			
<b>Mid-Cap Blend</b>																			
Boston Trust Walden SMID Cap CIT - CIT - F905	RS2500	-4.68	-5.58	-2.81	-4.78	1.24	3.59	12.84	11.28							5.89	12/16/2020	0.60	0.60
State Street Russell Small Mid Cap Index SL Fund - Class II - QF52	RSMCC	-4.87	-4.87	-3.38	-3.38	8.91	8.85	14.26	14.13	5.23	5.16	5.00	4.98	8.13	8.16	08/29/1997	0.02	0.02	

See Performance Introduction Page for Important Information

Investment Options	Fund Benchmark ID (BM)	1-Mo		3-Mo		YTD		1-Yr		3-Yr		5-Yr		10-Yr		Fund Inception Date	Gross Fund Exp %*	Net Fund Exp %*
		Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM	Fund	BM			
<b>Mid-Cap Growth</b>																		
Principal MidCap Fund - Class R-6 - C906	RSMID	-5.12	-5.02	-5.25	-4.68	9.70	3.91	18.50	13.45	6.76	8.09	9.21	6.38	11.02	8.98	12/06/2000	0.59	0.59
<b>Global / International</b>																		
<b>Foreign Large Blend</b>																		
State Street Global All Cap Eq Ex-U.S. Ind SL Srs F - II CIT - D937	MSCAEUIGU	-3.22	-3.20	-3.71	-3.39	5.58	5.77	21.11	20.82	3.98	4.27	2.86	3.06	3.76	3.96	04/30/2010	0.06	0.05
<b>Foreign Large Growth</b>																		
American Funds EuroPacific Growth Fund® - Class R-4 - 573	MSCIXUS	-5.16	-3.16	-6.40	-3.77	4.87	5.34	19.22	20.39	-0.27	3.74	2.75	2.58	4.28	3.35	04/16/1984	0.82	0.82

The risks of investing in small company stocks may include relatively low trading volumes, a greater degree of change in earnings and greater short-term volatility.

Foreign investing involves special risks such as currency fluctuation and public disclosure, as well as economic and political risks.

Some of the Funds invest in securities guaranteed by the U.S. Government as to the timely payment of principal and interest; however, shares of the Funds are not insured nor guaranteed.

High yielding fixed-income securities generally are subject to greater market fluctuations and risks of loss of income and principal than are investments in lower yielding fixed-income securities.

Sector funds may involve greater-than average risk and are often more volatile than funds holding a diversified portfolio of stocks in many industries. Examples include: banking, biotechnology, chemicals, energy, environmental services, natural resources, precious metals, technology, telecommunications, and utilities.

\*The Gross Expense Ratios shown do not reflect temporary fee or expense waivers that may be in effect for a fund. The Net Expense Ratios reflect any applicable temporary fee or expense waivers. The performance of a fund with a temporary fee or expense waiver would have been lower if the gross fund fees/expenses listed had been reflected.

# PERFORMANCE UPDATE

## Voya Retirement Insurance and Annuity Company

State of RI 457b

Separate Account D

**Average Annual Total Returns as of: 09/30/2023** (shown in percentages)

Variable annuities and funding agreements are long-term investment vehicles designed for retirement purposes which allow you to allocate contributions among variable investment options that have the potential to grow tax-deferred with an option to receive a stream of income at a later date.

**The performance data quoted represents past performance. Past performance does not guarantee future results. For month-end performance which may be lower or higher than the performance data shown please call 800-232-5422. Investment return and principal value of an investment will fluctuate so that, when sold, an investment may be worth more or less than the original cost.**

These numbers reflect total Separate Account charges, ranging from 0.09% to 0.44% on an annual basis. They also assume reinvestment of all dividends (ordinary income and capital gains) and are net of management fees and other fund operating expenses. See "Additional Notes" section for charges by investment option.

**Depending upon the type of contract in which you participate, you have either received disclosure booklets for the separate account and/or fund prospectuses. You should consider the investment objectives, risks and charges, and expenses of the variable product and its underlying fund options carefully before investing. The disclosure booklet contains this and other information. Anyone who wishes to obtain a free copy of the separate account disclosure booklet and/or fund prospectuses may call their Voya representative or the number above. Please read the separate account disclosure booklet and/or the fund prospectuses carefully before investing.**

Returns less than one year are not annualized. Fund Inception Date is the date of inception for the underlying fund, and is the date used in calculating the periodic returns. This date may also precede the portfolio's inclusion in the product.

Investment Options	1-Mo	3-Mo	YTD	1-Yr	3-Yr	5-Yr	10-Yr	Incept	Fund Inception Date
<b>Stability of Principal</b>									
<i>Stability of Principal</i>									
Voya Fixed Account - 457/401 II A - 4573 (17)(18) <i>This fund is not part of the product's separate account.</i>	0.12	0.36	1.03	1.29	1.11	1.22	1.50		
<b>Bonds</b>									
<i>High Yield Bond</i>									
PGIM High Yield Fund - Class Z - 2482	-1.47	0.30	4.80	8.55	1.24	2.79	4.18		03/01/1996
<i>Inflation-Protected Bond</i>									
PIMCO Real Return Fund - Institutional Class - 2695	-1.75	-2.42	-1.11	1.43	-2.37	1.73	1.26		01/29/1997
<i>Intermediate Core Bond</i>									



<b>Investment Options</b>	<b>1-Mo</b>	<b>3-Mo</b>	<b>YTD</b>	<b>1-Yr</b>	<b>3-Yr</b>	<b>5-Yr</b>	<b>10-Yr</b>	<b>Incept</b>	<b>Fund Inception Date</b>
State Street U.S. Bond Index SL Series Fund - Class XIV CIT - C925	-2.58	-3.34	-1.36	0.18	-5.63	-0.31	0.70		06/30/2011
<b>Intermediate Core-Plus Bond</b>									
Voya Intermediate Bond Fund - Class I - 238 (1)(2)	-2.57	-2.74	-0.30	1.27	-5.06	0.13	1.49		12/15/1998
<b>Asset Allocation</b>									
<b>Lifecycle</b>									
Voya Solution 2025 Portfolio - Initial Class - 790 (3)(4)	-3.47	-3.31	4.56	10.26	1.82	3.59	5.20		04/29/2005
Voya Solution 2030 Portfolio - Initial Class - 6753 (3)(5)	-3.60	-3.36	5.80	12.44	3.09	4.20	6.01		10/03/2011
Voya Solution 2035 Portfolio - Initial Class - 761 (3)(6)	-3.81	-3.50	7.00	14.74	4.05	4.49	6.22		04/29/2005
Voya Solution 2040 Portfolio - Initial Class - 6756 (3)(7)	-4.04	-3.64	8.02	16.77	5.12	5.22	6.95		10/03/2011
Voya Solution 2045 Portfolio - Initial Class - 764 (3)(8)	-4.11	-3.71	8.45	17.93	5.76	5.39	6.91		04/29/2005
Voya Solution 2050 Portfolio - Initial Class - 6759 (3)(9)	-4.26	-3.86	8.72	18.45	5.79	5.37	7.10		10/03/2011
Voya Solution 2055 Portfolio - Initial Class - 1166 (3)(10)	-4.23	-3.81	8.76	18.55	5.89	5.41	6.97		03/08/2010
Voya Solution 2060 Portfolio - Initial Class - 3290 (3)(11)	-4.29	-3.85	8.81	18.49	5.82	5.32		6.40	02/09/2015
Voya Solution 2065 Portfolio - Initial Class - E479 (12)	-4.24	-3.78	8.90	18.72	5.92			6.18	07/29/2020
Voya Solution Income Portfolio - Initial Class - 767 (3)(13)	-2.89	-2.85	2.87	6.39	-0.05	2.64	3.70		04/29/2005
<b>Balanced</b>									
<b>Allocation--50% to 70% Equity</b>									
VY® T. Rowe Price Capital Appreciation Portfolio - Inst - 1257	-3.05	-1.44	9.55	15.48	8.36	9.45	10.20		01/24/1989
<b>Large Cap Value/Blend</b>									
<b>Large Blend</b>									
Vanguard® FTSE Social Index Fund - Admiral™ Shares - D591	-5.04	-3.63	16.05	21.90	7.70	9.49	11.77		05/31/2000
Voya Growth and Income Portfolio - Class I - 001 (14)	-3.98	-3.52	13.21	22.57	12.85	10.56	10.86		12/31/1979
Voya U.S. Stock Index Portfolio - Institutional Class - 829	-4.78	-3.38	12.69	21.05	9.66	9.45	11.43		05/03/2004
<b>Large Value</b>									
BlackRock Equity Dividend Fund - Institutional Shares - 8518 (15)	-2.73	-3.85	2.38	14.64	11.42	6.42	8.83		11/29/1988
<b>Large Cap Growth</b>									
<b>Large Growth</b>									
Voya Large Cap Growth Portfolio - Institutional Class - 742 (16)	-5.92	-4.13	20.72	21.79	4.09	8.18	11.76		05/03/2004
<b>Small/Mid/Specialty</b>									
<b>Mid-Cap Blend</b>									
Boston Trust Walden SMID Cap CIT - CIT - F905	-4.69	-2.83	1.17	12.74				5.79	12/16/2020
State Street Russell Small Mid Cap Index SL Fund - Class II - QF52	-4.90	-3.49	8.56	13.76	4.77	4.54	7.66		08/29/1997
<b>Mid-Cap Growth</b>									
Principal MidCap Fund - Class R-6 - C906	-5.16	-5.36	9.34	17.98	6.30	8.73	10.53		12/06/2000
<b>Global / International</b>									
<b>Foreign Large Blend</b>									

See Performance Introduction Page for Important Information

Investment Options	1-Mo	3-Mo	YTD	1-Yr	3-Yr	5-Yr	10-Yr	Incept	Fund Inception Date
State Street Global All Cap Eq Ex-U.S. Ind SL Srs F - II CIT - D937	-3.25	-3.82	5.24	20.58	3.52	2.40	3.30		04/30/2010
<b>Foreign Large Growth</b>									
American Funds EuroPacific Growth Fund® - Class R-4 - 573	-5.16	-6.42	4.80	19.12	-0.36	2.66	4.19		04/16/1984

The risks of investing in small company stocks may include relatively low trading volumes, a greater degree of change in earnings and greater short-term volatility.

Foreign investing involves special risks such as currency fluctuation and public disclosure, as well as economic and political risks.

Some of the Funds invest in securities guaranteed by the U.S. Government as to the timely payment of principal and interest; however, shares of the Funds are not insured nor guaranteed.

High yielding fixed-income securities generally are subject to greater market fluctuations and risks of loss of income and principal than are investments in lower yielding fixed-income securities.

Sector funds may involve greater-than average risk and are often more volatile than funds holding a diversified portfolio of stocks in many industries. Examples include: banking, biotechnology, chemicals, energy, environmental services, natural resources, precious metals, technology, telecommunications, and utilities.

#### Additional Notes

For a performance report reflecting the charges or more information regarding product expenses, please contact your Voya Representative.

(1)Voya Intermediate Bond Fund - Class I: The adviser is contractually obligated to limit expenses to 0.50% through August 1, 2018. The limitation does not extend to interest, taxes, investment-related costs, leverage expenses, extraordinary expenses, and Acquired Fund Fees and Expenses. This limitation is subject to possible recoupment by the adviser within 36 months of the waiver or reimbursement. Termination or modification of this obligation requires approval by the Fund's board.

(2)Voya Intermediate Bond Fund - Class I has identical investment objectives and policies, the same portfolio manager, and invests in the same holdings as Class A. The performance information above is based upon the Class A performance, excluding sales charges, and has not been adjusted by the fee differences between classes.

(3)There is no guarantee that any investment option will achieve its stated objective. Principal value fluctuates and there is no guarantee of value at any time, including the target date. The "target date" is the approximate date when you plan to start withdrawing your money. When your target date is reached, you may have more or less than the original amount invested. For each target date Portfolio, until the day prior to its Target Date, the Portfolio will seek to provide total returns consistent with an asset allocation targeted for an investor who is retiring in approximately each Portfolio's designation Target Year. Prior to choosing a Target Date Portfolio, investors are strongly encouraged to review and understand the Portfolio's objectives and its composition of stocks and bonds, and how the asset allocation will change over time as the target date nears. No two investors are alike and one should not assume that just because they intend to retire in the year corresponding to the Target Date that that specific Portfolio is appropriate and suitable to their risk tolerance. It is recommended that an investor consider carefully the possibility of capital loss in each of the target date Portfolios, the likelihood and magnitude of which will be dependent upon the Portfolio's asset allocation. On the Target Date, the portfolio will seek to provide a combination of total return and stability of principal.

The Voya Solution / Target Date Portfolios<sup>SM</sup> are actively managed and the asset allocation adjusted over time. The portfolios may merge with or change to other portfolios over time. Refer to the prospectus for more information about the specific risks of investing in the various asset classes included in the The Voya Solution / Target Date Portfolios<sup>SM</sup>.

Stocks are more volatile than bonds, and portfolios with a higher concentration of stocks are more likely to experience greater fluctuations in value than portfolios with a higher concentration in bonds. Foreign stocks and small and midcap stocks may be more volatile than large cap stocks. Investing in bonds also entails credit risk and interest rate risk. Generally investors with longer timeframes can consider assuming more risk in their investment portfolio.

(4)Voya Solution 2025 Portfolio - Initial Class: Total Annual Portfolio Operating Expenses may be higher than the Portfolio's ratio of expenses to average net assets shown in the Portfolio's Financial Highlights, which reflects the operating expenses of the Portfolio and does not include Acquired Fund Fees and Expenses. Voya Investments, LLC (the " Investment Adviser " ) is contractually obligated to limit expenses to 0.78% of Class I shares through May 1, 2024. This limitation is subject to possible recoupment by the Investment Adviser within 36 months of the waiver or

**Additional Notes**

reimbursement. The amount of the recoupment is limited to the lesser of the amounts that would be recoupable under: (i) the expense limitation in effect at the time of the waiver or reimbursement; or (ii) the expense limitation in effect at the time of recoupment. In addition, the Investment Adviser is contractually obligated to further limit expenses to 0.72% of Class I shares through May 1, 2024. The limitations do not extend to interest, taxes, investment-related costs, leverage expenses and extraordinary expenses. Termination or modification of these obligations requires approval by the Portfolio's Board of Directors (the "Board").

(5)Voya Solution 2030 Portfolio - Initial Class: Total Annual Portfolio Operating Expenses may be higher than the Portfolio's ratio of expenses to average net assets shown in the Portfolio's Financial Highlights, which reflects the operating expenses of the Portfolio and does not include Acquired Fund Fees and Expenses. Voya Investments, LLC (the " Investment Adviser " ) is contractually obligated to limit expenses to 0.79% of Class I shares through May 1, 2024. This limitation is subject to possible recoupment by the Investment Adviser within 36 months of the waiver or reimbursement. The amount of the recoupment is limited to the lesser of the amounts that would be recoupable under: (i) the expense limitation in effect at the time of the waiver or reimbursement; or (ii) the expense limitation in effect at the time of recoupment. In addition, the Investment Adviser is contractually obligated to further limit expenses to 0.72% of Class I shares through May 1, 2024. The limitations do not extend to interest, taxes, investment-related costs, leverage expenses and extraordinary expenses. Termination or modification of these obligations requires approval by the Portfolio's Board of Directors (the "Board").

(6)Voya Solution 2035 Portfolio - Initial Class: Total Annual Portfolio Operating Expenses may be higher than the Portfolio's ratio of expenses to average net assets shown in the Portfolio's Financial Highlights, which reflects the operating expenses of the Portfolio and does not include Acquired Fund Fees and Expenses. Voya Investments, LLC (the " Investment Adviser " ) is contractually obligated to limit expenses to 0.83% of Class I shares through May 1, 2024. This limitation is subject to possible recoupment by the Investment Adviser within 36 months of the waiver or reimbursement. The amount of the recoupment is limited to the lesser of the amounts that would be recoupable under: (i) the expense limitation in effect at the time of the waiver or reimbursement; or (ii) the expense limitation in effect at the time of recoupment. In addition, the Investment Adviser is contractually obligated to further limit expenses to 0.73% of Class I shares through May 1, 2024. The limitations do not extend to interest, taxes, investment-related costs, leverage expenses and extraordinary expenses. Termination or modification of these obligations requires approval by the Portfolio's Board of Directors (the "Board").

(7)Voya Solution 2040 Portfolio - Initial Class: Total Annual Portfolio Operating Expenses may be higher than the Portfolio's ratio of expenses to average net assets shown in the Portfolio's Financial Highlights, which reflects the operating expenses of the Portfolio and does not include Acquired Fund Fees and Expenses. Voya Investments, LLC (the " Investment Adviser " ) is contractually obligated to limit expenses to 0.83% of Class I shares through May 1, 2024. This limitation is subject to possible recoupment by the Investment Adviser within 36 months of the waiver or reimbursement. The amount of the recoupment is limited to the lesser of the amounts that would be recoupable under: (i) the expense limitation in effect at the time of the waiver or reimbursement; or (ii) the expense limitation in effect at the time of recoupment. In addition, the Investment Adviser is contractually obligated to further limit expenses to 0.73% of Class I shares through May 1, 2024. The limitations do not extend to interest, taxes, investment-related costs, leverage expenses and extraordinary expenses. Termination or modification of these obligations requires approval by the Portfolio's Board of Directors (the "Board").

(8)Voya Solution 2045 Portfolio - Initial Class: Total Annual Portfolio Operating Expenses may be higher than the Portfolio's ratio of expenses to average net assets shown in the Portfolio's Financial Highlights, which reflects the operating expenses of the Portfolio and does not include Acquired Fund Fees and Expenses. Voya Investments, LLC (the " Investment Adviser " ) is contractually obligated to limit expenses to 0.86% of Class I shares through May 1, 2024. This limitation is subject to possible recoupment by the Investment Adviser within 36 months of the waiver or reimbursement. The amount of the recoupment is limited to the lesser of the amounts that would be recoupable under: (i) the expense limitation in effect at the time of the waiver or reimbursement; or (ii) the expense limitation in effect at the time of recoupment. In addition, the Investment Adviser is contractually obligated to further limit expenses to 0.75% of Class I shares through May 1, 2024. The limitations do not extend to interest, taxes, investment-related costs, leverage expenses and extraordinary expenses. Termination or modification of these obligations requires approval by the Portfolio's Board of Directors (the "Board").

(9)Voya Solution 2050 Portfolio - Initial Class: Total Annual Portfolio Operating Expenses may be higher than the Portfolio's ratio of expenses to average net assets shown in the Portfolio's Financial Highlights, which reflects the operating expenses of the Portfolio and does not include Acquired Fund Fees and Expenses. Voya Investments, LLC (the " Investment Adviser " ) is contractually obligated to limit expenses to 0.86% of Class I shares through May 1, 2024. This limitation is subject to possible recoupment by the Investment Adviser within 36 months of the waiver or reimbursement. The amount of the recoupment is limited to the lesser of the amounts that would be recoupable under: (i) the expense limitation in effect at the time of the waiver or reimbursement; or (ii) the expense limitation in effect at the time of recoupment. In addition, the Investment Adviser is contractually obligated to further limit expenses to 0.76% of Class ADV I shares through May 1, 2024. The limitations do not extend to interest, taxes, investment-related costs, leverage expenses and extraordinary expenses. Termination or modification of these obligations requires approval by the Portfolio's Board of Directors (the "Board").

(10)Voya Solution 2055 Portfolio - Initial Class: Total Annual Portfolio Operating Expenses may be higher than the Portfolio's ratio of expenses to average net assets shown in the Portfolio's Financial Highlights, which reflects the operating expenses of the Portfolio and does not include Acquired Fund Fees and Expenses. Voya Investments, LLC (the " Investment Adviser " ) is contractually obligated to limit expenses to 0.86% of Class I shares through May 1, 2024. This limitation is subject to possible recoupment by the Investment Adviser within 36 months of the waiver or

**Additional Notes**

reimbursement. The amount of the recoupment is limited to the lesser of the amounts that would be recoupable under: (i) the expense limitation in effect at the time of the waiver or reimbursement; or (ii) the expense limitation in effect at the time of recoupment. In addition, the Investment Adviser is contractually obligated to further limit expenses to 0.78% of Class I shares through May 1, 2024. The limitations do not extend to interest, taxes, investment-related costs, leverage expenses and extraordinary expenses. Termination or modification of these obligations requires approval by the Portfolio's Board of Directors (the "Board").

(11)Voya Solution 2060 Portfolio - Initial Class: Expense information has been restated to reflect current contractual rates. Total Annual Portfolio Operating Expenses may be higher than the Portfolio's ratio of expenses to average net assets shown in the Portfolio's Financial Highlights, which reflects the operating expenses of the Portfolio and does not include Acquired Fund Fees and Expenses. Voya Investments, LLC (the " Investment Adviser " ) is contractually obligated to limit expenses to 0.87% for Class I shares through May 1, 2024. This limitation is subject to possible recoupment by the Investment Adviser within 36 months of the waiver or reimbursement. The amount of the recoupment is limited to the lesser of the amounts that would be recoupable under: (i) the expense limitation in effect at the time of the waiver or reimbursement; or (ii) the expense limitation in effect at the time of recoupment. In addition, the Investment Adviser is contractually obligated to further limit expenses to 0.78% for Class I shares through May 1, 2024. The limitations do not extend to interest, taxes, investment-related costs, leverage expenses and extraordinary expenses. Termination or modification of these obligations requires approval by the Portfolio's Board of Directors (the "Board").

(12)Voya Solution 2065 Portfolio - Initial Class: Expense information has been restated to reflect current contractual rates. Voya Investments, LLC (the " Investment Adviser " ) is contractually obligated to limit expenses to 0.87% for Class I shares through May 1, 2024. This limitation is subject to possible recoupment by the Investment Adviser within 36 months of the waiver or reimbursement. The amount of the recoupment is limited to the lesser of the amounts that would be recoupable under: (i) the expense limitation in effect at the time of the waiver or reimbursement; or (ii) the expense limitation in effect at the time of recoupment. In addition, the Investment Adviser is contractually obligated to further limit expenses to 0.78% for Class I shares through May 1, 2024. The limitations do not extend to interest, taxes, investment-related costs, leverage expenses and extraordinary expenses. Termination or modification of these obligations requires approval by the Portfolio's Board of Directors (the "Board").

(13)Voya Solution Income Portfolio - Initial Class: Total Annual Portfolio Operating Expenses may be higher than the Portfolio's ratio of expenses to average net assets shown in the Portfolio's Financial Highlights, which reflects the operating expenses of the Portfolio and does not include Acquired Fund Fees and Expenses. Voya Investments, LLC (the " Investment Adviser " ) is contractually obligated to limit expenses to 0.68% for Class I shares through May 1, 2024. The limitation does not extend to interest, taxes, investment-related costs, leverage expenses and extraordinary expenses. This limitation is subject to possible recoupment by the Investment Adviser within 36 months of the waiver or reimbursement. The amount of the recoupment is limited to the lesser of the amounts that would be recoupable under: (i) the expense limitation in effect at the time of the waiver or reimbursement; or (ii) the expense limitation in effect at the time of recoupment. Termination or modification of this obligation requires approval by the Portfolio's Board of Directors (the "Board").

(14)Voya Growth and Income Portfolio - Class I: Expense information has been restated to reflect current contractual rates. Voya Investments, LLC (the "Investment Adviser") is contractually obligated to limit expenses to 0.67% for Class I shares through May 1, 2024. The limitation does not extend to interest, taxes, investment-related costs, leverage expenses, extraordinary expenses and Acquired Fund Fees and Expenses. This limitation is subject to possible recoupment by the Investment Adviser within 36 months of the waiver or reimbursement. The amount of the recoupment is limited to the lesser of the amounts that would be recoupable under: (i) the expense limitation in effect at the time of the waiver or reimbursement; or (ii) the expense limitation in effect at the time of recoupment. The distributor is contractually obligated to waive 0.05% of the distribution fee for Class ADV shares through May 1, 2024. Termination or modification of these obligations requires approval by the Portfolio's Board of Trustees (the "Board").

(15)BlackRock Equity Dividend Fund - Institutional Shares: As described in the "Management of the Fund" section of the Fund's prospectus beginning on page 39, BlackRock has contractually agreed to waive the management fee with respect to any portion of the Fund's assets estimated to be attributable to investments in other equity and fixed-income mutual funds and exchange-traded funds managed by BlackRock or its affiliates that have a contractual management fee, through August 31, 2021. In addition, BlackRock has contractually agreed to waive its management fees by the amount of investment advisory fees the Fund pays to BlackRock indirectly through its investment in money market funds managed by BlackRock or its affiliates, through August 31, 2021. The contractual agreements may be terminated upon 90 days' notice by a majority of the non-interested trustees of the Fund or by a vote of a majority of the outstanding voting securities of the Fund. The Total Annual Fund Operating Expenses do not correlate to the ratios of expenses to average net assets given in the Fund's most recent annual report which do not include Acquired Fund Fees and Expenses.

(16)Voya Large Cap Growth Portfolio - Institutional Class: Voya Investments, LLC (the "Investment Adviser") is contractually obligated to limit expenses to 0.67% for Class I shares through May 1, 2024. The limitation does not extend to interest, taxes, investment-related costs, leverage expenses, extraordinary expenses, and Acquired Fund Fees and Expenses. Termination or modification of this obligation requires approval by the Portfolio's Board of Trustees (the "Board").

See Performance Introduction Page for Important Information

**Additional Notes**

These numbers reflect the fund's investment advisory fees, other fund expenses, and the annual deduction from the Separate Account as stated below:

American Funds EuroPacific Grw R4, Boston Trust Walden SMID Cap CIT, Voya Solution 2065 Portfolio I: 0.09%

Voya Growth and Income Port I, Voya Large Cap Growth Port Inst: 0.14%

VY TRowePrice Captl Apprec Pt Inst, Voya U.S. Stock Index Port Inst: 0.16%

BlackRock Equity Dividend Fund Inst, PGIM High Yield Fund Z: 0.19%

Voya Intermediate Bond Fund I: 0.27%

PIMCO Real Return Fund Inst, Principal MidCap Fund R6, St Str GI A Cp Eq Ex US In SL S F II, St Str Russell Sm/Md Cp Ind SL Fd II, St Str US Bond Index SL Fd XIV, Vanguard FTSE Social Index Fund Adm: 0.44%

All Other funds: 0.12%

(17)The current rate for the Voya Fixed Account - 457/401 II A MC 945, Fund 4573 is 1.55%, expressed as an annual effective yield. The current rate may change and be higher or lower than the previously identified rate but is guaranteed not to be less than 1.00%. VRIAC will not apply a decrease to the current rate following a rate change initiated solely by us prior to the last day of the three-month period measured from the first day of the month in which such change was effective. Note: The current rate for an initial investment in the fixed account previously identified may be in effect for less than a full three-month period.

(18)The Investment Option is neither a mutual fund nor part of a Separate Account. The returns listed do not include the impact of contract charges. Please refer to the contract or disclosure book to determine which Fixed Interest Options are available for your specific plan. The Investment Option is offered through Voya Retirement Insurance and Annuity Company.

The returns do not reflect the impact of a Deferred Surrender Charge. If included, performance would be less favorable.

Not all investments options are available under all contracts; please check your disclosure booklet for options available under your plan.

<b>Benchmark Id</b>	<b>Benchmark Description</b>
BCUSH1IC	Bloomberg US HY 1% Issuer Cap TR Index - description is not available.
FTSE4GUSS	FTSE 4Good US Select Index measures the performance of companies that meet globally recognized corporate responsibility standards, and to facilitate investment in those companies.
LBUSTIPS	Bloomberg US Treasury US TIPS TR Index measures the performance of rulesbased, market value-weighted inflation-protected securities issued by the U.S. Treasury. It is a subset of the Global Inflation-Linked Index (Series-L).
LEHM	Bloomberg US Agg Bond TR Index measures the performance of investment grade, U.S. dollar-denominated, fixed-rate taxable bond market, including Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM passthroughs), ABS, and CMBS. It rolls up into other Barclays flagship indices, such as the multi-currency Global Aggregate Index and the U.S. Universal Index, which includes high yield and emerging markets debt.
MFR	iMoney All Taxable Retail (Net) Index is comprised of returns which are based upon historical average 30-day compound yields on a universe of taxable money market funds. The data for the universe, which includes approximately 980 funds, is compiled by iMoneynet, Inc. Goal of Voya Fixed Account - 457/401 is to outperform the MFR by 150 - 200 basis points over 3 - 5 year time periods.
MSCAEUIGU	MSCI ACWI Ex USA IMI GR - description is not available.
MSCIXUS	MSCI ACWI (All Country World Index) ex USA Index measures the performance of the large and mid-cap segment of the particular regions, excluding USA equity securities,including developed and emerging market. It is free float-adjusted market-capitalization weighted.
RS1000G	Russell 1000 Growth Index measures the performance of the large-cap growth segment of the U.S. equity securities. It includes the Russell 1000 index companies with higher price-to-book ratios and higher forecasted growth values. It is market-capitalization weighted.
RS1000V	Russell 1000 Value Index measures the performance of the large-cap value segment of the U.S. equity securities. It includes the Russell 1000 index companies with lower price-to-book ratios and lower expected growth values. It is market-capitalization weighted.

See Performance Introduction Page for Important Information

<b>Benchmark Id</b>	<b>Benchmark Description</b>
RS2500	Russell 2500 Index measures the performance of the small to mid-cap segment of the U.S. equity universe. It is a subset of the Russell 3000 index includes approximately 2500 of the smallest securities based on the combination of their market cap and current index membership.
RSMCC	Russell Small Cap Completeness index measures the performance of the Russell 3000 Index companies excluding S&P 500 constituents. The Russell Small Cap Completeness Index is constructed to provide a comprehensive and unbiased barometer of the extended broad market beyond the S&P 500 exposure. The Index and is completely reconstituted annually to ensure new and growing equities are reflected.
RSMID	Russell Mid-Cap Index measures the performance of the mid-cap segment of the U.S. equity universe. It is a subset of Russell 1000 index and includes approximately 800 of the smallest securities based on a combination of their market cap and current index membership. The index represents approximately 31% of the total market capitalization of the Russell 1000 companies.
SP2035	S&P Target Date 2035 Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2035, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.
SP2045	S&P Target Date 2045 Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2045, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.
SPT2025	S&P Target Date 2025 Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2025, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.
SPT2030	S&P Target Date 2030 Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2030, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.
SPT2040	S&P Target Date 2040 Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2040, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.
SPT2050	S&P Target Date 2050 Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2050, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.
SPT2055	S&P Target Date 2055+ Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index has target retirement date of 2055, and belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.
SPT2060	S&P Target Date 2060 TR USD - description is not available.
SPT2065	S&P Target Date 2065 TR USD - description is not available.
SPTREIN	S&P Target Date Retirement Income Index measures the performance of a portfolio of multi-asset including equities, fixed income and commodities. The index belongs to S&P Target Date Index Series which comprises eleven indexes with different target retirement date. Each index in this series is determined once a year through survey of large fund management companies that offer target date products.

See Performance Introduction Page for Important Information

**Benchmark Id**

SPXRE

**Benchmark Description**

S&P 500 Index measures the performance of 500 widely held stocks in U.S. equity market. Standard and Poor's chooses member companies for the index based on market size, liquidity and industry group representation. Included are the stocks of industrial, financial, utility, and transportation companies. Since mid 1989, this composition has been more flexible and the number of issues in each sector has varied. The index is market capitalization-weighted.

<b>Plan Balance By Investment - 10/31/2023</b>					
<b>Fund Name</b>	<b>Fund Number</b>	<b>Asset Class</b>	<b>Balance</b>	<b>YTD Contributions</b>	<b>Percent</b>
Voya Solution 2025 Portfolio I	0790	Asset Allocation	\$1,625,789.50	\$121,666.16	0.75%
Voya Solution 2030 Port I	6753	Asset Allocation	\$547,108.46	\$121,839.98	0.25%
Voya Solution 2035 Portfolio I	0761	Asset Allocation	\$2,337,808.08	\$264,651.34	1.08%
Voya Solution 2040 Port I	6756	Asset Allocation	\$236,218.41	\$75,696.26	0.11%
Voya Solution 2045 Portfolio I	0764	Asset Allocation	\$2,337,509.41	\$234,594.19	1.08%
Voya Solution 2050 Port I	6759	Asset Allocation	\$344,168.38	\$94,616.12	0.16%
Voya Solution 2055 Portfolio I	1166	Asset Allocation	\$1,218,240.02	\$161,044.49	0.56%
Voya Solution 2060 Port I	3290	Asset Allocation	\$381,630.26	\$107,908.70	0.18%
Voya Solution 2065 Port I	E479	Asset Allocation	\$94,918.41	\$23,011.80	0.04%
Voya Solution Income Prt I	0767	Asset Allocation	\$213,215.76	\$12,232.26	0.10%
VY TRowePrice Captl Apprec Pt Inst	1257	Balanced	\$14,848,196.94	\$428,636.33	6.84%
PGIM High Yield Fund Z	2482	Bonds	\$599,642.88	\$19,348.99	0.28%
PIMCO Real Return Fund Ins	2695	Bonds	\$748,196.24	\$40,977.37	0.34%
SStr US Bond Index SL Fd XIV	C925	Bonds	\$831,300.01	\$52,892.57	0.38%
Voya Intermediate Bond Fund I	0238	Bonds	\$7,752,066.76	\$592,364.69	3.57%
American Funds EuroPacific Grw R4	0573	Global / International	\$6,580,141.99	\$390,720.64	3.03%
S St Gl Al Cp Eq xUS I SL S II	D937	Global / International	\$4,587,577.49	\$214,844.88	2.11%
Voya Large Cap Growth Port Inst	0742	Large Cap Growth	\$15,788,026.54	\$654,638.43	7.27%
BlackRock Equity Dividend Fund Inst	8518	Large Cap Value/Blend	\$4,940,936.91	\$233,344.26	2.28%
Vangrd FTSE Social Ind Fd Adm	D591	Large Cap Value/Blend	\$803,925.57	\$68,812.35	0.37%
Voya Growth and Income Port I	0001	Large Cap Value/Blend	\$34,229,387.92	\$687,252.73	15.77%
Voya U.S. Stock Index Port Inst	0829	Large Cap Value/Blend	\$18,803,629.97	\$606,880.63	8.66%
Boston Trst Walden SMID Cp CIT	F905	Small/Mid/Specialty	\$7,620,122.17	\$246,286.58	3.51%
Principal MidCap Fd R6	C906	Small/Mid/Specialty	\$12,125,969.83	\$368,753.80	5.59%
SStr Russ SM Cp Ind SL Fd II	QF52	Small/Mid/Specialty	\$3,778,594.79	\$285,068.66	1.74%
Voya Fixed Account - 457/401	0043	Stability of Principal	\$54,261,689.43	\$0.00	25.00%
Voya Fixed Account - 457/401 II A	4573	Stability of Principal	\$19,397,786.56	\$1,976,241.92	8.94%
Voya Long-Term GAA (4560)	4560	Stability of Principal	\$22,554.48	\$0.00	0.01%
		<b>TOTAL</b>	<b>\$217,056,353.17</b>	<b>\$8,084,326.13</b>	<b>100%</b>



# OPEB TRUST

NEPC, LLC

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# TOTAL FUND OVERVIEW

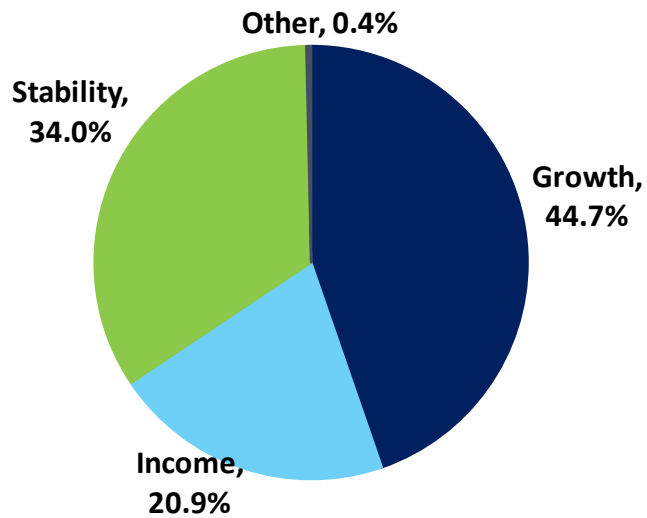


# ASSET ALLOCATION (OVERLAY) VS TARGET

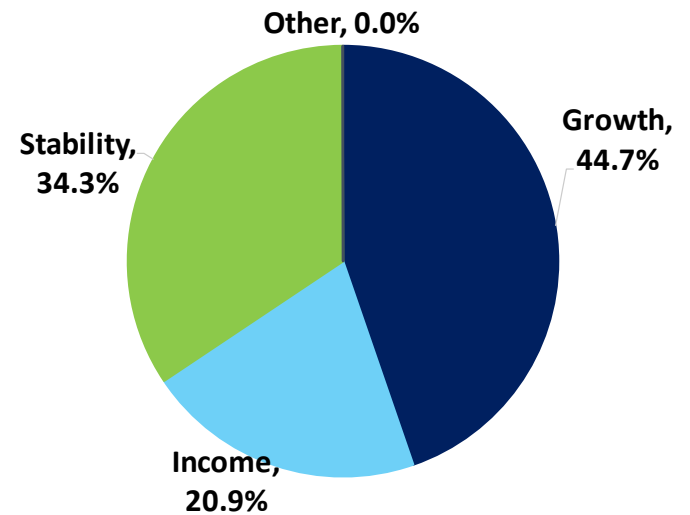
Asset Allocation vs. Target

	Current Balance	Current Allocation	Current Allocation (w/ Overlay)	Strategic Benchmark Allocation	Difference	Difference (w/ Overlay)
 Growth	\$250,698,501	44.7%	44.7%	45.0%	-0.3%	-0.3%
 Income	\$117,292,172	20.9%	20.9%	21.0%	-0.1%	-0.1%
 Stability	\$190,731,407	34.0%	34.3%	34.0%	0.0%	0.3%
 Other	\$1,999,550	0.4%	0.0%	0.0%	0.4%	0.0%

Current Asset Allocation



Current Asset Allocation (w/ Overlay)





# MANAGER PERFORMANCE



# TOTAL FUND PERFORMANCE DETAIL - (NET)

	Allocation		Performance (%)								
	Market Value (\$)	% of Portfolio	1 Mo (%)	FYTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total OPEB</b>	<b>560,721,630</b>	<b>100.00</b>	<b>-1.95</b>	<b>-4.30</b>	<b>3.58</b>	<b>6.88</b>	<b>4.74</b>	<b>7.26</b>	<b>7.64</b>	<b>8.05</b>	<b>May-11</b>
<i>OPEB Custom Blend</i>			-1.72	-3.70	3.01	3.86	3.81	6.78	7.42	7.46	
<b>OPEB Total Growth</b>	<b>250,698,501</b>	<b>44.71</b>	<b>-2.92</b>	<b>-6.18</b>	<b>6.82</b>	-	-	-	-	<b>6.82</b>	<b>Jan-23</b>
<i>OPEB Total Growth BM</i>			-2.71	-5.58	5.48	-	-	-	-	5.48	
<b>OPEB Public Growth</b>	<b>246,432,403</b>	<b>43.95</b>	<b>-2.97</b>	<b>-6.29</b>	<b>6.89</b>	-	-	-	-	<b>6.89</b>	<b>Jan-23</b>
<i>MSCI AC World Index</i>			-2.98	-6.19	7.19	-	-	-	-	7.19	
OPEB SSGA MSCI ACWI ex Russia	246,432,403	43.95	-2.92	-6.16	7.05	10.87	-	-	-	10.87	Nov-22
<i>MSCI AC World Index</i>			-2.98	-6.19	7.19	11.06	-	-	-	11.06	
<b>OPEB Private Growth</b>	<b>4,266,099</b>	<b>0.76</b>	<b>-0.19</b>	<b>0.88</b>	<b>-2.35</b>	-	-	-	-	<b>-2.35</b>	<b>Jan-23</b>
<i>OPEB Private Growth BM</i>			-0.34	0.24	-4.87	-	-	-	-	-4.87	

State of Rhode Island OPEB

# TOTAL FUND PERFORMANCE DETAIL - (NET)

	Allocation		Performance (%)								
	Market Value (\$)	% of Portfolio	1 Mo (%)	FYTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total OPEB</b>	<b>560,721,630</b>	<b>100.00</b>	<b>-1.95</b>	<b>-4.30</b>	<b>3.58</b>	<b>6.88</b>	<b>4.74</b>	<b>7.26</b>	<b>7.64</b>	<b>8.05</b>	<b>May-11</b>
<i>OPEB Custom Blend</i>			-1.72	-3.70	3.01	3.86	3.81	6.78	7.42	7.46	
<b>OPEB Public Growth</b>	<b>246,432,403</b>	<b>43.95</b>	<b>-2.97</b>	<b>-6.29</b>	<b>6.89</b>	-	-	-	-	<b>6.89</b>	<b>Jan-23</b>
<i>MSCI AC World Index</i>			-2.98	-6.19	7.19	-	-	-	-	7.19	
<b>OPEB Private Growth</b>	<b>4,266,099</b>	<b>0.76</b>	<b>-0.19</b>	<b>0.88</b>	<b>-2.35</b>	-	-	-	-	<b>-2.35</b>	<b>Jan-23</b>
<i>OPEB Private Growth BM</i>			-0.34	0.24	-4.87	-	-	-	-	-4.87	
<b>OPEB Total Income</b>	<b>117,292,172</b>	<b>20.92</b>	<b>-0.74</b>	<b>0.09</b>	<b>6.31</b>	-	-	-	-	<b>6.31</b>	<b>Jan-23</b>
<i>OPEB Total Income BM</i>			-0.42	0.90	8.34	-	-	-	-	8.34	
<b>OPEB Tot Inflation Protection</b>	<b>23,905,840</b>	<b>4.26</b>	<b>-0.02</b>	<b>-3.11</b>	<b>-3.11</b>	-	-	-	-	<b>-3.11</b>	<b>Jan-23</b>
<i>OPEB Inflation Protecton BM</i>			-0.02	-1.65	-5.81	-	-	-	-	-5.81	
<b>OPEB Total Volatility</b>	<b>166,825,568</b>	<b>29.75</b>	<b>-1.56</b>	<b>-4.73</b>	<b>-2.56</b>	-	-	-	-	<b>-2.56</b>	<b>Jan-23</b>
<i>Blmbg. U.S. Aggregate Index</i>			-1.58	-4.76	-2.77	-	-	-	-	-2.77	

- Fiscal Year ends June 30th.



State of Rhode Island OPEB

# TOTAL FUND PERFORMANCE DETAIL - (NET)

	Allocation		Performance (%)								
	Market Value (\$)	% of Portfolio	1 Mo (%)	FYTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>OPEB Total Income</b>	<b>117,292,172</b>	<b>20.92</b>	<b>-0.74</b>	<b>0.09</b>	<b>6.31</b>	-	-	-	-	<b>6.31</b>	<b>Jan-23</b>
<i>OPEB Total Income BM</i>			-0.42	0.90	8.34	-	-	-	-	8.34	
OPEB Liquid Credit	69,046,172	12.31	-1.20	-0.79	4.76	6.12	-	-	-	6.12	Nov-22
<i>ICE BofA US High Yield Index Non-TC</i>			-1.23	-0.69	4.72	5.90	-	-	-	5.90	
OPEB Private Credit	2,471,534	0.44	0.00	2.90	6.39	6.39	-	-	-	5.88	Oct-22
<i>Cambridge Assoc Sen Debt 1Qlag</i>			0.00	4.10	9.40	6.73	-	-	-	6.20	
OPEB NB Index Fund	21,484,180	3.83	-0.43	-1.44	3.85	-	-	-	-	3.85	Dec-22
<i>CBOE PutWrite Index</i>			0.13	-2.74	9.44	-	-	-	-	8.97	
<b>OPEB CLO Aggregate</b>	<b>24,290,285</b>	<b>4.33</b>	<b>0.23</b>	<b>3.81</b>	<b>13.94</b>	-	-	-	-	<b>9.74</b>	<b>Dec-22</b>
<i>JPM Collateralized Loan Obligation BB Index (CLOIE)</i>			-0.15	6.83	15.86	-	-	-	-	17.41	
OPEB Sycamore Tree CLO Fund	12,645,883	2.26	0.76	0.76	11.24	-	-	-	-	4.36	Dec-22
OPEB Neuberger CLO Total	11,644,402	2.08	-0.36	7.23	16.66	-	-	-	-	16.21	Dec-22
<b>OPEB Tot Inflation Protection</b>	<b>23,905,840</b>	<b>4.26</b>	<b>-0.02</b>	<b>-3.11</b>	<b>-3.11</b>	-	-	-	-	<b>-3.11</b>	<b>Jan-23</b>
<i>OPEB Inflation Protecton BM</i>			-0.02	-1.65	-5.81	-	-	-	-	-5.81	
OPEB Core Real Estate	15,428,215	2.75	0.00	-4.05	-4.05	-4.05	-	-	-	-3.48	Sep-22
OPEB Private Real Assets ex RE	8,477,625	1.51	-0.04	1.34	-	-	-	-	-	1.34	Apr-23
<b>OPEB Total Volatility</b>	<b>166,825,568</b>	<b>29.75</b>	<b>-1.56</b>	<b>-4.73</b>	<b>-2.56</b>	-	-	-	-	<b>-2.56</b>	<b>Jan-23</b>
<i>Blmbg. U.S. Aggregate Index</i>			-1.58	-4.76	-2.77	-	-	-	-	-2.77	
<b>OPEB Total Stability</b>	<b>190,731,407</b>	<b>34.02</b>	<b>-1.37</b>	<b>-4.48</b>	<b>-2.41</b>	-	-	-	-	<b>-2.41</b>	<b>Jan-23</b>
<i>OPEB Total Stability BM</i>			-1.21	-4.03	-3.46	-	-	-	-	-3.46	
RI OPEB SSGA Bloomberg Barclay	166,825,568	29.75	-1.56	-4.73	-2.56	0.38	-5.56	-	-	-5.56	Nov-20
<i>Blmbg. U.S. Aggregate Index</i>			-1.58	-4.76	-2.77	0.36	-5.57	-	-	-5.57	
OPEB Operating Cash	1,444,581	0.26	0.44	3.33	5.47	5.82	-	-	-	5.08	Sep-22
OPEB Russell Overlay	554,969	0.10	-0.03	-0.09	-0.18	-	-	-	-	-0.18	Jan-23

\*Please note returns are provided by BNY Mellon: returns may not match the custodian due to rounding



# DISCLAIMERS & DISCLOSURES

Past performance is no guarantee of future results.

Returns for pooled funds, e.g. mutual funds and collective investment trusts, are collected from third parties; they are not generally calculated by NEPC. Returns for separate accounts, with some exceptions, are calculated by NEPC. Returns are reported net of manager fees unless otherwise noted.

A “since inception” return, if reported, begins with the first full month after funding, although actual inception dates (e.g. the middle of a month) and the timing of cash flows are taken into account in Composite return calculations.

NEPC’s preferred data source is the plan’s custodian bank or record-keeper. If data cannot be obtained from one of the preferred data sources, data provided by investment managers may be used. Information on market indices and security characteristics is received from additional providers. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within. In addition, some index returns displayed in this report or used in calculation of a policy index, allocation index or other custom benchmark may be preliminary and subject to change.

All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.

The opinions presented herein represent the good faith views of NEPC as of the date of this presentation and are subject to change at any time. Neither fund performance nor universe rankings contained in this report should be considered a recommendation by NEPC.

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Source of private fund performance benchmark data: Cambridge Associates, via Refinitiv







## 10.3. Retirement Application Processing Report

For Reference

Pension Application Processing Report  
as of 11/30/2023

For Month of September 23

	Teachers	State Employees	Municipal Employees	Totals
<b>Total Outstanding</b>				
Less than 0	21	23	9	53
0-30 Days	5	10	3	18
30-60 Days	3	4	6	13
60-90 Days	-	2	1	3
90-120 Days	19	-	-	19
120 + Days	1	4	2	7
<b>Total</b>	<u>49</u>	<u>43</u>	<u>21</u>	<u>113</u>

For Month of October 23

	Teachers	State Employees	Municipal Employees	Totals
<b>Total Outstanding</b>				
Less than 0	28	23	14	65
0-30 Days	6	8	5	19
30-60 Days	3	8	2	13
60-90 Days	-	2	2	4
90-120 Days	-	3	1	4
120 + Days	6	5	2	13
<b>Total</b>	<u>43</u>	<u>49</u>	<u>26</u>	<u>118</u>

For Month of November 23

	Teachers	State Employees	Municipal Employees	Totals
<b>Total Outstanding</b>				
Less than 0	23	20	12	55
0-30 Days	5	5	4	14
30-60 Days	-	1	3	4
60-90 Days	1	2	1	4
90-120 Days	-	1	1	2
120 + Days	1	7	3	11
<b>Total</b>	<u>30</u>	<u>36</u>	<u>24</u>	<u>90</u>

	Teachers	State Employees	Municipal Employees	Totals
November 22	12	10	29	51
December 22	13	14	14	41
January 23	7	29	17	53
February 23	24	48	31	103
March 23	14	21	28	63
April 23	2	46	17	65
May 23	11	47	36	94
June 23	6	25	20	51
July 23	93	46	13	152
August 23	109	32	66	207
September 23	51	38	30	119
October 23	36	31	26	93
November 23	21	36	15	72
<b>Total (rolling year)</b>	<u>387</u>	<u>413</u>	<u>313</u>	<u>1,113</u>
<b>Total (since 07/01/03)</b>	<u>8,380</u>	<u>9,762</u>	<u>5,444</u>	<u>23,586</u>

Fiscal Year Totals

FY 2004 Total	689	665	199	1,553
FY 2005 Total	534	574	256	1,364
FY 2006 Total	493	507	221	1,221
FY 2007 Total	462	464	239	1,165
FY 2008 Total	409	659	195	1,263
FY 2009 Total	565	1,368	303	2,236
FY 2010 Total	562	283	263	1,108
FY 2011 Total	325	261	302	888
FY 2012 Total	458	346	292	1,096
FY 2013 Total	369	334	276	979
FY 2014 Total	266	311	209	786
FY 2015 Total	271	375	192	838
FY 2016 Total	301	345	262	908
FY 2017 Total	311	378	239	928
FY 2018 Total	300	570	269	1,139
FY 2019 Total	308	324	313	945
FY 2020 Total	349	405	281	1,035
FY 2021 Total	396	588	316	1,300
FY 2022 Total	380	467	336	1,183
FY 2023 Total	322	355	331	1,008
FY 2024 Total	310	183	150	643