

# GASB Statement No. 67 - Virginia Retirement System

GASB Statement No. 67 Plan Reporting and  
Accounting Schedules

June 30, 2022



# Table of Contents

<b>Section A: Executive Summary</b> .....	<b>1</b>
Executive Summary .....	1
Discussion .....	2
<b>Section B: Required Supplementary Information</b> .....	<b>6</b>
Multiyear Schedule of Changes in Net Pension Liability/(Asset) and Related Ratios .....	6
Multiyear Schedule of the Net Pension Liability/(Asset) .....	12
Multiyear Schedule of Contributions .....	15
Notes to Schedule of Contributions .....	17
<b>Section C: Notes to Financial Statements</b> .....	<b>18</b>
Summary of Membership .....	18
Asset Allocation .....	19
Sensitivity of Total Pension Liability to the Single Discount Rate Assumption .....	20
<b>Section D: Other Disclosures</b> .....	<b>21</b>
<b>Section E: Glossary of Terms</b> .....	<b>22</b>





December 5, 2022

Board of Trustees  
Virginia Retirement System  
1200 E. Main Street  
Richmond, VA 23219

Dear Board Members:

This report provides certain information requested by the Virginia Retirement System (“VRS”) in connection with the Governmental Accounting Standards Board (GASB) Statement No. 67 “Accounting and Financial Reporting for Pension Plans.”

The actuarial calculations in connection with this report were prepared for the purpose of complying with the requirements of GASB Statement No. 67. These calculations have been made on a basis that is consistent with our understanding of this Statement. The calculation of the plan’s liability for this report is not applicable for funding purposes of the plan. A calculation of the plan’s liability for purposes other than satisfying the requirements of GASB Statement No. 67 may produce significantly different results.

This report may be provided to parties other than the VRS only in its entirety and only with the permission of the VRS. GRS is not responsible for unauthorized use of this report.

The report was based upon information, provided by the VRS, concerning Retirement System benefits, financial transactions, and active members, terminated members, retirees and beneficiaries. We checked for internal consistency, but did not audit the data. We are not responsible for the accuracy or completeness of any data provided by the VRS.

This report complements the actuarial valuation report provided to the Board by the prior actuary and should be considered in conjunction with that report. Please see the actuarial valuation reports as of June 30, 2021 for additional discussion of the nature of actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions.

This report is intended to assist in preparation of the financial statements of VRS and its participating employers. Financial statements are the responsibility of the reporting entity and not the actuary. The statements are subject to an auditor’s review. Please let us know if the plan’s auditor recommends any changes.

Valuation results are developed through the use of multiple models.

Valuation liabilities were prepared using ProVal's valuation model, a software product of Winklevoss Technologies. We are relying on the ProVal model. We performed tests of the ProVal model with this assignment and made a reasonable attempt to understand the developer's intended purpose of, general operation of, major sensitivities and dependencies within, and key strengths and limitations of the ProVal model. In our professional judgment, the ProVal valuation model has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses.

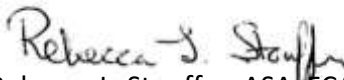
Financial results were prepared using our financing model which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

This report was prepared during the COVID-19 pandemic, which is likely to influence demographic and economic experience, at least in the short term. Results in this report are developed based on available data without adjustment. We will continue to monitor these developments and their impact on the Retirement System. Actual experience will be reflected in each subsequent report, as experience emerges.

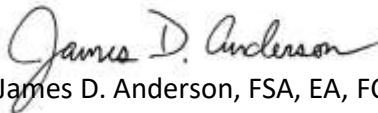
To the best of our knowledge, the information contained in this report is accurate, and fairly represents the actuarial position of VRS. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Rebecca L. Stouffer, James D. Anderson, and Richard C. Koch Jr. are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the Academy of Actuaries to render the actuarial opinions contained herein. The signing actuaries are independent of the plan sponsor.

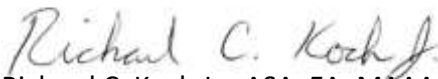
Respectfully submitted,  
Gabriel, Roeder, Smith & Company



Rebecca L. Stouffer, ASA, FCA, MAAA



James D. Anderson, FSA, EA, FCA, MAAA



Richard C. Koch Jr., ASA, EA, MAAA

RLS/JDA/RCK:dj



## **SECTION A**

---

### **EXECUTIVE SUMMARY**

## Executive Summary as of June 30, 2022

	State Employees	Teachers	State Police	Judicial	Virginia Law Officers	Political Subdivisions
Actuarial Valuation Date	June 30, 2021	June 30, 2021	June 30, 2021	June 30, 2021	June 30, 2021	June 30, 2021
Measurement Date of the Net Pension Liability	June 30, 2022	June 30, 2022	June 30, 2022	June 30, 2022	June 30, 2022	June 30, 2022
<b>Membership (as of the valuation date)</b>						
Number of						
- Retirees and Beneficiaries	70,231	106,011	1,755	577	6,234	80,790
- Inactive Vested Members	14,555	28,677	184	6	1,340	20,372
- Inactive Nonvested Members	32,979	41,266	264	0	6,460	46,323
- Long Term Disability	2,005	15	25	0	499	55
- Active Elsewhere in VRS	9,086	5,974	229	5	3,493	35,088
- Active Employees	73,686	149,793	1,947	453	7,823	108,613
- Total	202,542	331,736	4,404	1,041	25,849	291,241
Covered-Employee Payroll <sup>1</sup>	\$ 4,661,990,509	\$ 9,319,260,057	\$ 138,643,566	\$ 79,539,271	\$ 338,767,528	\$ 5,699,595,938
<b>Single Equivalent Interest Rate (SEIR)</b>						
Long-Term Expected Rate of Return	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%
Municipal Bond Index Rate at Prior Measurement Date <sup>2</sup>	N/A	N/A	N/A	N/A	N/A	2.16%
Municipal Bond Index Rate at Measurement Date <sup>3</sup>	N/A	N/A	N/A	N/A	N/A	3.69%
Fiscal year in which Plan's Fiduciary Net Position is projected to be depleted from future benefit payments for current members	N/A	N/A	N/A	N/A	N/A	N/A
Single Equivalent Interest Rate at Prior Measurement Date	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%
Single Equivalent Interest Rate <sup>4</sup>	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%
<b>Net Pension Liability/(Asset)</b>						
Total Pension Liability (TPL)	\$ 27,117,746,241	\$ 54,732,329,433	\$ 1,355,955,921	\$ 760,193,007	\$ 2,474,068,715	\$ 28,149,356,871
Plan Fiduciary Net Position (PFNP)	22,579,326,240	45,211,730,774	1,031,383,369	656,964,466	1,841,041,323	26,045,031,183
Net Pension Liability/(Asset) (NPL = TPL - PFNP)	\$ 4,538,420,001	\$ 9,520,598,659	\$ 324,572,552	\$ 103,228,541	\$ 633,027,392	\$ 2,104,325,688
PFNP as a percentage of TPL/(Asset) (=PFNP/TPL)	83.26%	82.61%	76.06%	86.42%	74.41%	92.52%

<sup>1</sup> Covered-Employee Payroll is for the year ending June 30, 2022 and was provided by VRS.

<sup>2</sup> Provided by the prior Actuary, as the Bond Buyers Obligation 20-Year Municipal Bond Index Rate published for the last week in June 2021.

<sup>3</sup> Source: Fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-year Municipal GO AA Index" as of June 30, 2022. In describing this index, Fidelity notes that the Municipal Curves are constructed using option-adjusted analytics of a diverse population of over 10,000 tax-exempt securities. The municipal bond rate is used as the discount rate in years where assets are not projected to be sufficient to meet benefit payments.

<sup>4</sup> The Single Equivalent Interest Rate for one Political Subdivision Plan – Upper Valley Regional Park Authority (55490) – was the municipal bond index rate.

Note: There was a change in actuarial service providers during calendar year 2022. Throughout this report, information prior to 2022 was provided by the prior actuarial service provider.



# Discussion

## Accounting Standard

For pension plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 67, “Financial Reporting for Pension Plans,” replaces the requirements of GASB Statement No. 25, “Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans,” and GASB Statement No. 50, “Pension Disclosures.” GASB Statement No. 67 establishes standards of financial reporting for separately issued financial reports and specifies the required approach for measuring the pension liability of employers and non-employer contributing entities for benefits provided through the pension plan.

The following discussion provides a summary of the information that is required to be disclosed under this accounting standard. A number of these disclosure items are provided in this report. However, certain information, such as notes regarding accounting policies and investments, is not included in this report, and your internal staff will be responsible for preparing that information to comply with this accounting standard.

## Financial Statements

GASB Statement No. 67 requires defined benefit pension plans to present two financial statements – a statement of fiduciary net position and a statement of changes in fiduciary net position.

The *statement of fiduciary net position* presents the following items as of the end of the pension plan’s reporting period, such as:

- assets;
- deferred inflows and outflows of resources;
- liabilities; and
- fiduciary net position (assets, plus deferred outflows, minus liabilities, minus deferred inflows).

The *statement of changes in fiduciary net position* presents the following for the plan’s reporting period:

- additions, such as contributions and investment income;
- deductions, such as benefit payments and expenses; and
- net increase or decrease in the fiduciary net position (the difference between additions and deductions).

## Notes to Financial Statements

GASB Statement No. 67 also requires the notes of the plan's financial statements to include additional disclosure information. This disclosure information should include:

- a description of the types of benefits provided by the plan, as well as automatic or ad hoc COLAs;
- the number and classes of employees covered by the benefit terms;
- the composition of the pension plan's Board and the authority under which benefit terms may be amended;
- a description of the plan's funding policy, which includes member and employer contribution requirements;
- the pension plan's investment policies;
- a description of how fair value is determined;
- concentrations of investments greater than or equal to 5%;
- annual money-weighted rate of return on pension plan investments;
- the portion of the present value of benefits to be provided through the pension plan to current active and inactive plan members;
- the pension plan's fiduciary net position;
- the net pension liability/(asset);
- the pension plan's fiduciary net position as a percentage of the total pension liability;
- significant assumptions and methods used to calculate the total pension liability;
- inputs to the discount rates; and
- certain information about mortality assumptions and the dates of experience studies.

## Required Supplementary Information

GASB Statement No. 67 requires a 10-year fiscal history of:

- sources of changes in the net pension liability/(asset);
- information about the components of the net pension liability/(asset) and related ratios, including the pension plan's fiduciary net position as a percentage of the total pension liability, and the net pension liability/(asset) as a percent of covered-employee payroll;
- comparison of the actual employer contributions to the actuarially determined contributions based on the plan's funding policy; and
- the annual money-weighted rate of return on pension plan investments for each year.

These tables may be built prospectively.

## Measurement of the Net Pension Liability/(Asset)

The net pension liability/(asset) is to be measured as the total pension liability, less the amount of the pension plan's fiduciary net position. In actuarial terms, this will be the accrued liability less the market value of assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement).



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

Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 6.75% on the actuarial value of assets), it is expected that:

1. The employer normal cost as a percentage of pay will decrease to the level of the future service normal cost as time passes.
2. The unfunded liability is expected to decrease in dollar amount until it is fully funded.
3. The funded status of the plan will move toward a 100% funded ratio.

The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.

### Limitations of Funded Status Measurements

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

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

### Limitation of Project Scope

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

## Timing of the Valuation

An actuarial valuation to determine the total pension liability is required to be performed at least every two years. If the actuarial valuation is not calculated as of the plan's fiscal year end, the total pension liability is required to be rolled forward from the actuarial valuation date to the pension plan's fiscal year end.

The total pension liability shown in this report is based on an actuarial valuation performed as of June 30, 2021 and a measurement date of June 30, 2022.

## Single Discount Rate

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

For the purpose of this valuation, the expected rate of return on pension plan investments is 6.75%; the municipal bond rate is 3.69% (based on the weekly rate closest to but not later than the measurement date of the Fidelity "20-Year Municipal GO AA Index"); and the resulting single discount rate is 6.75%.

## **SECTION B**

---

### **REQUIRED SUPPLEMENTARY INFORMATION**

# Schedules of Required Supplementary Information

## Multiyear Schedule of Changes in Net Pension Liability/(Asset)

### State Employees

Fiscal year ending June 30,	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
<b>Total Pension Liability</b>										
Service Cost	\$ 413,902,578	\$ 404,703,462	\$ 406,776,003	\$ 379,359,288	\$ 375,965,000	\$ 370,235,000	\$ 369,779,000	\$ 375,149,000	\$ 369,120,000	
Interest on the Total Pension Liability	1,779,932,926	1,704,841,881	1,666,047,947	1,627,636,919	1,606,772,000	1,562,819,000	1,533,764,000	1,482,951,000	1,436,064,000	
Benefit Changes	-	-	-	-	-	-	-	-	-	
Difference between expected and actual experience of the Total Pension Liability	(247,390,730)	(281,382,363)	(12,440,702)	181,189,928	(327,289,000)	(85,975,000)	(245,642,000)	59,923,000	-	
Assumption Changes	-	412,575,352	-	663,564,653	-	76,965,000	-	-	-	
Benefit Payments	(1,536,664,842)	(1,486,951,352)	(1,427,873,034)	(1,360,832,374)	(1,296,803,000)	(1,234,388,000)	(1,195,198,000)	(1,136,102,000)	(1,081,866,000)	
Refunds of Contributions	(31,680,440)	(29,065,328)	(27,426,881)	(26,897,650)	(30,236,000)	(30,837,000)	(25,240,000)	(27,724,000)	(25,036,000)	
<b>Net Change in Total Pension Liability</b>	<b>378,099,492</b>	<b>724,721,652</b>	<b>605,083,333</b>	<b>1,464,020,764</b>	<b>328,409,000</b>	<b>658,819,000</b>	<b>437,463,000</b>	<b>754,197,000</b>	<b>698,282,000</b>	
<b>Total Pension Liability - Beginning</b>	<b>26,739,646,749</b>	<b>26,014,925,097</b>	<b>25,409,841,764</b>	<b>23,945,821,000</b>	<b>23,617,412,000</b>	<b>22,958,593,000</b>	<b>22,521,130,000</b>	<b>21,766,933,000</b>	<b>21,068,651,000</b>	
<b>Total Pension Liability - Ending (a)</b>	<b>\$ 27,117,746,241</b>	<b>\$ 26,739,646,749</b>	<b>\$ 26,014,925,097</b>	<b>\$ 25,409,841,764</b>	<b>\$ 23,945,821,000</b>	<b>\$ 23,617,412,000</b>	<b>\$ 22,958,593,000</b>	<b>\$ 22,521,130,000</b>	<b>\$ 21,766,933,000</b>	
<b>Plan Fiduciary Net Position</b>										
Employer Contributions	\$ 633,738,297	\$ 609,777,928	\$ 576,443,391	\$ 545,582,547	\$ 548,158,000	\$ 535,424,000	\$ 722,617,000	\$ 480,657,000	\$ 343,259,000	
Special Employer Contributions	219,156,318	-	-	-	-	-	-	-	-	
Employee Contributions	217,945,186	207,064,776	210,896,385	201,481,234	201,920,000	201,391,000	200,184,000	195,582,000	198,035,000	
Pension Plan Net Investment Income	(21,579,143)	5,055,162,928	361,060,166	1,211,721,847	1,302,241,000	1,963,811,000	277,166,000	728,083,000	2,243,999,000	
Benefit Payments	(1,536,664,842)	(1,486,951,352)	(1,427,873,034)	(1,360,832,374)	(1,296,803,000)	(1,234,388,000)	(1,195,198,000)	(1,136,102,000)	(1,081,866,000)	
Refunds of Contributions	(31,680,440)	(29,065,328)	(27,426,881)	(26,897,650)	(30,236,000)	(30,837,000)	(25,240,000)	(27,724,000)	(25,036,000)	
Pension Plan Administrative Expense	(14,301,972)	(12,903,729)	(12,602,679)	(12,373,471)	(11,481,000)	(11,612,000)	(10,140,000)	(10,302,000)	(12,341,000)	
Other	295,766	(735,549)	(539,185)	(761,900)	28,502,000	(1,743,000)	(122,000)	(154,000)	123,000	
<b>Net Change in Plan Fiduciary Net Position</b>	<b>(533,090,830)</b>	<b>4,342,349,674</b>	<b>(320,041,837)</b>	<b>557,920,233</b>	<b>742,301,000</b>	<b>1,422,046,000</b>	<b>(30,733,000)</b>	<b>230,040,000</b>	<b>1,666,173,000</b>	
<b>Plan Fiduciary Net Position - Beginning</b>	<b>23,112,417,070</b>	<b>18,770,067,396</b>	<b>19,090,109,233</b>	<b>18,532,189,000</b>	<b>17,789,888,000</b>	<b>16,367,842,000</b>	<b>16,398,575,000</b>	<b>16,168,535,000</b>	<b>14,502,362,000</b>	
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 22,579,326,240</b>	<b>\$ 23,112,417,070</b>	<b>\$ 18,770,067,396</b>	<b>\$ 19,090,109,233</b>	<b>\$ 18,532,189,000</b>	<b>\$ 17,789,888,000</b>	<b>\$ 16,367,842,000</b>	<b>\$ 16,398,575,000</b>	<b>\$ 16,168,535,000</b>	
<b>Net Pension Liability - Ending (a) - (b)</b>	<b>4,538,420,001</b>	<b>3,627,229,679</b>	<b>7,244,857,701</b>	<b>6,319,732,531</b>	<b>5,413,632,000</b>	<b>5,827,524,000</b>	<b>6,590,751,000</b>	<b>6,122,555,000</b>	<b>5,598,398,000</b>	



# Multiyear Schedule of Changes in Net Pension Liability/(Asset) (Continued)

## Teachers

Fiscal year ending June 30,	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
<b>Total Pension Liability</b>										
Service Cost	\$ 823,884,059	\$ 948,915,273	\$ 938,143,989	\$ 889,003,292	\$ 885,510,000	\$ 830,475,000	\$ 828,856,000	\$ 828,901,000	\$ 831,501,000	
Interest on the Total Pension Liability	3,568,410,098	3,355,158,131	3,269,776,154	3,184,697,542	3,099,338,000	3,016,207,000	2,931,065,000	2,834,138,000	2,722,787,000	
Benefit Changes	-	-	-	-	-	-	-	-	-	-
Difference between expected and actual experience of the Total Pension Liability	(361,724,703)	(178,348,918)	(404,985,282)	(174,815,175)	(440,308,000)	(642,745,000)	(391,881,000)	(212,089,000)	-	
Assumption Changes	-	845,179,109	-	1,472,647,362	-	218,559,000	-	-	-	
Benefit Payments	(2,635,944,718)	(2,553,153,337)	(2,448,204,545)	(2,331,036,972)	(2,241,927,000)	(2,147,781,000)	(2,081,069,000)	(1,980,353,000)	(1,874,636,000)	
Refunds of Contributions	(43,436,778)	(38,463,686)	(36,211,791)	(36,714,671)	(40,578,000)	(39,521,000)	(35,067,000)	(36,058,000)	(36,103,000)	
<b>Net Change in Total Pension Liability</b>	<b>1,351,187,958</b>	<b>2,379,286,572</b>	<b>1,318,518,525</b>	<b>3,003,781,378</b>	<b>1,262,035,000</b>	<b>1,235,194,000</b>	<b>1,251,904,000</b>	<b>1,434,539,000</b>	<b>1,643,549,000</b>	
<b>Total Pension Liability - Beginning</b>	<b>53,381,141,475</b>	<b>51,001,854,903</b>	<b>49,683,336,378</b>	<b>46,679,555,000</b>	<b>45,417,520,000</b>	<b>44,182,326,000</b>	<b>42,930,422,000</b>	<b>41,495,883,000</b>	<b>39,852,334,000</b>	
<b>Total Pension Liability - Ending (a)</b>	<b>\$ 54,732,329,433</b>	<b>\$ 53,381,141,475</b>	<b>\$ 51,001,854,903</b>	<b>\$ 49,683,336,378</b>	<b>\$ 46,679,555,000</b>	<b>\$ 45,417,520,000</b>	<b>\$ 44,182,326,000</b>	<b>\$ 42,930,422,000</b>	<b>\$ 41,495,883,000</b>	
<b>Plan Fiduciary Net Position</b>										
Employer Contributions	\$ 1,485,306,601	\$ 1,416,134,388	\$ 1,327,772,013	\$ 1,280,962,776	\$ 1,292,988,000	\$ 1,137,976,000	\$ 1,062,338,000	\$ 1,267,250,000	\$ 853,634,000	
Non-Employer Contributions	442,371,085	61,344,275	-	-	-	-	-	-	-	
Employee Contributions	439,139,284	419,414,949	418,909,152	403,257,714	391,490,000	392,730,000	380,314,000	373,525,000	371,241,000	
Pension Plan Net Investment Income	(66,609,130)	9,887,249,917	689,013,633	2,311,029,037	2,421,157,000	3,632,291,000	516,704,000	1,327,047,000	4,042,441,000	
Benefit Payments	(2,635,944,718)	(2,553,153,337)	(2,448,204,545)	(2,331,036,972)	(2,241,927,000)	(2,147,781,000)	(2,081,069,000)	(1,980,353,000)	(1,874,636,000)	
Refunds of Contributions	(43,436,778)	(38,463,686)	(36,211,791)	(36,714,671)	(40,578,000)	(39,521,000)	(35,067,000)	(36,058,000)	(36,103,000)	
Pension Plan Administrative Expense	(27,875,772)	(24,543,264)	(23,649,318)	(22,843,327)	(20,945,000)	(21,123,000)	(18,859,000)	(18,238,000)	(22,036,000)	
Other	736,100	832,115	(1,168,511)	(1,449,445)	(2,167,000)	(3,238,000)	(222,000)	(284,000)	217,000	
<b>Net Change in Plan Fiduciary Net Position</b>	<b>(406,313,328)</b>	<b>9,168,815,357</b>	<b>(73,539,367)</b>	<b>1,603,205,112</b>	<b>1,800,018,000</b>	<b>2,951,334,000</b>	<b>(175,861,000)</b>	<b>932,889,000</b>	<b>3,334,758,000</b>	
<b>Plan Fiduciary Net Position - Beginning</b>	<b>45,618,044,102</b>	<b>36,449,228,745</b>	<b>36,522,768,112</b>	<b>34,919,563,000</b>	<b>33,119,545,000</b>	<b>30,168,211,000</b>	<b>30,344,072,000</b>	<b>29,411,183,000</b>	<b>26,076,425,000</b>	
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 45,211,730,774</b>	<b>\$ 45,618,044,102</b>	<b>\$ 36,449,228,745</b>	<b>\$ 36,522,768,112</b>	<b>\$ 34,919,563,000</b>	<b>\$ 33,119,545,000</b>	<b>\$ 30,168,211,000</b>	<b>\$ 30,344,072,000</b>	<b>\$ 29,411,183,000</b>	
<b>Net Pension Liability - Ending (a) - (b)</b>	<b>9,520,598,659</b>	<b>7,763,097,373</b>	<b>14,552,626,158</b>	<b>13,160,568,266</b>	<b>11,759,992,000</b>	<b>12,297,975,000</b>	<b>14,014,115,000</b>	<b>12,586,350,000</b>	<b>12,084,700,000</b>	



# Multiyear Schedule of Changes in Net Pension Liability/(Asset) (Continued)

## State Police

Fiscal year ending June 30,	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
<b>Total Pension Liability</b>										
Service Cost	\$ 23,688,274	\$ 22,041,596	\$ 22,167,233	\$ 20,078,289	\$ 18,187,000	\$ 18,880,000	\$ 18,700,000	\$ 18,847,000	\$ 18,341,000	
Interest on the Total Pension Liability	86,396,232	79,549,396	77,231,145	72,714,868	71,251,000	74,042,000	72,618,000	70,350,000	67,977,000	
Benefit Changes	-	-	-	-	-	-	-	-	-	
Difference between expected and actual experience of the Total Pension Liability	25,537,550	(9,431,035)	4,466,024	45,330,743	(7,248,000)	(5,327,000)	(14,711,000)	(2,890,000)	-	
Assumption Changes	-	58,257,232	-	31,772,675	-	(68,707,000)	-	-	-	
Benefit Payments	(71,465,612)	(73,226,848)	(64,990,934)	(62,683,309)	(58,197,000)	(57,814,000)	(53,515,000)	(53,338,000)	(50,467,000)	
Refunds of Contributions	(378,452)	(270,823)	(551,279)	(805,044)	(867,000)	(630,000)	(584,000)	(375,000)	(685,000)	
<b>Net Change in Total Pension Liability</b>	<b>63,777,992</b>	<b>76,919,518</b>	<b>38,322,189</b>	<b>106,408,222</b>	<b>23,126,000</b>	<b>(39,556,000)</b>	<b>22,508,000</b>	<b>32,594,000</b>	<b>35,166,000</b>	
<b>Total Pension Liability - Beginning</b>	<b>1,292,177,929</b>	<b>1,215,258,411</b>	<b>1,176,936,222</b>	<b>1,070,528,000</b>	<b>1,047,402,000</b>	<b>1,086,958,000</b>	<b>1,064,450,000</b>	<b>1,031,856,000</b>	<b>996,690,000</b>	
<b>Total Pension Liability - Ending (a)</b>	<b>\$ 1,355,955,921</b>	<b>\$ 1,292,177,929</b>	<b>\$ 1,215,258,411</b>	<b>\$ 1,176,936,222</b>	<b>\$ 1,070,528,000</b>	<b>\$ 1,047,402,000</b>	<b>\$ 1,086,958,000</b>	<b>\$ 1,064,450,000</b>	<b>\$ 1,031,856,000</b>	
<b>Plan Fiduciary Net Position</b>										
Employer Contributions	\$ 36,494,431	\$ 33,788,401	\$ 32,496,258	\$ 31,436,774	\$ 35,806,000	\$ 31,888,000	\$ 33,655,000	\$ 28,427,000	\$ 42,683,000	
Special Employer Contributions	10,957,816	-	-	-	-	-	-	-	-	
Employee Contributions	7,130,833	6,489,374	6,600,050	6,379,355	6,311,000	5,701,000	5,759,000	5,680,000	5,646,000	
Pension Plan Net Investment Income	(901,658)	229,137,634	16,333,892	54,790,848	58,148,000	87,265,000	12,634,000	32,466,000	98,682,000	
Benefit Payments	(71,465,612)	(73,226,848)	(64,990,934)	(62,683,309)	(58,197,000)	(57,814,000)	(53,515,000)	(53,338,000)	(50,467,000)	
Refunds of Contributions	(378,452)	(270,823)	(551,279)	(805,044)	(867,000)	(630,000)	(584,000)	(375,000)	(685,000)	
Pension Plan Administrative Expense	(602,287)	(531,925)	(359,899)	(487,015)	(509,000)	(926,000)	(590,000)	(471,000)	(431,000)	
Other	(144)	-	(38,456)	(60,612)	(63,000)	(99,000)	(23,000)	(27,000)	-	
<b>Net Change in Plan Fiduciary Net Position</b>	<b>(18,765,073)</b>	<b>195,385,813</b>	<b>(10,510,368)</b>	<b>28,570,997</b>	<b>40,629,000</b>	<b>65,385,000</b>	<b>(2,664,000)</b>	<b>12,362,000</b>	<b>95,428,000</b>	
<b>Plan Fiduciary Net Position - Beginning</b>	<b>1,050,148,442</b>	<b>854,762,629</b>	<b>865,272,997</b>	<b>836,702,000</b>	<b>796,073,000</b>	<b>730,688,000</b>	<b>733,352,000</b>	<b>720,990,000</b>	<b>625,562,000</b>	
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 1,031,383,369</b>	<b>\$ 1,050,148,442</b>	<b>\$ 854,762,629</b>	<b>\$ 865,272,997</b>	<b>\$ 836,702,000</b>	<b>\$ 796,073,000</b>	<b>\$ 730,688,000</b>	<b>\$ 733,352,000</b>	<b>\$ 720,990,000</b>	
<b>Net Pension Liability - Ending (a) - (b)</b>	<b>324,572,552</b>	<b>242,029,487</b>	<b>360,495,782</b>	<b>311,663,225</b>	<b>233,826,000</b>	<b>251,329,000</b>	<b>356,270,000</b>	<b>331,098,000</b>	<b>310,866,000</b>	



# Multiyear Schedule of Changes in Net Pension Liability/(Asset) (Continued)

## Judicial

Fiscal year ending June 30,	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
<b>Total Pension Liability</b>										
Service Cost	\$ 18,630,280	\$ 19,335,180	\$ 20,649,982	\$ 18,767,031	\$ 19,228,000	\$ 22,144,000	\$ 21,978,000	\$ 23,254,000	\$ 24,024,000	
Interest on the Total Pension Liability	50,035,918	44,788,102	44,233,505	44,139,042	43,799,000	42,081,000	42,820,000	41,759,000	40,014,000	
Benefit Changes	-	-	-	-	-	-	(15,552,000)	-	-	
Difference between expected and actual experience of the Total Pension Liability	(7,255,761)	(10,245,397)	(9,446,288)	(7,157,647)	(15,786,000)	(14,774,000)	(18,681,000)	(9,107,000)	-	
Assumption Changes	-	53,039,560	-	14,076,928	-	16,114,000	-	-	-	
Benefit Payments	(47,678,981)	(47,749,544)	(46,545,799)	(43,586,503)	(41,165,000)	(40,895,000)	(41,341,000)	(40,205,000)	(37,984,000)	
Refunds of Contributions	(41,025)	(135,056)	(11,520)	-	-	-	-	-	-	
<b>Net Change in Total Pension Liability</b>	<b>13,690,431</b>	<b>59,032,845</b>	<b>8,879,880</b>	<b>26,238,851</b>	<b>6,076,000</b>	<b>24,670,000</b>	<b>(10,776,000)</b>	<b>15,701,000</b>	<b>26,054,000</b>	
<b>Total Pension Liability - Beginning</b>	<b>746,502,576</b>	<b>687,469,731</b>	<b>678,589,851</b>	<b>652,351,000</b>	<b>646,275,000</b>	<b>621,605,000</b>	<b>632,381,000</b>	<b>616,680,000</b>	<b>590,626,000</b>	
<b>Total Pension Liability - Ending (a)</b>	<b>\$ 760,193,007</b>	<b>\$ 746,502,576</b>	<b>\$ 687,469,731</b>	<b>\$ 678,589,851</b>	<b>\$ 652,351,000</b>	<b>\$ 646,275,000</b>	<b>\$ 621,605,000</b>	<b>\$ 632,381,000</b>	<b>\$ 616,680,000</b>	
<b>Plan Fiduciary Net Position</b>										
Employer Contributions	\$ 24,016,451	\$ 22,855,683	\$ 24,817,883	\$ 22,893,124	\$ 28,096,000	\$ 27,612,000	\$ 41,502,000	\$ 31,503,000	\$ 27,727,000	
Special Employer Contributions	6,250,014	-	-	-	-	-	-	-	-	
Employee Contributions	2,032,453	1,868,382	3,436,043	3,208,353	3,231,000	3,272,000	3,236,000	3,015,000	3,051,000	
Pension Plan Net Investment Income	(476,447)	147,200,377	10,489,514	35,371,399	37,466,000	56,029,000	8,112,000	20,051,000	60,833,000	
Benefit Payments	(47,678,981)	(47,749,544)	(46,545,799)	(43,586,503)	(41,165,000)	(40,895,000)	(41,341,000)	(40,205,000)	(37,984,000)	
Refunds of Contributions	(41,025)	(135,056)	(11,520)	-	-	-	-	-	-	
Pension Plan Administrative Expense	(385,887)	(342,710)	(231,601)	(314,877)	(326,000)	(594,000)	(363,000)	(283,000)	(268,000)	
Other	96,169	-	(40,994)	(39,435)	(42,000)	(64,000)	(15,000)	(17,000)	-	
<b>Net Change in Plan Fiduciary Net Position</b>	<b>(16,187,253)</b>	<b>123,697,132</b>	<b>(8,086,474)</b>	<b>17,532,061</b>	<b>27,260,000</b>	<b>45,360,000</b>	<b>11,131,000</b>	<b>14,064,000</b>	<b>53,359,000</b>	
<b>Plan Fiduciary Net Position - Beginning</b>	<b>673,151,719</b>	<b>549,454,587</b>	<b>557,541,061</b>	<b>540,009,000</b>	<b>512,749,000</b>	<b>467,389,000</b>	<b>456,258,000</b>	<b>442,194,000</b>	<b>388,835,000</b>	
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 656,964,466</b>	<b>\$ 673,151,719</b>	<b>\$ 549,454,587</b>	<b>\$ 557,541,061</b>	<b>\$ 540,009,000</b>	<b>\$ 512,749,000</b>	<b>\$ 467,389,000</b>	<b>\$ 456,258,000</b>	<b>\$ 442,194,000</b>	
<b>Net Pension Liability - Ending (a) - (b)</b>	<b>103,228,541</b>	<b>73,350,857</b>	<b>138,015,144</b>	<b>121,048,790</b>	<b>112,342,000</b>	<b>133,526,000</b>	<b>154,216,000</b>	<b>176,123,000</b>	<b>174,486,000</b>	



# Multiyear Schedule of Changes in Net Pension Liability/(Asset) (Continued)

## Virginia Law Officers

Fiscal year ending June 30,	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
<b>Total Pension Liability</b>										
Service Cost	\$ 44,326,239	\$ 47,606,141	\$ 48,003,115	\$ 44,526,173	\$ 45,179,000	\$ 47,189,000	\$ 45,608,000	\$ 47,531,000	\$ 46,504,000	
Interest on the Total Pension Liability	159,759,434	149,676,722	143,708,106	139,306,834	136,289,000	135,453,000	129,756,000	124,579,000	119,040,000	
Benefit Changes	-	-	-	-	-	-	-	-	-	
Difference between expected and actual experience of the Total Pension Liability	15,631,619	(25,404,753)	22,645,674	11,067,542	(26,111,000)	(1,457,000)	4,997,000	(4,849,000)	-	
Assumption Changes	-	66,215,936	-	62,089,118	-	(63,457,000)	-	-	-	
Benefit Payments	(129,974,023)	(124,044,662)	(117,136,820)	(109,192,755)	(104,776,000)	(96,224,000)	(92,270,000)	(84,990,000)	(78,412,000)	
Refunds of Contributions	(6,283,501)	(5,791,359)	(4,893,089)	(4,933,976)	(5,604,000)	(4,938,000)	(4,524,000)	(4,797,000)	(4,665,000)	
<b>Net Change in Total Pension Liability</b>	<b>83,459,768</b>	<b>108,258,025</b>	<b>92,326,986</b>	<b>142,862,936</b>	<b>44,977,000</b>	<b>16,566,000</b>	<b>83,567,000</b>	<b>77,474,000</b>	<b>82,467,000</b>	
<b>Total Pension Liability - Beginning</b>	<b>2,390,608,947</b>	<b>2,282,350,922</b>	<b>2,190,023,936</b>	<b>2,047,161,000</b>	<b>2,002,184,000</b>	<b>1,985,618,000</b>	<b>1,902,051,000</b>	<b>1,824,577,000</b>	<b>1,742,110,000</b>	
<b>Total Pension Liability - Ending (a)</b>	<b>\$ 2,474,068,715</b>	<b>\$ 2,390,608,947</b>	<b>\$ 2,282,350,922</b>	<b>\$ 2,190,023,936</b>	<b>\$ 2,047,161,000</b>	<b>\$ 2,002,184,000</b>	<b>\$ 1,985,618,000</b>	<b>\$ 1,902,051,000</b>	<b>\$ 1,824,577,000</b>	
<b>Plan Fiduciary Net Position</b>										
Employer Contributions	\$ 73,959,423	\$ 76,414,947	\$ 79,913,158	\$ 75,326,824	\$ 73,793,000	\$ 73,816,000	\$ 79,392,000	\$ 62,084,000	\$ 67,483,000	
Special Employer Contributions	19,886,407	-	-	-	-	-	-	-	-	
Employee Contributions	17,276,267	17,602,495	18,712,484	17,870,998	17,496,000	17,598,000	17,574,000	17,081,000	17,908,000	
Pension Plan Net Investment Income	(1,665,880)	405,216,623	28,578,977	93,872,895	98,292,000	146,039,000	20,899,000	52,312,000	156,786,000	
Benefit Payments	(129,974,023)	(124,044,662)	(117,136,820)	(109,192,755)	(104,776,000)	(96,224,000)	(92,270,000)	(84,990,000)	(78,412,000)	
Refunds of Contributions	(6,283,501)	(5,791,359)	(4,893,089)	(4,933,976)	(5,604,000)	(4,938,000)	(4,524,000)	(4,797,000)	(4,665,000)	
Pension Plan Administrative Expense	(1,073,675)	(942,670)	(622,819)	(831,136)	(861,000)	(1,540,000)	(940,000)	(743,000)	(681,000)	
Other	(8,167)	562	(73,052)	(103,153)	(247,000)	(310,000)	(38,000)	(44,000)	-	
<b>Net Change in Plan Fiduciary Net Position</b>	<b>(27,883,149)</b>	<b>368,455,936</b>	<b>4,478,839</b>	<b>72,009,697</b>	<b>78,093,000</b>	<b>134,441,000</b>	<b>20,093,000</b>	<b>40,903,000</b>	<b>158,419,000</b>	
<b>Plan Fiduciary Net Position - Beginning</b>	<b>1,868,924,472</b>	<b>1,500,468,536</b>	<b>1,495,989,697</b>	<b>1,423,980,000</b>	<b>1,345,887,000</b>	<b>1,211,446,000</b>	<b>1,191,353,000</b>	<b>1,150,450,000</b>	<b>992,031,000</b>	
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 1,841,041,323</b>	<b>\$ 1,868,924,472</b>	<b>\$ 1,500,468,536</b>	<b>\$ 1,495,989,697</b>	<b>\$ 1,423,980,000</b>	<b>\$ 1,345,887,000</b>	<b>\$ 1,211,446,000</b>	<b>\$ 1,191,353,000</b>	<b>\$ 1,150,450,000</b>	
<b>Net Pension Liability - Ending (a) - (b)</b>	<b>633,027,392</b>	<b>521,684,475</b>	<b>781,882,386</b>	<b>694,034,239</b>	<b>623,181,000</b>	<b>656,297,000</b>	<b>774,172,000</b>	<b>710,698,000</b>	<b>674,127,000</b>	





# Multiyear Schedule of Changes in Net Pension Liability/(Asset) (Continued)

## Political Subdivisions

Fiscal year ending June 30,	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
<b>Total Pension Liability</b>										
Service Cost	\$ 640,326,868	\$ 613,226,699	\$ 603,765,952	\$ 556,149,437	\$ 544,762,000	\$ 541,594,000	\$ 535,322,000	\$ 530,945,000	\$ 524,758,000	
Interest on the Total Pension Liability	1,840,834,308	1,674,639,649	1,593,594,255	1,535,532,384	1,472,680,000	1,422,753,000	1,362,892,000	1,309,484,000	1,243,386,000	
Benefit Changes	9,041,894	13,156,588	19,656,740	3,948,465	10,811,000	36,652,000	2,053,000	1,135,000	-	
Difference between expected and actual experience of the Total Pension Liability	(294,247,308)	(164,894,521)	221,364,302	45,031,456	(43,177,000)	(205,649,000)	(87,268,000)	(185,419,000)	-	
Assumption Changes	(14,779)	1,003,381,832	-	691,407,023	-	(64,510,000)	-	-	-	
Benefit Payments	(1,307,580,106)	(1,237,073,517)	(1,157,505,004)	(1,082,791,828)	(1,010,021,000)	(941,856,000)	(893,585,000)	(819,201,000)	(754,706,000)	
Refunds of Contributions	(48,297,043)	(42,459,920)	(38,323,303)	(40,248,652)	(41,324,000)	(42,068,000)	(37,380,000)	(36,898,000)	(36,876,000)	
<b>Net Change in Total Pension Liability</b>	<b>840,063,834</b>	<b>1,859,976,810</b>	<b>1,242,552,942</b>	<b>1,709,028,285</b>	<b>933,731,000</b>	<b>746,916,000</b>	<b>882,034,000</b>	<b>800,046,000</b>	<b>976,562,000</b>	
<b>Total Pension Liability - Beginning</b>	<b>27,309,293,037</b>	<b>25,449,316,227</b>	<b>24,206,763,285</b>	<b>22,497,735,000</b>	<b>21,564,004,000</b>	<b>20,817,088,000</b>	<b>19,935,054,000</b>	<b>19,135,008,000</b>	<b>18,158,446,000</b>	
<b>Total Pension Liability - Ending (a)</b>	<b>\$ 28,149,356,871</b>	<b>\$ 27,309,293,037</b>	<b>\$ 25,449,316,227</b>	<b>\$ 24,206,763,285</b>	<b>\$ 22,497,735,000</b>	<b>\$ 21,564,004,000</b>	<b>\$ 20,817,088,000</b>	<b>\$ 19,935,054,000</b>	<b>\$ 19,135,008,000</b>	
<b>Plan Fiduciary Net Position<sup>1</sup></b>										
Employer Contributions	\$ 608,878,589	\$ 579,989,263	\$ 521,612,585	\$ 499,292,247	\$ 490,286,000	\$ 477,563,000	\$ 543,947,000	\$ 533,877,000	\$ 539,366,000	
Employee Contributions	276,349,681	258,561,680	258,396,039	248,421,687	241,339,000	238,636,000	231,934,000	227,060,000	225,555,000	
Pension Plan Net Investment Income	(26,243,944)	5,779,326,711	405,050,874	1,345,759,207	1,415,454,000	2,113,973,000	300,995,000	761,164,000	2,272,284,000	
Benefit Payments	(1,307,580,106)	(1,237,073,517)	(1,157,505,004)	(1,082,791,828)	(1,010,021,000)	(941,856,000)	(893,585,000)	(819,201,000)	(754,706,000)	
Refunds of Contributions	(48,297,043)	(42,459,920)	(38,323,303)	(40,248,652)	(41,324,000)	(42,068,000)	(37,380,000)	(36,898,000)	(36,876,000)	
Pension Plan Administrative Expense	(16,525,468)	(14,411,894)	(13,841,789)	(13,368,660)	(12,236,000)	(12,220,000)	(10,696,000)	(10,358,000)	(12,153,000)	
Other	265,953	160,632	(332,796)	(851,041)	(30,924,000)	(1,887,000)	(130,000)	(162,000)	120,000	
<b>Net Change in Plan Fiduciary Net Position</b>	<b>(513,152,338)</b>	<b>5,324,092,955</b>	<b>(24,943,394)</b>	<b>956,212,960</b>	<b>1,052,574,000</b>	<b>1,832,141,000</b>	<b>135,085,000</b>	<b>655,482,000</b>	<b>2,233,590,000</b>	
<b>Plan Fiduciary Net Position - Beginning</b>	<b>26,558,183,521</b>	<b>21,234,090,566</b>	<b>21,259,033,960</b>	<b>20,302,821,000</b>	<b>19,250,247,000</b>	<b>17,418,106,000</b>	<b>17,283,021,000</b>	<b>16,627,539,000</b>	<b>14,393,949,000</b>	
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>\$ 26,045,031,183</b>	<b>\$ 26,558,183,521</b>	<b>\$ 21,234,090,566</b>	<b>\$ 21,259,033,960</b>	<b>\$ 20,302,821,000</b>	<b>\$ 19,250,247,000</b>	<b>\$ 17,418,106,000</b>	<b>\$ 17,283,021,000</b>	<b>\$ 16,627,539,000</b>	
<b>Net Pension Liability - Ending (a) - (b)</b>	<b>2,104,325,688</b>	<b>751,109,516</b>	<b>4,215,225,661</b>	<b>2,947,729,325</b>	<b>2,194,914,000</b>	<b>2,313,757,000</b>	<b>3,398,982,000</b>	<b>2,652,033,000</b>	<b>2,507,469,000</b>	

<sup>1</sup> Beginning with 2022, components of the Plan Fiduciary net position are summed from the individual disclosures prepared for GASB Statement No. 68 purposes and may differ from the aggregate figures of the financial statement.



# Schedules of Required Supplementary Information

## Multiyear Schedule of the Net Pension Liability/(Asset) and Related Ratios

**Last 10 Fiscal Years (which may be built prospectively)**

### State Employees

Fiscal year ending June 30,	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Total Pension Liability	\$ 27,117,746,241	\$ 26,739,646,749	\$ 26,014,925,097	\$ 25,409,841,764	\$ 23,945,821,000	\$ 23,617,412,000	\$ 22,958,593,000	\$ 22,521,130,000	\$ 21,766,933,000	
Plan Fiduciary Net Position	22,579,326,240	23,112,417,070	18,770,067,396	19,090,109,233	18,532,189,000	17,789,888,000	16,367,842,000	16,398,575,000	16,168,535,000	
Net Pension Liability	\$ 4,538,420,001	\$ 3,627,229,679	\$ 7,244,857,701	\$ 6,319,732,531	\$ 5,413,632,000	\$ 5,827,524,000	\$ 6,590,751,000	\$ 6,122,555,000	\$ 5,598,398,000	
<b>Ratio of Plan Fiduciary Net Position to Total Pension Liability</b>										
	83.26 %	86.44 %	72.15 %	75.13 %	77.39 %	75.33 %	71.29 %	72.81 %	74.28 %	
Covered-Employee Payroll <sup>(1)</sup>	\$ 4,661,990,509	\$ 4,399,969,381	\$ 4,440,135,406	\$ 4,197,483,596	\$ 4,152,368,000	\$ 4,020,893,000	\$ 3,977,759,000	\$ 3,878,632,000	\$ 3,861,712,000	
<b>Net Pension Liability as a Percentage of Covered-Employee Payroll</b>										
	97.35 %	82.44 %	163.17 %	150.56 %	130.37 %	144.93 %	165.69 %	157.85 %	144.97 %	

### Teachers

Fiscal year ending June 30,	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Total Pension Liability	\$ 54,732,329,433	\$ 53,381,141,475	\$ 51,001,854,903	\$ 49,683,336,378	\$ 46,679,555,000	\$ 45,417,520,000	\$ 44,182,326,000	\$ 42,930,422,000	\$ 41,495,883,000	
Plan Fiduciary Net Position	45,211,730,774	45,618,044,102	36,449,228,745	36,522,768,112	34,919,563,000	33,119,545,000	30,168,211,000	30,344,072,000	29,411,183,000	
Net Pension Liability	\$ 9,520,598,659	\$ 7,763,097,373	\$ 14,552,626,158	\$ 13,160,568,266	\$ 11,759,992,000	\$ 12,297,975,000	\$ 14,014,115,000	\$ 12,586,350,000	\$ 12,084,700,000	
<b>Ratio of Plan Fiduciary Net Position to Total Pension Liability</b>										
	82.61 %	85.46 %	71.47 %	73.51 %	74.81 %	72.92 %	68.28 %	70.68 %	70.88 %	
Covered-Employee Payroll <sup>(1)</sup>	\$ 9,319,260,057	\$ 8,843,886,917	\$ 8,766,666,892	\$ 8,387,502,872	\$ 8,086,986,000	\$ 7,891,783,000	\$ 7,624,612,000	\$ 7,434,932,000	\$ 7,313,025,000	
<b>Net Pension Liability as a Percentage of Covered-Employee Payroll</b>										
	102.16 %	87.78 %	166.00 %	156.91 %	145.42 %	155.83 %	183.80 %	169.29 %	165.25 %	

Notes to Schedule:

<sup>(1)</sup> Covered-Employee Payroll was provided by VRS.



# Multiyear Schedule of the Net Pension Liability/(Asset) and Related Ratios (Continued)

**Last 10 Fiscal Years (which may be built prospectively)**

## State Police

Fiscal year ending June 30,	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Total Pension Liability	\$ 1,355,955,921	\$ 1,292,177,929	\$ 1,215,258,411	\$ 1,176,936,222	\$ 1,070,528,000	\$ 1,047,402,000	\$ 1,086,958,000	\$ 1,064,450,000	\$ 1,031,856,000	
Plan Fiduciary Net Position	1,031,383,369	1,050,148,442	854,762,629	865,272,997	836,702,000	796,073,000	730,688,000	733,352,000	720,990,000	
Net Pension Liability	\$ 324,572,552	\$ 242,029,487	\$ 360,495,782	\$ 311,663,225	\$ 233,826,000	\$ 251,329,000	\$ 356,270,000	\$ 331,098,000	\$ 310,866,000	
<b>Ratio of Plan Fiduciary Net Position to Total Pension Liability</b>										
	76.06 %	81.27 %	70.34 %	73.52 %	78.16 %	76.00 %	67.22 %	68.89 %	69.87 %	
Covered-Employee Payroll <sup>(1)</sup>	\$ 138,643,566	\$ 128,252,194	\$ 130,759,499	\$ 126,482,552	\$ 124,003,195	\$ 111,395,000	\$ 114,395,000	\$ 110,059,000	\$ 112,010,000	
<b>Net Pension Liability as a Percentage of Covered-Employee Payroll</b>										
	234.11 %	188.71 %	275.69 %	246.41 %	188.56 %	225.62 %	311.44 %	300.84 %	277.53 %	

## Judicial

Fiscal year ending June 30,	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Total Pension Liability	\$ 760,193,007	\$ 746,502,576	\$ 687,469,731	\$ 678,589,851	\$ 652,351,000	\$ 646,275,000	\$ 621,605,000	\$ 632,381,000	\$ 616,680,000	
Plan Fiduciary Net Position	656,964,466	673,151,719	549,454,587	557,541,061	540,009,000	512,749,000	467,389,000	456,258,000	442,194,000	
Net Pension Liability	\$ 103,228,541	\$ 73,350,857	\$ 138,015,144	\$ 121,048,790	\$ 112,342,000	\$ 133,526,000	\$ 154,216,000	\$ 176,123,000	\$ 174,486,000	
<b>Ratio of Plan Fiduciary Net Position to Total Pension Liability</b>										
	86.42 %	90.17 %	79.92 %	82.16 %	82.78 %	79.34 %	75.19 %	72.15 %	71.71 %	
Covered-Employee Payroll <sup>(1)</sup>	\$ 79,539,271	\$ 74,594,273	\$ 74,768,610	\$ 68,330,332	\$ 68,245,000	\$ 66,826,000	\$ 66,621,000	\$ 61,092,000	\$ 61,020,000	
<b>Net Pension Liability as a Percentage of Covered-Employee Payroll</b>										
	129.78 %	98.33 %	184.59 %	177.15 %	164.62 %	199.81 %	231.48 %	288.29 %	285.95 %	

Notes to Schedule:

<sup>(1)</sup> Covered-Employee Payroll was provided by VRS.



# Multiyear Schedule of the Net Pension Liability/(Asset) and Related Ratios (Continued)

**Last 10 Fiscal Years (which may be built prospectively)**

## Virginia Law Officers

Fiscal year ending June 30,	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Total Pension Liability	\$ 2,474,068,715	\$ 2,390,608,947	\$ 2,282,350,922	\$ 2,190,023,936	\$ 2,047,161,000	\$ 2,002,184,000	\$ 1,985,618,000	\$ 1,902,051,000	\$ 1,824,577,000	
Plan Fiduciary Net Position	1,841,041,323	1,868,924,472	1,500,468,536	1,495,989,697	1,423,980,000	1,345,887,000	1,211,446,000	1,191,353,000	1,150,450,000	
Net Pension Liability	\$ 633,027,392	\$ 521,684,475	\$ 781,882,386	\$ 694,034,239	\$ 623,181,000	\$ 656,297,000	\$ 774,172,000	\$ 710,698,000	\$ 674,127,000	
<b>Ratio of Plan Fiduciary Net Position to Total Pension Liability</b>	74.41 %	78.18 %	65.74 %	68.31 %	69.56 %	67.22 %	61.01 %	62.64 %	63.05 %	
Covered-Employee Payroll <sup>(1)</sup>	\$ 338,767,528	\$ 348,649,734	\$ 369,995,506	\$ 349,997,734	\$ 345,531,000	\$ 344,468,000	\$ 345,504,000	\$ 338,562,000	\$ 352,492,000	
<b>Net Pension Liability as a Percentage of Covered-Employee Payroll</b>	186.86 %	149.63 %	211.32 %	198.30 %	180.35 %	190.52 %	224.07 %	209.92 %	191.25 %	

## Political Subdivisions

Fiscal year ending June 30,	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Total Pension Liability	\$ 28,149,356,871	\$ 27,309,293,037	\$ 25,449,316,227	\$ 24,206,763,285	\$ 22,497,735,000	\$ 21,564,004,000	\$ 20,817,088,000	\$ 19,935,054,000	\$ 19,135,008,000	
Plan Fiduciary Net Position	26,045,031,183	26,558,183,521	21,234,090,566	21,259,033,960	20,302,821,000	19,250,247,000	17,418,106,000	17,283,021,000	16,627,539,000	
Net Pension Liability	\$ 2,104,325,688	\$ 751,109,516	\$ 4,215,225,661	\$ 2,947,729,325	\$ 2,194,914,000	\$ 2,313,757,000	\$ 3,398,982,000	\$ 2,652,033,000	\$ 2,507,469,000	
<b>Ratio of Plan Fiduciary Net Position to Total Pension Liability</b>	92.52 %	97.25 %	83.44 %	87.82 %	90.24 %	89.27 %	83.67 %	86.70 %	86.90 %	
Covered-Employee Payroll <sup>(1)</sup>	\$ 5,699,595,938	\$ 5,403,266,882	\$ 8,843,886,917	\$ 5,368,250,421	\$ 5,118,621,606	\$ 4,932,344,000	\$ 4,765,842,000	\$ 4,628,806,000	\$ 4,513,335,000	
<b>Net Pension Liability as a Percentage of Covered-Employee Payroll</b>	36.92 %	13.90 %	47.66 %	54.91 %	42.88 %	46.91 %	71.32 %	57.29 %	55.56 %	

Notes to Schedule:

<sup>(1)</sup> Covered-Employee Payroll was provided by VRS.



# Multiyear Schedule of Contributions

## Last 10 Fiscal Years (which may be built prospectively)

### State Employees

Fiscal year ending June 30,	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Actuarially Determined Employer Contribution	\$ 674,123,828	\$ 636,235,572	\$ 600,306,307	\$ 567,499,782	\$ 560,154,000	\$ 542,418,000	\$ 628,486,000	\$ 612,824,000	\$ 504,726,000	\$ 485,577,000
Actual Employer Contribution	674,123,828	636,235,572	600,306,307	567,499,782	560,154,000	542,418,000	557,160,000	478,235,000	338,286,000	325,452,000
Annual Contribution Deficiency/(Excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 71,326,000	\$ 134,589,000	\$ 166,440,000	\$ 160,125,000
Covered-Employee Payroll <sup>(1)</sup>	\$ 4,661,990,509	\$ 4,399,969,381	\$ 4,440,135,406	\$ 4,197,483,596	\$ 4,152,368,000	\$ 4,020,893,000	\$ 3,977,759,000	\$ 3,878,632,000	\$ 3,861,712,000	\$ 3,715,205,000
Actual Contribution as a Percentage of Covered-Employee Payroll	14.46 %	14.46 %	13.52 %	13.52 %	13.49 %	13.49 %	14.01 %	12.33 %	8.76 %	8.76 %

### Teachers

Fiscal year ending June 30,	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Actuarially Determined Employer Contribution	\$ 1,548,861,021	\$ 1,469,854,006	\$ 1,374,613,369	\$ 1,315,160,450	\$ 1,319,796,000	\$ 1,287,939,000	\$ 1,344,981,000	\$ 1,353,158,000	\$ 1,226,394,000	\$ 1,203,856,000
Actual Employer Contribution	1,548,861,021	1,469,854,006	1,374,613,369	1,315,160,450	1,319,796,000	1,156,935,000	1,072,020,000	1,078,065,000	852,699,000	837,028,000
Annual Contribution Deficiency/(Excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 131,004,000	\$ 272,961,000	\$ 275,093,000	\$ 373,695,000	\$ 366,828,000
Covered-Employee Payroll <sup>(1)</sup>	\$ 9,319,260,057	\$ 8,843,886,917	\$ 8,766,666,892	\$ 8,387,502,872	\$ 8,086,986,000	\$ 7,891,783,000	\$ 7,624,612,000	\$ 7,434,932,000	\$ 7,313,025,000	\$ 7,178,629,000
Actual Contribution as a Percentage of Covered-Employee Payroll	16.62 %	16.62 %	15.68 %	15.68 %	16.32 %	14.66 %	14.06 %	14.50 %	11.66 %	11.66 %

### State Police

Fiscal year ending June 30,	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Actuarially Determined Employer Contribution	\$ 36,504,851	\$ 33,768,803	\$ 32,532,963	\$ 31,468,859	\$ 35,391,000	\$ 31,792,000	\$ 35,211,000	\$ 33,876,000	\$ 35,538,000	\$ 34,535,000
Actual Employer Contribution	36,504,851	33,768,803	32,532,963	31,468,859	35,391,000	31,792,000	31,561,000	28,417,000	27,711,000	26,193,000
Annual Contribution Deficiency/(Excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,650,000	\$ 5,459,000	\$ 7,827,000	\$ 8,342,000
Covered-Employee Payroll <sup>(1)</sup>	\$ 138,643,566	\$ 128,252,194	\$ 130,759,499	\$ 126,482,552	\$ 124,003,195	\$ 111,395,000	\$ 114,395,000	\$ 110,059,000	\$ 112,010,000	\$ 105,872,000
Actual Contribution as a Percentage of Covered-Employee Payroll	26.33 %	26.33 %	24.88 %	24.88 %	28.54 %	28.54 %	27.59 %	25.82 %	24.74 %	24.74 %

#### Notes to Schedule:

<sup>(1)</sup> Covered-Employee Payroll was provided by VRS.

Note: In 2022, the Actuarially determined employer contribution and actual employer contribution were provided by VRS. These amounts may differ from the employer contributions shown in the schedule of Changes in NPL. Some reasons for a difference include; adjustments from the prior year, impact of the Workforce Transition Act, early retirement plan contribution amounts, and Hybrid Defined Contribution Plan employer contribution amounts.



## Multiyear Schedule of Contributions (Continued)

**Last 10 Fiscal Years (which may be built prospectively)**

### Judicial

Fiscal year ending June 30,	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Actuarially Determined Employer Contribution	\$ 23,734,519	\$ 22,258,931	\$ 25,712,925	\$ 23,498,801	\$ 28,642,000	\$ 28,047,000	\$ 37,008,000	\$ 35,336,000	\$ 33,018,000	\$ 32,185,000
Actual Employer Contribution	23,734,519	22,258,931	25,712,925	23,498,801	28,642,000	28,047,000	33,291,000	31,560,000	27,728,000	27,028,000
Annual Contribution Deficiency/(Excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,717,000	\$ 3,776,000	\$ 5,290,000	\$ 5,157,000
Covered-Employee Payroll <sup>(1)</sup>	\$ 79,539,271	\$ 74,594,273	\$ 74,768,610	\$ 68,330,332	\$ 68,245,000	\$ 66,826,000	\$ 66,621,000	\$ 61,092,000	\$ 61,020,000	\$ 59,481,000
Actual Contribution as a Percentage of Covered-Employee Payroll	29.84 %	29.84 %	34.39 %	34.39 %	41.97 %	41.97 %	49.97 %	51.66 %	45.44 %	45.44 %

### Virginia Law Officers

Fiscal year ending June 30,	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Actuarially Determined Employer Contribution	\$ 74,190,089	\$ 76,354,292	\$ 79,956,029	\$ 75,634,510	\$ 72,734,000	\$ 72,511,000	\$ 72,763,000	\$ 71,301,000	\$ 68,806,000	\$ 66,463,000
Actual Employer Contribution	74,190,089	76,354,292	79,956,029	75,634,510	72,734,000	72,511,000	65,101,000	59,824,000	52,169,000	50,392,000
Annual Contribution Deficiency/(Excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,662,000	\$ 11,477,000	\$ 16,637,000	\$ 16,071,000
Covered-Employee Payroll <sup>(1)</sup>	\$ 338,767,528	\$ 348,649,734	\$ 369,995,506	\$ 349,997,734	\$ 345,531,000	\$ 344,468,000	\$ 345,504,000	\$ 338,562,000	\$ 352,492,000	\$ 340,489,000
Actual Contribution as a Percentage of Covered-Employee Payroll	21.90 %	21.90 %	21.61 %	21.61 %	21.05 %	21.05 %	18.84 %	17.67 %	14.80 %	14.80 %

### Political Subdivisions

Fiscal year ending June 30,	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Actuarially Determined Employer Contribution	\$ 643,826,493	\$ 610,473,947	\$ 544,676,278	\$ 515,903,853	\$ 504,955,000	\$ 487,066,000	\$ 554,335,000	\$ 540,859,000	\$ 551,822,000	\$ 537,657,000
Actual Employer Contribution	643,826,493	610,434,832	547,381,859	518,512,814	505,603,000	487,702,000	549,408,000	535,919,000	539,131,000	525,385,000
Annual Contribution Deficiency/(Excess)	\$ -	\$ 39,115	\$ (2,705,581)	\$ (2,608,961)	\$ (648,000)	\$ (636,000)	\$ 4,927,000	\$ 4,940,000	\$ 12,691,000	\$ 12,272,000
Covered-Employee Payroll <sup>(1)</sup>	\$ 5,699,595,938	\$ 5,403,266,882	\$ 5,368,250,421	\$ 5,118,621,606	\$ 4,932,344,000	\$ 4,765,842,000	\$ 4,628,806,000	\$ 4,513,335,000	\$ 4,434,764,000	\$ 4,321,565,000
Actual Contribution as a Percentage of Covered-Employee Payroll	11.30 %	11.30 %	10.20 %	10.13 %	10.25 %	10.23 %	11.87 %	11.87 %	12.16 %	12.16 %

Notes to Schedule:

<sup>(1)</sup> Covered-Employee Payroll was provided by VRS.

Note: In 2022, the Actuarially determined employer contribution and actual employer contribution were provided by VRS. These amounts may differ from the employer contributions shown in the schedule of Changes in NPL. Some reasons for a difference include; adjustments from the prior year, impact of the Workforce Transition Act, early retirement plan contribution amounts, and Hybrid Defined Contribution Plan employer contribution amounts.



# Notes to Schedule of Contributions

## Valuation Date:

Notes Actuarially determined contribution amounts for fiscal year 2022 are calculated based upon the results of the June 30, 2019 actuarial valuation.

## Methods and Assumptions Used to Determine Contribution Amounts for the Fiscal Year Ending June 30, 2022:

Actuarial Cost Method	Entry-Age Normal
Amortization Method	Level Percentage of Payroll, Closed
Remaining Amortization Period	2-24 years
Asset Valuation Method	5-year smoothed market
Inflation	2.50%
Salary Increases	State Employees - 3.50% to 5.35% Teachers - 3.50% to 5.95% State Police - 3.50% to 4.75% Judicial - 4.00% Virginia Law Officers - 3.50% to 4.75% Political Subdivisions - General Employees - 3.50% to 5.35% Public Safety - 3.50% to 4.75%
Investment Rate of Return	6.75%, net of investment expenses
Retirement Age	Experience-based tables of rates that are specific to the type of eligibility condition.
Mortality	A version of the RP-2014 Mortality Tables with mortality improvements projected to 2020 with scale BB.

## Other Information:

Notes An experience review was completed, by the prior actuary, covering the four-year period ending June 30, 2020. Changes in assumptions and methods resulting from this study were implemented in the June 30, 2021 funding valuations, first impacting contributions for fiscal years ending 2023 and 2024. The updated assumptions and methods were also reflected in the June 30, 2021 GASB Statement No. 67 report.



## **SECTION C**

---

### **NOTES TO FINANCIAL STATEMENTS**



## Summary of Membership as of the Valuation Date (June 30, 2021)

Category/Group	Count					
	State Employees	Teachers	State Police	Judicial	Virginia Law Officers	Political Subdivisions
Active Members	73,686	149,793	1,947	453	7,823	108,613
Inactive Members						
Vested	14,555	28,677	184	6	1,340	20,372
Non-Vested	32,979	41,266	264	0	6,460	46,323
LTD	2,005	15	25	0	499	55
Active Elsewhere in VRS	<u>9,086</u>	<u>5,974</u>	<u>229</u>	<u>5</u>	<u>3,493</u>	<u>35,088</u>
Total Inactive Members	58,625	75,932	702	11	11,792	101,838
Retirees						
Service	61,649	98,108	1,309	442	5,606	80,790
Disabled	3,149	4,285	188	0	254	0
Beneficiaries	<u>5,433</u>	<u>3,618</u>	<u>258</u>	<u>135</u>	<u>374</u>	<u>0</u>
Total Retirees	70,231	106,011	1,755	577	6,234	80,790
Totals	202,542	331,736	4,404	1,041	25,849	291,241

## Long-Term Expected Return on Plan Assets

For each major asset class that is included in the pension plan's target asset allocation as of June 30, 2022, these best estimates of the 20-year forward looking geometric nominal rates of return were provided by the VRS Investment Staff, and are summarized in the following table:

### Asset Allocation

Asset Class	Target Allocation	Long-Term Expected Rate of Return
Public Equity	34.0%	6.8%
Fixed Income	15.0%	4.4%
Credit Strategies	14.0%	7.1%
Real Assets	14.0%	6.0%
Private Equity	14.0%	8.8%
MAPS <sup>1</sup>	6.0%	5.9%
PIP <sup>2</sup>	3.0%	7.3%
Cash	0.0%	0.0%
<b>Total</b>	<b>100.0%</b>	
Currency Return Addition		0.1%
<b>Total Fund Expected Rate of Return</b>		<b>6.72%</b>

<sup>1</sup> Multi-Asset Public Strategies

<sup>2</sup> Private Investment Partnership

## Single Discount Rate

Aside from the Political Subdivision Plan(s) denoted in the executive summary, a single discount rate of 6.75% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments of 6.75% and a long-term bond rate of 3.69%. The projection of cash flows (provided under separate cover) used to determine this single discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

## Sensitivity of Total Pension Liability to the Single Discount Rate Assumption

Regarding the sensitivity of the net pension liability/(asset) to changes in the single discount rate, the following presents the plan's net pension liability/(asset), calculated using a single discount rate of 6.75%, as well as what the plan's net pension liability/(asset) would be if it were calculated using a single discount rate that is 1% lower or 1% higher:

Net Pension Liability	Current Single Discount Rate Assumption		
	1% Decrease 5.75%	6.75%	1% Increase 7.75%
State Employees	\$ 7,756,279,712	\$ 4,538,420,001	\$ 1,871,370,236
Teachers	17,004,518,040	9,520,598,659	3,427,042,546
State Police	495,275,744	324,572,552	182,451,867
Judicial	179,396,257	103,228,541	39,020,060
Virginia Law Officers	963,219,371	633,027,392	363,833,548
Political Subdivisions	5,821,436,497	2,104,325,688	(935,101,467)

<sup>(1)</sup> As denoted in the executive summary, select Political Subdivision Plan(s) use the municipal bond rate for accounting disclosures. The sensitivity for the select plans is computed at 1% +/- the municipal bond rate disclosed in the executive summary for the current measurement date.

## **SECTION D**

---

### **OTHER DISCLOSURES**

## Other Disclosures

This report complements the actuarial valuation reports prepared as of June 30, 2021 by the prior actuary. Information herein should be considered along with the information from these separate reports, especially for additional discussions of the nature of actuarial calculations and for more information related to:

- Plan Provisions;
- Valuation Methods and Actuarial Assumptions; and
- Summary of Participant Data.

**Assumption Rationale:** Assumptions are based upon a four-year Experience Review for the period ending June 30, 2020, as adopted by the Board of Trustees at its April 20, 2021 meeting.

**Asset Method:** The market value of assets is used for GASB Statement No. 67 purposes.

**Roll-Forward Disclosure:** The total pension liabilities shown in this report are based on an actuarial valuation as of June 30, 2021 and a measurement date of June 30, 2022. The roll-forward procedure increases the June 30, 2021 actuarial accrued liability with normal cost and interest and decreases it with actual benefit payments and interest, except for new Political Subdivision Plan(s) where the total pension liabilities at the measurement date are used.

**Changes of Benefit Terms:** There have been no significant changes to the System benefit provisions since the prior actuarial valuation. A hybrid plan with changes to the defined benefit plan structure and a new defined contribution component was adopted in 2012. The hybrid plan applies to most new employees hired on or after January 1, 2014 and not covered by enhanced hazardous duty benefits. Some of the Political Subdivision plans have made changes to the benefits provided to members in hazardous duty positions. In aggregate the impact of these changes on the Political Subdivision plans is not significant.

## **SECTION E**

---

### **GLOSSARY OF TERMS**

## Glossary of Terms

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

## Glossary of Terms

<b><i>Amortization Payment</i></b>	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
<b><i>Amortization Method</i></b>	The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be “open” (meaning, reset each year) or “closed” (the number of years remaining will decline each year).
<b><i>Cost-of-Living Adjustments</i></b>	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
<b><i>Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)</i></b>	A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.
<b><i>Covered-Employee Payroll</i></b>	The payroll of covered employees, which is typically only the pensionable pay and does not include pay above any pay cap.
<b><i>Deferred Retirement Option Program (DROP)</i></b>	A program that permits a plan member to elect a calculation of benefit payments based on service credits and salary, as applicable, as of the DROP entry date. The plan member continues to provide service to the employer and is paid for the service by the employer after the DROP entry date; however, the pensions that would have been paid to the plan member are credited to an individual member account within the defined benefit pension plan until the end of the DROP period. Other variations for DROP exist and will be more fully detailed in the plan provision section of the valuation report.
<b><i>Deferred Inflows and Outflows</i></b>	The deferred inflows and outflows of pension resources are amounts used under GASB Statement No. 68 in developing the annual pension expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in pension expense should be included in the deferred inflows or outflows of resources.
<b><i>Discount Rate</i></b>	For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically: <ol style="list-style-type: none"><li>1. The benefit payments to be made while the pension plans’ fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period and;</li><li>2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.</li></ol>



## Glossary of Terms

<b><i>Entry Age Actuarial Cost Method (EAN)</i></b>	The EAN is a funding method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit age(s). The portion of the actuarial present value allocated to a valuation year is the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.
<b><i>GASB</i></b>	The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.
<b><i>Fiduciary Net Position</i></b>	The fiduciary net position is the value of the assets of the trust.
<b><i>Long-Term Expected Rate of Return</i></b>	The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.
<b><i>Money-Weighted Rate of Return</i></b>	The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For purposes of GASB Statement No. 67, money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense.
<b><i>Multiple-Employer Defined Benefit Pension Plan</i></b>	A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.
<b><i>Municipal Bond Rate</i></b>	The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.
<b><i>Net Pension Liability (NPL)</i></b>	The NPL is the liability of employers and non-employer contribution entities to plan members for benefits provided through a defined benefit pension plan.
<b><i>Non-Employer Contribution Entities</i></b>	Non-employer contribution entities are entities that make contributions to a pension plan that is used to provide pensions to the employees of other entities. For purposes of the GASB Accounting statement plan members are not considered non-employer contribution entities.
<b><i>Normal Cost</i></b>	The actuarial present value of the pension trust benefits allocated to the current year by the actuarial cost method.

## Glossary of Terms

<b><i>Other Postemployment Benefits (OPEB)</i></b>	All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment health care benefits regardless of the manner in which they are provided. Other postemployment benefits do not include termination benefits.
<b><i>Real Rate of Return</i></b>	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
<b><i>Service Cost</i></b>	The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.
<b><i>Total Pension Expense</i></b>	The total pension expense is the sum of the following items that are recognized at the end of the employer's fiscal year: <ol style="list-style-type: none"><li>1. Service Cost</li><li>2. Interest on the Total Pension Liability</li><li>3. Current-Period Benefit Changes</li><li>4. Employee Contributions (made negative for addition here)</li><li>5. Projected Earnings on Plan Investments (made negative for addition here)</li><li>6. Pension Plan Administrative Expense</li><li>7. Other Changes in Plan Fiduciary Net Position</li><li>8. Recognition of Outflow (Inflow) of Resources due to Liabilities</li><li>9. Recognition of Outflow (Inflow) of Resources due to Assets</li></ol>
<b><i>Total Pension Liability (TPL)</i></b>	The TPL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.
<b><i>Unfunded Actuarial Accrued Liability (UAAL)</i></b>	The UAAL is the difference between actuarial accrued liability and valuation assets.
<b><i>Valuation Assets</i></b>	The valuation assets are the assets used in determining the unfunded liability of the plan. For purposes of the GASB Statement No. 67, the valuation asset is equal to the market value of assets.