

# Vermont Municipal Employees' Retirement System

**Governmental Accounting Standards Board  
Statement 67 Actuarial Valuation Report as of  
June 30, 2023**





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November 28, 2023

Board of Trustees  
Vermont Municipal Employees' Retirement System  
Montpelier, Vermont 05609

Dear Board Members:

We are pleased to submit this Governmental Accounting Standards Board (GASB) Statement No. 67 Accounting Valuation as of June 30, 2023, for the Vermont Municipal Employees' Retirement System, a cost-sharing multiple-employer defined benefit pension plan, based on a June 30, 2023, measurement date. It contains the actuarial information that will need to be disclosed in order to comply with GASB 67.

It is important to note that GASB 67 only defines pension liability for financial reporting purposes and does not apply to contribution amounts for pension funding purposes. The assumptions used in this valuation are the same as those in the Actuarial Valuation and Review report as of June 30, 2022, dated October 25, 2022, except as noted herein. Additional details can be found in that report.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist the Board and the member units in preparing their financial reports. The financial information on which our calculations were based was provided by the Office of the State Treasurer. That assistance is gratefully acknowledged.

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

The actuarial calculations were directed under the supervision of Matthew A. Strom, FSA, MAAA, EA. I am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of my knowledge, the information supplied in this actuarial valuation is complete and accurate.

The investment return and inflation assumptions were selected by the Vermont Pension Investment Commission (VPIC). The remaining actuarial assumptions used in this actuarial valuation were selected by the Board based upon our analysis and recommendations. In my opinion, the assumptions are reasonable and take into account the experience of the Plan and reasonable expectations.

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

Sincerely,

Segal

A handwritten signature in black ink that reads "Matthew A. Strom". The signature is written in a cursive style with a long horizontal line extending to the right.

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Matthew A. Strom, FSA, MAAA, EA  
Senior Vice President and Actuary

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# Table of Contents

## Section 1: Valuation Summary

Important information about actuarial valuations.....	5
Purpose and basis.....	7
Highlights of the valuation.....	7

## Section 2: Accounting Information

Exhibit 1 - Net Pension Liability .....	8
Exhibit 2 - Schedule of changes in Net Pension Liability – last ten fiscal years .....	12
Exhibit 3 - Schedule of contributions – last ten fiscal years .....	16
Exhibit 4 - Development of Blended Discount Rate.....	19

## Section 3: Supplemental Information

Exhibit I: Actuarial Assumptions and Methods .....	25
Exhibit II: Summary of Plan Provisions .....	32

Appendix: Definition of Terms .....	35
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# Section 1: Valuation Summary

## Important information about actuarial valuations

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

<b>Plan of benefits</b>	Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
<b>Participant data</b>	An actuarial valuation for a plan is based on data provided to the actuary by the System. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
<b>Assets</b>	The valuation is based on the market value of assets as of the valuation date, as provided by the System. The System uses an “actuarial value of assets” that differs from market value to gradually reflect year-to-year changes in the market value of assets in determining the contribution requirements.
<b>Actuarial assumptions</b>	In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The projected benefits are then discounted to a present value, based on the assumed rate of return that is expected to be achieved on the plan’s assets. There is a reasonable range for each assumption used in the projection and the results may vary materially based on which assumptions are selected. It is important for any user of an actuarial valuation to understand this concept. Actuarial assumptions are periodically reviewed to ensure that future valuations reflect emerging plan experience. While future changes in actuarial assumptions may have a significant impact on the reported results, that does not mean that the previous assumptions were unreasonable.
<b>Modeling</b>	Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are presented to meet regulatory, legislative and client requirements. Deterministic cost projections are based on a proprietary forecasting model. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility and user control. The client team programs the assumptions and the plan provisions, validates the models, and reviews test lives and results, under the direction of the supervising actuary.

## Section 1: Valuation Summary

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

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The actuarial valuation is prepared at the request of the Vermont Municipal Employees' Retirement System. Segal is not responsible for the use or misuse of its report, particularly by any other party.

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

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Sections of this report may include actuarial results that are not rounded, but that does not imply precision.

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

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

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

# Section 1: Valuation Summary

## Purpose and basis

This report has been prepared by Segal to present certain disclosure information required by Governmental Accounting Standards Board Statement No. 67 as of June 30, 2023. This report, based on unaudited financial information as of June 30, 2023, provided by the Office of the State Treasurer and the Vermont Municipal Employees' Retirement System Actuarial Report as of June 30, 2022, dated October 25, 2022, reflects:

- The benefit provisions of the Pension Plan, as administered by the Board; and
- The characteristics of covered active members, inactive members, and retired members and beneficiaries as of June 30, 2022, provided by the Office of the State Treasurer.

The assumptions are the same as shown in the Vermont Municipal Employees' Retirement System Actuarial Valuation Report as of June 30, 2022, except as noted herein. Total Pension Liability as of June 30, 2023, reflects changes to actuarial assumptions that were adopted as part of the Actuarial Experience Review dated September 18, 2023.

## Highlights of the valuation

The following key findings were the result of this actuarial valuation:

- The Net Pension Liability (NPL) is equal to the difference between the Total Pension Liability (TPL) and the Plan's Fiduciary Net Position. The Plan's Fiduciary Net Position is equal to the market value of assets and, therefore, the NPL measure is very similar to an Unfunded Actuarial Accrued Liability (UAAL) on a market value basis. The NPL increased from \$303.4 million as of June 30, 2022, to \$320.3 million as of June 30, 2023, and the Plan's Fiduciary Net Position as a percent of the TPL increased from 73.60% to 74.01%.
- The NPL, measured as of June 30, 2023, was determined based on the results of the actuarial valuation as of June 30, 2022, adjusted using standard actuarial techniques, and updated to reflect changes in the following assumptions: salary increases, death after retirement, death in active service, termination before retirement, disability incidence, and retirement. The NPL, measured as of June 30, 2022, was determined based on the results of the actuarial valuation as of June 30, 2021, adjusted using standard actuarial techniques.
- The discount rate used to determine the TPL and NPL as of June 30, 2023, and June 30, 2022, was 7.00%.

# Section 2: Accounting Information

## Exhibit 1 – Net Pension Liability

The components of the Net Pension Liability of the Vermont Municipal Employees' Retirement System are as follows:

	June 30, 2023	June 30, 2022
Total Pension Liability	\$1,232,406,785	\$1,149,351,427
Plan Fiduciary Net Position	912,113,032	845,979,471
System's Net Pension Liability	320,293,753	303,371,956
Plan Fiduciary Net Position as a percentage of the Total Pension Liability*	74.01%	73.60%

\* These funded percentages are not necessarily appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligation or the need for or the amount of future contributions.

*Actuarial assumptions.* The Total Pension Liability as of June 30, 2023, was determined by rolling forward the Total Pension Liability as of June 30, 2022, to June 30, 2023, using the following actuarial assumptions:

<b>Investment rate of return</b>	7.00%, net of pension plan investment expenses, including inflation
<b>Inflation</b>	2.30%
<b>Salary increases</b>	Ranging from 4.07% to 6.21%
<b>Cost of Living Adjustments</b>	1.10% for Group A members and 1.20% for Groups B, C and D members. The January 1, 2023, COLA was 2.00% for Group A members and 3.00% for Groups B, C, and D members. The January 1, 2024, COLA is expected to be 1.10% for Group A and 1.10% for Groups B, C, and D.
<b>Mortality</b>	<p><i>Pre-Retirement:</i></p> <ul style="list-style-type: none"> <li>• Groups A/B – 60% PubG-2010 General Employee Amount-Weighted Below-Median and 40% of PubG-2010 General Employee Amount-Weighted, with generational projection using Scale MP-2021.</li> <li>• Group C – PubG-2010 General Employee Amount-Weighted, with generational projection using scale MP-2021.</li> <li>• Group D – PubS-2010 Public Safety Employee Amount-Weighted Below-Median, with generational projection using scale MP-2021.</li> </ul>



## Section 2: Accounting Information

### **Mortality (continued)**

#### *Healthy Post-Retirement - Retirees:*

- Groups A/B – PubG-2010 General Healthy Retiree Amount-Weighted Below Median Table with credibility adjustments of 90% and 87% for the Male and Female tables, respectively, with generational projection using scale MP-2021.
- Group C – PubG-2010 General Healthy Retiree Amount-Weighted Table, with generational projection using scale MP-2021.
- Group D – PubS-2010 Public Safety Retiree Amount-Weighted Below-Median Table, with generational projection using scale MP-2021.

#### *Healthy Post-Retirement - Beneficiaries:*

- Pub-2010 Contingent Survivor Amount-Weighted Below-Median Table, with generational projection using scale MP-2021.

#### *Disabled Post-Retirement:*

- Group A/B/C – PubNS-2010 Non-Safety Disabled Retiree Amount-Weighted Table with generational projection using Scale MP-2021.
- Group D – PubS-2010 Safety Disabled Retiree Amount-Weighted Table with generational projection using Scale MP-2021.

The tables with the generational projection to the ages of members as of the measurement date reasonably reflect the mortality experience of the System as of the measurement date. The mortality rates were based on historical and current demographic data, adjusted to reflect health characteristics of the underlying groups and estimated future experience and professional judgment. The mortality tables were then adjusted to future years using the generational projection to reflect future mortality improvement between the measurement date and those years.

## Section 2: Accounting Information

### Determination of discount rate and investment rates of return

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of June 30, 2023, are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return*
Global Equities	44.00%	5.35%
Private Equity	10.00%	7.50%
Emerging Market Debt	2.00%	5.00%
Private and Alternative Credit	10.00%	5.50%
Non-Core Real Estate	4.00%	5.50%
Core Fixed Income	19.00%	1.50%
Core Real Estate	4.00%	3.25%
US TIPS	2.00%	1.50%
Infrastructure/Farmland	5.00%	4.25%
	100.00%	

\* Calculated as the Arithmetic Rates of Return minus the Rate of Inflation, as provided by the Vermont State Treasurers' Office

## Section 2: Accounting Information

*Discount rate:* The long-term expected rate of return on pension plan investments is 7.00%. The high quality tax-exempt general obligation municipal bond rate (20-Bond GO Index) as of the closest date prior to the valuation date of June 30, 2023, is 3.65%, as published by The Bond Buyer.

The discount rate used to measure the Total Pension Liability was 7.00% as of June 30, 2023. The projection of cash flows used to determine the discount rate assumed plan member and employer contributions will be made at rates set by the Board (employers) and statute (members). For this purpose, only employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs of future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the pension plans' Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members as of June 30, 2023. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

### Discount rate sensitivity

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

	<b>1% Decrease (6.00%)</b>	<b>Current Discount Rate (7.00%)</b>	<b>1% Increase (8.00%)</b>
Net Pension Liability as of June 30, 2023	\$482,091,663	\$320,293,753	\$187,302,206

## Section 2: Accounting Information

### Exhibit 2 – Schedule of changes in Net Pension Liability – last ten fiscal years

	Year End June 30,				
	2023	2022	2021	2020	2019
<b>Total Pension Liability</b>					
Service cost	\$42,203,364	\$39,576,266	\$37,158,549	\$34,726,405	\$30,744,435
Interest	81,522,271	76,210,791	70,595,483	67,360,649	61,617,803
Differences between expected and actual experience	9,651,600	8,120,277	15,794,755	8,291,943	17,467,646
Changes of assumptions	3,579,971	0	0	38,774,448	0
Changes of benefit terms	0	363,972	0	0	0
Benefit payments, including refunds of employee contributions	<u>-53,901,848</u>	<u>-48,138,407</u>	<u>-43,357,218</u>	<u>-39,084,124</u>	<u>-35,397,043</u>
<b>Net change in Total Pension Liability</b>	\$83,055,358	\$76,132,899	\$80,191,569	\$110,069,321	\$74,432,841
<b>Total Pension Liability – beginning</b>	<u>1,149,351,427</u>	<u>1,073,218,528</u>	<u>993,026,959</u>	<u>882,957,638</u>	<u>808,524,797</u>
<b>Total Pension Liability – ending (a)</b>	\$1,232,406,785	\$1,149,351,427	\$1,073,218,528	\$993,026,959	\$882,957,638
<b>Plan Fiduciary Net Position</b>					
Contributions – employer	\$28,456,017	\$25,217,676	\$22,297,570	\$20,680,856	\$19,202,981
Contributions – employee	29,695,944	25,025,242	23,074,402	20,771,304	19,777,956
Net investment income	63,095,183	-81,507,765	184,850,095	29,113,786	38,740,356
Benefit payments, including refunds of employee contributions	-53,901,848	-48,138,407	-43,357,218	-39,084,124	-35,397,043
Administrative expenses	-1,302,636	-1,302,589	-1,248,639	-1,354,418	-1,158,070
Other	<u>90,901</u>	<u>650,984</u>	<u>365,225</u>	<u>459,660</u>	<u>450,746</u>
<b>Net change in Fiduciary Net Position</b>	\$66,133,561	-\$80,054,859	\$185,981,435	\$30,587,064	\$41,616,926
<b>Plan Fiduciary Net Position – beginning</b>	<u>845,979,471</u>	<u>926,034,330</u>	<u>740,052,895</u>	<u>709,465,831</u>	<u>667,848,905</u>
<b>Plan Fiduciary Net Position – ending (b)</b>	\$912,113,032	\$845,979,471	\$926,034,330	\$740,052,895	\$709,465,831
<b>Net Pension Liability – ending: (a)-(b)</b>	\$320,293,753	\$303,371,956	\$147,184,198	\$252,974,064	\$173,491,807
<b>Plan's Fiduciary Net Position as a percentage of the Total Pension Liability</b>	74.01%	73.60%	86.29%	74.52%	80.35%
<b>Covered-employee payroll</b>	\$355,708,896	\$331,960,355	\$327,491,743	\$306,103,224	\$289,838,838
<b>Net Pension Liability as a percentage of covered-employee payroll</b>	90.04%	91.39%	44.94%	82.64%	59.86%

Note: Covered-employee payroll reflects actual compensation amounts from the prior Plan year.

## Section 2: Accounting Information

### Exhibit 2 – Schedule of changes in Net Pension Liability – last ten fiscal years (continued)

	Year End June 30,				
	2018	2017	2016	2015	2014
<b>Total Pension Liability</b>					
Service cost	\$28,434,045	\$27,245,986	\$25,264,340	\$24,366,167	\$22,519,428
Interest	56,503,328	54,779,918	49,744,271	46,058,159	42,139,031
Differences between expected and actual experience	14,172,418	-3,749,037	1,088,020	3,046,272	0
Changes of assumptions	0	14,481,136	12,203,982	19,192,039	0
Changes of benefit terms	193,575	0	0	0	0
Benefit payments, including refunds of employee contributions	<u>-31,444,463</u>	<u>-27,803,390</u>	<u>-25,588,884</u>	<u>-23,315,175</u>	<u>-20,601,380</u>
<b>Net change in Total Pension Liability</b>	\$67,858,903	\$64,954,613	\$62,711,729	\$69,347,462	\$44,057,079
<b>Total Pension Liability – beginning</b>	<u>740,665,894</u>	<u>675,711,281</u>	<u>612,999,552</u>	<u>543,652,090</u>	<u>499,595,011</u>
<b>Total Pension Liability – ending (a)</b>	\$808,524,797	\$740,665,894	\$675,711,281	\$612,999,552	\$543,652,090
<b>Plan Fiduciary Net Position</b>					
Contributions – employer	\$17,519,690	\$16,481,881	\$15,235,742	\$14,136,067	\$12,805,737
Contributions – employee	19,166,537	25,210,413	15,226,948	13,587,975	13,233,728
Net investment income	43,889,050	59,486,928	6,776,933	-2,358,518	64,346,116
Benefit payments, including refunds of employee contributions	<u>-31,444,463</u>	<u>-27,803,390</u>	<u>-25,588,884</u>	<u>-23,315,175</u>	<u>-20,601,380</u>
Administrative expenses	-928,741	-874,707	-755,013	-950,625	-588,022
Other	<u>136,490</u>	<u>-5,897</u>	<u>215,646</u>	<u>278,541</u>	<u>2,142,868</u>
<b>Net change in Fiduciary Net Position</b>	\$48,338,563	\$72,495,228	\$11,111,372	\$1,378,265	\$71,339,047
<b>Plan Fiduciary Net Position – beginning</b>	<u>619,510,342</u>	<u>547,015,114</u>	<u>535,903,742</u>	<u>534,525,477</u>	<u>463,186,430</u>
<b>Plan Fiduciary Net Position – ending (b)</b>	\$667,848,905	\$619,510,342	\$547,015,114	\$535,903,742	\$534,525,477
<b>Net Pension Liability – ending: (a)-(b)</b>	\$140,675,892	\$121,155,552	\$128,696,167	\$77,095,810	\$9,126,613
<b>Plan's Fiduciary Net Position as a percentage of the Total Pension Liability</b>	82.60%	83.64%	80.95%	87.42%	98.32%
<b>Covered-employee payroll</b>	\$274,813,707	\$256,730,055	\$249,810,907	\$230,969,202	\$220,371,643
<b>Net Pension Liability as a percentage of covered-employee payroll</b>	51.19%	47.19%	51.52%	33.38%	4.14%

Note: Covered-employee payroll reflects actual compensation amounts from the prior Plan year.

## Section 2: Accounting Information

### Notes to Exhibit 2:

*Changes in Assumptions:* Effective for the June 30, 2023, actuarial valuation, the following assumptions were updated:

- Assumed rates of salary increase were adjusted, generally increased, based on plan experience.
- Mortality assumptions changed as follows:
  - Pre-retirement mortality:
    - › For Groups A and B, changed from 40% of PubG-2010 General Employee Amount-Weighted Below Median (sex-specific) tables and 60% of PubG-2010 General Employee Amount-Weighted (sex-specific) tables to 60% of PubG-2010 General Employee Amount-Weighted Below Median (sex-specific) tables and 40% of PubG-2010 General Employee Amount-Weighted (sex-specific) tables.
    - › For Group C, changed from 40% of PubG-2010 General Employee Amount-Weighted Below Median (sex-specific) tables and 60% of PubG-2010 General Employee Amount-Weighted (sex-specific) tables to PubG-2010 General Employee Amount-Weighted (sex-specific) tables.
    - › For Group D, changed from PubG-2010 General Employee Amount-Weighted Above Median (sex-specific) tables to PubS-2010 Public Safety Employee Amount-Weighted Below Median (sex specific) tables.
  - Healthy retiree mortality:
    - › For Groups A and B, changed from 104% of 40% PubG-2010 General Healthy Retiree Amount-Weighted Below Median (sex-specific) tables and 60% of PubG-2010 General Healthy Retiree Amount-Weighted (sex-specific) tables to PubG-2010 General Healthy Retiree Amount-Weighted Below Median (sex-specific) tables with 90% and 87% adjustments for males and females, respectively.
    - › For Group C, changed from 104% of 40% PubG-2010 General Healthy Retiree Amount-Weighted Below Median (sex-specific) tables and 60% of PubG-2010 General Healthy Retiree Amount-Weighted (sex-specific) tables to PubG-2010 General Healthy Retiree Amount-Weighted (sex-specific) tables.
    - › For Group D, changed from PubG-2010 General Healthy Retiree Amount-Weighted (sex-specific) tables to PubS-2010 Public Safety Retiree Amount-Weighted Below Median (sex-specific) tables.

## Section 2: Accounting Information

- Healthy beneficiary mortality:
  - › For Groups A, B, and C, changed from 70% of the Pub-2010 Contingent Survivor Amount-Weighted Below Median (sex-specific) tables and 30% of the Pub-2010 Contingent Survivor Amount-Weighted (sex-specific) tables to Pub-2010 Contingent Survivor Amount-Weighted Below-Median (sex-specific) tables.
  - › For Group D, changed from Pub-2010 Contingent Survivor Amount-Weighted (sex-specific) tables to Pub-2010 Contingent Survivor Amount-Weighted Below-Median (sex-specific) tables.
- Disabled retiree Mortality:
  - › For Group D, changed from PubNS-2010 Non-Safety Disabled Retiree Amount-Weighted (sex-specific) tables to PubS-2010 Safety Disabled Retiree Amount-Weighted (sex-specific) tables.
- Mortality improvement scale was changed from generational projection using scale MP-2019 to generational projection using scale MP-2021 for all assumptions.
- Assumed active retirement rates for all groups were adjusted based on plan experience.
- Assumed termination rates were adjusted based on plan experience. Rates are now split between Groups A and B, and C and D.
- Assumed disability rates were adjusted based on plan experience. Rates are now split between Groups A and B, and C and D.

*Changes in Plan Provisions:* There have been no changes in plan provisions since the last measurement date.

## Section 2: Accounting Information

### Exhibit 3 – Schedule of contributions – last ten fiscal years

	Year End June 30				
	2023	2022	2021	2020	2019
Actuarially determined contribution	\$43,343,569	\$39,451,313	\$36,722,301	\$22,618,468	\$17,263,214
Contributions in relation to the actuarially determined contribution*	<u>28,456,017</u>	<u>25,217,676</u>	<u>22,297,570</u>	<u>20,680,856</u>	<u>19,202,981</u>
Contribution deficiency (excess)	\$14,887,552	\$14,233,637	\$14,424,731	\$1,937,612	-\$1,939,767
Covered-employee payroll	\$355,708,896	\$331,960,355	\$327,491,743	\$306,103,224	\$289,838,838
Contributions as a percentage of covered-employee payroll	8.00%	7.60%	6.81%	6.76%	6.63%
	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
Actuarially determined contribution	\$15,066,601	\$12,895,672	\$15,235,742	\$11,956,121	\$11,638,928
Contributions in relation to the actuarially determined contribution*	<u>17,519,690</u>	<u>16,481,881</u>	<u>15,235,742</u>	<u>14,136,067</u>	<u>12,805,737</u>
Contribution deficiency (excess)	-\$2,453,089	-\$3,586,209	\$0	-\$2,179,946	-\$1,166,809
Covered-employee payroll	\$274,813,707	\$256,730,055	\$249,810,907	\$230,969,202	\$220,371,643
Contributions as a percentage of covered-employee payroll	6.38%	6.42%	6.10%	6.12%	5.81%

\* Includes a portion of the contribution amount denoted as "other" in Exhibit 2.

Note: Actuarially determined contributions for a given fiscal year are based on results from the June 30 actuarial valuation one year prior.



## Section 2: Accounting Information

### Notes to Exhibit 3:

<b>Valuation date</b>	Actuarially determined contribution for the year ending June 30, 2023, is based on results from the June 30, 2022, actuarial valuation, and was calculated as of June 30, with appropriate interest to the middle of the fiscal year.
<b>Actuarial cost method</b>	Entry Age Normal cost method
<b>Amortization method</b>	Amortization payments calculated to fully fund unfunded actuarial accrued liability with annual increases of 3% over a closed period.
<b>Remaining amortization period</b>	16 years as of July 1, 2022 The amortization of unfunded actuarial accrued liability (UAAL) within the actuarially determined contribution rate calculation is based on the level percentage of pay required to amortize the UAAL over the 30-year closed period that began July 1, 2008.
<b>Asset valuation method</b>	A smoothing method is used, under which the value of assets for actuarial purposes equals market value less a five-year phase-in of the differences between actual and assumed investment return. The value of assets for actuarial purposes may not differ from market value of assets by more than 20%.
<b>Actuarial assumptions:</b>	
<b>Investment rate of return</b>	7.00%, net of pension plan investment expenses, including inflation
<b>Inflation rate</b>	2.30% per year
<b>Projected salary increases</b>	Varying service-based rates from 0-10 years of service, then a single rate of 4.50% (includes assumed inflation rate of 2.30%) for all subsequent years.
<b>Mortality</b>	<p><i>Pre-Retirement:</i></p> <ul style="list-style-type: none"> <li>• Groups A/B/C – 40% PubG-2010 General Employee Amount-Weighted below-median and 60% of PubG-2010 General Employee Amount-Weighted, with generational projection using Scale MP-2019.</li> <li>• Group D – PubG-2010 General Employee Amount-Weighted above-median, with generational projection using scale MP-2019.</li> </ul> <p><i>Healthy Post-Retirement - Retirees:</i></p> <ul style="list-style-type: none"> <li>• Groups A/B/C – 104% of 40% PubG-2010 General Healthy Retiree Amount-Weighted below-median and 60% of PubG-2010 General Healthy Retiree Amount-Weighted, with generational projection using scale MP-2019.</li> <li>• Group D – PubG-2010 General Healthy Retiree Amount-Weighted, with generational projection using scale MP-2019.</li> </ul> <p><i>Healthy Post-Retirement - Beneficiaries:</i></p> <ul style="list-style-type: none"> <li>• Groups A/B/C – 70% Pub-2010 Contingent Survivor Amount-Weighted below-median and 30% of Pub-2010 Contingent Survivor Amount-Weighted, with generational projection using scale MP-2019.</li> <li>• Group D – Pub-2010 Contingent Survivor Amount-Weighted, with generational projection using scale MP-2019.</li> </ul>

## Section 2: Accounting Information

### Mortality (continued)

#### *Disabled Post-Retirement:*

- All Groups – PubNS-2010 Non-Safety Disabled Retiree Amount-Weighted Mortality Table with generational projection using Scale MP-2019.

The tables with the generational projection to the ages of members as of the measurement date reasonably reflect the mortality experience of the System as of the measurement date. The mortality rates were based on historical and current demographic data, adjusted to reflect health characteristics of the underlying groups and estimated future experience and professional judgment. The mortality tables were then adjusted to future years using the generational projection to reflect future mortality improvement between the measurement date and those years.

### Other assumptions

Same as those used in the June 30, 2022, funding actuarial valuation.

## Section 2: Accounting Information

### Exhibit 4 – Development of Blended Discount Rate

Fiscal Year Beginning	Projected Beginning Fiduciary Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expense	Projected Investment Earnings	Projected Ending Fiduciary Net Position
2022*	\$845,979,471	\$58,151,961	\$53,901,848	\$1,302,636	\$63,186,084	\$912,113,032
2023	912,113,032	49,735,636	60,038,580	1,233,482	63,444,137	964,020,743
2024	964,020,743	49,275,465	64,265,554	1,192,899	66,915,047	1,014,752,802
2025	1,014,752,802	49,336,301	68,623,016	1,168,659	70,316,758	1,064,614,186
2026	1,064,614,186	47,552,416	73,327,917	1,156,848	73,580,361	1,111,262,198
2027	1,111,262,198	46,058,900	77,860,825	1,154,922	76,634,864	1,154,940,215
2028	1,154,940,215	44,731,069	82,901,975	1,158,848	79,469,274	1,195,079,735
2029	1,195,079,735	43,598,130	88,094,796	1,169,035	82,057,282	1,231,471,316
2030	1,231,471,316	42,507,901	93,045,081	1,182,021	84,392,820	1,264,144,935
2031	1,264,144,935	41,552,673	97,734,192	1,197,414	86,481,883	1,293,247,885
2032	1,293,247,885	40,698,516	102,586,939	1,216,115	88,318,693	1,318,462,040
2033	1,318,462,040	39,884,372	107,200,351	1,237,150	89,892,983	1,339,801,894
2034	1,339,801,894	39,148,783	111,589,772	1,259,177	91,206,627	1,357,308,355
2035	1,357,308,355	38,500,330	115,801,692	1,283,328	92,261,121	1,370,984,786
2036	1,370,984,786	37,973,492	119,789,352	1,309,331	93,059,553	1,380,919,148
2037	1,380,919,148	37,477,661	123,504,650	1,336,001	93,606,636	1,387,162,794
2038	1,387,162,794	37,053,584	126,978,139	1,363,685	93,906,307	1,389,780,861
2039	1,389,780,861	36,704,182	130,531,836	1,393,407	93,951,923	1,388,511,723
2040	1,388,511,723	36,389,501	133,464,977	1,423,173	93,748,368	1,383,761,442
2041	1,383,761,442	36,148,477	136,261,106	1,453,072	93,308,501	1,375,504,242
2042	1,375,504,242	35,966,541	138,810,492	1,483,362	92,633,841	1,363,810,770
2043	1,363,810,770	35,837,428	140,851,792	1,513,357	91,738,284	1,349,021,333
2044	1,349,021,333	35,804,190	142,626,848	1,543,687	90,638,671	1,331,293,659
2045	1,331,293,659	35,787,881	144,140,717	1,573,194	89,343,145	1,310,710,774
2046	1,310,710,774	35,817,086	145,360,997	1,601,637	87,859,660	1,287,424,886
2047	1,287,424,886	35,876,607	146,064,853	1,628,994	86,206,139	1,261,813,785
2048	1,261,813,785	36,000,676	146,491,244	1,655,098	84,401,867	1,234,069,986
2049	1,234,069,986	36,187,345	146,685,725	1,679,311	82,458,680	1,204,350,975
2050	1,204,350,975	36,391,053	146,734,504	1,701,799	80,382,985	1,172,688,710
2051	1,172,688,710	36,679,178	146,088,101	1,722,683	78,198,603	1,139,755,707
2052	1,139,755,707	37,029,871	145,299,654	1,741,156	75,932,517	1,105,677,285
2053	1,105,677,285	37,442,691	143,999,476	1,757,138	73,606,423	1,070,969,785
2054	1,070,969,785	37,928,317	142,431,791	1,770,874	71,248,283	1,035,943,720
2055	1,035,943,720	38,480,788	140,410,050	1,781,839	68,886,172	1,001,118,791
2056	1,001,118,791	39,116,906	138,145,301	1,789,776	66,549,679	966,850,299
2057	966,850,299	39,813,680	135,569,151	1,794,488	64,265,272	933,565,612
2058	933,565,612	40,603,731	132,581,704	1,795,979	62,067,505	901,859,165
2059	901,859,165	41,470,552	129,402,941	1,794,370	59,989,705	872,122,111

\* First year values in this projection reflect actual experience; first year investment earnings include "other" income.

## Section 2: Accounting Information

### Exhibit 4 – Development of Blended Discount Rate *continued*

Fiscal Year Beginning	Projected Beginning Fiduciary Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expense	Projected Investment Earnings	Projected Ending Fiduciary Net Position
2060	\$872,122,111	\$42,391,890	\$126,193,933	\$1,789,389	\$58,052,848	\$844,583,527
2061	844,583,527	43,364,895	122,573,255	1,780,451	56,286,239	819,880,955
2062	819,880,955	44,421,978	118,863,287	1,767,941	54,724,343	798,396,048
2063	798,396,048	45,556,719	114,815,998	1,751,644	53,402,341	780,787,466
2064	780,787,466	46,759,419	111,082,125	1,731,727	52,343,217	767,076,250
2065	767,076,250	48,023,216	106,802,515	1,707,810	51,578,289	758,167,430
2066	758,167,430	49,366,767	102,304,498	1,680,050	51,160,098	754,709,747
2067	754,709,747	50,780,578	97,964,205	1,648,448	51,120,560	756,998,232
2068	756,998,232	52,251,681	93,371,542	1,612,982	51,494,227	765,759,616
2069	765,759,616	53,781,046	88,764,596	1,573,546	52,323,675	781,526,195
2070	781,526,195	55,373,772	84,174,769	1,530,374	53,645,236	804,840,060
2071	804,840,060	57,023,809	79,648,775	1,483,552	55,495,006	836,226,548
2072	836,226,548	58,728,124	75,200,892	1,433,051	57,909,155	876,229,884
2073	876,229,884	60,486,257	70,796,461	1,379,065	60,926,967	925,467,582
2074	925,467,582	62,299,158	66,455,675	1,321,699	64,590,993	984,580,359
2075	984,580,359	64,168,133	62,175,513	1,264,905	68,946,095	1,054,254,169
2076	1,054,254,169	66,093,177	57,964,816	1,208,859	74,039,974	1,135,213,645
2077	1,135,213,645	68,075,972	53,833,813	1,153,770	79,923,049	1,228,225,083
2078	1,228,225,083	70,118,251	49,795,215	1,099,819	86,648,568	1,334,096,868
2079	1,334,096,868	72,221,799	45,863,930	1,047,164	94,272,655	1,453,680,228
2080	1,453,680,228	74,388,453	42,044,576	995,935	102,854,794	1,587,882,964
2081	1,587,882,964	76,620,106	38,358,214	946,238	112,457,855	1,737,656,473
2082	1,737,656,473	78,918,709	34,816,243	898,159	123,148,104	1,904,008,884
2083	1,904,008,884	81,286,271	31,433,036	851,760	134,995,674	2,088,006,033
2084	2,088,006,033	83,724,859	28,226,869	807,085	148,074,604	2,290,771,542
2085	2,290,771,542	86,236,605	25,205,926	764,162	162,463,336	2,513,501,395
2086	2,513,501,395	88,823,703	22,372,251	723,004	178,245,593	2,757,475,436
2087	2,757,475,436	91,488,414	19,736,200	683,607	195,510,682	3,024,054,725
2088	3,024,054,725	94,233,066	17,307,811	645,961	214,353,606	3,314,687,625
2089	3,314,687,625	97,060,058	15,085,411	610,041	234,875,895	3,630,928,126
2090	3,630,928,126	99,971,860	13,068,078	575,817	257,186,448	3,974,442,539
2091	3,974,442,539	102,971,016	11,252,924	543,250	281,402,097	4,347,019,478
2092	4,347,019,478	106,060,146	9,632,164	512,298	307,648,412	4,750,583,574
2093	4,750,583,574	109,241,951	8,206,181	482,912	336,060,200	5,187,196,632
2094	5,187,196,632	112,519,209	6,958,804	455,040	366,782,452	5,659,084,449
2095	5,659,084,449	115,894,785	5,886,801	428,629	399,971,189	6,168,634,993
2096	6,168,634,993	119,371,629	4,980,173	403,623	435,794,024	6,718,416,850
2097	6,718,416,850	122,952,778	4,209,563	379,965	474,431,893	7,311,211,993
2098	7,311,211,993	126,641,361	3,570,275	357,599	516,079,812	7,950,005,292

## Section 2: Accounting Information

### Exhibit 4 – Development of Blended Discount Rate *continued*

Fiscal Year Beginning	Projected Beginning Fiduciary Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expense	Projected Investment Earnings	Projected Ending Fiduciary Net Position
2099	\$7,950,005,292	\$130,440,602	\$3,040,056	\$336,467	\$560,947,613	\$8,638,016,984
2100	8,638,016,984	134,353,820	2,619,635	316,512	609,260,807	9,378,695,464
2101	9,378,695,464	138,384,435	2,283,451	297,681	661,261,798	10,175,760,565
2102	10,175,760,565	142,535,968	2,012,535	279,917	717,211,763	11,033,215,844
2103	11,033,215,844	146,812,047	1,796,746	263,168	777,391,434	11,955,359,411
2104	11,955,359,411	151,216,408	1,649,243	247,383	842,101,351	12,946,780,544
2105	12,946,780,544	155,752,900	1,529,186	232,511	911,664,330	14,012,436,077
2106	14,012,436,077	160,425,487	1,403,471	218,504	986,428,648	15,157,668,237
2107	15,157,668,237	165,238,252	1,345,238	205,317	1,066,765,846	16,388,121,780
2108	16,388,121,780	170,195,400	1,255,519	192,905	1,153,074,669	17,709,943,425
2109	17,709,943,425	175,301,262	1,176,685	181,224	1,245,784,057	19,129,670,835
2110	19,129,670,835	180,560,299	1,099,241	170,236	1,345,352,137	20,654,313,794
2111	20,654,313,794	185,977,108	1,021,682	159,900	1,452,269,809	22,291,379,129
2112	22,291,379,129	191,556,422	963,351	150,181	1,567,062,040	24,048,884,059
2113	24,048,884,059	197,303,114	886,003	141,043	1,690,291,547	25,935,451,674
2114	25,935,451,674	203,222,208	791,418	132,452	1,822,562,059	27,960,312,071
2115	27,960,312,071	209,318,874	669,008	124,377	1,964,520,237	30,133,357,797
2116	30,133,357,797	215,598,440	523,056	116,789	2,116,858,597	32,465,174,989
2117	32,465,174,989	222,066,393	405,838	109,658	2,280,316,531	34,967,042,417
2118	34,967,042,417	228,728,385	258,748	102,958	2,455,685,803	37,651,094,899
2119	37,651,094,899	235,590,237	154,439	96,664	2,643,813,513	40,530,247,546
2120	40,530,247,546	242,657,944	93,015	90,751	2,845,603,924	43,618,325,648
2121	43,618,325,648	249,937,682	52,871	85,197	3,062,025,782	46,930,151,044
2122	46,930,151,044	257,435,813	17,418	79,980	3,294,117,418	50,481,606,877
2123	50,481,606,877	265,158,887	912	75,081	3,542,990,383	54,289,680,154
2124	54,289,680,154	273,113,654	6	70,480	3,809,834,122	58,372,557,444
2125	58,372,557,444	281,307,063	3	66,159	4,095,922,453	62,749,720,798
2126	62,749,720,798	289,746,275	2	62,103	4,402,619,402	67,442,024,370
2127	67,442,024,370	298,438,663	1	58,293	4,731,385,019	72,471,789,758
2128	72,471,789,758	307,391,823	0	0	5,083,783,997	77,862,965,578

## Section 2: Accounting Information

### Exhibit 4 – Development of Blended Discount Rate *continued*

Fiscal Year Beginning	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	“Funded” Portion of Benefit	“Unfunded” Portion of Benefit	Present Value of “Funded” Benefit Payments at 7.00%	Present Value of “Unfunded” Benefit Payments at 3.65%*	Present Value of Benefit Payments at 7.00%
2022	\$845,979,471	\$53,901,848	\$53,901,848	\$0	\$52,108,883	\$0	\$52,108,883
2023	912,113,032	60,038,580	60,038,580	0	54,244,379	0	54,244,379
2024	964,020,743	64,265,554	64,265,554	0	54,264,876	0	54,264,876
2025	1,014,752,802	68,623,016	68,623,016	0	54,153,506	0	54,153,506
2026	1,064,614,186	73,327,917	73,327,917	0	54,080,706	0	54,080,706
2027	1,111,262,198	77,860,825	77,860,825	0	53,667,112	0	53,667,112
2028	1,154,940,215	82,901,975	82,901,975	0	53,403,574	0	53,403,574
2029	1,195,079,735	88,094,796	88,094,796	0	53,036,142	0	53,036,142
2030	1,231,471,316	93,045,081	93,045,081	0	52,351,763	0	52,351,763
2031	1,264,144,935	97,734,192	97,734,192	0	51,392,606	0	51,392,606
2032	1,293,247,885	102,586,939	102,586,939	0	50,415,306	0	50,415,306
2033	1,318,462,040	107,200,351	107,200,351	0	49,236,000	0	49,236,000
2034	1,339,801,894	111,589,772	111,589,772	0	47,899,080	0	47,899,080
2035	1,357,308,355	115,801,692	115,801,692	0	46,455,154	0	46,455,154
2036	1,370,984,786	119,789,352	119,789,352	0	44,911,074	0	44,911,074
2037	1,380,919,148	123,504,650	123,504,650	0	43,274,769	0	43,274,769
2038	1,387,162,794	126,978,139	126,978,139	0	41,581,162	0	41,581,162
2039	1,389,780,861	130,531,836	130,531,836	0	39,948,487	0	39,948,487
2040	1,388,511,723	133,464,977	133,464,977	0	38,173,979	0	38,173,979
2041	1,383,761,442	136,261,106	136,261,106	0	36,424,051	0	36,424,051
2042	1,375,504,242	138,810,492	138,810,492	0	34,678,065	0	34,678,065
2043	1,363,810,770	140,851,792	140,851,792	0	32,886,008	0	32,886,008
2044	1,349,021,333	142,626,848	142,626,848	0	31,121,913	0	31,121,913
2045	1,331,293,659	144,140,717	144,140,717	0	29,394,624	0	29,394,624
2046	1,310,710,774	145,360,997	145,360,997	0	27,704,183	0	27,704,183
2047	1,287,424,886	146,064,853	146,064,853	0	26,017,130	0	26,017,130
2048	1,261,813,785	146,491,244	146,491,244	0	24,386,056	0	24,386,056
2049	1,234,069,986	146,685,725	146,685,725	0	22,820,963	0	22,820,963
2050	1,204,350,975	146,734,504	146,734,504	0	21,335,095	0	21,335,095
2051	1,172,688,710	146,088,101	146,088,101	0	19,851,503	0	19,851,503
2052	1,139,755,707	145,299,654	145,299,654	0	18,452,676	0	18,452,676
2053	1,105,677,285	143,999,476	143,999,476	0	17,091,175	0	17,091,175
2054	1,070,969,785	142,431,791	142,431,791	0	15,799,166	0	15,799,166
2055	1,035,943,720	140,410,050	140,410,050	0	14,555,986	0	14,555,986
2056	1,001,118,791	138,145,301	138,145,301	0	13,384,304	0	13,384,304
2057	966,850,299	135,569,151	135,569,151	0	12,275,432	0	12,275,432
2058	933,565,612	132,581,704	132,581,704	0	11,219,557	0	11,219,557
2059	901,859,165	129,402,941	129,402,941	0	10,234,167	0	10,234,167
2060	872,122,111	126,193,933	126,193,933	0	9,327,452	0	9,327,452

\* Bond Buyer's 20-Bond GO index

## Section 2: Accounting Information

### Exhibit 4 – Development of Blended Discount Rate *continued*

Fiscal Year Beginning	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	“Funded” Portion of Benefit	“Unfunded” Portion of Benefit	Present Value of “Funded” Benefit Payments at 7.00%	Present Value of “Unfunded” Benefit Payments at 3.65%*	Present Value of Benefit Payments at 7.00%
2061	\$844,583,527	\$122,573,255	\$122,573,255	\$0	\$8,467,135	\$0	\$8,467,135
2062	819,880,955	118,863,287	118,863,287	0	7,673,699	0	7,673,699
2063	798,396,048	114,815,998	114,815,998	0	6,927,486	0	6,927,486
2064	780,787,466	111,082,125	111,082,125	0	6,263,739	0	6,263,739
2065	767,076,250	106,802,515	106,802,515	0	5,628,428	0	5,628,428
2066	758,167,430	102,304,498	102,304,498	0	5,038,678	0	5,038,678
2067	754,709,747	97,964,205	97,964,205	0	4,509,263	0	4,509,263
2068	756,998,232	93,371,542	93,371,542	0	4,016,695	0	4,016,695
2069	765,759,616	88,764,596	88,764,596	0	3,568,702	0	3,568,702
2070	781,526,195	84,174,769	84,174,769	0	3,162,778	0	3,162,778
2071	804,840,060	79,648,775	79,648,775	0	2,796,933	0	2,796,933
2072	836,226,548	75,200,892	75,200,892	0	2,467,983	0	2,467,983
2073	876,229,884	70,796,461	70,796,461	0	2,171,436	0	2,171,436
2074	925,467,582	66,455,675	66,455,675	0	1,904,951	0	1,904,951
2075	984,580,359	62,175,513	62,175,513	0	1,665,664	0	1,665,664
2076	1,054,254,169	57,964,816	57,964,816	0	1,451,271	0	1,451,271
2077	1,135,213,645	53,833,813	53,833,813	0	1,259,666	0	1,259,666
2078	1,228,225,083	49,795,215	49,795,215	0	1,088,941	0	1,088,941
2079	1,334,096,868	45,863,930	45,863,930	0	937,355	0	937,355
2080	1,453,680,228	42,044,576	42,044,576	0	803,080	0	803,080
2081	1,587,882,964	38,358,214	38,358,214	0	684,737	0	684,737
2082	1,737,656,473	34,816,243	34,816,243	0	580,849	0	580,849
2083	1,904,008,884	31,433,036	31,433,036	0	490,099	0	490,099
2084	2,088,006,033	28,226,869	28,226,869	0	411,317	0	411,317
2085	2,290,771,542	25,205,926	25,205,926	0	343,268	0	343,268
2086	2,513,501,395	22,372,251	22,372,251	0	284,745	0	284,745
2087	2,757,475,436	19,736,200	19,736,200	0	234,761	0	234,761
2088	3,024,054,725	17,307,811	17,307,811	0	192,407	0	192,407
2089	3,314,687,625	15,085,411	15,085,411	0	156,730	0	156,730
2090	3,630,928,126	13,068,078	13,068,078	0	126,889	0	126,889
2091	3,974,442,539	11,252,924	11,252,924	0	102,116	0	102,116
2092	4,347,019,478	9,632,164	9,632,164	0	81,690	0	81,690
2093	4,750,583,574	8,206,181	8,206,181	0	65,043	0	65,043
2094	5,187,196,632	6,958,804	6,958,804	0	51,548	0	51,548
2095	5,659,084,449	5,886,801	5,886,801	0	40,754	0	40,754
2096	6,168,634,993	4,980,173	4,980,173	0	32,222	0	32,222
2097	6,718,416,850	4,209,563	4,209,563	0	25,454	0	25,454
2098	7,311,211,993	3,570,275	3,570,275	0	20,176	0	20,176
2099	7,950,005,292	3,040,056	3,040,056	0	16,056	0	16,056

\* Bond Buyer's 20-Bond GO index

## Section 2: Accounting Information

### Exhibit 4 – Development of Blended Discount Rate *continued*

Fiscal Year Beginning	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	“Funded” Portion of Benefit	“Unfunded” Portion of Benefit	Present Value of “Funded” Benefit Payments at 7.00%	Present Value of “Unfunded” Benefit Payments at 3.65%*	Present Value of Benefit Payments at 7.00%
2100	\$8,638,016,984	\$2,619,635	\$2,619,635	\$0	\$12,930	\$0	\$12,930
2101	9,378,695,464	2,283,451	2,283,451	0	10,534	0	10,534
2102	10,175,760,565	2,012,535	2,012,535	0	8,677	0	8,677
2103	11,033,215,844	1,796,746	1,796,746	0	7,240	0	7,240
2104	11,955,359,411	1,649,243	1,649,243	0	6,210	0	6,210
2105	12,946,780,544	1,529,186	1,529,186	0	5,382	0	5,382
2106	14,012,436,077	1,403,471	1,403,471	0	4,616	0	4,616
2107	15,157,668,237	1,345,238	1,345,238	0	4,135	0	4,135
2108	16,388,121,780	1,255,519	1,255,519	0	3,607	0	3,607
2109	17,709,943,425	1,176,685	1,176,685	0	3,159	0	3,159
2110	19,129,670,835	1,099,241	1,099,241	0	2,758	0	2,758
2111	20,654,313,794	1,021,682	1,021,682	0	2,396	0	2,396
2112	22,291,379,129	963,351	963,351	0	2,111	0	2,111
2113	24,048,884,059	886,003	886,003	0	1,815	0	1,815
2114	25,935,451,674	791,418	791,418	0	1,515	0	1,515
2115	27,960,312,071	669,008	669,008	0	1,197	0	1,197
2116	30,133,357,797	523,056	523,056	0	875	0	875
2117	32,465,174,989	405,838	405,838	0	634	0	634
2118	34,967,042,417	258,748	258,748	0	378	0	378
2119	37,651,094,899	154,439	154,439	0	211	0	211
2120	40,530,247,546	93,015	93,015	0	119	0	119
2121	43,618,325,648	52,871	52,871	0	63	0	63
2122	46,930,151,044	17,418	17,418	0	19	0	19
2123	50,481,606,877	912	912	0	1	0	1
2124	54,289,680,154	6	6	0	0	0	0
2125	58,372,557,444	3	3	0	0	0	0
2126	62,749,720,798	2	2	0	0	0	0
2127	67,442,024,370	1	1	0	0	0	0
2128	72,471,789,758	0	0	0	0	0	0
<b>Total</b>					<b>\$1,439,383,386</b>	<b>\$0</b>	<b>\$1,439,383,386</b>

\* Bond Buyer's 20-Bond GO index



# Section 3: Supplemental Information

## Exhibit I: Actuarial Assumptions and Methods

<b>Rationale for Assumptions:</b>	The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is shown in the Actuarial Experience Review dated September 18, 2023 (as prepared by Segal) and in the Economic Experience Study (as prepared by the Gabriel Roeder Smith actuarial consulting firm) adopted by the Vermont Pension Investment Commission during their meeting on July 25, 2023.																				
<b>Roll-forward Techniques:</b>	The results as of June 30, 2023, are based on the results of the Vermont Municipal Employees' Retirement System Actuarial Valuation Report as of June 30, 2022, adjusted forward, using standard actuarial techniques. Total Pension Liability as of June 30, 2023, reflects changes to actuarial assumptions that were adopted as part of the Actuarial Experience Review dated September 18, 2023.																				
<b>Inflation:</b>	2.30%.																				
<b>Investment Return:</b>	7.00%. The investment return assumption is a long-term estimate derived from historical data, current and recent market expectations, and professional judgment. As part of the analysis, a building block approach was used that reflects inflation expectations and anticipated risk premiums for each of the portfolio's asset classes, as well as the System's target asset allocation.																				
<b>Salary Increases:</b>	Varying service based rates depending on years of service <table border="1"> <thead> <tr> <th>Service</th> <th>Annual Rate of Salary Increase (%)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>6.21</td> </tr> <tr> <td>5</td> <td>5.69</td> </tr> <tr> <td>10</td> <td>5.06</td> </tr> <tr> <td>15</td> <td>4.80</td> </tr> <tr> <td>20</td> <td>4.67</td> </tr> <tr> <td>25</td> <td>4.46</td> </tr> <tr> <td>30</td> <td>4.26</td> </tr> <tr> <td>35</td> <td>4.13</td> </tr> <tr> <td>37+</td> <td>4.07</td> </tr> </tbody> </table>	Service	Annual Rate of Salary Increase (%)	0	6.21	5	5.69	10	5.06	15	4.80	20	4.67	25	4.46	30	4.26	35	4.13	37+	4.07
Service	Annual Rate of Salary Increase (%)																				
0	6.21																				
5	5.69																				
10	5.06																				
15	4.80																				
20	4.67																				
25	4.46																				
30	4.26																				
35	4.13																				
37+	4.07																				

## Section 3: Supplemental Information

<b>Cost-of-Living Adjustments:</b>	Assumed to occur on January 1 following one year of retirement at the rate of 1.10% per annum for Group A members and 1.20% per annum for Groups B, C and D members (beginning at Normal Retirement eligibility age for members who elect reduced early retirement, at age 62 for members of Groups A, B, and D who receive a disability retirement benefit, and at age 55 for members of Group C who receive a disability retirement benefit). The January 1, 2024, COLA is expected to be 1.10% for Group A and 1.10% for Groups B, C, and D. The January 1, 2023, COLAs were 2.00% for Group A and 3.00% for Groups B, C, and D.
<b>Mortality Rates:</b>	<p><i>Pre-retirement:</i></p> <ul style="list-style-type: none"> <li>• Groups A/B 60% PubG-2010 General Employee Amount-Weighted Below-Median and 40% of PubG-2010 General Employee Amount-Weighted, with generational projection using Scale MP-2021.</li> <li>• Group C PubG-2010 General Employee Amount-Weighted, with generational projection using scale MP-2021.</li> <li>• Group D PubS-2010 Public Safety Employee Amount-Weighted Below-Median, with generational projection using scale MP-2021.</li> </ul> <p><i>Healthy Post-retirement - Retirees:</i></p> <ul style="list-style-type: none"> <li>• Groups A/B PubG-2010 General Healthy Retiree Amount-Weighted Below Median Table with credibility adjustments of 90% and 87% for the Male and Female tables, respectively, with generational projection using scale MP-2021.</li> <li>• Group C PubG-2010 General Healthy Retiree Amount-Weighted Table, with generational projection using scale MP-2021.</li> <li>• Group D PubS-2010 Public Safety Retiree Amount-Weighted Below-Median Table, with generational projection using scale MP-2021.</li> </ul> <p><i>Healthy Post-retirement - Beneficiaries:</i></p> <ul style="list-style-type: none"> <li>• All Groups Pub-2010 Contingent Survivor Amount-Weighted Below-Median Table, with generational projection using scale MP-2021.</li> </ul> <p><i>Disabled Post-retirement:</i></p> <ul style="list-style-type: none"> <li>• Groups A/B/C PubNS-2010 Non-Safety Disabled Retiree Amount-Weighted Table with generational projection using Scale MP-2021.</li> <li>• Group D PubS-2010 Safety Disabled Retiree Amount-Weighted Table with generational projection using Scale MP-2021.</li> </ul> <p>The tables with the generational projection to the ages of members as of the measurement date reasonably reflect the mortality experience of the System as of the measurement date. The mortality rates were based on historical and current demographic data, adjusted to reflect health characteristics of the underlying groups and estimated future experience and professional judgment. The mortality tables were then adjusted to future years using the generational projection to reflect future mortality improvement between the measurement date and those years.</p>

## Section 3: Supplemental Information

### Withdrawal from Service before Retirement:

Assumed annual rates of withdrawal are as follows:

Group A and B		Group C and D	
Years of Service	Unisex Rate (%)	Years of Service	Unisex Rate (%)
0 - 2	18.50	0-2	16.00
3	16.50	3	14.20
4	14.50	4	12.40
5	12.50	5	10.60
6	10.50	6	8.80
7	8.50	7	7.00
8	8.30	8	6.30
9	8.10	9	5.60
10	7.90	10	4.90
11	7.70	11	4.20
12	7.50	12+	3.50
13	7.20		
14	6.90		
15	6.60		
16	6.30		
17 - 22	6.00		
23	5.80		
24	5.60		
25	5.40		
26	5.20		
27+	5.00		

## Section 3: Supplemental Information

### Disability Incidence:

Representative values of the assumed annual rates of disability incidence are as follows:

Age	Group A and B Rate (%) <sup>1</sup>		Group C and D Rate (%) <sup>1</sup>	
	Male	Female	Male	Female
25	0.0190	0.0060	0.0120	0.0030
30	0.0250	0.0080	0.0150	0.0030
35	0.0320	0.0100	0.0200	0.0040
40	0.0570	0.0180	0.0350	0.0080
45	0.0950	0.0300	0.0580	0.0130
50	0.1710	0.0540	0.1040	0.0230
55	0.3420	0.1080	0.2070	0.0450
60	0.5990	0.1890	0.3620	0.0790
65	0.5990	0.1890	0.3620	0.0790

<sup>1</sup> Disability rates stop after age 55 with 5 or more years of service for Group B, C and D members and after age 55 with 35 or more years of service for Group A members.

## Section 3: Supplemental Information

### Retirement Rates:

Retirement Group A					
Age	Male	Female	Age	Male	Female
55	1.00%	2.00%	63	15.00%	10.00%
56	1.00	4.00	64	25.00	17.50
57	2.00	4.00	65	25.00	17.50
58	2.00	4.00	66	25.00	20.00
59	6.00	5.00	67	25.00	20.00
60	7.00	5.00	68	25.00	22.50
61	7.00	6.00	69	25.00	25.00
62	15.00	8.00	70	100.00	100.00

Retirement Group B					
Age	Male	Female	Age	Male	Female
55	4.00%	3.00%	63	20.00%	12.50%
56	4.00	3.00	64	22.50	20.00
57	4.00	3.00	65	25.00	30.00
58	4.00	3.00	66	25.00	30.00
59	4.00	4.00	67	25.00	17.50
60	4.00	4.00	68	25.00	20.00
61	10.00	10.00	69	25.00	25.00
62	20.00	12.50	70	100.00	100.00

## Section 3: Supplemental Information

### Retirement Rates: (continued)

Retirement Group C			
Age	Unisex	Age	Unisex
55	22.50%	63	12.50%
56	7.50	64	20.00
57	7.50	65	40.00
58	12.50	66	40.00
59	12.50	67	30.00
60	12.50	68	30.00
61	7.50	69	30.00
62	20.00	70	100.00

Retirement Group D			
Age	Unisex	Age	Unisex
50	10.00%	58	25.00%
51	10.00	59	25.00
52	10.00	60	5.00
53	10.00	61	5.00
54	10.00	62	5.00
55	25.00	63	5.00
56	25.00	64	5.00
57	25.00	65	5.00

Rates shown are for members with 5 or more years of service (unless otherwise indicated). For members with less than 5 years of service, 0% is assumed.

## Section 3: Supplemental Information

<b>Inactive Members as Reported by the System:</b>	<p>Not Vested: Valuation liability equals 100% of accumulated contributions.</p> <p>Vested: Valuation liability is based on accrued benefit and members are assumed to retire 10% of the time each year from their Early Retirement Age until their Normal Retirement Age, then 100% of the time at their Normal Retirement age, with a deferred vested benefit.</p>
<b>Deferred Members as Reported by the System:</b>	Assumed to retire 10% of the time each year from their Early Retirement Age until their Normal Retirement Age, then 100% of the time at their Normal Retirement age, with a deferred vested benefit.
<b>Unknown Data for Members:</b>	Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.
<b>Percent Married:</b>	85% of male members and 50% of female members are assumed to be married.
<b>Age of Spouse:</b>	Females three years younger than males.
<b>Benefit Elections:</b>	<p>Non-Group D: All members are assumed to elect the single life annuity.</p> <p>Group D: Single members are assumed to elect the single life annuity. Married members are assumed to elect the 70% joint &amp; survivor option.</p>
<b>Actuarial Cost Method:</b>	Entry Age Actuarial Cost Method. Entry Age is the age at date of employment or, if date is unknown, current age minus years of service. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by salary, with Normal Cost determined using the plan of benefits applicable to each participant.
<b>Changes in Actuarial Assumptions:</b>	<p>Effective for the June 30, 2023, actuarial valuation, the following actuarial assumptions were changed according to past experience and future expectations:</p> <ul style="list-style-type: none"> <li>• Salary Increase,</li> <li>• Death After Retirement,</li> <li>• Death in Active Service,</li> <li>• Termination Before Retirement,</li> <li>• Disability Incidence, and</li> <li>• Retirement.</li> </ul>

## Section 3: Supplemental Information

### Exhibit II: Summary of Plan Provisions

This exhibit summarizes the major provisions of the Plan included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

<b>Effective Date:</b>	July 1, 1975.
<b>Credible Service:</b>	Service as a member plus purchased service.
<b>Membership:</b>	Full time employees of participating municipalities. Municipality elects coverage under Groups A, B, C, or D provisions.
<b>Average Final Compensation (AFC):</b>	<ul style="list-style-type: none"> <li>• Group A: Average annual compensation during highest 5 consecutive years.</li> <li>• Group B/C: Average annual compensation during highest 3 consecutive years.</li> <li>• Group D: Average annual compensation during highest 2 consecutive years.</li> </ul>
<b>Normal Retirement – Eligibility:</b>	<ul style="list-style-type: none"> <li>• Group A: Earlier of age 65 with 5 years of service or age 55 with 35 years of service.</li> <li>• Group B: Earlier of age 62 with 5 years of service or age 55 with 30 years of service.</li> <li>• Groups C/D: Age 55 with 5 years of service.</li> </ul>
<b>Normal Retirement – Amount:</b>	<ul style="list-style-type: none"> <li>• Group A: 1.4% of AFC times service.</li> <li>• Group B: 1.7% of AFC times service as a Group B member plus percentage earned as a Group A member times AFC.</li> <li>• Group C: 2.5% of AFC times service as a Group C member plus percentage earned as a Group A or B member times AFC.</li> <li>• Group D: 2.5% of AFC times service as a Group D member plus percentage earned as a Group A, B or C member times AFC.</li> </ul> <p>Maximum benefit is 60% of AFC for Groups A and B and 50% of AFC for Groups C and D. The above amounts include the portion of the allowance provided by member contributions.</p>
<b>Early Retirement – Eligibility:</b>	<ul style="list-style-type: none"> <li>• Groups A/B: Age 55 with 5 years of service.</li> <li>• Group C: None.</li> <li>• Group D: Age 50 with 20 years of service.</li> </ul>
<b>Early Retirement – Amount:</b>	Normal retirement allowance based on service and AFC at early retirement, reduced by 6% for each year commencement precedes Normal Retirement Age for Group A and B members; payable without reduction to Group D members.



## Section 3: Supplemental Information

<b>Vesting:</b>	All groups – 5 years of service. Allowance beginning at normal retirement age based on AFC and service at termination. The AFC is to be adjusted annually by one-half of the percentage change in the Consumer Price Index, subject to the limits on “Post-Retirement Adjustments” described below.
<b>Disability Retirement – Eligibility:</b>	All groups – 5 years of service and disability as determined by Retirement Board.
<b>Disability Retirement – Amount:</b>	All groups – Immediate allowance based on AFC and service to date of disability. Children’s benefit of 10% of AFC payable to up to three minor children (or children up to age 23 if enrolled in full-time studies) of a disabled Group D member.
<b>Death Benefit – Eligibility:</b>	All groups – Death after 5 years of service.
<b>Death Benefit – Amount:</b>	<ul style="list-style-type: none"> <li>• Groups A/B/C: Reduced early retirement allowance under 100% survivor option commencing immediately or, if greater, survivor’s benefit under disability allowance computed as of date of death.</li> <li>• Group D: 70% of the unreduced accrued benefit, plus children’s benefit.</li> </ul>
<b>Post-Retirement Adjustments:</b>	<ul style="list-style-type: none"> <li>• Group A: Allowances in pay status for at least one year increased on each January 1 by one-half of the percentage increase in Consumer Price Index, but not more than 2%. If receiving an Early Retirement benefit, no increases until after reaching attaining Normal Retirement eligibility. If receiving a Disability Retirement benefit, no increases until after attaining age 62.</li> <li>• Groups B/C/D: Allowances in payment for at least one year increased on each January 1 by one-half of the percentage increase in Consumer Price Index, but not more than 3%. If receiving an Early Retirement benefit, no increases until after reaching attaining Normal Retirement eligibility. If receiving a Disability Retirement benefit, no increases until after attaining age 62 (age 55 for Group C).</li> </ul>
<b>Retirement Stipend:</b>	\$25 per month payable at the option of the Retirement Board.
<b>Optional Benefit and Death after Retirement:</b>	<ul style="list-style-type: none"> <li>• Group A/B/C: A lifetime allowance or actuarially equivalent 50% or 100% joint and survivor allowance with refund of contribution guarantee.</li> <li>• Group D: A lifetime allowance or 70% contingent annuitant option with no reduction.</li> </ul>
<b>Refund of Contributions:</b>	Upon termination, if the member so elects, or if no other benefit is payable, the member’s accumulated contributions with interest are refunded.

## Section 3: Supplemental Information

<b>Member Contribution Rates:</b>	<ul style="list-style-type: none"> <li>• Group A 3.75% effective July 1, 2023; 4.00% effective July 1, 2024; 4.25% effective July 1, 2025, and thereafter.</li> <li>• Group B 6.125% effective July 1, 2023; 6.375% effective July 1, 2024; 6.625% effective July 1, 2025, and thereafter.</li> <li>• Group C 11.25% effective July 1, 2023; 11.50% effective July 1, 2024; 11.75% effective July 1, 2025, and thereafter.</li> <li>• Group D 12.60% effective July 1, 2023; 12.85% effective July 1, 2024; 13.10% effective July 1, 2025, and thereafter.</li> </ul>
<b>Employer Contribution Rates:</b>	<ul style="list-style-type: none"> <li>• Group A 5.25% effective July 1, 2023; 5.50% effective July 1, 2024; 5.75% effective July 1, 2025, and thereafter.</li> <li>• Group B 6.75% effective July 1, 2023; 7.00% effective July 1, 2024; 7.25% effective July 1, 2025, and thereafter.</li> <li>• Group C 8.50% effective July 1, 2023; 8.75% effective July 1, 2024; 9.00% effective July 1, 2025, and thereafter.</li> <li>• Group D 11.10% effective July 1, 2023; 11.35% effective July 1, 2024; 11.60% effective July 1, 2025, and thereafter.</li> </ul>
<b>Changes in Plan Provisions:</b>	Aside from the future contribution rate increases shown above, there were no other changes in plan provisions since the prior valuation.

# Appendix: Definition of Terms

Definitions of certain terms *as they are used in Statements 67/68*. The terms may have different meanings in other contexts.

<b>Active Employees:</b>	Individuals employed at the end of the reporting or measurement period, as applicable.
<b>Actual Contributions:</b>	Cash contributions recognized as additions to a pension Plan Fiduciary Net Position.
<b>Actuarial Present Value of Projected Benefit Payments:</b>	Projected benefit payments discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment.
<b>Actuarial Valuation:</b>	The determination, as of a point in time (the actuarial valuation date), of the service cost, Total Pension Liability, and related actuarial present value of projected benefit payments for pensions performed in conformity with Actuarial Standards of Practice unless otherwise specified by the GASB.
<b>Actuarial Valuation Date:</b>	The date as of which an actuarial valuation is performed.
<b>Actuarially Determined Contribution:</b>	A target or recommended contribution to a defined benefit pension plan for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.
<b>Ad Hoc Cost-of-Living Adjustments (Ad Hoc COLAs):</b>	Cost-of-living adjustments that require a decision to grant by the authority responsible for making such decisions.
<b>Ad Hoc Postemployment Benefit Changes:</b>	Postemployment benefit changes that require a decision to grant by the authority responsible for making such decisions.
<b>Agent Employer:</b>	An employer whose employees are provided with pensions through an agent multiple-employer defined benefit pension plan.
<b>Agent Multiple-Employer Defined Benefit Pension Plan (Agent Pension Plan):</b>	A multiple-employer defined benefit pension plan in which pension plan assets are pooled for investment purposes but separate accounts are maintained for each individual employer so that each employer's share of the pooled assets is legally available to pay the benefits of only its employees.
<b>Allocated Insurance Contract:</b>	A contract with an insurance company under which related payments to the insurance company are currently used to purchase immediate or deferred annuities for individual employees. Also may be referred to as an annuity contract.

## Appendix: Definition of Terms

<b>Automatic Cost-of-Living Adjustments (Automatic COLAs):</b>	Cost-of-living adjustments that occur without a requirement for a decision to grant by a responsible authority, including those for which the amounts are determined by reference to a specified experience factor (such as the earnings experience of the pension plan) or to another variable (such as an increase in the consumer price index).
<b>Automatic Postemployment Benefit Changes:</b>	Postemployment benefit changes that occur without a requirement for a decision to grant by a responsible authority, including those for which the amounts are determined by reference to a specified experience factor (such as the earnings experience of the pension plan) or to another variable (such as an increase in the consumer price index).
<b>Closed Period:</b>	A specific number of years that is counted from one date and declines to zero with the passage of time. For example, if the recognition period initially is five years on a closed basis, four years remain after the first year, three years after the second year, and so forth.
<b>Collective Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions:</b>	Deferred outflows of resources and deferred inflows of resources related to pensions arising from certain changes in the collective Net Pension Liability.
<b>Collective Net Pension Liability:</b>	The Net Pension Liability for benefits provided through (1) a cost-sharing pension plan or (2) a single-employer or agent pension plan in circumstances in which there is a special funding situation.
<b>Collective Pension Expense:</b>	Pension expense arising from certain changes in the collective Net Pension Liability.
<b>Contributions:</b>	Additions to a pension plan's Fiduciary Net Position for amounts from employers, nonemployer contributing entities (for example, state government contributions to a local government pension plan), or employees. Contributions can result from cash receipts by the pension plan or from recognition by the pension plan of a receivable from one of these sources.
<b>Cost-of-Living Adjustments:</b>	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
<b>Cost-Sharing Employer:</b>	An employer whose employees are provided with pensions through a cost-sharing multiple-employer defined benefit pension plan.
<b>Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (Cost-Sharing Pension Plan):</b>	A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.
<b>Covered-Employee Payroll:</b>	The payroll of employees that are provided with pensions through the pension plan.

## Appendix: Definition of Terms

<b>Deferred Retirement Option Program (DROP):</b>	A program that permits an employee to elect a calculation of benefit payments based on service credits and salary, as applicable, as of the DROP entry date. The employee continues to provide service to the employer and is paid for that service by the employer after the DROP entry date; however, the pensions that would have been paid to the employee (if the employee had retired and not entered the DROP) are credited to an individual employee account within the defined benefit pension plan until the end of the DROP period.
<b>Defined Benefit Pension Plans:</b>	Pension plans that are used to provide defined benefit pensions.
<b>Defined Benefit Pensions:</b>	Pensions for which the income or other benefits that the employee will receive at or after separation from employment are defined by the benefit terms. The pensions may be stated as a specified dollar amount or as an amount that is calculated based on one or more factors such as age, years of service, and compensation. (A pension that does not meet the criteria of a defined contribution pension is classified as a defined benefit pension for purposes of Statements 67/68.)
<b>Defined Contribution Pension Plans:</b>	Pension plans that are used to provide defined contribution pensions.
<b>Defined Contribution Pensions:</b>	Pensions having terms that (1) provide an individual account for each employee; (2) define the contributions that an employer is required to make (or the credits that it is required to provide) to an active employee's account for periods in which that employee renders service; and (3) provide that the pensions an employee will receive will depend only on the contributions (or credits) to the employee's account, actual earnings on investments of those contributions (or credits), and the effects of forfeitures of contributions (or credits) made for other employees, as well as pension plan administrative costs, that are allocated to the employee's account.
<b>Discount Rate:</b>	<p>The single rate of return that, when applied to all projected benefit payments, results in an actuarial present value of projected benefit payments equal to the total of the following:</p> <ol style="list-style-type: none"><li>1. The actuarial present value of benefit payments projected to be made in future periods in which (a) the amount of the pension plan's Fiduciary Net Position is projected (under the requirements of Statements 67/68) to be greater than the benefit payments that are projected to be made in that period and (b) pension plan assets up to that point are expected to be invested using a strategy to achieve the long-term expected rate of return, calculated using the long-term expected rate of return on pension plan investments.</li><li>2. The actuarial present value of projected benefit payments not included in (1), calculated using the municipal bond rate.</li></ol>

## Appendix: Definition of Terms

<b>Entry Age Actuarial Cost Method:</b>	A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age(s). The portion of this actuarial present value allocated to a valuation year is called the <i>normal cost</i> . The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is called the <i>actuarial accrued liability</i> .
<b>Inactive Employees:</b>	Terminated individuals that have accumulated benefits but are not yet receiving them, and retirees or their beneficiaries currently receiving benefits.
<b>Measurement Period:</b>	The period between the prior and the current measurement dates.
<b>Multiple-Employer Defined Benefit Pension Plan:</b>	A defined benefit pension plan that is used to provide pensions to the employees of more than one employer.
<b>Net Pension Liability (NPL):</b>	The liability of employers and non-employer contributing entities to employees for benefits provided through a defined benefit pension plan.
<b>Non-Employer Contributing Entities:</b>	Entities that make contributions to a pension plan that is used to provide pensions to the employees of other entities. For purposes of Statements 67/68, employees are not considered non-employer contributing entities.
<b>Other Postemployment Benefits:</b>	All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment healthcare benefits, regardless of the manner in which they are provided. Other postemployment benefits do not include termination benefits.
<b>Pension Plans:</b>	Arrangements through which pensions are determined, assets dedicated for pensions are accumulated and managed and benefits are paid as they come due.
<b>Pensions:</b>	Retirement income and, if provided through a pension plan, postemployment benefits other than retirement income (such as death benefits, life insurance, and disability benefits). Pensions do not include postemployment healthcare benefits and termination benefits.
<b>Plan Members:</b>	Individuals that are covered under the terms of a pension plan. Plan members generally include (1) employees in active service (active plan members) and (2) terminated employees who have accumulated benefits but are not yet receiving them and retirees or their beneficiaries currently receiving benefits (inactive plan members).
<b>Postemployment</b>	The period after employment.
<b>Postemployment Benefit Changes:</b>	Adjustments to the pension of an inactive employee.
<b>Postemployment Healthcare Benefits:</b>	Medical, dental, vision, and other health-related benefits paid subsequent to the termination of employment.

## Appendix: Definition of Terms

<b>Projected Benefit Payments:</b>	All benefits estimated to be payable through the pension plan to current active and inactive employees as a result of their past service and their expected future service.
<b>Public Employee Retirement System:</b>	A special-purpose government that administers one or more pension plans; also may administer other types of employee benefit plans, including postemployment healthcare plans and deferred compensation plans.
<b>Real Rate of Return:</b>	The rate of return on an investment after adjustment to eliminate inflation.
<b>Service Costs:</b>	The portions of the actuarial present value of projected benefit payments that are attributed to valuation years.
<b>Single Employer:</b>	An employer whose employees are provided with pensions through a single-employer defined benefit pension plan.
<b>Single-Employer Defined Benefit Pension Plan (Single-Employer Pension Plan):</b>	A defined benefit pension plan that is used to provide pensions to employees of only one employer.
<b>Special Funding Situations:</b>	<p>Circumstances in which a nonemployer entity is legally responsible for making contributions directly to a pension plan that is used to provide pensions to the employees of another entity or entities and either of the following conditions exists:</p> <p>The amount of contributions for which the nonemployer entity legally is responsible is not dependent upon one or more events or circumstances unrelated to the pensions.</p> <p>The nonemployer entity is the only entity with a legal obligation to make contributions directly to a pension plan.</p>
<b>Termination Benefits:</b>	Inducements offered by employers to active employees to hasten the termination of services, or payments made in consequence of the early termination of services. Termination benefits include early-retirement incentives, severance benefits, and other termination-related benefits.
<b>Total Pension Liability (TPL):</b>	The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service in conformity with the requirements of Statement.

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