VIRGINIA RETIREMENT SYSTEM
TEACHER RETIREMENT PLAN

GASB No. 68 Schedules

With Independent Auditor's Report Thereon

For the Plan Year Ended June 30, 2018

Table of Contents

Independent Auditor's Report 3

VRS Teacher Retirement Plan –
Schedule of Employer Allocations 5

VRS Teacher Retirement Plan –
Schedule of Net Pension Liability and Total Pension Expense 9

VRS Teacher Retirement Plan –
Schedule of Deferred Outflows and Deferred Inflows
of Resources by Employer 13

VRS Teacher Retirement Plan –
Notes to GASB No. 68 Schedules 18

Commonwealth of Virginia

Auditor of Public Accounts

Martha S. Mavredes, CPA
Auditor of Public Accounts

P.O. Box 1295
Richmond, Virginia 23218

July 26, 2019

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

INDEPENDENT AUDITOR'S REPORT

Report on the Schedules

We have audited the accompanying schedule of employer allocations of the Virginia Retirement System Teacher Retirement Plan as of and for the year ended June 30, 2018, and the related notes. We have also audited the total for teacher employers of the columns titled net pension liability, total pension expense, total deferred outflows of resources, and total deferred inflows of resources (specified column totals) included in the accompanying schedule of net pension liability and total pension expense and the schedule of deferred outflows and deferred inflows of resources by employer of the Virginia Retirement System Teacher Retirement Plan as of and for the year ended June 30, 2018, and the related notes.

Management's Responsibility for the Schedules

The Virginia Retirement System's management is responsible for the preparation and fair presentation of these schedules in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the schedules that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express opinions on the schedule of employer allocations and the specified column totals included in the schedule of net pension liability and total pension expense and the schedule of deferred outflows and deferred inflows of resources by employer based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the schedule of employer allocations and the specified column totals included in the schedule of net pension liability and total pension expense and the schedule of deferred outflows and deferred inflows of resources by employer are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the schedule of employer allocations and the specified column totals included in the schedule of net pension liability and total pension expense and the schedule of deferred outflows and deferred inflows of resources by employer. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the schedule of employer allocations and the specified column totals included in the schedule of net pension liability and total pension expense and the schedule of deferred outflows and deferred inflows of resources by employer, whether due

to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the schedule of employer allocations and the specified column totals included in the schedule of net pension liability and total pension expense and the schedule of deferred outflows and deferred inflows of resources by employer in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by the Virginia Retirement System management, as well as evaluating the overall presentation of the schedule of employer allocations and the specified column totals included in the schedule of net pension liability and total pension expense and the schedule of deferred outflows and deferred inflows of resources by employer.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the schedules referred to above present fairly, in all material respects, the employer allocations and net pension liability, total pension expense, total deferred outflows of resources, and total deferred inflows of resources, for the total of all of the participating teacher employers for the Virginia Retirement System Teacher Retirement Plan as of and for the year ended June 30, 2018, in accordance with accounting principles generally accepted in the United States of America.

Other Matter

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in **Government Auditing Standards**, issued by the Comptroller General of the United States, the financial statements of the Virginia Retirement System as of and for the year ended June 30, 2018, and our report thereon, dated December 14, 2018, expressed an unmodified opinion on those financial statements.

Restriction on Use

Our report is intended solely for the information and use of the Virginia Retirement System management, the Virginia Retirement System Board of Trustees, the Commonwealth Joint Legislative Audit and Review Commission, and the Virginia Retirement System Teacher Retirement Plan employers and their auditors and is not intended to be and should not be used by anyone other than these specified parties.

AUDITOR OF PUBLIC ACCOUNTS

ZLB/clj

Virginia Retirement System
VRS Teacher Retirement Plan
Schedule of Employer Allocations
For the Plan Year Ended and Measurement Date of June 30, 2018

Employer Code	Employer	Employer Contributions	Employer Allocation Percentage
40100	Accomack County School Board	$ 4,470,781	0.34568%
40101	Albemarle County Schools	14,635,237	1.13161%
40102	Alleghany County School Board	1,823,447	0.14099%
40103	Amelia County School Board	1,347,879	0.10422%
40104	Amherst County School Board	3,695,911	0.28577%
40105	Appomattox County School Board	1,805,306	0.13959%
40106	Arlington Public Schools	47,952,349	3.70772%
40107	Augusta County School Board	9,227,799	0.71350%
40108	Bath County School Board	735,754	0.05689%
40109	Bedford County School Board	8,024,883	0.62049%
40110	Bland County School Board	573,637	0.04435%
40111	Botetourt County Schools	4,305,854	0.33293%
40112	Brunswick County Public Schools	1,488,319	0.11508%
40113	Buchanan County School Board	2,223,532	0.17193%
40114	Buckingham County School Board	1,718,757	0.13290%
40115	Campbell County School Board	6,158,204	0.47616%
40116	Caroline County School Board	3,352,395	0.25921%
40117	Carroll County School Board	3,445,884	0.26644%
40118	Charles City County School Board	713,390	0.05516%
40119	Charlotte County School Board	1,838,746	0.14217%
40120	Chesterfield County School Board	48,508,879	3.75075%
40121	Clarke County School Board	1,964,107	0.15187%
40122	Craig County School Board	553,196	0.04277%
40123	Culpeper County School Board	7,059,081	0.54581%
40124	Cumberland County School Board	1,240,692	0.09593%
40125	Dickenson County School Board	1,556,197	0.12033%
40126	Dinwiddie County School Board	3,696,688	0.28583%
40128	Essex County Public Schools	1,240,464	0.09591%
40129	Fairfax County School Board	235,240,392	18.18897%
40130	Fauquier County School Board	11,676,725	0.90285%
40131	Floyd County School Board	1,692,771	0.13089%
40132	Fluvanna County Public Schools	3,907,666	0.30214%
40133	Franklin County Public Schools	6,865,645	0.53086%
40134	Frederick County School Board	14,099,388	1.09018%
40135	Giles County Schools	2,009,254	0.15536%
40136	Gloucester County School Board	4,786,828	0.37012%
40137	Goochland County School Board	2,431,334	0.18799%
40138	Grayson County School Board	1,444,372	0.11168%

Virginia Retirement System
VRS Teacher Retirement Plan
Schedule of Employer Allocations – continued
For the Plan Year Ended and Measurement Date of June 30, 2018

Employer Code	Employer	Employer Contributions	Employer Allocation Percentage
40139	Greene County Public Schools	2,777,909	0.21479%
40140	Greensville County School Board	2,075,741	0.16050%
40141	Halifax County School Board	4,378,863	0.33858%
40142	Hanover County School Board	16,251,147	1.25655%
40143	Henrico County School Board	42,546,236	3.28971%
40144	Henry County Public Schools	5,904,175	0.45652%
40145	Highland County Public Schools	314,729	0.02434%
40146	Isle of Wight County Schools	4,764,070	0.36836%
40148	King George County School Board	3,617,476	0.27971%
40149	King & Queen County School Board	733,041	0.05668%
40150	King William County School Board	1,915,948	0.14814%
40151	Lancaster County Public Schools	1,226,426	0.09483%
40152	Lee County School Board	3,020,036	0.23351%
40153	Loudoun County School Board	92,691,913	7.16702%
40154	Louisa County Public Schools	4,540,070	0.35104%
40155	Lunenburg County School Board	1,252,508	0.09684%
40156	Madison County School Board	1,618,780	0.12517%
40157	Mathews County School Board	1,039,401	0.08037%
40158	Mecklenburg County School Board	3,674,315	0.28410%
40159	Middlesex County School Board	1,246,785	0.09640%
40160	Montgomery County School Board	8,258,375	0.63854%
40162	Nelson County Public Schools	1,873,385	0.14485%
40163	New Kent County School Board	2,629,605	0.20332%
40165	Northampton County Schools	1,474,601	0.11402%
40166	Northumberland County School Board	1,334,983	0.10322%
40167	Nottoway County School Board	1,805,118	0.13957%
40168	Orange County Public Schools	4,290,246	0.33173%
40169	Page County Public Schools	2,952,675	0.22830%
40170	Patrick County School Board	2,110,855	0.16321%
40171	Pittsylvania County School Board	7,077,625	0.54725%
40172	Powhatan County School Board	3,797,889	0.29366%
40173	Prince Edward County School Board	1,901,980	0.14706%
40174	Prince George County School Board	5,227,338	0.40418%
40176	Prince William County School Board	86,368,204	6.67806%
40177	Pulaski County School Board	3,467,473	0.26811%
40178	Rappahannock County School Board	902,642	0.06979%
40179	Richmond County School Board	1,052,934	0.08141%

Virginia Retirement System
VRS Teacher Retirement Plan
Schedule of Employer Allocations – continued
For the Plan Year Ended and Measurement Date of June 30, 2018

Employer Code	Employer	Employer Contributions	Employer Allocation Percentage
40180	Roanoke County School Board	12,382,790	0.95745%
40181	Rockbridge County School Board	2,649,911	0.20489%
40182	Rockingham County School Board	10,688,619	0.82645%
40183	Russell County School Board	2,957,008	0.22864%
40184	Scott County School Board	3,235,219	0.25015%
40185	Shenandoah County School Board	5,568,263	0.43054%
40186	Smyth County School Board	3,602,415	0.27854%
40187	Southampton County School Board	2,112,441	0.16334%
40188	Spotsylvania County School Board	20,250,661	1.56580%
40189	Stafford County School Board	24,369,044	1.88423%
40190	Surry County Schools	1,273,498	0.09847%
40191	Sussex County School Board	1,269,249	0.09814%
40192	Tazewell County Schools	4,140,685	0.32016%
40193	Warren County School Board	4,759,140	0.36798%
40195	Washington County School Board	5,667,087	0.43818%
40196	Westmoreland County School Board	1,555,933	0.12031%
40197	Wise County School Board	4,203,488	0.32502%
40198	Wythe County School Board	3,343,697	0.25854%
40199	York County School Board	10,870,429	0.84051%
40200	Alexandria City School Board	23,743,307	1.83585%
40201	Bristol City School Board	1,951,537	0.15089%
40202	Buena Vista City Schools	831,830	0.06432%
40203	Charlottesville Public Schools	6,202,602	0.47959%
40205	Danville City Schools	4,988,508	0.38572%
40206	Fredericksburg City Schools	3,721,253	0.28773%
40207	Hampton City Schools	17,587,089	1.35985%
40208	Harrisonburg City School Board	6,323,348	0.48893%
40209	Hopewell City School Board	3,980,495	0.30778%
40210	Lynchburg Public Schools	8,878,626	0.68650%
40211	Newport News Public Schools	25,768,859	1.99247%
40212	Norfolk Public Schools	33,217,791	2.56843%
40213	Petersburg City Schools	3,650,457	0.28226%
40214	Portsmouth School Board	12,974,638	1.00321%
40215	Radford City School Board	1,404,635	0.10861%
40216	Richmond Public Schools	26,434,995	2.04398%
40217	Roanoke City School Board	12,842,165	0.99297%
40219	Staunton City Schools	2,753,055	0.21287%

Virginia Retirement System
VRS Teacher Retirement Plan
Schedule of Employer Allocations – continued
For the Plan Year Ended and Measurement Date of June 30, 2018

Employer Code	Employer	Employer Contributions	Employer Allocation Percentage
40220	Suffolk City School Board	12,296,612	0.95078%
40222	Winchester Public Schools	4,713,639	0.36446%
40223	Martinsville City Schools	1,867,344	0.14438%
40224	Falls Church Public Schools	4,094,647	0.31660%
40225	Colonial Heights City Schools	3,044,775	0.23542%
40230	Covington City School Board	882,636	0.06825%
40231	Fairfax City School Board	15,527	0.00120%
40232	Franklin City Public Schools	1,119,367	0.08655%
40233	Chesapeake Public Schools	37,378,505	2.89014%
40234	Virginia Beach City School Board	65,645,528	5.07577%
40236	Manassas Park City Schools	3,425,400	0.26485%
40306	Town of West Point School Board	885,673	0.06848%
40307	Lexington City School Board	460,556	0.03561%
40308	Waynesboro Public Schools	2,878,665	0.22258%
40309	Town of Colonial Beach Schools	577,218	0.04463%
40313	Galax City Schools	1,152,904	0.08914%
40314	Norton City Schools	573,813	0.04437%
40332	Manassas City Schools	8,531,099	0.65963%
40335	City of Salem Schools	3,639,321	0.28140%
40402	Williamsburg-James City County School Board	10,985,768	0.84943%
40403	Poquoson City Public Schools	1,861,082	0.14390%
40410	Valley Vocational Technical Center	311,553	0.02409%
40412	Charlottesville/Albemarle Vo-Tech Center	159,876	0.01236%
40413	The Pruden Center for Industry and Technology	—	—%
40414	Jackson River Technical Center	95,201	0.00736%
40415	New Horizons Technical Center	1,394,319	0.10781%
40416	Northern Neck Regional Vocational Center	179,115	0.01385%
40417	Rowanty Vocational Technical Center	110,026	0.00851%
40418	Amelia-Nottoway Vocational Center	33,977	0.00263%
40421	Northern Neck Regional Special Education Program	135,138	0.01045%
40423	Maggie Walker Governor's School for Govt & Intl Studies	724,752	0.05604%
40424	Appomattox Region Governor's School	271,290	0.02098%
40425	Bridging Communities Regional Career and Tech Center	85,036	0.00658%
	Total for Teacher Employers	$ 1,293,312,369	100.00000%

The accompanying notes are an integral part of the Schedule of Employer Allocations.

Virginia Retirement System
VRS Teacher Retirement Plan
Schedule of Net Pension Liability and Total Pension Expense
As of the Measurement Date and For the Plan Year Ended June 30, 2018

(Dollars in Thousands)

Employer Code	Employer	Net Pension Liability	Total Pension Expense
40100	Accomack County School Board	$ 40,652	$ 2,409
40101	Albemarle County Schools	133,078	9,115
40102	Alleghany County School Board	16,581	(11)
40103	Amelia County School Board	12,256	717
40104	Amherst County School Board	33,606	1,338
40105	Appomattox County School Board	16,416	943
40106	Arlington Public Schools	436,027	34,860
40107	Augusta County School Board	83,908	4,623
40108	Bath County School Board	6,690	397
40109	Bedford County School Board	72,970	4,023
40110	Bland County School Board	5,215	19
40111	Botetourt County Schools	39,152	1,972
40112	Brunswick County Public Schools	13,534	122
40113	Buchanan County School Board	20,219	(24)
40114	Buckingham County School Board	15,629	935
40115	Campbell County School Board	55,996	2,691
40116	Caroline County School Board	30,483	1,874
40117	Carroll County School Board	31,333	1,772
40118	Charles City County School Board	6,486	233
40119	Charlotte County School Board	16,719	542
40120	Chesterfield County School Board	441,087	30,829
40121	Clarke County School Board	17,860	1,020
40122	Craig County School Board	5,030	139
40123	Culpeper County School Board	64,188	3,933
40124	Cumberland County School Board	11,282	662
40125	Dickenson County School Board	14,151	383
40126	Dinwiddie County School Board	33,613	2,203
40128	Essex County Public Schools	11,279	328
40129	Fairfax County School Board	2,139,027	142,732
40130	Fauquier County School Board	106,175	4,947
40131	Floyd County School Board	15,393	1,010
40132	Fluvanna County Public Schools	35,532	1,712
40133	Franklin County Public Schools	62,429	4,399
40134	Frederick County School Board	128,205	9,489
40135	Giles County Schools	18,270	1,213
40136	Gloucester County School Board	43,526	2,154

Virginia Retirement System
VRS Teacher Retirement Plan
Schedule of Net Pension Liability and Total Pension Expense – continued
As of the Measurement Date and For the Plan Year Ended June 30, 2018

(Dollars in Thousands)

Employer Code	Employer	Net Pension Liability	Total Pension Expense
40137	Goochland County School Board	22,108	1,656
40138	Grayson County School Board	13,134	409
40139	Greene County Public Schools	25,259	1,703
40140	Greensville County School Board	18,875	985
40141	Halifax County School Board	39,817	1,330
40142	Hanover County School Board	147,770	7,602
40143	Henrico County School Board	386,870	22,535
40144	Henry County Public Schools	53,687	2,762
40145	Highland County Public Schools	2,863	180
40146	Isle of Wight County Schools	43,319	1,423
40148	King George County School Board	32,893	2,609
40149	King & Queen County School Board	6,666	184
40150	King William County School Board	17,421	1,174
40151	Lancaster County Public Schools	11,152	580
40152	Lee County School Board	27,460	1,281
40153	Loudoun County School Board	842,841	82,150
40154	Louisa County Public Schools	41,282	2,940
40155	Lunenburg County School Board	11,388	406
40156	Madison County School Board	14,720	688
40157	Mathews County School Board	9,451	476
40158	Mecklenburg County School Board	33,411	1,239
40159	Middlesex County School Board	11,337	653
40160	Montgomery County School Board	75,093	5,300
40162	Nelson County Public Schools	17,034	972
40163	New Kent County School Board	23,911	1,690
40165	Northampton County Schools	13,409	525
40166	Northumberland County School Board	12,139	983
40167	Nottoway County School Board	16,414	728
40168	Orange County Public Schools	39,011	2,272
40169	Page County Public Schools	26,848	1,265
40170	Patrick County School Board	19,194	970
40171	Pittsylvania County School Board	64,357	4,774
40172	Powhatan County School Board	34,534	1,807
40173	Prince Edward County School Board	17,294	323
40174	Prince George County School Board	47,531	2,673
40176	Prince William County School Board	785,340	57,366
40177	Pulaski County School Board	31,530	999
40178	Rappahannock County School Board	8,208	310

Virginia Retirement System
VRS Teacher Retirement Plan
Schedule of Net Pension Liability and Total Pension Expense – continued
As of the Measurement Date and For the Plan Year Ended June 30, 2018

(Dollars in Thousands)

Employer Code	Employer	Net Pension Liability	Total Pension Expense
40179	Richmond County School Board	9,574	497
40180	Roanoke County School Board	112,596	5,776
40181	Rockbridge County School Board	24,095	1,225
40182	Rockingham County School Board	97,190	6,367
40183	Russell County School Board	26,888	1,304
40184	Scott County School Board	29,418	1,605
40185	Shenandoah County School Board	50,631	2,984
40186	Smyth County School Board	32,756	755
40187	Southampton County School Board	19,208	969
40188	Spotsylvania County School Board	184,137	8,669
40189	Stafford County School Board	221,585	12,147
40190	Surry County Schools	11,580	369
40191	Sussex County School Board	11,541	466
40192	Tazewell County Schools	37,651	1,056
40193	Warren County School Board	43,274	2,369
40195	Washington County School Board	51,529	1,785
40196	Westmoreland County School Board	14,148	875
40197	Wise County School Board	38,222	681
40198	Wythe County School Board	30,404	1,275
40199	York County School Board	98,844	6,556
40200	Alexandria City School Board	215,896	13,796
40201	Bristol City School Board	17,745	610
40202	Buena Vista City Schools	7,564	373
40203	Charlottesville Public Schools	56,399	3,476
40205	Danville City Schools	45,360	465
40206	Fredericksburg City Schools	33,837	2,595
40207	Hampton City Schools	159,918	6,883
40208	Harrisonburg City School Board	57,498	4,620
40209	Hopewell City School Board	36,195	1,927
40210	Lynchburg Public Schools	80,732	5,072
40211	Newport News Public Schools	234,314	11,762
40212	Norfolk Public Schools	302,047	10,830
40213	Petersburg City Schools	33,194	1,410
40214	Portsmouth School Board	117,977	4,906
40215	Radford City School Board	12,773	672
40216	Richmond Public Schools	240,372	15,073
40217	Roanoke City School Board	116,773	7,825
40219	Staunton City Schools	25,034	1,226

Virginia Retirement System
VRS Teacher Retirement Plan
Schedule of Net Pension Liability and Total Pension Expense – continued
As of the Measurement Date and For the Plan Year Ended June 30, 2018

(Dollars in Thousands)

Employer Code	Employer	Net Pension Liability	Total Pension Expense
40220	Suffolk City School Board	111,812	6,398
40222	Winchester Public Schools	42,860	2,689
40223	Martinsville City Schools	16,979	757
40224	Falls Church Public Schools	37,232	3,437
40225	Colonial Heights City Schools	27,685	1,116
40230	Covington City School Board	8,026	434
40231	Fairfax City School Board	141	11
40232	Franklin City Public Schools	10,178	208
40233	Chesapeake Public Schools	339,880	19,806
40234	Virginia Beach City School Board	596,910	31,973
40236	Manassas Park City Schools	31,147	2,742
40306	Town of West Point School Board	8,053	624
40307	Lexington City School Board	4,188	258
40308	Waynesboro Public Schools	26,175	1,271
40309	Town of Colonial Beach Schools	5,248	329
40313	Galax City Schools	10,483	605
40314	Norton City Schools	5,218	167
40332	Manassas City Schools	77,572	4,214
40335	City of Salem Schools	33,092	1,427
40402	Williamsburg-James City County School Board	99,893	5,836
40403	Poquoson City Public Schools	16,923	951
40410	Valley Vocational Technical Center	2,833	144
40412	Charlottesville/Albemarle Vo-Tech Center	1,454	(31)
40413	The Pruden Center for Industry and Technology	—	(459)
40414	Jackson River Technical Center	866	(75)
40415	New Horizons Technical Center	12,678	871
40416	Northern Neck Regional Vocational Center	1,629	131
40417	Rowanty Vocational Technical Center	1,000	37
40418	Amelia-Nottoway Vocational Center	310	10
40421	Northern Neck Regional Special Education Program	1,229	(5)
40423	Maggie Walker Governor's School for Govt & Intl Studies	6,590	426
40424	Appomattox Region Governor's School	2,467	138
40425	Bridging Communities Regional Career and Tech Center	774	157
	Total for Teacher Employers	$ 11,759,992	$ 731,473

The accompanying notes are an integral part of the Schedule of Net Pension Liability and Total Pension Expense.

Virginia Retirement System
VRS Teacher Retirement Plan
Schedule of Deferred Outflows and Deferred Inflows of Resources by Employer
As of the Measurement Date of June 30, 2018

(Dollars in Thousands)

		Deferred Outflows of Resources					Deferred Inflows of Resources				
Employer Code	Employer	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Change of Assumptions	Changes in Proportionate Share	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Change of Assumptions	Changes in Proportionate Share	Total Deferred Inflows of Resources
40100	Accomack County School Board	$ —	$ —	$ 485	$ 501	$ 986	$ 3,476	$ 862	$ —	$ 620	$ 4,958
40101	Albemarle County Schools	—	—	1,588	2,166	3,754	11,379	2,822	—	348	14,549
40102	Alleghany County School Board	—	—	198	—	198	1,418	352	—	2,232	4,002
40103	Amelia County School Board	—	—	146	230	376	1,048	260	—	653	1,961
40104	Amherst County School Board	—	—	401	12	413	2,873	713	—	2,609	6,195
40105	Appomattox County School Board	—	—	196	443	639	1,404	348	—	289	2,041
40106	Arlington Public Schools	—	—	5,204	22,097	27,301	37,283	9,247	—	—	46,530
40107	Augusta County School Board	—	—	1,001	1,099	2,100	7,175	1,779	—	3,599	12,553
40108	Bath County School Board	—	—	80	114	194	572	142	—	387	1,101
40109	Bedford County School Board	—	—	871	1,669	2,540	6,240	1,547	—	3,178	10,965
40110	Bland County School Board	—	—	62	74	136	445	111	—	950	1,506
40111	Botetourt County Schools	—	—	467	166	633	3,348	830	—	2,147	6,325
40112	Brunswick County Public Schools	—	—	162	—	162	1,157	287	—	1,486	2,930
40113	Buchanan County School Board	—	—	241	—	241	1,728	429	—	2,920	5,077
40114	Buckingham County School Board	—	—	187	260	447	1,337	331	—	887	2,555
40115	Campbell County School Board	—	—	668	130	798	4,789	1,187	—	2,781	8,757
40116	Caroline County School Board	—	—	364	412	776	2,608	646	—	159	3,413
40117	Carroll County School Board	—	—	374	718	1,092	2,680	664	—	1,308	4,652
40118	Charles City County School Board	—	—	77	131	208	554	138	—	624	1,316
40119	Charlotte County School Board	—	—	200	54	254	1,430	355	—	614	2,399
40120	Chesterfield County School Board	—	—	5,265	12,295	17,560	37,717	9,354	—	2,175	49,246
40121	Clarke County School Board	—	—	213	66	279	1,527	379	—	227	2,133
40122	Craig County School Board	—	—	60	4	64	430	107	—	517	1,054
40123	Culpeper County School Board	—	—	766	631	1,397	5,489	1,361	—	1,239	8,089
40124	Cumberland County School Board	—	—	135	268	403	965	239	—	812	2,016
40125	Dickenson County School Board	—	—	169	75	244	1,210	300	—	1,787	3,297
40126	Dinwiddie County School Board	—	—	401	853	1,254	2,874	713	—	1,130	4,717
40128	Essex County Public Schools	—	—	135	11	146	965	239	—	1,240	2,444
40129	Fairfax County School Board	—	—	25,531	30,044	55,575	182,903	45,362	—	9,711	237,976
40130	Fauquier County School Board	—	—	1,267	—	1,267	9,078	2,252	—	4,807	16,137

Virginia Retirement System
VRS Teacher Retirement Plan
Schedule of Deferred Outflows and Deferred Inflows of Resources by Employer – continued
As of the Measurement Date of June 30, 2018

(Dollars in Thousands)

		Deferred Outflows of Resources					Deferred Inflows of Resources				
Employer Code	Employer	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Change of Assumptions	Changes in Proportionate Share	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Change of Assumptions	Changes in Proportionate Share	Total Deferred Inflows of Resources
40131	Floyd County School Board	—	—	184	534	718	1,316	326	—	638	2,280
40132	Fluvanna County Public Schools	—	—	424	409	833	3,039	753	—	1,035	4,827
40133	Franklin County Public Schools	—	—	745	1,883	2,628	5,338	1,324	—	—	6,662
40134	Frederick County School Board	—	—	1,530	3,900	5,430	10,962	2,719	—	1,664	15,345
40135	Giles County Schools	—	—	218	221	439	1,563	387	—	242	2,192
40136	Gloucester County School Board	—	—	520	908	1,428	3,722	923	—	1,985	6,630
40137	Goochland County School Board	—	—	264	470	734	1,891	469	—	257	2,617
40138	Grayson County School Board	—	—	157	296	453	1,123	279	—	1,266	2,668
40139	Greene County Public Schools	—	—	301	614	915	2,159	536	—	418	3,113
40140	Greensville County School Board	—	—	225	659	884	1,614	400	—	815	2,829
40141	Halifax County School Board	—	—	475	260	735	3,405	844	—	3,671	7,920
40142	Hanover County School Board	—	—	1,764	375	2,139	12,636	3,134	—	2,344	18,114
40143	Henrico County School Board	—	—	4,618	2,382	7,000	33,082	8,204	—	3,413	44,699
40144	Henry County Public Schools	—	—	641	78	719	4,591	1,139	—	1,287	7,017
40145	Highland County Public Schools	—	—	34	132	166	245	61	—	55	361
40146	Isle of Wight County Schools	—	—	517	42	559	3,703	919	—	1,207	5,829
40148	King George County School Board	—	—	393	2,209	2,602	2,812	698	—	656	4,166
40149	King & Queen County School Board	—	—	80	76	156	571	141	—	394	1,106
40150	King William County School Board	—	—	208	266	474	1,490	369	—	746	2,605
40151	Lancaster County Public Schools	—	—	133	—	133	954	236	—	357	1,547
40152	Lee County School Board	—	—	328	322	650	2,348	582	—	703	3,633
40153	Loudoun County School Board	—	—	10,060	80,568	90,628	72,071	17,874	—	—	89,945
40154	Louisa County Public Schools	—	—	493	1,174	1,667	3,530	875	—	289	4,694
40155	Lunenburg County School Board	—	—	136	186	322	974	242	—	1,053	2,269
40156	Madison County School Board	—	—	176	111	287	1,259	312	—	493	2,064
40157	Mathews County School Board	—	—	113	18	131	809	200	—	516	1,525
40158	Mecklenburg County School Board	—	—	399	646	1,045	2,856	709	—	1,567	5,132
40159	Middlesex County School Board	—	—	135	389	524	970	240	—	228	1,438
40160	Montgomery County School Board	—	—	896	1,937	2,833	6,421	1,592	—	242	8,255
40162	Nelson County Public Schools	—	—	203	131	334	1,456	361	—	560	2,377

Virginia Retirement System
VRS Teacher Retirement Plan
Schedule of Deferred Outflows and Deferred Inflows of Resources by Employer – continued
As of the Measurement Date of June 30, 2018

(Dollars in Thousands)

		Deferred Outflows of Resources					Deferred Inflows of Resources				
Employer Code	Employer	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Change of Assumptions	Changes in Proportionate Share	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Change of Assumptions	Changes in Proportionate Share	Total Deferred Inflows of Resources
40163	New Kent County School Board	—	—	285	789	1,074	2,044	507	—	100	2,651
40165	Northampton County Schools	—	—	160	—	160	1,147	284	—	732	2,163
40166	Northumberland County School Board	—	—	145	591	736	1,038	257	—	172	1,467
40167	Nottoway County School Board	—	—	196	—	196	1,404	348	—	733	2,485
40168	Orange County Public Schools	—	—	466	422	888	3,336	827	—	1,189	5,352
40169	Page County Public Schools	—	—	320	96	416	2,296	569	—	1,411	4,276
40170	Patrick County School Board	—	—	229	—	229	1,641	407	—	841	2,889
40171	Pittsylvania County School Board	—	—	768	3,011	3,779	5,503	1,365	—	625	7,493
40172	Powhatan County School Board	—	—	412	170	582	2,954	732	—	1,492	5,178
40173	Prince Edward County School Board	—	—	206	115	321	1,478	367	—	1,664	3,509
40174	Prince George County School Board	—	—	567	548	1,115	4,064	1,008	—	2,100	7,172
40176	Prince William County School Board	—	—	9,374	24,904	34,278	67,154	16,654	—	—	83,808
40177	Pulaski County School Board	—	—	376	—	376	2,695	669	—	2,265	5,629
40178	Rappahannock County School Board	—	—	98	—	98	702	174	—	552	1,428
40179	Richmond County School Board	—	—	114	78	192	818	203	—	342	1,363
40180	Roanoke County School Board	—	—	1,344	2,592	3,936	9,628	2,388	—	3,657	15,673
40181	Rockbridge County School Board	—	—	288	43	331	2,061	511	—	416	2,988
40182	Rockingham County School Board	—	—	1,160	1,487	2,647	8,311	2,061	—	777	11,149
40183	Russell County School Board	—	—	321	94	415	2,300	570	—	696	3,566
40184	Scott County School Board	—	—	351	280	631	2,516	624	—	778	3,918
40185	Shenandoah County School Board	—	—	604	599	1,203	4,329	1,074	—	1,277	6,680
40186	Smyth County School Board	—	—	391	—	391	2,800	695	—	3,162	6,657
40187	Southampton County School Board	—	—	229	226	455	1,643	407	—	704	2,754
40188	Spotsylvania County School Board	—	—	2,198	333	2,531	15,745	3,905	—	6,983	26,633
40189	Stafford County School Board	—	—	2,645	3,398	6,043	18,948	4,699	—	6,646	30,293
40190	Surry County Schools	—	—	138	1	139	990	246	—	734	1,970
40191	Sussex County School Board	—	—	138	220	358	987	245	—	614	1,846
40192	Tazewell County Schools	—	—	449	—	449	3,219	798	—	3,648	7,665
40193	Warren County School Board	—	—	517	172	689	3,701	918	—	813	5,432
40195	Washington County School Board	—	—	615	—	615	4,406	1,093	—	3,132	8,631

Virginia Retirement System
VRS Teacher Retirement Plan
Schedule of Deferred Outflows and Deferred Inflows of Resources by Employer – continued
As of the Measurement Date of June 30, 2018

(Dollars in Thousands)

		Deferred Outflows of Resources					Deferred Inflows of Resources				
Employer Code	Employer	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Change of Assumptions	Changes in Proportionate Share	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Change of Assumptions	Changes in Proportionate Share	Total Deferred Inflows of Resources
40196	Westmoreland County School Board	—	—	169	741	910	1,210	300	—	483	1,993
40197	Wise County School Board	—	—	456	129	585	3,268	811	—	6,085	10,164
40198	Wythe County School Board	—	—	363	—	363	2,600	645	—	1,625	4,870
40199	York County School Board	—	—	1,180	1,886	3,066	8,453	2,096	—	2,854	13,403
40200	Alexandria City School Board	—	—	2,577	4,238	6,815	18,461	4,578	—	2,416	25,455
40201	Bristol City School Board	—	—	212	4	216	1,518	376	—	1,439	3,333
40202	Buena Vista City Schools	—	—	90	27	117	647	160	—	449	1,256
40203	Charlottesville Public Schools	—	—	673	696	1,369	4,822	1,196	—	431	6,449
40205	Danville City Schools	—	—	541	—	541	3,878	962	—	4,727	9,567
40206	Fredericksburg City Schools	—	—	404	695	1,099	2,893	718	—	166	3,777
40207	Hampton City Schools	—	—	1,909	296	2,205	13,675	3,391	—	8,630	25,696
40208	Harrisonburg City School Board	—	—	686	3,868	4,554	4,916	1,219	—	56	6,191
40209	Hopewell City School Board	—	—	432	789	1,221	3,095	768	—	1,173	5,036
40210	Lynchburg Public Schools	—	—	964	1,756	2,720	6,903	1,712	—	4,207	12,822
40211	Newport News Public Schools	—	—	2,797	19	2,816	20,036	4,969	—	7,221	32,226
40212	Norfolk Public Schools	—	—	3,605	—	3,605	25,828	6,405	—	26,916	59,149
40213	Petersburg City Schools	—	—	396	374	770	2,838	704	—	2,787	6,329
40214	Portsmouth School Board	—	—	1,408	—	1,408	10,087	2,502	—	5,327	17,916
40215	Radford City School Board	—	—	152	278	430	1,092	271	—	388	1,751
40216	Richmond Public Schools	—	—	2,869	9,281	12,150	20,554	5,097	—	8,116	33,767
40217	Roanoke City School Board	—	—	1,394	1,318	2,712	9,985	2,476	—	1,696	14,157
40219	Staunton City Schools	—	—	299	189	488	2,141	531	—	848	3,520
40220	Suffolk City School Board	—	—	1,335	3,350	4,685	9,561	2,371	—	1,915	13,847
40222	Winchester Public Schools	—	—	512	454	966	3,665	909	—	1,329	5,903
40223	Martinsville City Schools	—	—	203	184	387	1,453	360	—	1,629	3,442
40224	Falls Church Public Schools	—	—	444	1,581	2,025	3,183	790	—	798	4,771
40225	Colonial Heights City Schools	—	—	330	—	330	2,367	587	—	1,202	4,156
40230	Covington City School Board	—	—	96	461	557	687	170	—	564	1,421
40231	Fairfax City School Board	—	—	2	1	3	12	3	—	—	15
40232	Franklin City Public Schools	—	—	121	56	177	870	216	—	1,727	2,813

Virginia Retirement System
VRS Teacher Retirement Plan
Schedule of Deferred Outflows and Deferred Inflows of Resources by Employer – continued
As of the Measurement Date of June 30, 2018

(Dollars in Thousands)

		Deferred Outflows of Resources					Deferred Inflows of Resources				
Employer Code	Employer	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Change of Assumptions	Changes in Proportionate Share	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Earnings on Pension Plan Investments	Change of Assumptions	Changes in Proportionate Share	Total Deferred Inflows of Resources
40233	Chesapeake Public Schools	—	—	4,057	3,076	7,133	29,062	7,208	—	5,746	42,016
40234	Virginia Beach City School Board	—	—	7,125	1,140	8,265	51,042	12,658	—	10,253	73,953
40236	Manassas Park City Schools	—	—	372	2,207	2,579	2,663	661	—	1,568	4,892
40306	Town of West Point School Board	—	—	96	627	723	688	171	—	108	967
40307	Lexington City School Board	—	—	50	119	169	358	89	—	45	492
40308	Waynesboro Public Schools	—	—	312	158	470	2,237	555	—	1,093	3,885
40309	Town of Colonial Beach Schools	—	—	63	112	175	450	111	—	108	669
40313	Galax City Schools	—	—	125	16	141	896	222	—	290	1,408
40314	Norton City Schools	—	—	62	141	203	446	111	—	681	1,238
40332	Manassas City Schools	—	—	926	767	1,693	6,633	1,645	—	6,561	14,839
40335	City of Salem Schools	—	—	395	288	683	2,830	702	—	877	4,409
40402	Williamsburg-James City County School Board	—	—	1,192	713	1,905	8,542	2,118	—	2,763	13,423
40403	Poquoson City Public Schools	—	—	202	73	275	1,447	359	—	384	2,190
40410	Valley Vocational Technical Center	—	—	34	25	59	242	60	—	181	483
40412	Charlottesville/Albemarle Vo-Tech Center	—	—	17	157	174	124	31	—	405	560
40413	The Pruden Center for Industry and Technology	—	—	—	61	61	—	—	—	2,075	2,075
40414	Jackson River Technical Center	—	—	10	52	62	74	18	—	399	491
40415	New Horizons Technical Center	—	—	151	597	748	1,083	269	—	60	1,412
40416	Northern Neck Regional Vocational Center	—	—	19	64	83	138	35	—	149	322
40417	Rowanty Vocational Technical Center	—	—	12	24	36	86	21	—	128	235
40418	Amelia-Nottoway Vocational Center	—	—	4	—	4	26	7	—	14	47
40421	Northern Neck Regional Special Education Program	—	—	15	79	94	105	26	—	180	311
40423	Maggie Walker Governor's School for Govt & Intl Studies	—	—	79	91	170	564	140	—	51	755
40424	Appomattox Region Governor's School	—	—	29	24	53	211	52	—	220	483
40425	Bridging Communities Regional Career and Tech Center	—	—	9	186	195	67	16	—	21	104
	Total for Teacher Employers	$ —	$ —	$ 140,363	$ 259,356	$ 399,719	$ 1,005,582	$ 249,387	$ —	$ 259,356	$ 1,514,325

The accompanying notes are an integral part of the Schedule of Deferred Outflows and Deferred Inflows of Resources by Employer.

Virginia Retirement System
VRS Teacher Retirement Plan
Notes to GASB No. 68 Schedules
For the Plan Year Ended Date of June 30, 2018

Note 1. Summary of Significant Accounting Policies

Description of the Entity

The Virginia Retirement System (the System) is an independent agency of the Commonwealth of Virginia. The System administers four separate pension trust funds – the Virginia Retirement System (VRS), the State Police Officers' Retirement System (SPORS), the Virginia Law Officers' Retirement System (VaLORS) and the Judicial Retirement System (JRS). The VRS Teacher Retirement Plan is part of the VRS Trust Fund.

Administration and Management

The Board of Trustees (the Board) is responsible for the general administration and operation of the defined benefit pension plans and the other employee benefit plans. The Board has full power to invest and reinvest the trust funds of the System through the adoption of investment policies and guidelines that fulfill the Board's investment objective to maximize long-term investment returns while targeting an acceptable level of risk.

The Board consists of nine members. Five members are appointed by the Governor and four members are appointed by the Joint Rules Committee of the General Assembly subject to confirmation by the General Assembly. The Board appoints a Director to serve as the Chief Administrative Officer of the System and a Chief Investment Officer to direct, manage, and administer the investment of the System's funds.

The System issues a *Comprehensive Annual Financial Report* (CAFR) containing the financial statements and required supplementary information for all of the System's pension and other employee benefit trust funds. The CAFR is publicly available through the About VRS link on the VRS website at www.varetire.org, or a copy may be obtained by submitting a request to the VRS Chief Financial Officer, PO Box 2500, Richmond, VA 23218-2500. The pension and other employee benefit trust funds administered by the VRS are classified as fiduciary funds and are included in the basic financial statements of the Commonwealth of Virginia.

Pensions

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the Virginia Retirement System (VRS) Teacher Retirement Plan and the additions to/deductions from the VRS Teacher Retirement Plan's net fiduciary position have been determined on the same basis as they were reported by VRS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

Note 2. General Information about the Pension Plan

Plan Description

All full-time, salaried permanent (professional) employees of public school divisions are automatically covered by the VRS Teacher Retirement Plan upon employment. This plan is administered by the Virginia Retirement System (the System) along with plans for other employer groups in the Commonwealth of Virginia. The VRS Teacher Retirement Plan is a multiple-employer cost-sharing plan. Members earn one month of service credit for each month they are employed and for which they and their employer pay contributions to VRS. Members are eligible to purchase prior service, based on specific criteria a defined in the *Code of Virginia*, as amended. Eligible prior service that may be purchased includes prior public service, active military service, certain periods of leave, and previously refunded service.

The System administers three different benefit structures for covered employees in the VRS Teacher Retirement Plan – Plan 1, Plan 2 and Hybrid. Each of these benefit structures has different eligibility criteria. The specific information for each plan, and the eligibility for covered groups within each plan are set out in the table below:

RETIREMENT PLAN PROVISIONS BY PLAN STRUCTURE		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
About Plan 1 Plan 1 is a defined benefit plan. The retirement benefit is based on a member's age, creditable service and average final compensation at retirement using a formula.	**About Plan 2** Plan 2 is a defined benefit plan. The retirement benefit is based on a member's age, creditable service and average final compensation at retirement using a formula.	**About the Hybrid Retirement Plan** The Hybrid Retirement Plan combines the features of a defined benefit plan and a defined contribution plan. • The defined benefit is based on a member's age, creditable service and average final compensation at retirement using a formula. • The benefit from the defined contribution component of the plan depends on the member and employer contributions made to the plan and the investment performance of those contributions. • In addition to the monthly benefit payment payable from the defined benefit plan at retirement, a member may start receiving distributions from the balance in the defined contribution account, reflecting the contributions, investment gains or losses, and any required fees.

PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
Eligible Members Employees are in Plan 1 if their membership date is before July 1, 2010, and they were vested as of January 1, 2013 and they have not taken a refund. **Hybrid Opt-In Election** VRS Plan 1 members were allowed to make an irrevocable decision to opt into the Hybrid Retirement Plan during a special election window held January 1 through April 30, 2014. The Hybrid Retirement Plan's effective date for eligible Plan 1 members who opted in was July 1, 2014. If eligible deferred members returned to work during the election window, they were also eligible to opt into the Hybrid Retirement Plan.	**Eligible Members** Employees are in Plan 2 if their membership date is on or after July 1, 2010, or their membership date is before July 1, 2010, and they were not vested as of January 1, 2013. **Hybrid Opt-In Election** Eligible Plan 2 members were allowed to make an irrevocable decision to opt into the Hybrid Retirement Plan during a special election window held January 1 through April 30, 2014. The Hybrid Retirement Plan's effective date for eligible Plan 2 members who opted in was July 1, 2014. If eligible deferred members returned to work during the election window, they were also eligible to opt into the Hybrid Retirement Plan.	**Eligible Members** Employees are in the Hybrid Retirement Plan if their membership date is on or after January 1, 2014. This includes: • School division employees • Members in Plan 1 or Plan 2 who elected to opt into the plan during the election window held January 1-April 30, 2014; the plan's effective date for opt-in members was July 1, 2014
Retirement Contributions Employees contribute 5% of their compensation each month to their member contribution account through a pre-tax salary reduction. Member contributions are tax-deferred until they are withdrawn as part of a retirement benefit or as a refund. The employer makes a separate actuarially determined contribution to VRS for all covered employees. VRS invests both member and employer contributions to provide funding for the future benefit payment.	**Retirement Contributions** Employees contribute 5% of their compensation each month to their member contribution account through a pre-tax salary reduction.	**Retirement Contributions** A member's retirement benefit is funded through mandatory and voluntary contributions made by the member and the employer to both the defined benefit and the defined contribution components of the plan. Mandatory contributions are based on a percentage of the employee's creditable compensation and are required from both the member and the employer. Additionally, members may choose to make voluntary contributions to the defined contribution component of the plan, and the employer is required to match those voluntary contributions according to specified percentages.

PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
Creditable Service Creditable service includes active service. Members earn creditable service for each month they are employed in a covered position. It also may include credit for prior service the member has purchased or additional creditable service the member was granted. A member's total creditable service is one of the factors used to determine their eligibility for retirement and to calculate their retirement benefit. It also may count toward eligibility for the health insurance credit in retirement, if the employer offers the health insurance credit.	**Creditable Service** Same as Plan 1.	**Creditable Service** *Defined Benefit Component:* Under the defined benefit component of the plan, creditable service includes active service. Members earn creditable service for each month they are employed in a covered position. It also may include credit for prior service the member has purchased or additional creditable service the member was granted. A member's total creditable service is one of the factors used to determine their eligibility for retirement and to calculate their retirement benefit. It also may count toward eligibility for the health insurance credit in retirement, if the employer offers the health insurance credit. *Defined Contribution Component:* Under the defined contribution component, creditable service is used to determine vesting for the employer contribution portion of the plan.

PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
Vesting Vesting is the minimum length of service a member needs to qualify for a future retirement benefit. Members become vested when they have at least five years (60 months) of creditable service. Vesting means members are eligible to qualify for retirement if they meet the age and service requirements for their plan. Members also must be vested to receive a full refund of their member contribution account balance if they leave employment and request a refund. Members are always 100% vested in the contributions that they make.	**Vesting** Same as Plan 1.	**Vesting** *Defined Benefit Component:* Defined benefit vesting is the minimum length of service a member needs to qualify for a future retirement benefit. Members are vested under the defined benefit component of the Hybrid Retirement Plan when they reach five years (60 months) of creditable service. Plan 1 or Plan 2 members with at least five years (60 months) of creditable service who opted into the Hybrid Retirement Plan remain vested in the defined benefit component. *Defined Contribution Component:* Defined contribution vesting refers to the minimum length of service a member needs to be eligible to withdraw the employer contributions from the defined contribution component of the plan. Members are always 100% vested in the contributions that they make. Upon retirement or leaving covered employment, a member is eligible to withdraw a percentage of employer contributions to the defined contribution component of the plan, based on service. After two years, a member is 50% vested and may withdraw 50% of employer contributions. After three years, a member is 75% vested and may withdraw 75% of employer contributions. After four or more years, a member is 100% vested and may withdraw 100% of employer contributions. Distribution is not required by law until age 70½.

PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
Calculating the Benefit The Basic Benefit is calculated based on a formula using the member's average final compensation, a retirement multiplier and total service credit at retirement. It is one of the benefit payout options available to a member at retirement. An early retirement reduction factor is applied to the Basic Benefit if the member retires with a reduced retirement benefit or selects a benefit payout option other than the Basic Benefit.	**Calculating the Benefit** See definition under Plan 1.	**Calculating the Benefit** *Defined Benefit Component:* See definition under Plan 1 *Defined Contribution Component:* The benefit is based on contributions made by the member and any matching contributions made by the employer, plus net investment earnings on those contributions.
Average Final Compensation A member's average final compensation is the average of the 36 consecutive months of highest compensation as a covered employee.	**Average Final Compensation** A member's average final compensation is the average of their 60 consecutive months of highest compensation as a covered employee.	**Average Final Compensation** Same as Plan 2. It is used in the retirement formula for the defined benefit component of the plan.
Service Retirement Multiplier The retirement multiplier is a factor used in the formula to determine a final retirement benefit. The retirement multiplier for members is 1.70%.	**Service Retirement Multiplier** Same as Plan 1 for service earned, purchased or granted prior to January 1, 2013. The retirement multiplier is 1.65% for creditable service earned, purchased or granted on or after January 1, 2013.	**Service Retirement Multiplier** *Defined Benefit Component:* The retirement multiplier for the defined benefit component is 1.00%. For members who opted into the Hybrid Retirement Plan from Plan 1 or Plan 2, the applicable multipliers for those plans will be used to calculate the retirement benefit for service credited in those plans. *Defined Contribution Component:* Not applicable.
Normal Retirement Age Age 65.	**Normal Retirement Age** Normal Social Security retirement age.	**Normal Retirement Age** *Defined Benefit Component:* Same as Plan 2. *Defined Contribution Component:* Members are eligible to receive distributions upon leaving employment, subject to restrictions.

PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
Earliest Unreduced Retirement Eligibility Age 65 with at least five years (60 months) of creditable service or at age 50 with at least 30 years of creditable service.	**Earliest Unreduced Retirement Eligibility** Normal Social Security retirement age with at least five years (60 months) of creditable service or when their age and service equal 90.	**Earliest Unreduced Retirement Eligibility** *Defined Benefit Component:* Normal Social Security retirement age and have at least five years (60 months) of creditable service or when their age and service equal 90. *Defined Contribution Component:* Members are eligible to receive distributions upon leaving employment, subject to restrictions.
Earliest Reduced Retirement Eligibility VRS: Age 55 with at least five years (60 months) of creditable service or age 50 with at least 10 years of creditable service.	**Earliest Reduced Retirement Eligibility** VRS: Age 60 with at least five years (60 months) of creditable service.	**Earliest Reduced Retirement Eligibility** *Defined Benefit Component:* VRS: Age 60 with at least five years (60 months) of creditable service. *Defined Contribution Component:* Members are eligible to receive distributions upon leaving employment, subject to restrictions.

PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
Cost-of-Living Adjustment (COLA) in Retirement The Cost-of-Living Adjustment (COLA) matches the first 3% increase in the Consumer Price Index for all Urban Consumers (CPI-U) and half of any additional increase (up to 4%) up to a maximum COLA of 5%. *Eligibility:* For members who retire with an unreduced benefit or with a reduced benefit with at least 20 years of creditable service, the COLA will go into effect on July 1 after one full calendar year from the retirement date. For members who retire with a reduced benefit and who have less than 20 years of creditable service, the COLA will go into effect on July 1 after one calendar year following the unreduced retirement eligibility date. *Exceptions to COLA Effective Dates:* The COLA is effective July 1 following one full calendar year (January 1 to December 31) under any of the following circumstances: • The member is within five years of qualifying for an unreduced retirement benefit as of January 1, 2013. • The member retires on disability. • The member is involuntarily separated from employment for causes other than job performance or misconduct and is eligible to retire under the Workforce Transition Act or the Transitional Benefits Program. • The member dies in service and the member's survivor or beneficiary is eligible for a monthly death-in-service benefit. The COLA will go into effect on July 1 following one full calendar year (January 1 to December 31) from the date the monthly benefit begins.	**Cost-of-Living Adjustment (COLA) in Retirement** The Cost-of-Living Adjustment (COLA) matches the first 2% increase in the CPI-U and half of any additional increase (up to 2%), for a maximum COLA of 3%. *Eligibility:* Same as Plan 1 *Exceptions to COLA Effective Dates:* Same as Plan 1	**Cost-of-Living Adjustment (COLA) in Retirement** *Defined Benefit Component:* Same as Plan 2. *Defined Contribution Component:* Not applicable. *Eligibility:* Same as Plan 1 and Plan 2. *Exceptions to COLA Effective Dates:* Same as Plan 1 and Plan 2.

PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
Disability Coverage Members who are eligible to be considered for disability retirement and retire on disability, the retirement multiplier is 1.7% on all service, regardless of when it was earned, purchased or granted.	**Disability Coverage** Members who are eligible to be considered for disability retirement and retire on disability, the retirement multiplier is 1.65% on all service, regardless of when it was earned, purchased or granted.	**Disability Coverage** Employees of political subdivisions and school divisions (including Plan 1 and Plan 2 opt-ins) participate in the Virginia Local Disability Program (VLDP) unless their local governing body provides and employer-paid comparable program for its members. Hybrid members (including Plan 1 and Plan 2 opt-ins) covered under VLDP are subject to a one-year waiting period before becoming eligible for non-work-related disability benefits.
Purchase of Prior Service Members may be eligible to purchase service from previous public employment, active duty military service, an eligible period of leave or VRS refunded service as creditable service in their plan. Prior creditable service counts toward vesting, eligibility for retirement and the health insurance credit. Only active members are eligible to purchase prior service. Members also may be eligible to purchase periods of leave without pay.	**Purchase of Prior Service** Same as Plan 1.	**Purchase of Prior Service** *Defined Benefit Component:* Same as Plan 1, with the following exceptions: • Hybrid Retirement Plan members are ineligible for ported service. *Defined Contribution Component:* Not applicable.

Contributions

The contribution requirement for active employees is governed by §51.1-145 of the *Code of Virginia*, as amended, but may be impacted as a result of funding provided to school divisions by the Virginia General Assembly. Employees are required to contribute 5.00% of their compensation toward their retirement. Each school division's contractually required employer contribution rate for the year ended June 30, 2018, was 16.32% of covered employee compensation. This rate was based on the actuarial valuation as of June 30, 2015, and reflects the transfer in June 2015 of $192,884,000 as an accelerated payback of the deferred contribution in the 2010-12 biennium. The actuarially determined rate, when combined with employee contributions, was expected to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability.

Actuarial Assumptions and Methods

The total pension liability for the VRS Teacher Retirement Plan was based on an actuarial valuation as of June 30, 2017, using the Entry Age Normal actuarial cost method and the following assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2018.

Inflation	2.50%
Salary increases, including inflation	3.50% – 5.95%
Investment rate of return	7.00%, net of pension plan investment expenses, including inflation*

* Administrative expenses as a percent of the market value of assets for the last experience study were found to be approximately 0.06% of the market assets for all of the VRS plans. This would provide an assumed investment return rate for GASB purposes of slightly more than the assumed 7.00%. However, since the difference was minimal, and a more conservative 7.00% investment return assumption provided a projected plan net position that exceeded the projected benefit payments, the long-term expected rate of return on investments was assumed to be 7.00% to simplify preparation of pension liabilities.

Mortality rates:

Pre-Retirement:
RP-2014 White Collar Employee Rates to age 80, White Collar Healthy Annuitant Rates at ages 81 and older projected with scale BB to 2020.

Post-Retirement:
RP-2014 White Collar Employee Rates to age 49, White Collar Healthy Annuitant Rates at ages 50 and older projected with scale BB to 2020; males 1% increase compounded from ages 70 to 90; females set back 3 years with 1.5% increase compounded from ages 65 to 70 and 2.0% increase compounded from ages 75 to 90.

Post-Disablement:
RP-2014 Disability Mortality Rates projected with Scale BB to 2020; 115% of rates for males and females.

The actuarial assumptions used in the June 30, 2017, valuation were based on the results of an actuarial experience study for the four-year period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled	Update to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages and changed final retirement from 70 to 75
Withdrawal Rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change

Note 3. Net Pension Liability

The net pension liability (NPL) is calculated separately for each system and represents that particular system's total pension liability determined in accordance with GASB Statement No. 67, less that system's fiduciary net position. As of June 30, 2018, NPL amounts for the VRS Teacher Retirement Plan are as follows (amounts expressed in thousands):

Total Pension Liability	46,679,555
Plan Fiduciary Net Position	34,919,563
Employers' Net Pension Liability (Asset)	11,759,992
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	74.81%

The total pension liability is calculated by the System's actuary, and each plan's fiduciary net position is reported in the System's financial statements. The net pension liability is disclosed in accordance with the requirements of GASB Statement No. 67 in the System's notes to the financial statements and required supplementary information.

Discount Rate

The discount rate used to measure the total pension liability was 7.00%. The projection of cash flows used to determine the discount rate assumed that member contributions will be made per the VRS Statutes and the employer contributions will be made in accordance with the VRS funding policy at rates equal to the difference between actuarially determined contribution rates adopted by the VRS Board of Trustees and the member rate. Through the fiscal year ending June 30, 2018, the rate contributed by the school division for the VRS Teacher Retirement Plan will be subject to the portion of the VRS Board-certified rates that are funded by the Virginia General Assembly which was 100% of the actuarially determined contribution rate. From July 1, 2018 on, school divisions are assumed to continue to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore the long-term expected rate of return was applied to all periods of projected benefit payments to determine the total pension liability.

Long-Term Expected Rate of Return

The long-term expected rate of return on pension System investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension System 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. The target asset allocation and best estimate of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset Class (Strategy)	Target Allocation	Arithmetic Long-Term Expected Rate of Return	Weighted Average Long-Term Expected Rate of Return
Public Equity	40.00 %	4.54%	1.82 %
Fixed Income	15.00 %	0.69%	0.10 %
Credit Strategies	15.00 %	3.96%	0.59 %
Real Assets	15.00 %	5.76%	0.86 %
Private Equity	15.00 %	9.53%	1.43 %
Total	**100.00%**		**4.80%**
		Inflation	2.50 %
		* Expected arithmetic nominal return	**7.30%**

* The above allocation provides a one-year return of 7.30%. However, one-year returns do not take into account the volatility present in each of the asset classes. In setting the long-term expected return for the system, stochastic projections are employed to model future returns under various economic conditions. The results provide a range of returns over various time periods that ultimately provide a median return of 6.83%, including expected inflation of 2.50%.

Sensitivity Analysis

The following table presents the collective net pension liability of the participating employers in the VRS Teacher Retirement Plan using the discount rate of 7.00%, as well as what collective net pension liability of the participating employers in the VRS Teacher Retirement Plan net pension liability would be if it were calculated using a discount rate that is one percentage point lower (6.00%) or one percentage point higher (8.00%) than the current rate (amounts expressed in thousands):

Net Pension Liability - 1.00% Decrease (6.00%)	17,963,676
Net Pension Liability - Current Discount Rate (7.00%)	11,759,992
Net Pension Liability - 1.00% Increase (8.00%)	6,625,048

Note 4. Deferred Outflows / (Inflows) of Resources

The following schedule reflects the amortization of the net balance of remaining deferred outflows / (inflows) of resources at June 30, 2018. The average remaining service lives of all employees provided with pensions through the VRS Teacher Retirement Plan at June 30, 2018, was 5.54 years. Deferred outflows of resources related to pensions resulting from the school division's contributions subsequent to the measurement date will be recognized as a reduction of the Net Pension Liability in the financial statements for the year ended June 30, 2020. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows (amounts expressed in thousands):

Measurement Period Ending June 30, 2019	($139,997)
Measurement Period Ending June 30, 2020	($263,035)
Measurement Period Ending June 30, 2021	($519,502)
Measurement Period Ending June 30, 2022	($149,154)
Measurement Period Ending June 30, 2023	($42,918)

Note 5. Employer Contributions

Employers' proportionate shares were calculated on the basis of historical employer contributions. Although GASB Statement No. 68 encourages the use of the employer's projected long-term contribution effort to the retirement plan, allocating on the basis of historical employer contributions is considered acceptable. Employer contributions recognized by the VRS Teacher Retirement Plan that are not representative of future contribution effort are excluded in the determination of employers' proportionate shares. Examples of employer contributions not representative of future contribution effort are contributions toward the purchase of employee service, contributions for adjustments for prior periods, and supplemental employer contributions from certain employers.

The employer contributions used in the determination of employers' proportionate shares of collective pension amounts reported in the Schedule of Employer Allocations was based on the total employer contributions using the plan's contribution rates and the employer's covered payroll for FY 2018. This total was $1,319,796,040. Of this amount, $26,483,671 was transferred to ICMA-RC as the employer cost of the defined contribution component for employees covered by the Hybrid Retirement Plan benefit structure and $1,293,312,369 was retained by the defined benefit plan. The employer contributions of $1,292,988,000 reported in the VRS Teacher Employee's Retirement Plan's Statement of Changes in Net Position (per the System's separately issued financial statements) reflects this net amount plus approximately $324,369 in other employer contribution adjustments that were not representative of future contribution efforts.

Note 6. Additional Financial and Actuarial Information

Information contained in the VRS Teacher Retirement Plan Notes to the Schedule of Employer Allocations and Schedule of Pension Amounts by Employer (Schedules) was extracted from the audited financial statements of the Virginia Retirement System for the fiscal year ended June 30, 2018. Additional financial information supporting the preparation of the VRS Teacher Retirement Plan Schedules (including the Financial statements and the unmodified audit opinion thereon, and required supplementary information) is presented in the separately issued VRS 2018 *Comprehensive Annual Financial Report* (CAFR). A copy of the 2018 VRS CAFR is publicly available through the About VRS link on the VRS website at www.varetire.org, or a copy may be obtained by submitting a request to the VRS Chief Financial Officer, PO Box 2500, Richmond, VA 23218-2500.